

T O R O N T O

canadā

SFC 4.0 Software Release Overview

Presented by: Murray McGrath

PROPRIETARY INFORMATION: The information contained in this document is the property of the Institutes for Behavior Resources, Inc. (IBR). Except as specifically authorized in writing, the holder of this document shall keep information contained herein confidential and shall protect same, in whole or in part, from disclosure and dissemination to all third parties. © 2019 - All rights reserved. Institutes for Behavior Resources, Inc. (IBR). SAFTE-FAST is a product of IBR.



INSTITUTES FOR BEHAVIOR RESOURCES, INC.
shaping a better world

SFC 4.0 Software Release

- Major Release Themes:
 - Shift Working
 - Provide the ability to construct shifts/patterns for modeling
 - Enhanced Reporting
 - Enhanced Workload
- Production Rollout targeted for Q1 2020



Shift Work Module

- Shift Details
 - Shift Name
 - Start
 - Duration
- Shift Patterns
 - Pattern Name
 - Pattern Duration
 - Shift(s)
- Create Schedule
 - Schedule Name
 - Base Station
 - Start Date
 - Schedule Duration
 - Pattern

Create a new Shift Schedule ✕

Schedule Name

Base Station **Start Date** **Duration (days)**

Pattern

Shifts

Mon 9/2	Day ▼	08:00 ⌚	16:00 ⌚
Tue 9/3	Day ▼	08:00 ⌚	16:00 ⌚
Wed 9/4	Day ▼	08:00 ⌚	16:00 ⌚
Thu 9/5	Day ▼	08:00 ⌚	16:00 ⌚
Fri 9/6	Day ▼	08:00 ⌚	16:00 ⌚
Sat 9/7	Off ▼	Start ⌚	End ⌚

Edit Patterns & Shifts

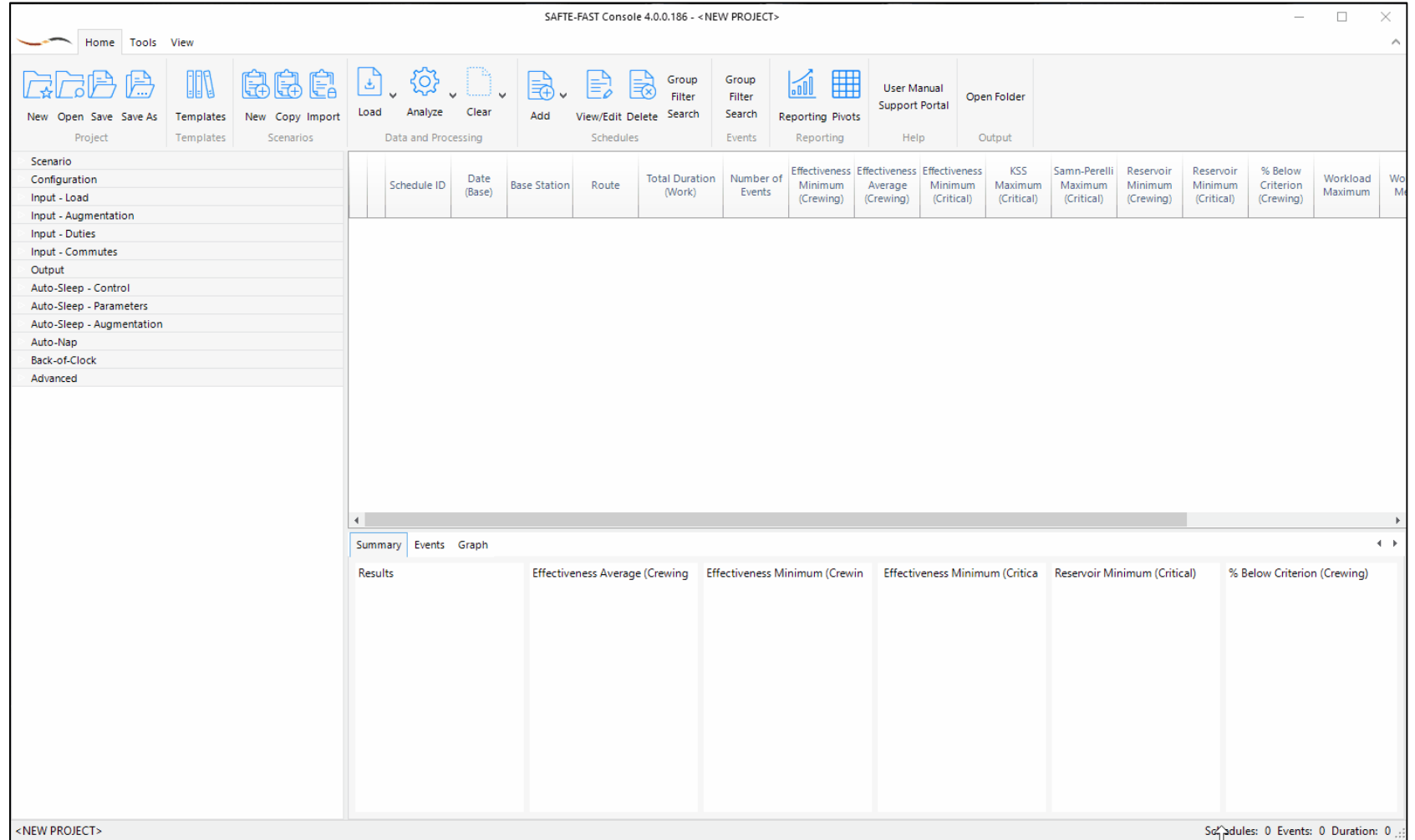
OK

Cancel



Shift Work Module

- Easy to use tool for the purpose of constructing shift patterns
- Multiple shifts & patterns can be stored for use
- Can be used with a shift work template & shift work industry settings



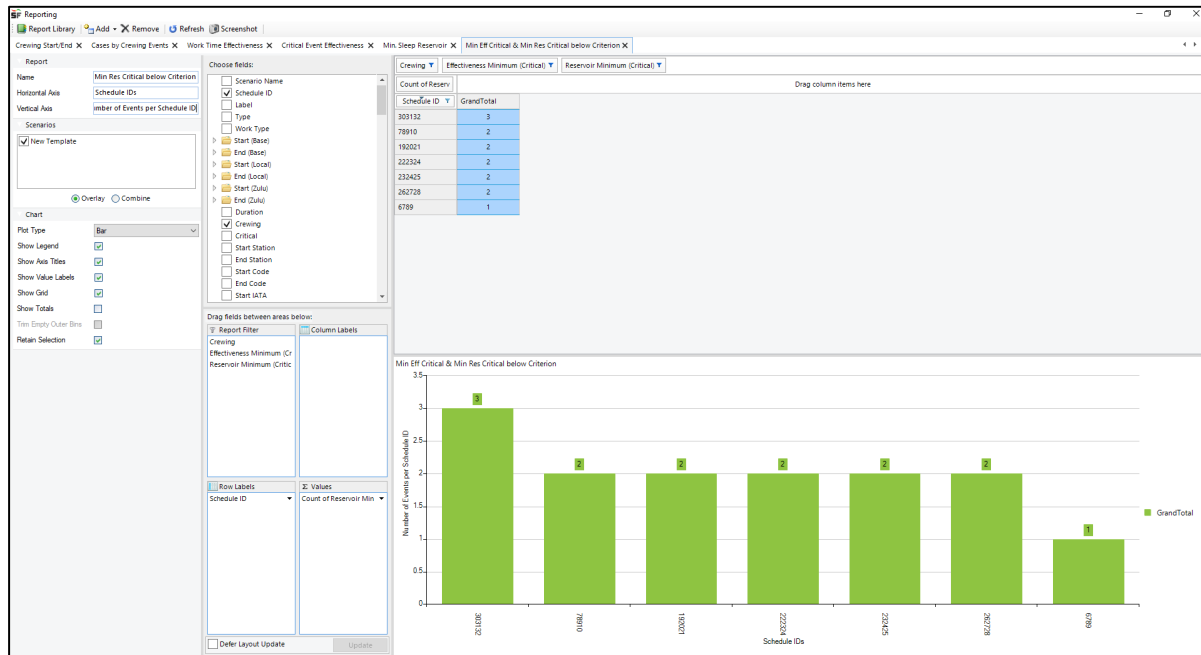
The screenshot displays the SAFTE-FAST Console 4.0.0.186 interface for a new project. The window title is "SAFTE-FAST Console 4.0.0.186 - <NEW PROJECT>". The interface includes a menu bar with "Home", "Tools", and "View". Below the menu bar is a ribbon with various tool groups: Project (New, Open, Save, Save As), Templates (New, Copy, Import), Data and Processing (Load, Analyze, Clear), Schedules (Add, View/Edit, Delete, Search), Events (Group Filter, Search), Reporting (Reporting, Pivots), Help (User Manual, Support Portal), and Output (Open Folder).

The main workspace is divided into a left sidebar and a central table area. The sidebar lists various scenario options: Scenario, Configuration, Input - Load, Input - Augmentation, Input - Duties, Input - Commutes, Output, Auto-Sleep - Control, Auto-Sleep - Parameters, Auto-Sleep - Augmentation, Auto-Nap, Back-of-Clock, and Advanced. The central table area is currently empty, with a header row containing the following columns: Schedule ID, Date (Base), Base Station, Route, Total Duration (Work), Number of Events, Effectiveness Minimum (Crewing), Effectiveness Average (Crewing), Effectiveness Minimum (Critical), KSS Maximum (Critical), Samn-Perelli Maximum (Critical), Reservoir Minimum (Crewing), Reservoir Minimum (Critical), % Below Criterion (Crewing), Workload Maximum, and Workload Minimum.

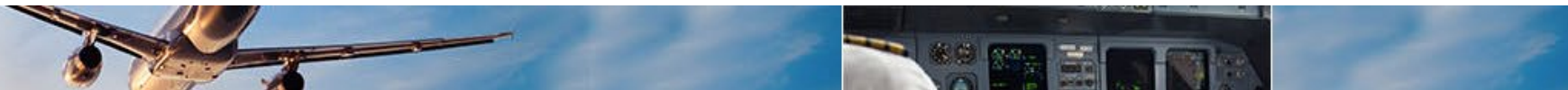
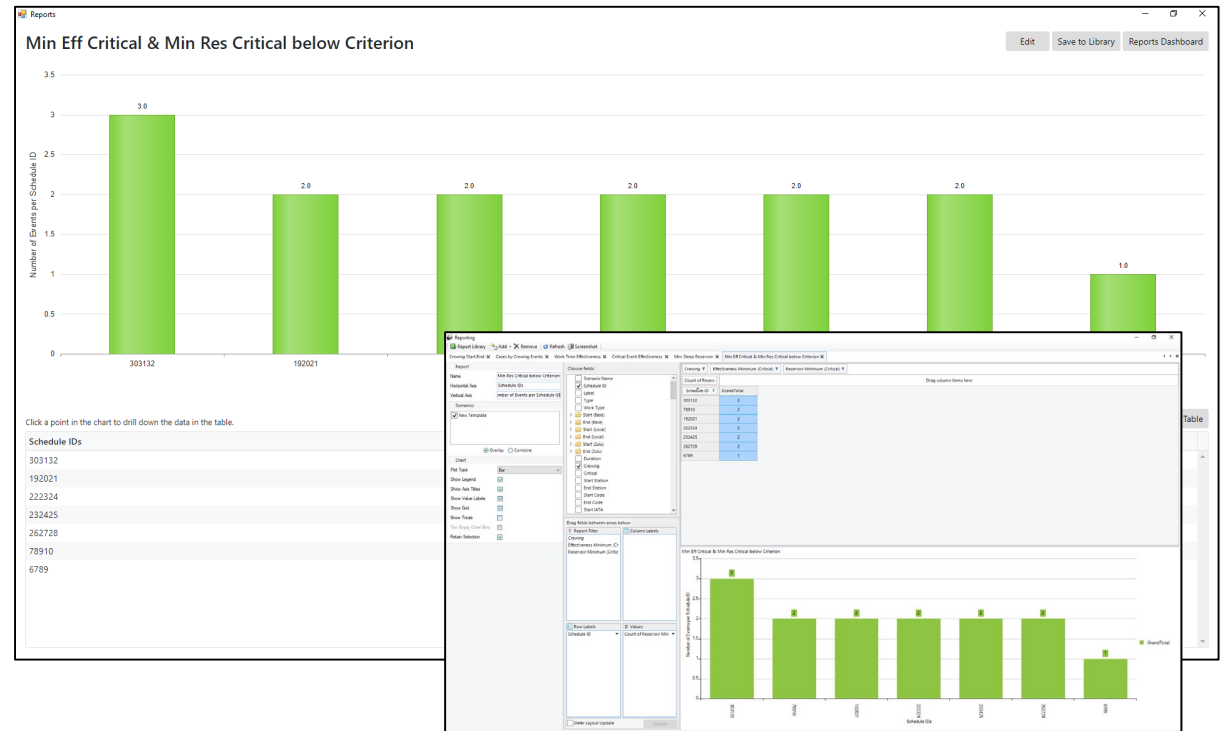
At the bottom of the window, there is a "Summary" tab selected, showing a table with the following columns: Results, Effectiveness Average (Crewing), Effectiveness Minimum (Crewing), Effectiveness Minimum (Critical), Reservoir Minimum (Critical), and % Below Criterion (Crewing). The status bar at the bottom right indicates "Schedules: 0 Events: 0 Duration: 0".

Reporting

Reporting in 3.0

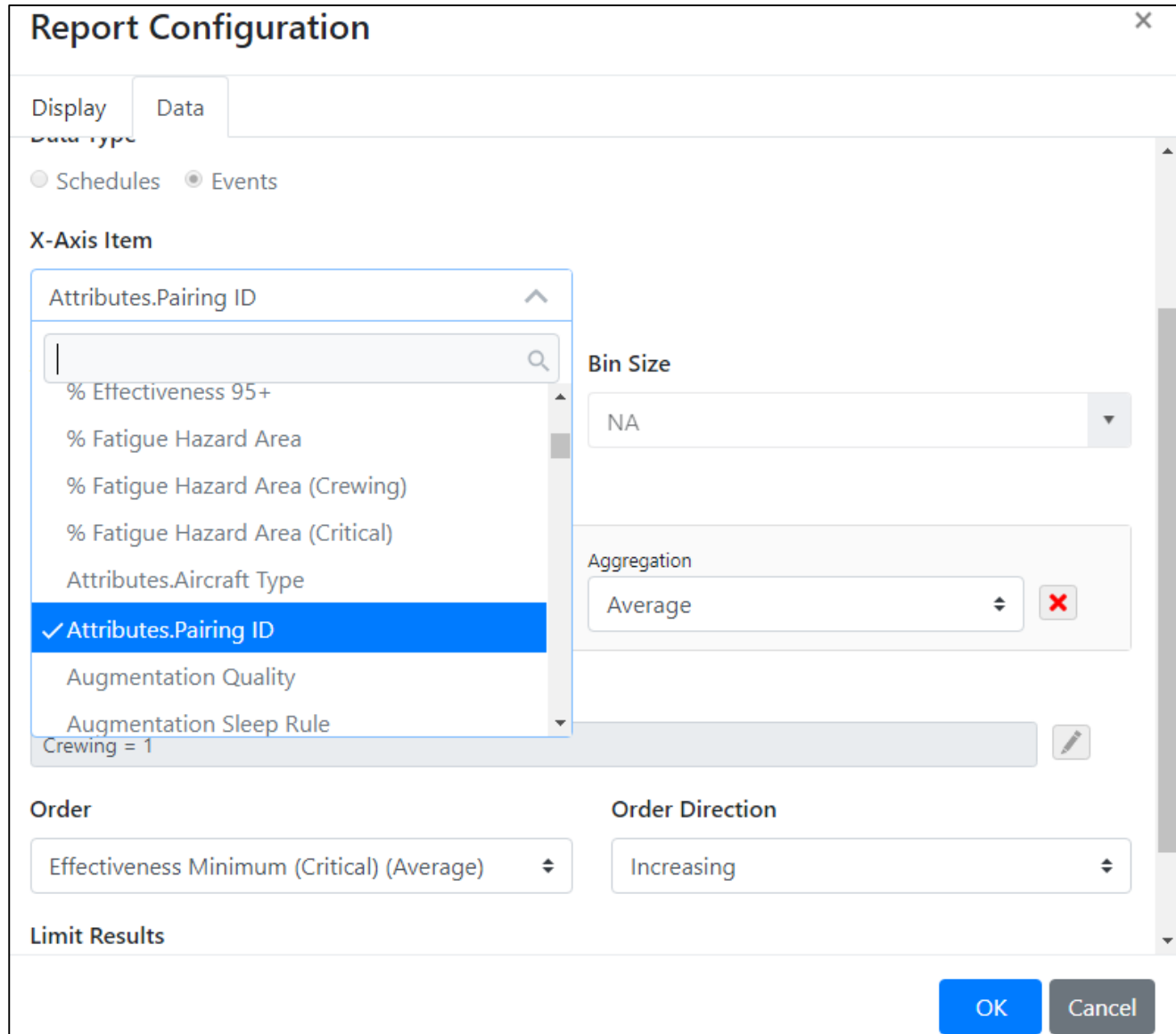


Reporting in 4.0



- Sortables and Attributes can now be used
 - **Sortable:** Unique Customer information included in datasets, at Schedule level
 - **Attributes:** Unique Customer information included in datasets, at Event level
- Find trends in your data by Flight Number of Pairing Number

Reporting 4.0



The screenshot shows the 'Report Configuration' dialog box with the 'Data' tab selected. The 'Data type' is set to 'Events'. The 'X-Axis Item' dropdown menu is open, showing a list of attributes with 'Attributes.Pairing ID' selected. The 'Bin Size' is set to 'NA'. The 'Aggregation' dropdown is set to 'Average'. The 'Order' dropdown is set to 'Effectiveness Minimum (Critical) (Average)' and the 'Order Direction' is set to 'Increasing'. The 'Limit Results' section is empty. The dialog has 'OK' and 'Cancel' buttons at the bottom right.

Report Configuration

Display Data

Data type

Schedules Events

X-Axis Item

Attributes.Pairing ID

% Effectiveness 95+

% Fatigue Hazard Area

% Fatigue Hazard Area (Crewing)

% Fatigue Hazard Area (Critical)

Attributes.Aircraft Type

✓ Attributes.Pairing ID

Augmentation Quality

Augmentation Sleep Rule

Crewing = 1

Bin Size

NA

Aggregation

Average

Order

Effectiveness Minimum (Critical) (Average)

Order Direction

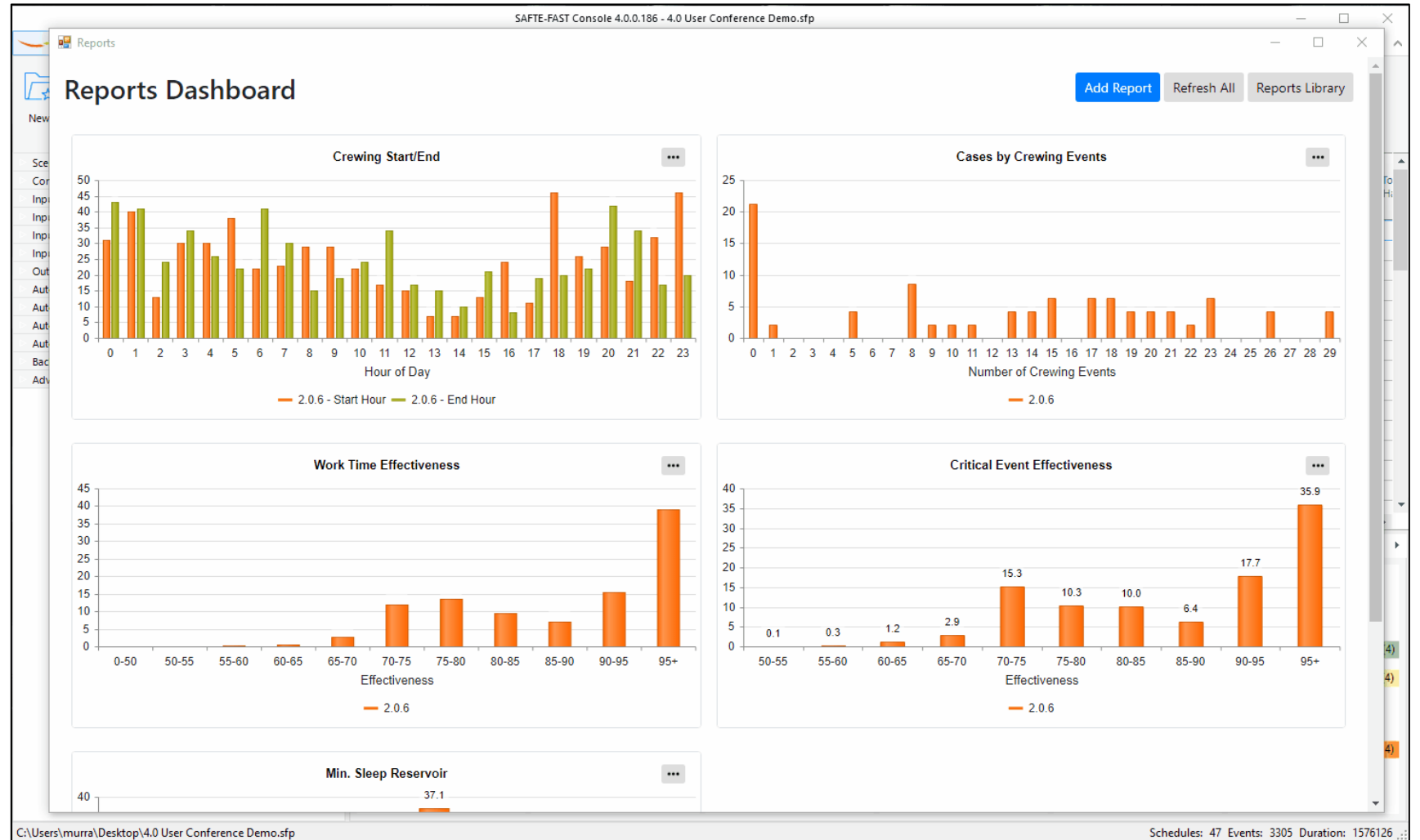
Increasing

Limit Results

OK Cancel

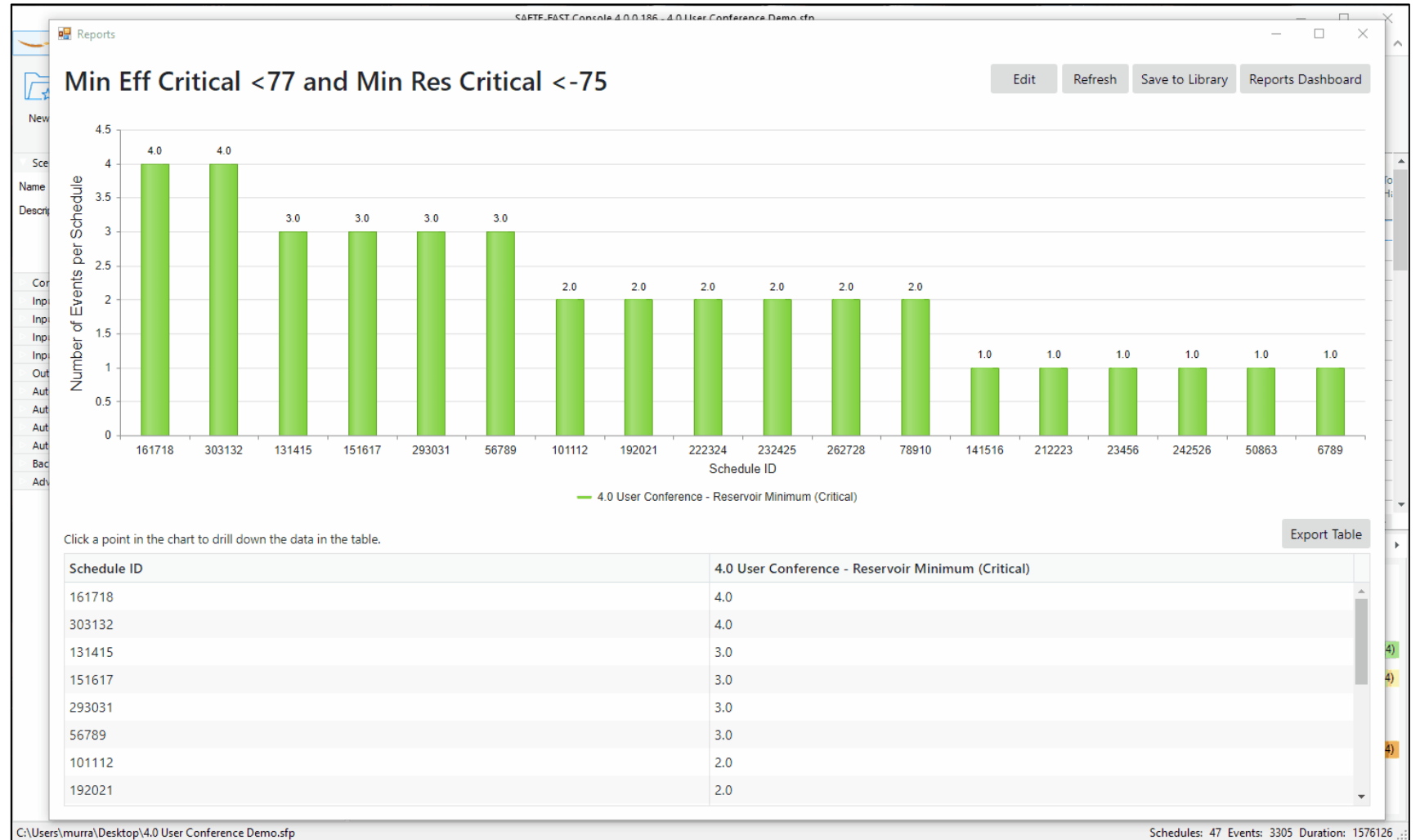
- Reports Dashboard
- Reports Library
- Easy to build and edit custom reports

Reporting 4.0



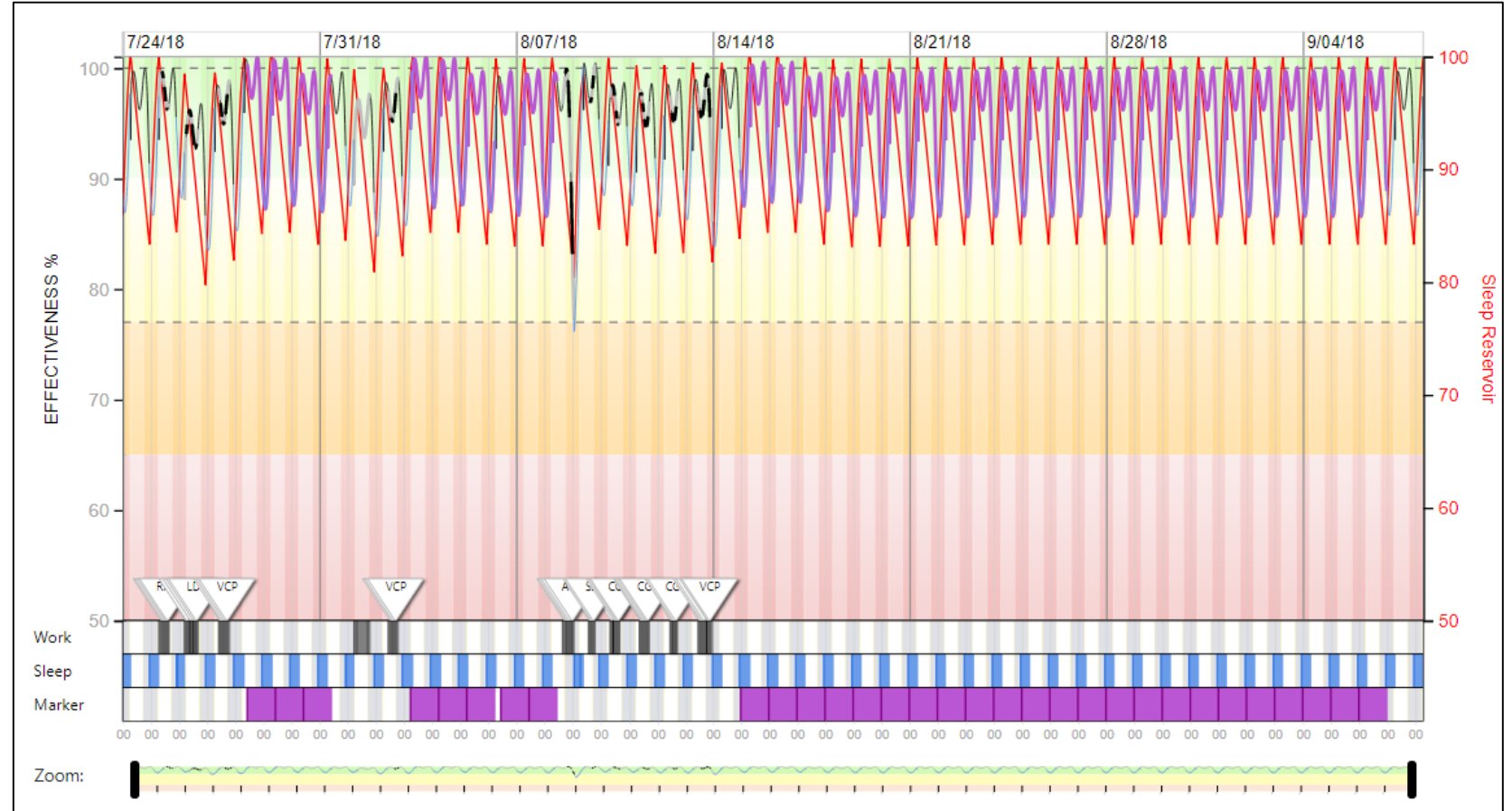
Reporting 4.0

- Exporting Functions
- Immediate Drilldown
- Customizable Metrics
- Launch Schedule Editor



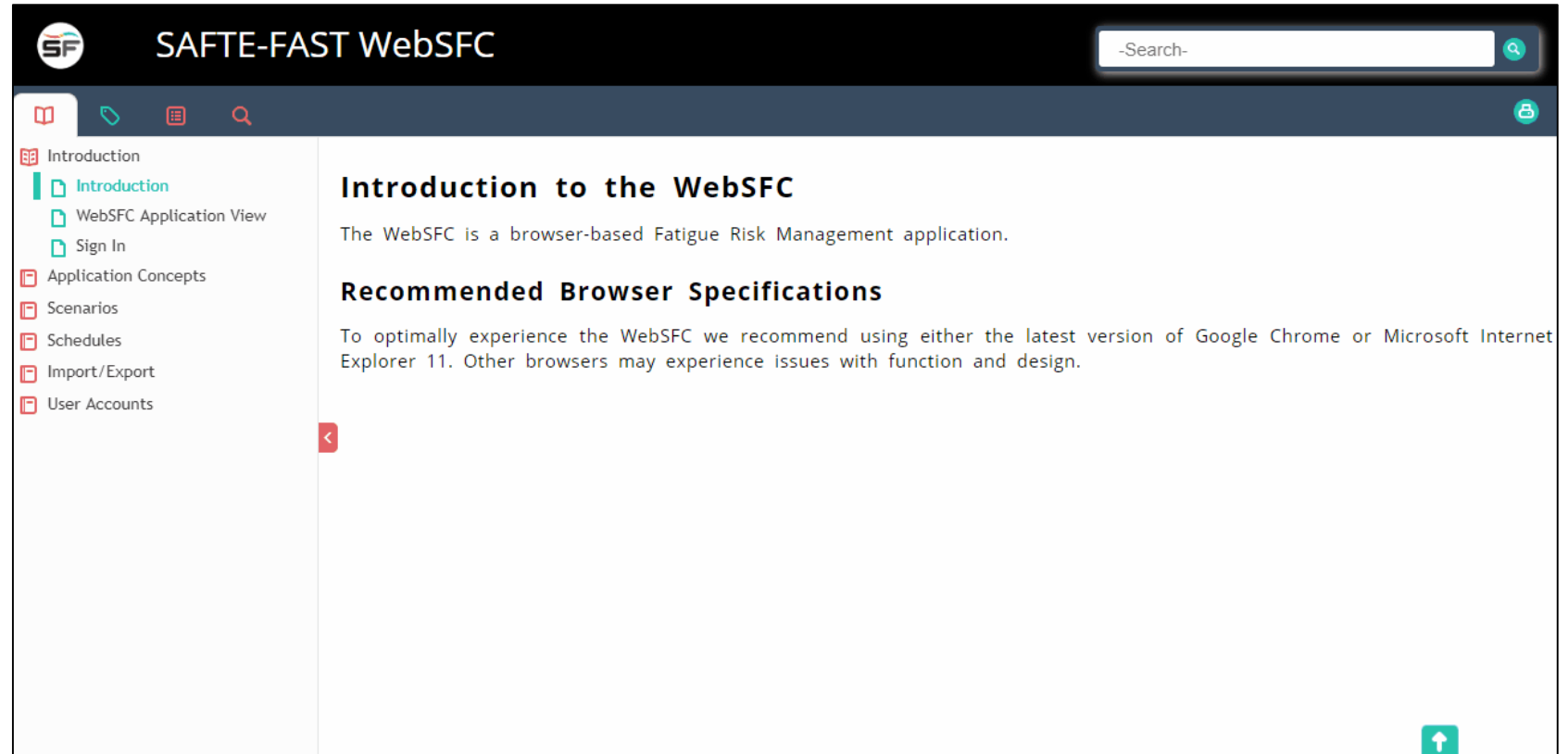
Non-Crewing Event Markers

- Allow configured codes to be interpreted as markers instead of ignored
- Allow for Markers to be used to depict Non-Crewing Event Codes
- Can be used in analysis between planned and actual for days off, reserve
- Will not change Effectiveness or Sleep Reservoir



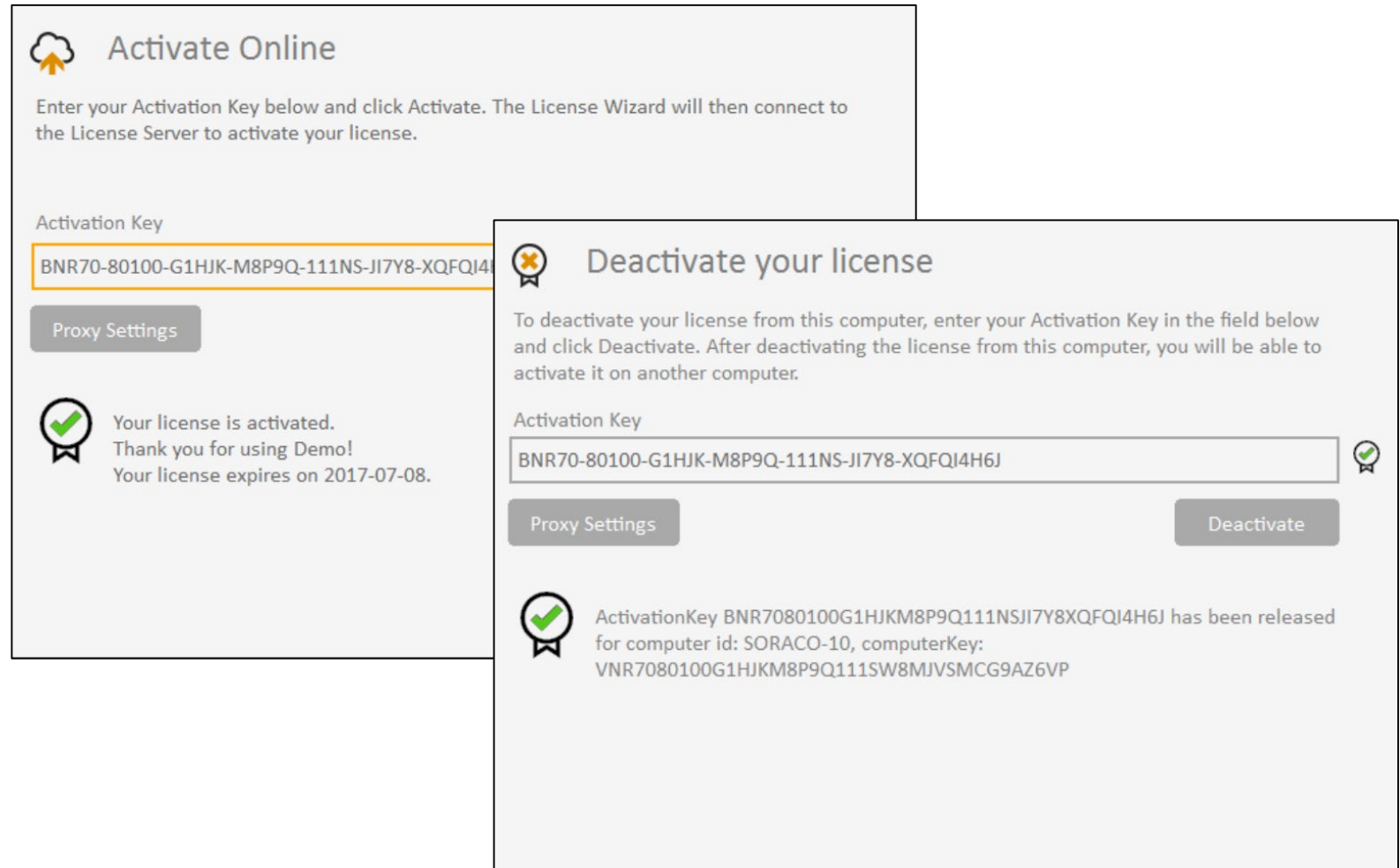
- SFC & WebSFC
- User Friendly & Intuitive Format
- Easily Find Information
- Multi-media Content

HTML5 User Manuals



- No longer controlled by IBR
- Customer will receive a set of serial numbers (per user requirement)
- Serial Number can be managed as required
 - Activate
 - Deactivate
 - Re-allocate
- No longer require annual license renewals
- Customer will need to re-license with IBR when transitioning to 4.0

Licensing Enhancements




Activate Online

Enter your Activation Key below and click Activate. The License Wizard will then connect to the License Server to activate your license.

Activation Key
BNR70-80100-G1HJK-M8P9Q-111NS-JI7Y8-XQFQI4H6J

Proxy Settings


 Your license is activated.
Thank you for using Demo!
Your license expires on 2017-07-08.

Deactivate your license

To deactivate your license from this computer, enter your Activation Key in the field below and click Deactivate. After deactivating the license from this computer, you will be able to activate it on another computer.

Activation Key
BNR70-80100-G1HJK-M8P9Q-111NS-JI7Y8-XQFQI4H6J

Proxy Settings Deactivate

 ActivationKey BNR7080100G1HJKM8P9Q111NSJI7Y8XQFQI4H6J has been released for computer id: SORACO-10, computerKey: VNR7080100G1HJKM8P9Q111SW8MJVSMCG9AZ6VP

Workload Enhancements

SFC-1712: User Defined Workload Factors

- Currently factors exist for Time of Day, Season, ATC and Terrain.
- In 4.0 the user will be able to define custom factors. These custom factors can be named as required and will contribute to the total workload score. **Ex. Non-Precision Approaches**
- Additional Conditions will be made available outside of simply location. These will include Labels and Crewing. **Ex. TRG Label for Training**

Custom Weighting

- Users can define the weight of each factor, giving some factors more or less significance



Workload Enhancements

SFC-1129: User Defined Look-back Period

- Currently a 72 hour look-back is used. In 4.0, the user will be able to define the look-back period.
- **Potential Use:** Regional Operators with pairings longer than three days that include a high number of legs.

SFC-1770: Multiple Event Triggers

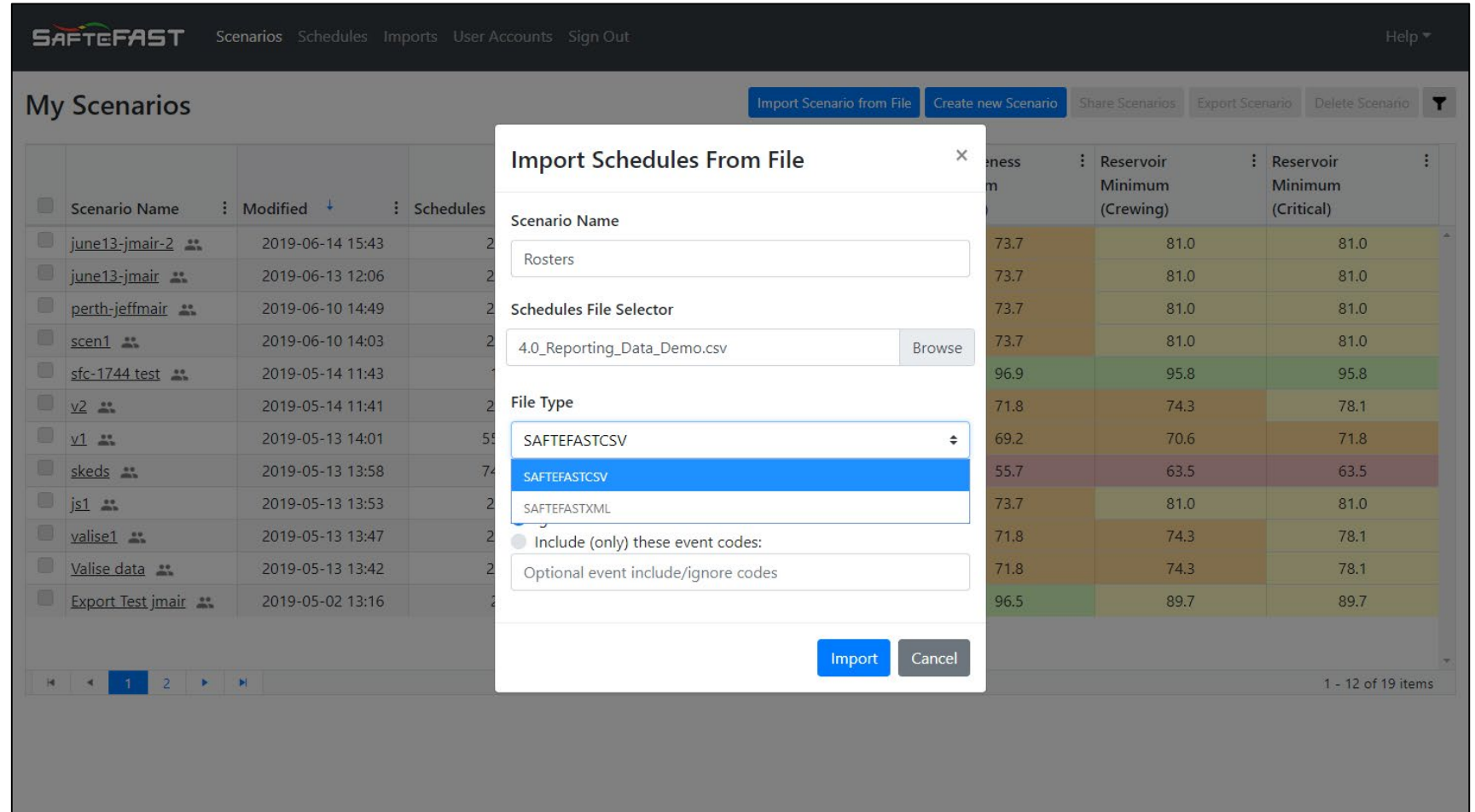
- Time periods can be configured to define how often workload should be incurred during an event.
- **Potential Use:** For Shift Work, factors can be triggered every 60 minutes, incurring a weight of 0.5 each time. So, an 8 hour event will add $(8 * 0.5)$ 4 units to the total score.



Data Importers

- SAFTE-FAST CSV
- SAFTE-FAST XML

Importing Data



SAFTEFAST Scenarios Schedules Imports User Accounts Sign Out Help

My Scenarios

Import Scenario from File Create new Scenario Share Scenarios Export Scenario Delete Scenario

Scenario Name	Modified	Schedules	Reservoir Minimum (Crewing)	Reservoir Minimum (Critical)
june13-jmair-2	2019-06-14 15:43	2	73.7	81.0
june13-jmair	2019-06-13 12:06	2	73.7	81.0
perth-jeffmair	2019-06-10 14:49	2	73.7	81.0
scen1	2019-06-10 14:03	2	73.7	81.0
sfc-1744_test	2019-05-14 11:43	1	96.9	95.8
v2	2019-05-14 11:41	2	71.8	74.3
v1	2019-05-13 14:01	5	69.2	70.6
skeds	2019-05-13 13:58	7	55.7	63.5
js1	2019-05-13 13:53	2	73.7	81.0
valise1	2019-05-13 13:47	2	71.8	74.3
Valise data	2019-05-13 13:42	2	71.8	74.3
Export Test jmair	2019-05-02 13:16	2	96.5	89.7

Import Schedules From File

Scenario Name: Rosters

Schedules File Selector: 4.0_Reporting_Data_Demo.csv [Browse]

File Type: SAFTEFASTCSV

Include (only) these event codes:
Optional event include/ignore codes

Import Cancel

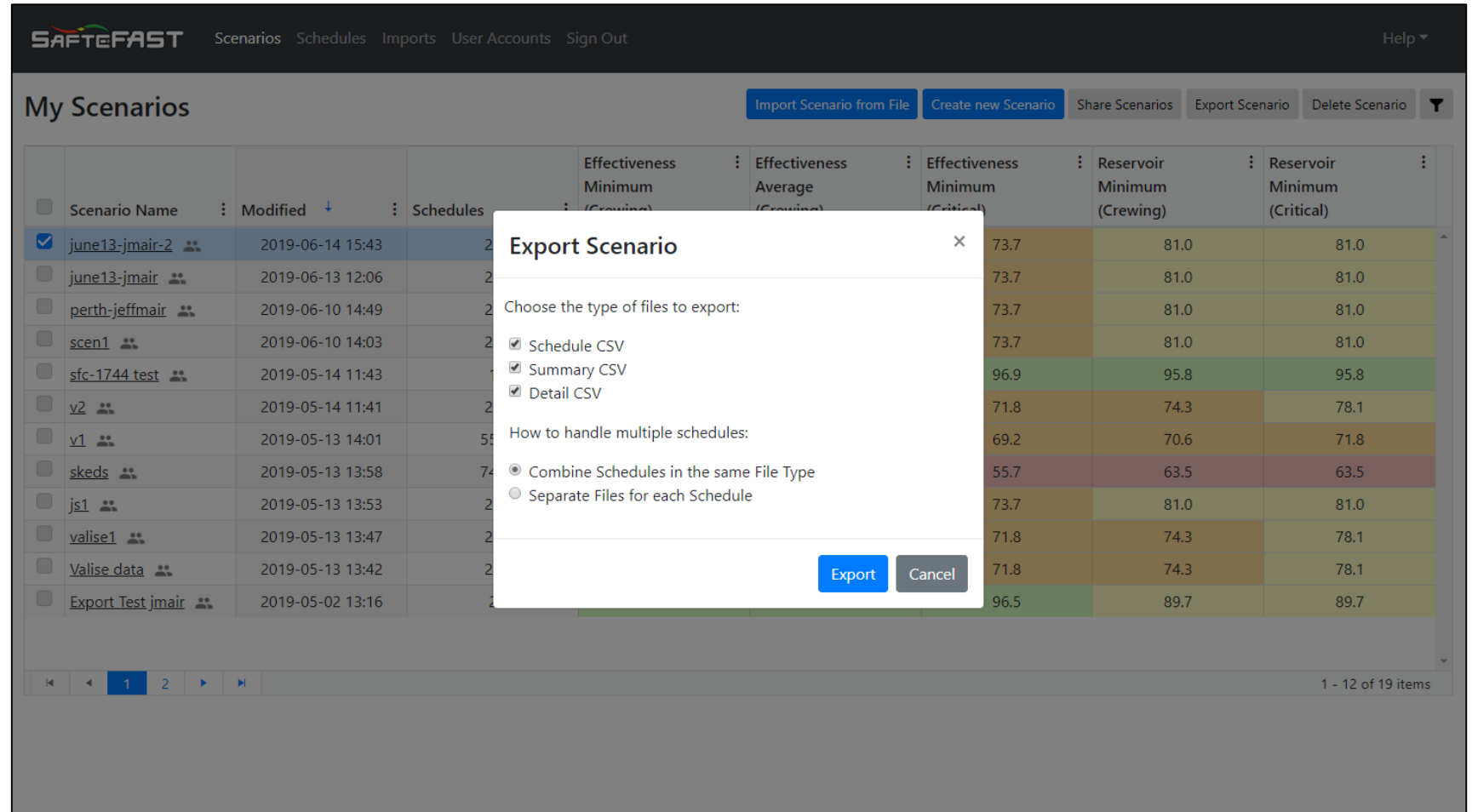
1 - 12 of 19 items



Data Exports

- Exporting for:
 - Summary CSV
 - Schedule CSV
 - Detail CSV
- Files can be generated individually or combined in one file

Exporting Data



The screenshot shows the SAFTEFAST web application interface. At the top, there is a navigation bar with the SAFTEFAST logo and links for Scenarios, Schedules, Imports, User Accounts, and Sign Out. A 'Help' dropdown is also visible. Below the navigation bar, there are buttons for 'Import Scenario from File', 'Create new Scenario', 'Share Scenarios', 'Export Scenario', and 'Delete Scenario'. The main content area is titled 'My Scenarios' and contains a table with the following columns: Scenario Name, Modified, Schedules, Effectiveness Minimum (Crewing), Effectiveness Average (Crewing), Effectiveness Minimum (Critical), Reservoir Minimum (Crewing), and Reservoir Minimum (Critical). The table lists several scenarios, with 'june13-jmair-2' selected. An 'Export Scenario' dialog box is open over the table, allowing the user to choose the type of files to export (Schedule CSV, Summary CSV, and Detail CSV) and how to handle multiple schedules (Combine Schedules in the same File Type or Separate Files for each Schedule). The dialog box has 'Export' and 'Cancel' buttons.

Scenario Name	Modified	Schedules	Effectiveness Minimum (Crewing)	Effectiveness Average (Crewing)	Effectiveness Minimum (Critical)	Reservoir Minimum (Crewing)	Reservoir Minimum (Critical)
<input checked="" type="checkbox"/> june13-jmair-2	2019-06-14 15:43	2	73.7	81.0	81.0	81.0	81.0
<input type="checkbox"/> june13-jmair	2019-06-13 12:06	2	73.7	81.0	81.0	81.0	81.0
<input type="checkbox"/> perth-jeffmair	2019-06-10 14:49	2	73.7	81.0	81.0	81.0	81.0
<input type="checkbox"/> scen1	2019-06-10 14:03	2	73.7	81.0	81.0	81.0	81.0
<input type="checkbox"/> sfc-1744 test	2019-05-14 11:43	1	96.9	95.8	95.8	95.8	95.8
<input type="checkbox"/> v2	2019-05-14 11:41	2	71.8	74.3	78.1	74.3	78.1
<input type="checkbox"/> v1	2019-05-13 14:01	55	69.2	70.6	71.8	70.6	71.8
<input type="checkbox"/> skeds	2019-05-13 13:58	74	55.7	63.5	63.5	63.5	63.5
<input type="checkbox"/> js1	2019-05-13 13:53	2	73.7	81.0	81.0	81.0	81.0
<input type="checkbox"/> valise1	2019-05-13 13:47	2	71.8	74.3	78.1	74.3	78.1
<input type="checkbox"/> Valise data	2019-05-13 13:42	2	71.8	74.3	78.1	74.3	78.1
<input type="checkbox"/> Export_Test jmair	2019-05-02 13:16	2	96.5	89.7	89.7	89.7	89.7

Shift Work Module

Shift Work

- Feature Parity with the SFC



A large commercial airplane is shown from a low-angle perspective, flying through a clear blue sky with scattered white clouds. The sun is low on the horizon, creating a warm, golden glow. The text "The Worldwide Leader in Aviation for Fatigue Management Solutions" is overlaid in white, bold, sans-serif font.

The Worldwide Leader in Aviation for
Fatigue Management Solutions



Questions?

Conclusion of Presentation