RaceDay Scoring
Updates, Best Practices, Roadmap & FAQ

Matt Avery • June 11th, 2024

RunSignup

RunSignup UNIVERSITY 2024

Speakers

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RunSignup UNIVERSITY 2024

Agenda

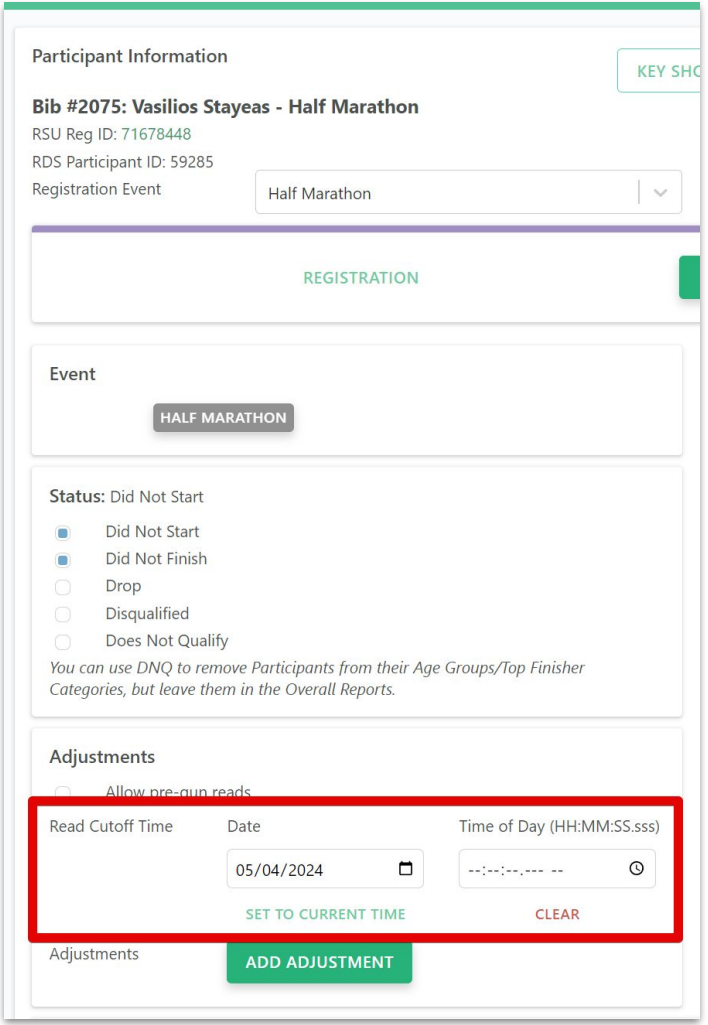
- Lap Race Improvements
- Race Progress/Leaderboard Report Fields for improved tracking experience in multi-segment and Lap Races.
- Min/Max Finish/Segment/Start Times.
- Announcer Enhancements
- Bundle/Challenge Event Scoring with Rest Segments
- Events to Sync
- RunSignup Results Integration Improvements
- Version 4 Technology Conversion
- Roadmap

Lap Race Improvements
Individual Cutoff Time

You can now enter the time of day to stop considering reads for a participant on the Scoring view.

This feature is particularly useful for **“Last Man Standing”** events, where you need to forcibly **stop collecting reads for someone for the remainder of the event.**

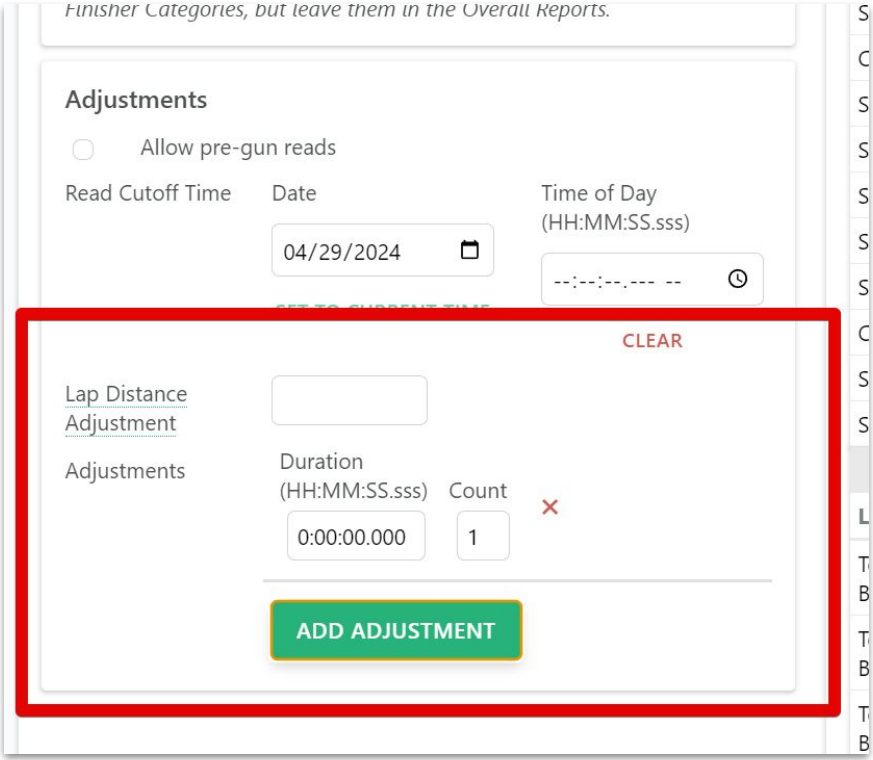
This is found on the Participant view under the Scoring tab in the Adjustments area.



Lap Race Improvements
Distance & Time Adjustments

Participants and Teams for Lap Races can now have an adjustment added. If you add a distance adjustment to a Lap Participant, the system will add an additional lap for that participant with the distance you entered into the adjustments area. If you include a time adjustment, that will be added to the additional lap.

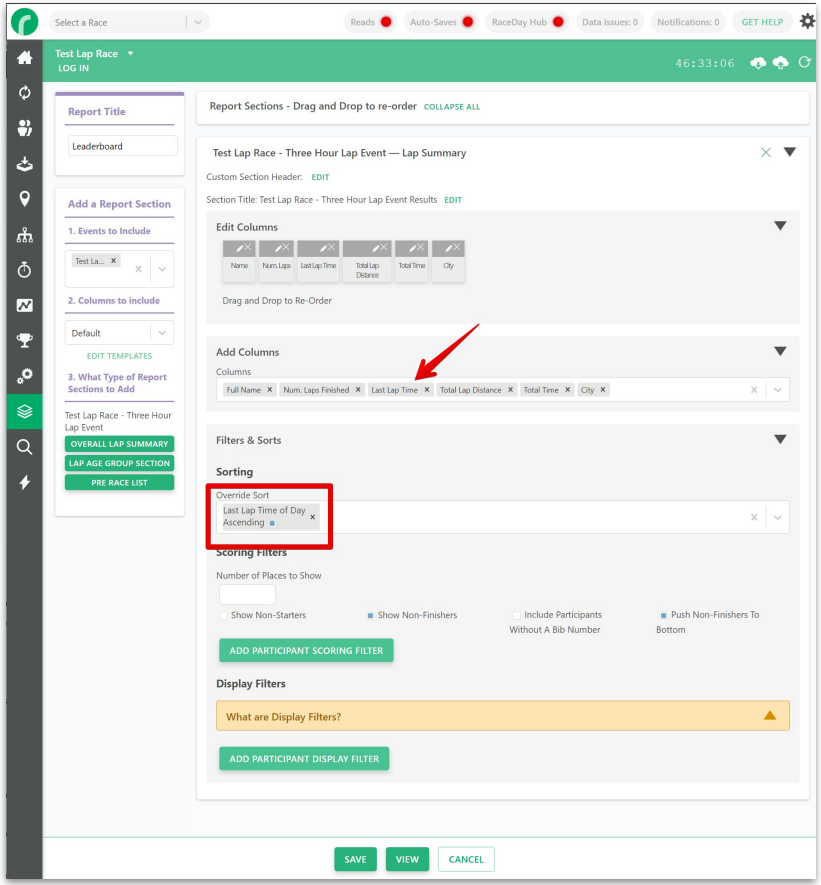
All adjustments for Lap Races are added to the end of the race. **This is typically done to add on a partial lap at the end of the event for those who were unable to complete a lap within the cutoff time. The race organizers want to give them partial credit.**



Lap Race Improvements
Leaderboard Report Fields

We have recently added some useful data fields to reports for Lap Races. These fields include the **name of the last lap completed**, the **time of the last lap completed**, and the **time of day that the last lap was completed**.

These data fields can be used to create custom leaderboard display reports for lap events. You can sort the results **based on the time of day that the last lap was completed** (so the most recent passing shows first) and **show the time of the last lap completed,** along with any other relevant information.



Lap Race Improvements
Leaderboard Report Fields

Once you create the reports, you can use the **HTML Auto-Save functionality** and display them on a monitor connected to your scoring computer, or **save them to a Dropbox folder** and view them on another device connected to the internet. This way, you can have a **fully customizable Lap Race leaderboard display.**

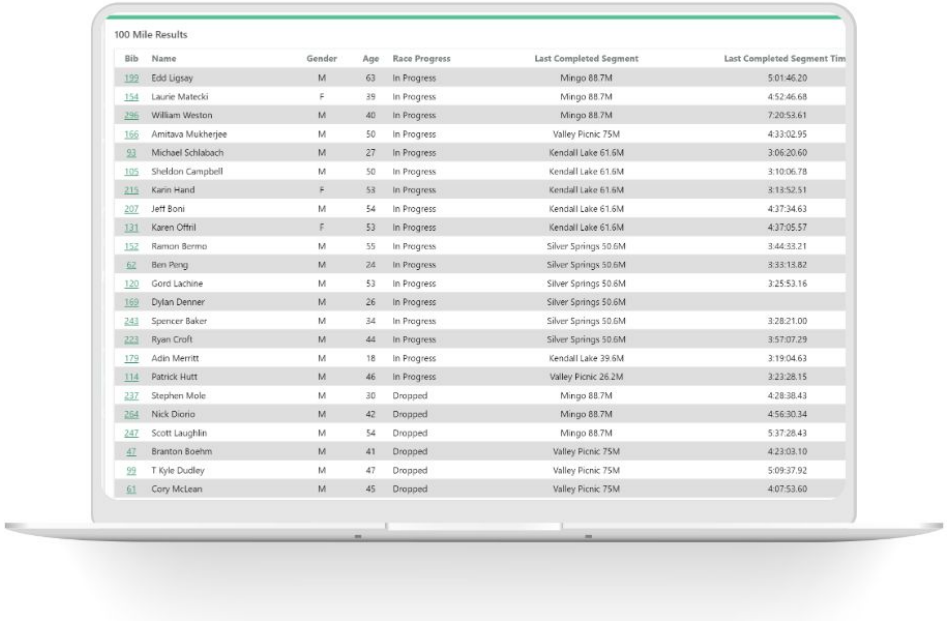
It would be helpful to include some of these fields in the **online results** for events that aim to **provide real-time progress tracking for spectators** as well. For example, including the time of day of the last lap was completed for each participant would be very useful for those who are tracking their friends and family members participating in long lap events.

Name	Num. Laps	Last Lap Time	Last Lap Time of Day	Total Lap Distance	City
LUCIANO **BARONE**	4	1:11:27.64	1:24:09.5 PM	31.2	ORLANDO
CESAR **RINCON**	4	1:09:45.14	1:09:41.9 PM	31.2	PORT ORANGE
DANIEL **CAMPOS**	4	54:01.62	1:05:03.4 PM	31.2	POMPANO BEACH
OSCAR **GARCIA**	4	54:07.90	1:05:02.2 PM	31.2	POMPANO BEACH
JAMES **HESSLER**	5	30:12.19	12:52:23.3 PM	39	ORLANDO
JOSEPH **SHELTON**	3	1:25:48.80	12:51:21.2 PM	23.4	FORT LAUDERDALE
ANDRES **CASTRO**	5	56:08.17	12:48:58.1 PM	39	MIAMI
JERRAD **GRIFFIS**	4	1:00:29.10	12:47:53.2 PM	31.2	OCALA
GAVIN **DAVIS**	4	1:00:10.94	12:46:28.2 PM	31.2	SAINT JOHNS
VICTOR **LAYNE**	4	59:11.29	12:45:34.4 PM	31.2	ALACHUA
CALVIN **STEELE**	5	43:23.67	12:43:32.4 PM	39	LAKELAND
GUSTAVO	4	1:00:01.07	12:43:25.5	31.2	SUNRISE

Reporting Improvements
Leaderboard Report Fields

We have added a number of helpful fields for longer multi-segment events.

We recommend using these for your online results as the first few columns, so that those following the results online with their phones will be able to see right away **where the person they're tracking was last seen, what time they were seen, and their overall progress** (Dropped, In Progress, Did Not Finish, etc…)



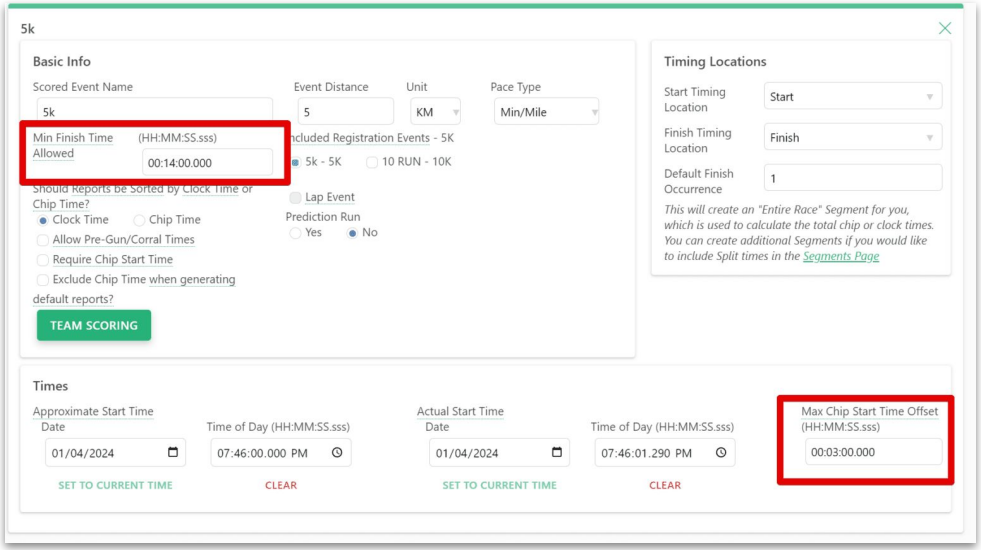
Read Selection
Improvements

Min Finish Time/Max Chip Start Time Offset

These new settings will simplify the setup and execution of scoring for many races. Instead of relying on time of day filtering at the Timing Location level, you can now define a **minimum accepted finish time** for each Scored Event, as well as a **maximum chip start time offset.**

Previously, we would recommend that timers create multiple Timing Locations, one for each of their events with a different start/finish timeframe, then set the time filters at the Timing Location level.

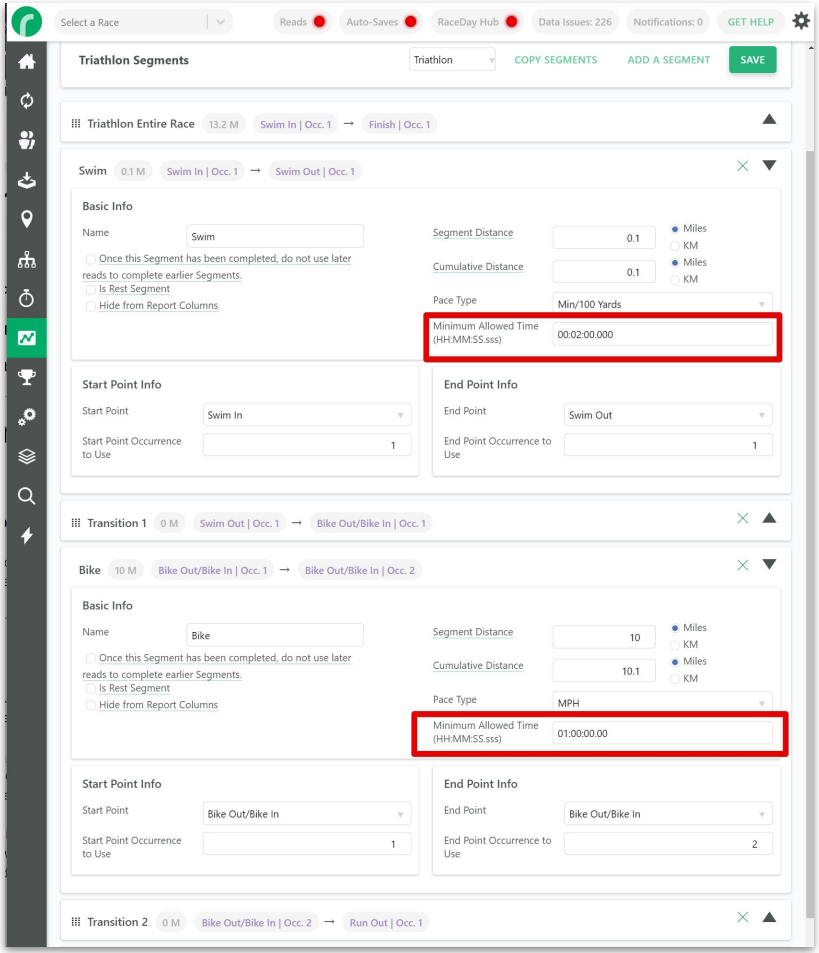
Now you can use a **shared Timing Location**, set the time filters and gap factor on the location to cover all events that use it, and **set a min finish time and max chip start time offset for each Scored Event to make sure the correct reads are used**.



Read Selection **Improvements**

Min Segment Times

This same concept has been applied to Segments, so now a Timer setting up a Triathlon can say that the **Olympic bike leg should be no faster than 2 hours**, but the **Sprint no faster than 1 hour,** without having to have separate timing locations and estimated earliest/latest time of day for each event, **significantly reducing the time to set up complicated multi-segment Races**.



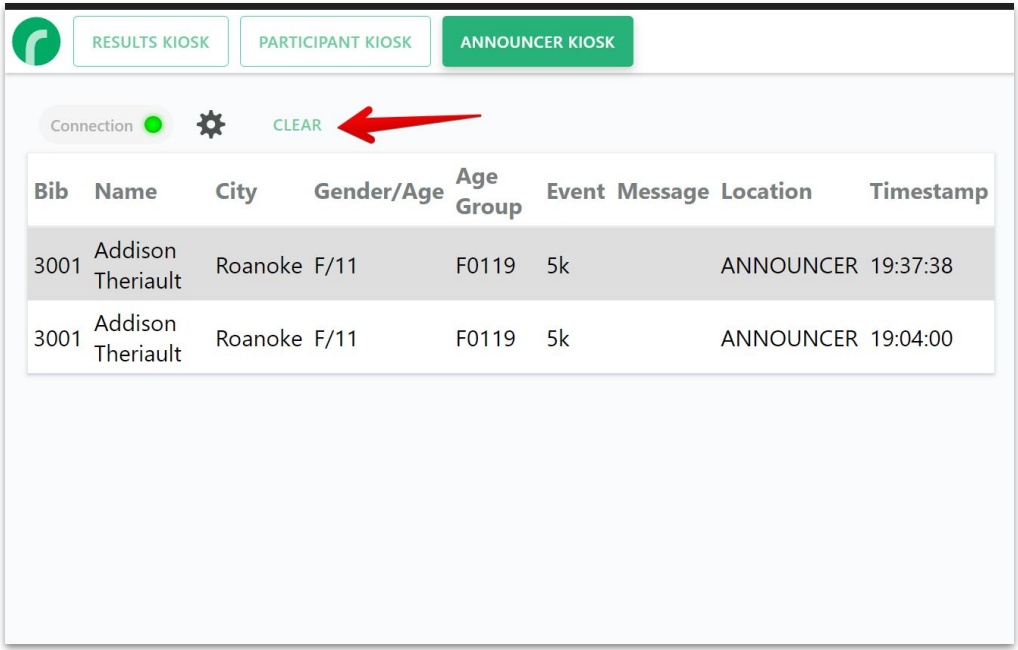
Announcer **Improvements**

Added a Clear function to the RaceDay Hub Announcer Kiosk Window.

This will let you clear all the currently displayed data on the window.

Changed the RaceDay Hub Announcer Kiosk Window to not show every read for each Participant.

Before this change, the announcer window would display all reads, causing issues if someone was standing around the announcer mats after they've completed the Race.

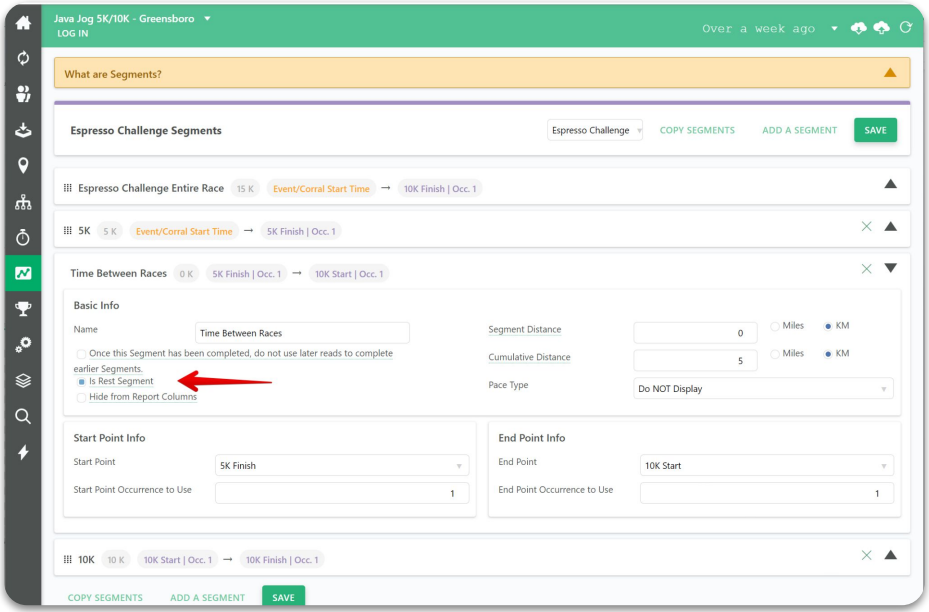


Rest **Segments**

For Bundle/Challenge Event "Series" Scoring

Rest Segments are useful for a number of reasons, but the most common use case is for **"Bundle" or "Challenge"** type Races, where a Participant registers for the bundle and gets entry into the **5k and 10k**. They then are **scored based on their time of the 5k plus the time of the 10k.**

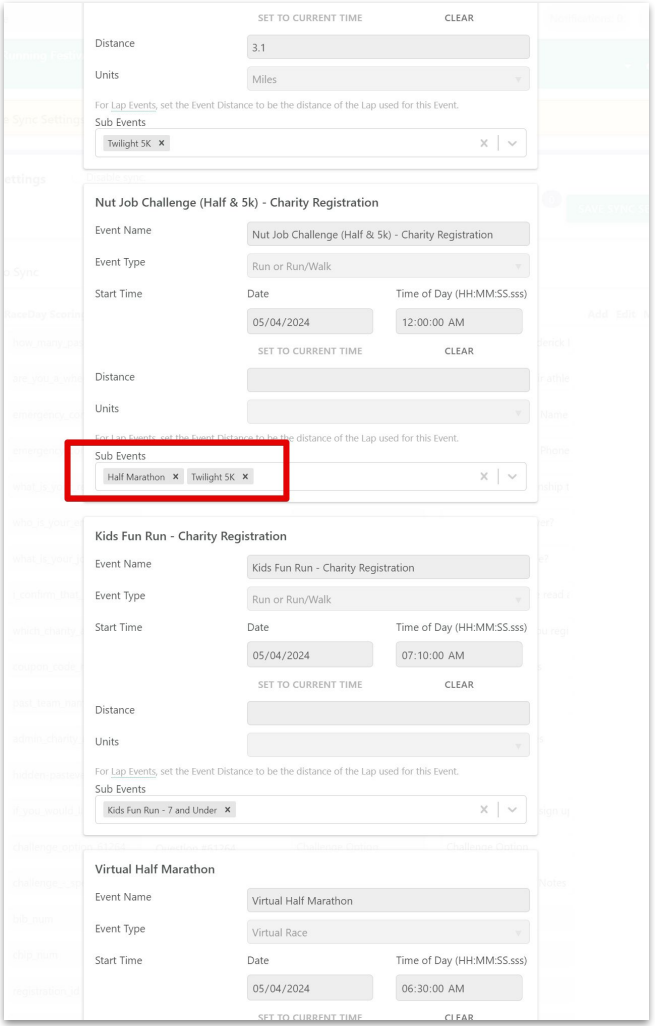
Using RunSignup's **Super Sub Events**, this kind of scoring can be done with RaceDay Scoring by **creating a Segment that is marked as a rest segment, removing the time spent between races from the total time for each Participant.**



Local Super/Sub
Event Settings

Timers can now **use Super/Sub Event Settings even for Races that are not using RunSignup for registration** so that they can leverage this feature to score challenge/combo events (one runner participating in multiple events in a day, where their times are added up across all events) with RaceDay Scoring.

Additionally, we have made this setting available to RunSignup integrated Races. When used in a RunSignup Race, it acts as a local override of the RunSignup settings, giving Timers a way to **manage the Super/Sub Event relationship between Events, without changing the registration settings.**

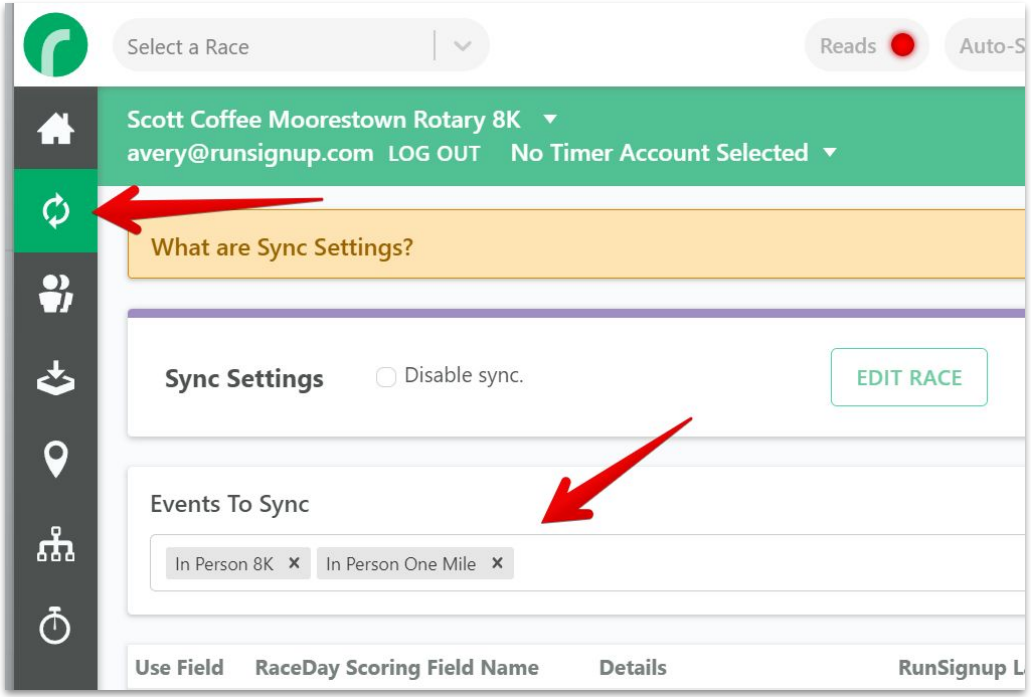


Events **to Sync**

Under the Sync Settings area you can now select which Registration Events you want to sync down into RaceDay Scoring.

This is helpful for a few different reasons. Firstly, you may not care about some of the Registration Events on RunSignup for scoring purposes, like a virtual run, so you could remove it from the Race here so that it is not referenced in any Event dropdowns, and the participants are not synced into RaceDay Scoring.

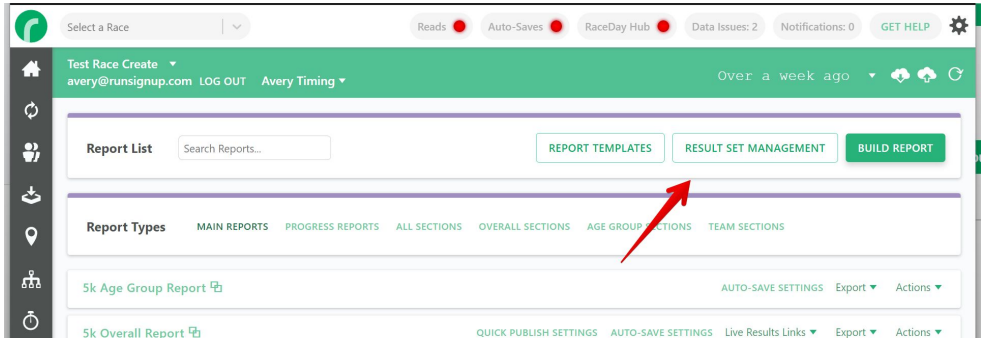
You may also use this setting for Races that are a series, where each day is a different Event. In that case you may just want week 1 synced for the first instance of scoring, then the next time you score the race, you'll just sync week 2, etc…

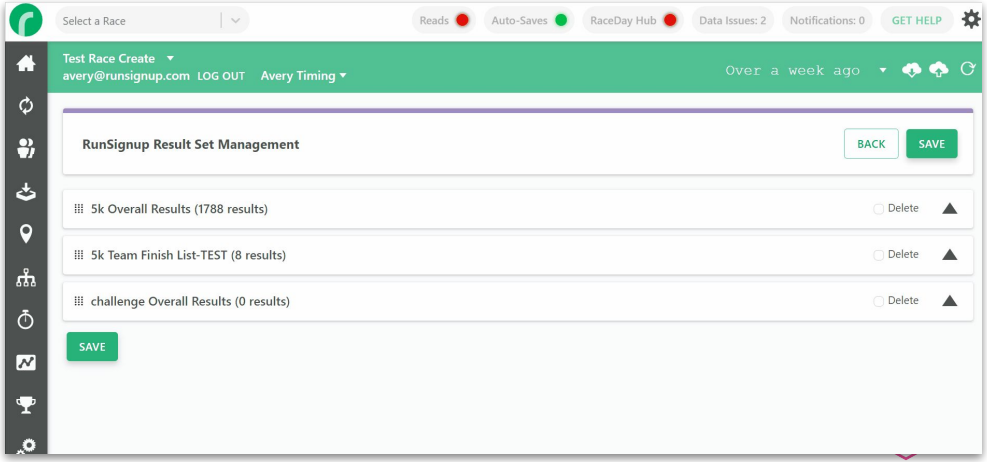


RunSignup Results **Set Management**

Found under **Reports > Result Set Management**, this page will list out any RunSignup Result Sets, allow you to **change the order of the result sets**, and **change most of the settings about Result Sets that are available to you on RunSignup**, besides editing the email address, which can still be done when creating the result set in the Auto-Save Settings.

New features include **making the Result Set Private or Public**, marking the results as **preliminary**, **hiding Splits in Results**, **hiding Event Names, deleting the Result Set, and clearing the results within a result set**. We also show a **count of the current number of finishers in each Result Set** and provide a **link to view each Result Set**.





Performance **Updates**

Removed Division Placements for athletes in progress.

Before this change, we would send a Division Place to RunSignup for athletes who have not yet finished. This would cause a significant increase in the amount of data and API requests that we would have to make for each result push. For larger races that have many splits on course, this could significantly impact the performance of results publishing and cause issues where it takes a long time for division placements to appear at RunSignup, or in the worst case, having the Division placements disappear completely.

With this change, Timers should see an improvement in publishing performance for races with many splits and participants.

Listing Performance Improvements

We have implemented significant optimizations to the processing and calculation of result data in this update. As a result, the scoring process is now approximately **2x faster for most events, with an even greater impact on races with numerous teams and/or scored events.**

This should reduce the amount of time users may experience the application slowing down or freezing up while collecting reads for events with lots data.

In a future update, we plan to separate the scoring and syncing processes from the user interface processes. This means that if the scoring and/or syncing processes take a long time to complete, the user interface will not be affected, ensuring a smoother experience.

Version 4 - **2023 into 2024**

- Complete Rewrite for the read processing, filtering and creation of scored reads
- Movement of all scored reads into SQLite relational database out of browser-based object database that is easily corrupted

- Rust language focuses on:
  - Performance
    - Comparable to C++ and systems level languages
  - Concurrency
    - Threads, Threads, Threads
  - Memory Management
    - Memory leaks not possible due to programmer

RaceDay Scoring **Roadmap**

What we're focused on next - we would love to hear your feedback and thoughts on these!

Our development plan is never set in stone, and we always consider all requests from our users!

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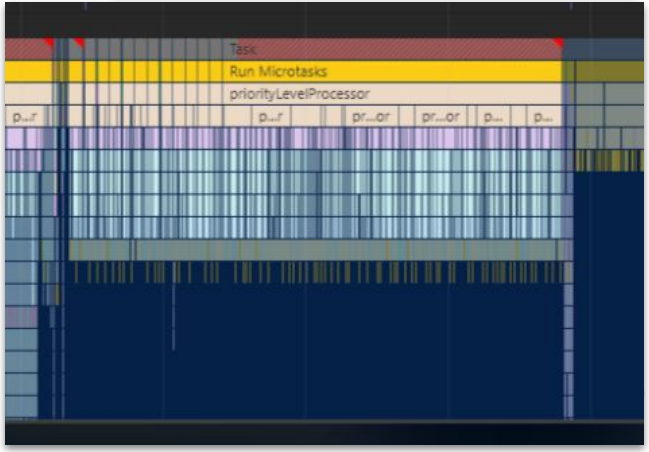
Application Performance **Improvements**

- Current Frontend is React - Javascript
  - Single threaded user interface & processing
  - This means that the user interface must wait for other processes to complete before being useable. In situations with lots of calculations, the app can feel sluggish as the UI is waiting for scoring to complete.
- Summer into Fall 2024
  - Move into Rust and SQLite
    - Participant and Group Entities
    - Listings Scoring Worker
      - Currently the largest reason why UI gets stalled in events with many timing locations and many teams
    - RSU Entity Sync
- Frontend is the Reporting and Participant Management User Experience and Results Pushing to RSU

The Rust Programming Language

SQLite

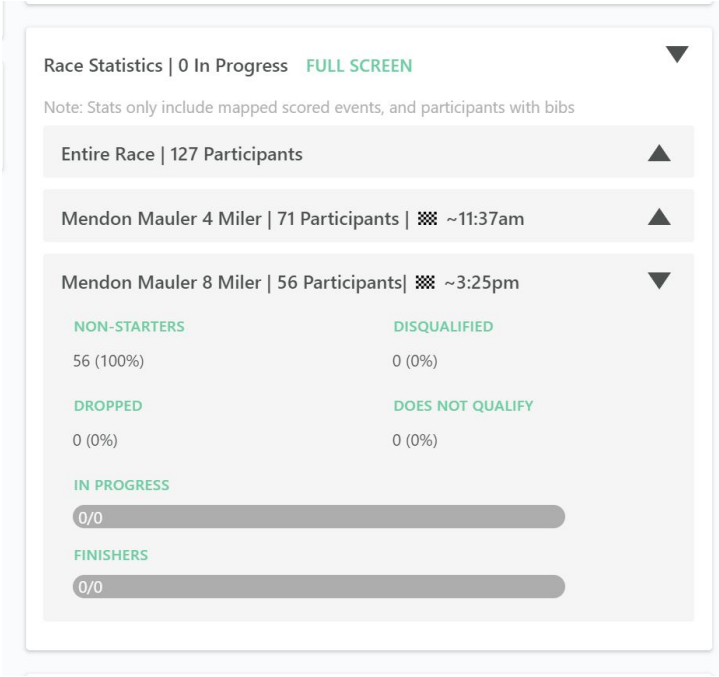


Estimated First/Last **Finish Times by Event**

We have recently added the ability to include the estimated finish time based on the pace of the last completed segment for each participant in reports. The next step is for us to provide an area on the Dashboard where you would be able to view, for each event, when we think the first person and last person will finish.

This will help you keep track of course closure and when to anticipate needing to be ready for your first finisher for each event.

Once we have this available in RaceDay Scoring, we plan on pushing this to the Timer Dashboard and possibly the Race Dashboard, so that you could view this information remotely as a Race is ongoing.

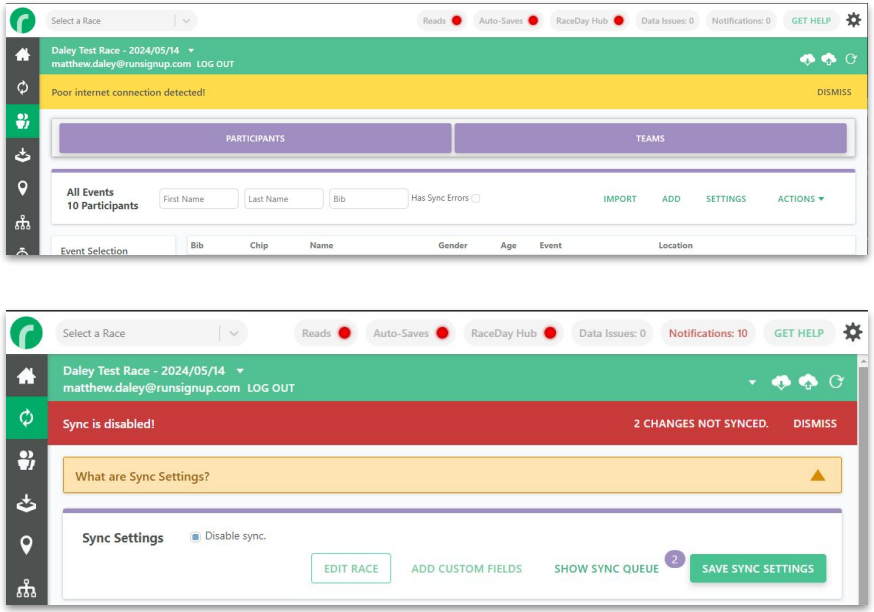


Mockup design - not final

Sync Status
Warning Banners

We are currently in the process of implementing banners to alert users when they are in a poor network environment.

Additionally, if there are any pending changes that need to be pushed to RunSignup, we will display the number of pending changes and provide a link to view the pending sync queue. This will allow users to see what changes are waiting and delete any items that may be stuck.



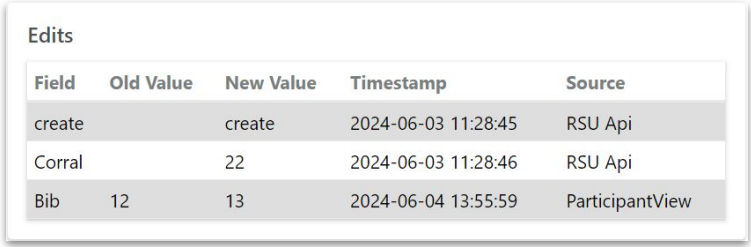
Designs not final

Participant Level **Audit Log**

We have a way to view an edit log for all participants in a Race in the Data Issues area, but it is hard to access and impossible to search through.

We will be adding a table on the Participant View that will show the recent changes made to each participant, so you can **quickly see the timeline of updates made to this person for troubleshooting purposes.**

We will show details like what data was changed, who changed it (RSU or RDS), what time it happened, what the old value was, and what the new value is.



Edits

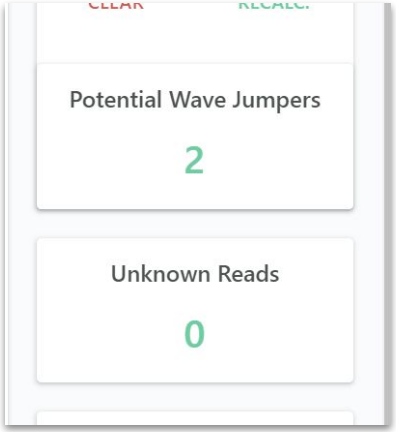
Field	Old Value	New Value	Timestamp	Source
create		create	2024-06-03 11:28:45	RSU Api
Corral		22	2024-06-03 11:28:46	RSU Api
Bib	12	13	2024-06-04 13:55:59	ParticipantView

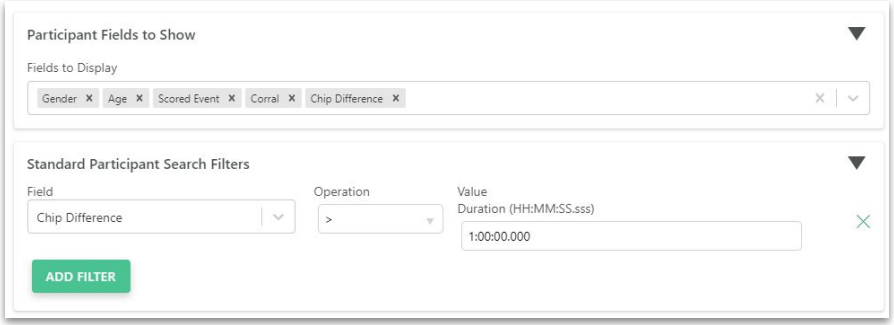
Data Check Improvements

We want to make some upgrades to the Data Check Reports to make them more visible, easier to use and access, and more powerful.

Some ideas that we have:

- **“Wave Jumper” Data Check** - a default Data Check Reports that show all Participants with a Chip Difference greater than some value, like an hour. This would indicate that someone was a “wave jumper” and got a chip start time outside of the range we would expect.
- **Make Data Checks accessible from the Dashboard**, and provide a live count of the number of participants within each report as the Race is ongoing.
- **Support Raw Read Time Filters** so that you will be able to use Data Check reports on Raw Read data. Currently, you cannot set up filters on reads that were not scored like you can with Data Actions. We know many Timers prefer Data Checks because they do not automatically fire so that they have more control over what changes are made and when.

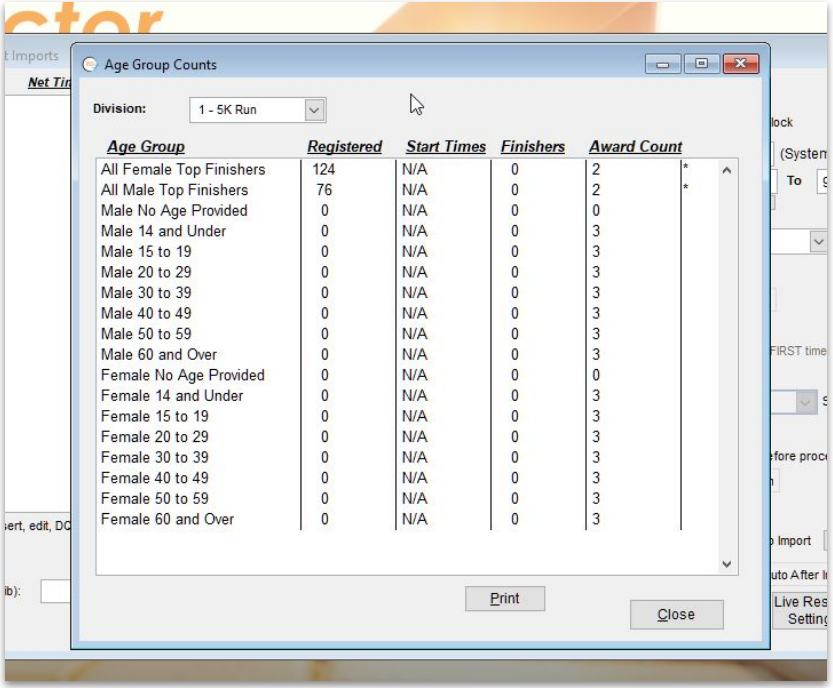




Realtime Award **Count Report**

We will be adding an area where you will be able to view your Age Group completion progress. This will show you how how close you are to filling out all of your age groups based on how many registrants or starters you had, compared to how many finishers you have, for each age group and top finisher category, based on how many award winners you have defined.

This will allow you to easily answer the question RDs will ask throughout the day **“Can we do the awards ceremony yet?”,** with a response like **“We’re still waiting on two 60+ men to fill out their age group, and their last estimated finish time is in 30 minutes.”**

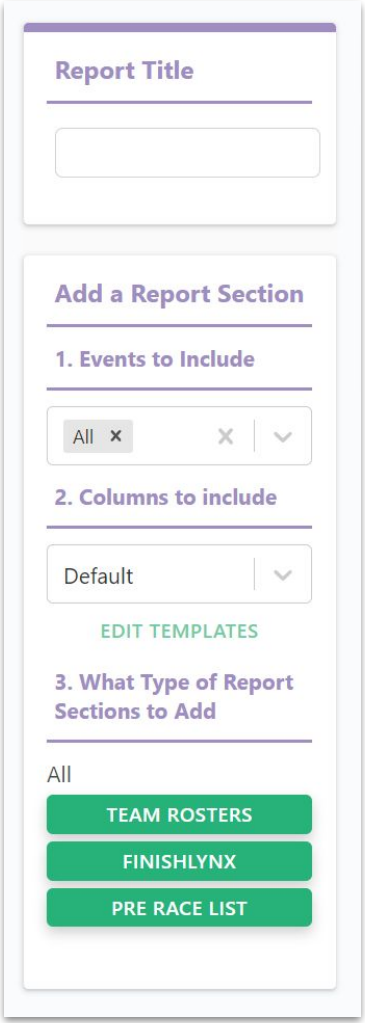


Similar concept to the Race Director Age Group Counts report, but would update in realtime.

Single Reports Including **Multiple Scored Events**

We would like to investigate how we could go about supporting report sections that combine together participants from multiple Scored Events, but still be able to show calculated times based on those separate Scored Events.

Today, we only support non-calculated fields like participant info in report sections that use the “All” Scored Event selection. If you try to add any calculated fields, we will use the first Scored Event in the list to do those calculations for all participants in the report, so anything referencing a Scored Event field would not be calculated properly.



Questions?

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Photo: Swim to the Moon 10K