# Fatigue Manager Release Notes

Current Version: 3.3.0

## December 2015 – 3.3.0 Released

Version 3.3.0 has been released. It introduces a new feature and a number of improvements as well as fixes to bugs that were previously identified.

### 1    New Feature

Ability to generate PDF's of all operator reports associated with respective crews in a single click instead of generating the report individually. Also the user can scheduled the report, so that the reports are automatically emailed to the configured email address.

### 2    Improvements

- The most notable is the improvement in the presentation of the PDF reports.
- Sorting of the tables and the drop list throughout the application has been standardized.
- Audit trail export has been changed from PDF to CSV export.
- Confirmation message appears when headwear is assigned to operator.
- Added Acknowledgement time stamps in Alarm view and Snapshot Plus email reports.
- Added system and Fatigue Manager versions in the footer of the email reports.
- Language support for US-English and Mongolian.
- New algorithm for the headwear ID in hexadecimal, starting with 2D.

### 3    Bug Fixes

- The list of operators displayed as High Risk Individual and Possible Headwear Fitting is fixed to display the operators who have more than 12 hours of data.
- Limited the status that can trigger the alarms.
- Error and missing translations in Spanish.

### 4    Known Issues

- **Pagination:** The pagination in SmartCap overview does not work as desired.
- **User Interface:** The alignment in the new alarm rules page changes, when there are errors in the alarm rules.
- **Error Messages:** Some error messages are not translated into Spanish.
- **Scheduled Reports:** When the Bulk operator reports are scheduled, sometimes there is a delay in the generation of the reports, when there are large number of operators involved.
- **Fatigue History Graph:** When generating the report within a daylight savings area during daylight savings and the data is from a time when daylight savings was not active, the time will be out by one hour.
- **Fatigue Data Import**: When importing a large number of files (>100), the system may become unresponsive. The maximum number of files may vary. It depends on the file size, hardware specifications and network connection speed the maximum number of files may vary.
- **Alarm Rules:** Tracking of changes to alarm rules has not been implemented as of yet. Therefore it is not possible to generate a report based on previously deleted alarm rules.
- **Notifications:** Only available on Linux servers (such as the cloud hosted version of Fatigue Manager), not on Windows.
- **Zooming:** Zooming on shift history graphs does not work effectively when there is not much data in the graph.

- **Time zones:** Not compatible with [half hour time zones](#); it is recommended to select a time zone 30 minutes ahead or behind.
- **Assignment of headwear and plants:** It is not possible to assign headwear and/or plants historically.

## February 2015 - 3.2.2 Released

*Version 3.2.2 has been released. It introduces a number of improvements and bug fixes.*

### 5    Changes
- Snapshot reports – HTML improvements.
- Bug fixes.

### 6    Known Issues
- **Sorting:** Sorting on status of plants in the *Fleet Overview* does not work properly.
- **Fatigue Data Import**: When importing a large number of files (>100), the system may become unresponsive. The maximum number of files may vary. It depends on the file size, hardware specifications and network connection speed the maximum number of files may vary.
- **Alarm Rules:** Tracking of changes to alarm rules has not been implemented as of yet. Therefore it is not possible to generate a report based on previously deleted alarm rules.
- **Alarm Rules:** A maximum of 15 active alarm rules in total can be enabled Fatigue Manager.
- **Alarm Rules:** Once an alarm rule is used in a notification rule, the alarm rule can only be deleted by a SmartCap administrator.
- **Notifications:** The timestamp in the SMS notifications is potentially incorrect (not the timestamp of the alarm that triggered the notification).
- **Notifications:** Only available on Linux servers (such as the cloud hosted version of Fatigue Manager), not on Windows.
- **Audible Control Room Alarm:** The audible alarm may take a long time to load.
- **Internet Explorer**: Not all features work in Internet Explorer Compatibility Mode. Make sure to disable this.
- **Zooming: Z**ooming on shift history graphs does not work effectively when there is not much data in the graph.
- **Time zones:** Not compatible with [half hour time zones](#); it is recommended to select a time zone 30 minutes ahead or behind.
- **Assignment of headwear and plants:** It is not possible to assign headwear and/or plants historically.

## January 2015 - 3.2.1 Released

*Version 3.2.1 has been released. It introduces a number of improvements as well as fixes to bugs that were previously identified.*

### 1    Improvements
SMS notifications will be delivered by email if the notification was triggered on old data (data buffered for more than one hour).

The access rights of the control room user have been changed to give them more access to reporting and administrative features.

### 2    Bug Fixes
- Correction to SmartCap data hours calculation in Snapshot and Data Overview reports.

- Notifications will be logged / triggered, even when the operator's contact has no contact details.
- Data import result messages are now also compatible with Chrome.
- Importing log files from the "Log Import" menu requires double-click under IE8 and IE10.
- Fatigue Manager will report "no data to display" rather than generating an empty report – on all reports.
- Missing translations (Spanish) and textual improvements.
- Other minor bug fixes.

## December 2014 – 3.2.0 Released

*Version 3.2 introduces security enhancements allowing Fatigue Manager to be hosted in the cloud! It is available for users of SmartCap Systems with back-to-base comms enabled as well as for users that upload fatigue data manually – e.g. users of SmartCap Portable Systems.*

### 1    Cloud Hosted Fatigue Manager

Version 3.2 supports secure communication (SSL) between SmartCap Systems and the Fatigue Manager as well as a secure connection to the Fatigue Manager web-application from client computers. This allows the Fatigue Manager to be hosted in the cloud.

### 2    SMS and Email Notifications

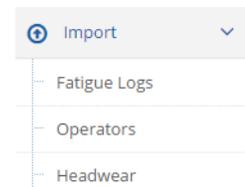It is now possible to setup SMS and Email Notifications based on number of alarms over a pre-defined time period.

At this stage this feature is only available for Linux hosted servers, i.e. not on Windows.

## October 2014 – 3.1.1 Released

*Version 3.1 incorporates a number of features aimed at offering the reporting capabilities of Fatigue Manager to users of SmartCap Portable Systems or Mining Systems without back-to-base communications capabilities.*

### Data Import

Version 3.1 allows users to import fatigue data downloaded from SmartCap displays. It will process each of the selected files and store fatigue and alarm data in the Fatigue Manager. Control room alarms are auto-acknowledged during import.



The new functionality also includes import of headwear and operators from a CSV file. When importing operators the user can automatically assign the operator to a crew as well as perform the headwear assignment.

## July 2014 - 3.0.2 Released

*Version 3.0 has been released. It features over-the-air (OTA) firmware upgrades as well as a stack of other features such as clustered alarms, real-time comms status indication for each plant and a count of "alarms in current shift" for a designated alarm rule.*

### 1    Firmware Upgrades

Version 3.0 of Fatigue Manager introduces over-the-air (OTA) firmware upgrades. That means it is possible to upgrade the firmware on all SmartCap devices in the trucks (base unit, display and processor cards) remotely from the Fatigue Manager server. The upgrade happens automatically. There is no need for operator or field technician to perform any tasks in the truck.

For safety reasons, the automatic upgrade will not be performed if the operator recently recorded a Fatigue Level 3+ in the last 30 minutes.

Firmware versions are managed from the Firmware Management page. The page shows the firmware images that are currently in the database along with the respective version numbers for each component (base unit, display, processor card).
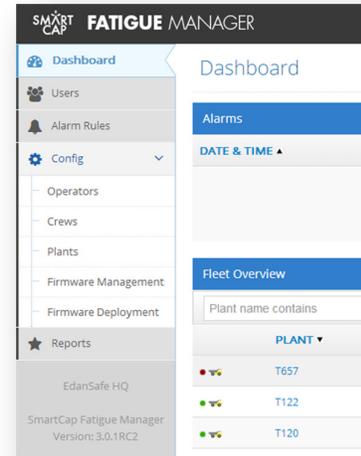
Firmware can be both added and deleted from the database using this page. The firmware management page is sortable on each column.

The OTA upgrade is performed in two phases:

**A: Download:** the new firmware is sent to the display in one or more plants.

**B: Install:**
Send the command to one or multiple plants to upgrade all SmartCap equipment: display, base unit and processor cards.



**NOTE:** At the moment the OTA firmware upgrade is a feature that's only accessible for EdanSafe system administrators and EdanSafe will offer full support when clients wish to upgrade firmware in plants.

## 2    Clustered Alarms

An operator may get multiple fatigue alarms in a short time frame. Even though they show up as separate alarms, some may consider this cluster of alarms as a single event.

In this release there is the option to cluster alarms of the same alarm rule in reports. In each report, e.g. 'SmartCap Snapshot' the number of 'alarm clusters' as well as the total number of alarms is shown:



**Last 30 Days**
73 (114)
42 (43)

To enable this, simple specify a cluster duration for the relevant alarm rule(s).



Cluster Duration    1    (in minutes)
Alarms that occur within this time limit will be classed as a single alarm. Leave blank if no clustering is required.
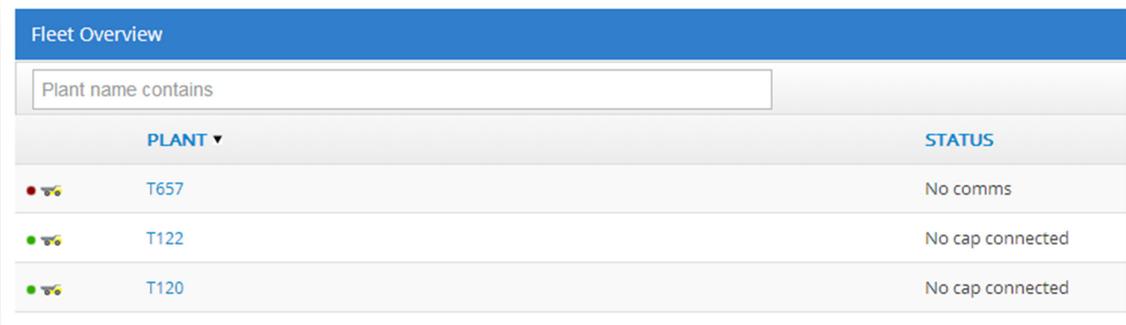
## 3    Show count of alarms in Fleet Overview

The fleet overview on the dashboard shows red dots to indicate the number of alarms an operator has had in the current shift. The count applies to a designated alarm rule and has a maximum of 5 alarms.



| | OPERATOR |
|---|---|
| | 8 Arjen Robben |
| | 12 Klaas-Jan Huntelaar •• |



| STATUS | OPERATOR |
|---|---|
| Fatigue Level 3 | 8 Arjen Robben |
| Fatigue Level 3 | 12 Klaas-Jan Huntelaar •• |

## 4    Plant Online/Offline

A comms status icon has been added for each plant in the Fleet Overview to indicate whether a plant's comms is up or down. A green dot indicates the system in the plant is connected to Fatigue Manager; a red dot indicates the connection has been lost.



**NOTE:** on *"version 1 systems"* a status change is required to update the comms status. If a system has "No cap connected" the status doesn't change

## 5    System Health Report

In this release we are trialling a System Health Report. Initially this report will only be visible for system administrators.

## 6    Other improvements

- Added a plant assignment button on the plant management page (requires assign privileges)
- Added a headwear assignment button on the operator management page (requires assign privileges)
- Site name is visible in the sidebar
- Crew name is shown on operator details page
- Speed improvements for Snapshot report
- Added system version to plant details page
- Changed fatigue status by hour of day chart to auto-scale on the vertical axis
- Spanish translation improved

## 7    Bug Fixes

- Unacknowledged alarms now shown in the control room irrespective of whether the base alarm is enabled for the control room

# June 2014 - 2.3.3 Released

*Version 2.3.3 has been released. It features speed improvements in generating reports as well as data exports. The improvements made in this release will address the webserver stability issues that can be experienced when dealing with large amounts of data.*

## Bug Fixes

- Increased performance of fatigue log utilisation calculations to speed up reports.
- Modified fatigue data export to start streaming data to the client as soon as the SQL query provides data. User will see the file downloading in their browser and web application remains responsive.

- Optimised fatigue data export generation.

# May 2014 - 2.3.0 Released

*Version 2.3.0 has been released. In this version a new user role has been added for maintenance personnel. The access rights of the other roles have also been modified, making it more suitable for mining operations.*

*This release also features a number of improvements to reporting, general bug fixes and translation improvements for the Spanish language.*

## 1    User Roles

A new role has been introduced for maintenance personnel. It has access plant information, but no permission to act on alarms or view fatigue reports. The permissions of each of the user roles have been amended as per table below.

| Action | Control Room | Supervisor | Maintenance | Admin |
|---|---|---|---|---|
| Fleet Overview | Yes – no fatigue levels | Yes – no fatigue levels | Yes – no fatigue levels | Yes – incl fatigue levels |
| Acknowledge Alarms | Yes | X | X | Yes |
| Alarm Audible | Yes | X | X | X |
| Alarm Snooze Button | Yes | X | X | X |
| Assign/Unassign Trucks | Yes | Yes | Yes | Yes |
| Assign/Unassign Headwear | Yes | Yes | Yes | Yes |
| Edit Own User Profile | X | Yes | Yes | Yes |
| Reporting *(incl PDF export)* | X | Yes | X | Yes |
| Data Export | X | Yes | X | Yes |
| Users | V | VAE | X | VAED |
| Alarm Rules | V | V | X | VAED |
| Config >> Operators | X | VAE | X | Yes |
| Operator Profile Page | X | Yes | X | VAED |
| Config >> Crews | V | VAE | X | VAED |
| Config >> Plants | V | VAE | VAED | VAED |

**NOTE:** *V, A, E & D are used to indicate view, add, edit and delete.*

## 2    Reporting Improvements
- Fixed issue where date selector on Shift Investigation Report didn't work reliably.
- Updated date range selector to show the normal cursor when hovering over the dates in the selector rather than the disabled cursor. Also changed the selector to immediately show both calendars rather than waiting for the user to click on the "to" or "from" labels.
- Added the option for internet explorer users to resize the Window of the PDF export.

## 3    Bug Fixes
- Fixed issue where disabling users did not work properly.
- Updated user table to be sortable by either first name or last name.
- Updated the loading icon in the top right hand corner to only show once loading has been in progress for longer than 500ms.

## 4    Language
Improved translations for the Spanish language have been added and a few grammatical errors have been corrected.

# March 2014 - 2.2.3 Released

*Version 2.2.3 has been released. This is a patch released on top of version 2.2.2. It fixes a stability issue on automated reports and CSV data export on large quantities of data.*

## Bug Fixes

- High memory usage when exporting fatigue data to CSV potentially caused the application to fail. This addressed by significantly reducing the memory usage.
- Fixed bug in generation of snapshot reports where data for the latest shift would be zero, especially if a lot of data for that shift was generated.
- Fixed bug where reports in specific Microsoft Windows Server configurations would generate an internal server error
- Fixed bug in CSV data export (fatigue data and alarm data) where unicode data in the database would fail to write to the csv file

# February 2014 - 2.2.2 Released

*Version 2.2.2 is a patch released on top of version 2.2.1. It fixes a stability issue on some translations in the automated reports.*

## Bug Fixes

- Fixed issue where translations in the snapshot reports caused the reports to throw an exception because they didn't have access to the request.

# February 2014 - 2.2.1 Released

*Version 2.2.1 has been released. This is a small bug fix release on top of version 2.2.0. It fixes a permission issue that may occur in certain circumstances when generating pdf reports.*

## Bug Fixes

- Fixed PDF generation for a number of reports when user is a supervisor.

# February 2014 - 2.2.0 Released

*In version 2.2.0 a number of additional reports are introduced and it is the first multi-language version of Fatigue Manager. The languages included in this release are English and Spanish.*

*This release also features a number of improvements on reporting and general bug fixes.*

## 1    Multiple Languages

Fatigue Manager is now available in multiple languages. Initially Spanish has been added. Translations are available throughout the entire web application, including the reporting, email reports and configuration pages.



## 2    New Reports

**Automated Email Reports**: there are now 3 automated email reports.

1. **Snapshot**: summary and usage statistics of the most recent shift
2. **AlarmView***: listing operators that have received alarms, ranked by number of alarms and a list of every alarm in the shift.
3. **Snapshot Plus**: Snapshot and AlarmView* combined

* This report can be configured for one particular alarm or for all alarms. It can be configured with/without the operator name displayed.

**Data Export**:

In the Report section two new reports have been added. They are *Fatigue Data Export* and *Alarm Data Export*.

The user can select a date range and a few other parameters from the input screen. In total there are 12 columns available to be selected for both reports. It is up to the user to select the columns that are of interest.

Once the report is generated it can be viewed on-screen and exported to a file (CSV) for analysis using spreadsheet software, e.g. MS Excel.

| Date Range | 21/02/2014 - 28/02/2014 |
| Operator | All |
| Plant | All |
| Columns | Fatigue Log ID, Timestamp, Plant Name, Operator ID, Operator Last Name, Operator First Name, Headwear Label, Headwear ID, Status, Status Name, Shift Start Date/Time, Shift End Date/Time |

SHOW REPORT

## 3    Report Improvements

The precision on the alarm rate in the Operator Report and Data Overview reports have been increased to always show 4 decimal places.

Update of operator alarm reports to also show alarms that cannot be linked to an operator.

Update of operator alarm statistics to show "No Operator ID" if no operators with no operator ID exists for the alarm, e.g. "no cap connected alarm" or operator ID unknown.

Updated reports to use the local database timezone when calculating dates for improved reporting.

Updated system uptime and utilisation statistics to deal with edge cases where statuses like "no cap connected" and "plant off" biased the calculation results.

Fixed inconsistencies in report naming. Reports are named consistently throughout the application.

## 4    Other improvements

Addition of administrative tools to update a database to the correct database version regardless of what version it currently is. These tools get the current database version, and do the proper updates required to get it to the latest version.

Correction to the utilisation calculation.

## 5    Bug Fixes

Fixed bug in fatigue history graphs where data would not appear correctly. This would occur on the 29-31st of January, 31st of March, 31st of May, 31st of August, and the 31st of October. The issue is understood and has been corrected.

Fixed bug in PDF generation, where it would fail to complete if the text contained non-ascii, i.e. unicode characters. This became apparent when the first non-English language was introduced.

- Various database fixes.
- Fixed bug in crew page where too many pages were shown. This is now limited to a single page for all crews.

- Fixed issue in database upgrade script related to 'deactivation' of plants. The issue occurs when using old versions of the communication application.

## January 2014 – 2.1.0 non-distributed release

*Version 2.1.0 addressed a number of features specifically requested by one particular client. This is a non-distributed release. The features and fixes addressed in 2.1.0 are released to the public and captured in the release notes of 2.2.0.*

## 2.0.5

- Fixed issue with Operator SmartCap Report PDF generation
- Fixed incorrect units for alarms in the Snapshot Report 6 month column
- Fixed incorrect column name in the SmartCap Data Overview Report.
- Data Overview Report now allows the user to either filter on a single alarm or include all alarms in the report.
    - **Added a second Snapshot Report (only supports email) which details alarm information for the shift.**
    - Shift history graph now has fatigue value first and shift date/time second.
    - Operator Shift Report added restriction to ensure that only those operators with a fatigue status in [2, 3, 4, 5, 6, 11, 12] i.e. SmartCap connected are included.
    - Fixed issue when filtering on plant in the operator shift investigation report. This required a DB change and a DB migration script.
    - Added fatigue status ids for system on.
    - Shift chart in shift investigation report now shows non-fatigue statuses as 0.
    - **Alarm rate is now alarm/hour instead of alarm/shift.**
    - **Added SmartCap Data Overview report.**

## 2.0.4

- Fixed issue where snapshot report would show percentages of 0.0% for Cap Off and Utilisation when running with an MS SQL Server.
- Fixed issue where the pie chart in the operator report would not show correctly when running with an MS SQL Server.
- Pie chart now shows the level and percentage in the tooltip for each segment.
- Shift history list has been removed from the right of the graph in the operator profile.
- The operator selection box on the operator and shift reports now contains the operator name and is searchable on both name and employee id.
- Fixed issue where the pie chart and snapshot percentages on the operator report did not match.
- Added headwear column to the operator list.
- Fixed issue where 6 month site average was incorrect on the operator report.