



Stratus EEG Release Notes

Software Version 3.0

What's New in Version 3.0?

The main focus of the Stratus EEG version 3.0 is to enable remote monitoring of multiple patients. This is important in order for users to comply with the new CPT codes for EEG that will come in effect in the USA on January 1st 2020. The new Team Monitor application is the tool proposed to perform the monitoring. This is accompanied with the periodically run assignment task, where exams that need to be monitored are automatically assigned to monitoring resources. The inspection comment feature allows documentation of periodic inspection during monitoring, including report generation. The multi-site accounts feature enables monitoring of patients across several sites by the same monitoring team, while still keeping a level of independence.

Another important new functionality is the Active Directory support, where Stratus user accounts can be linked to active directory user accounts for authentication and calculation of heart rate from ECG using a modified Pan Tompkins algorithm.

Team Monitor (ER #11537, #11459)

The Team Monitor is a new application specifically designed to facilitate remote monitoring of a large number of patients by a team of operators. It can operate in two modes: "Intermittent" and "Continuous".

The Team Monitor application manages monitoring of a number of patients assigned to the logged-in user. In continuous mode, the EEG and video is fed continuously to the display. One patient at a time can be selected for remote control, which enables impedance test and other features. In intermittent mode, only one exam at a time shows live EEG and video data. The operator switches between exams displayed in remote control view with a single click. A countdown timer for each exam displays the time remaining until next inspection is due. Health indicators alert the user to common problems such as amplifier connection lost and system mains power detached.



Automatic Assignment of Exams for Monitoring (ER # 11447)

Patient exams are scheduled for monitoring by assigning an exam type with a specific monitoring type. The requirements of the monitoring, such as inspection frequency and maximum patients per monitoring operator, are set through the monitoring type.

The assignment task runs periodically on the Stratus server, identifying all exams that need monitoring and assigning them to be monitored.

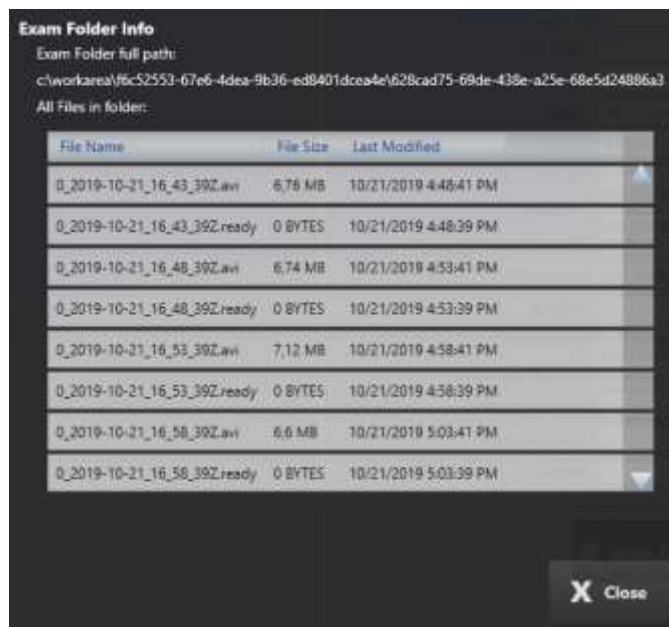
When using this feature, it is suggested to create user groups with 2–3 members to cover in shifts the monitoring of a group of patients. The patient exams are assigned to the group, rather than to the individual, making shift changes effortless.

Monitoring Inspection Comments (ER #769)

Inspection comments are new types of events that can be inserted during acquisition, both from the Acquire Pro application and the Team Monitor. These events capture the results of periodic inspection of the exam. The inspection comment is stored within the EEG file as an event, but also in the Monitoring Log on the main server such that it is always available. A report containing the Monitoring Log can be automatically generated.

Exam Folder Information in Remote Control (ER #11464)

Exam data files, both EEG and video, can be viewed during internet remote control by clicking the “Exam Folder Info” button in the Properties section of the Exams tab.



Multi-site Accounts (ER #10781)

With this functionality, it is now possible to run several Sites from the same cloud account. This has several benefits, including the ability to delegate exam reporting between sites and facilitate cooperation in monitoring patients. Each customer, e.g. a hospital, is defined as a “Site” in the account. The data for each site is kept separately, usage is billed separately, and

the Sites manage their own users. By default, only users tied to the Site have permission to view the data. However, it is possible to assign permissions across sites, enabling the monitoring of exams from several Sites simultaneously by the same user. Sites are set up by the system admin.

Customer Accounts for Cloud Archive (ER #10781)

Customers can open their own AWS account and have exams archived to it. A Glacier Vault must be created in the desired region, and information about the account and the vault entered into the system.

Manage Sites

Sales Server User Distributor

Selected Site

Name

Customer Save Customer Cancel

Workarea Path

Cloud Archive Enabled for Site

Amazon Vault Region

Amazon Account Use Kvikna Account

AccessKey SecretKey

Create Vault Cancel

Save Changes Discard Changes Close

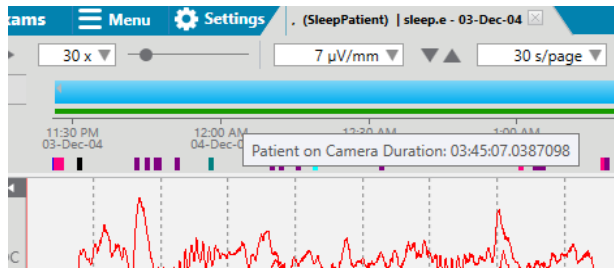
Alternatively, the Kvikna AWS cloud account can be used for a fee as previously. Each Site can use individual Vaults on the Kvikna AWS account, charged separately.

Patient Video Coverage (ER #11463)

Events to indicate whether the patient is visible in the video picture have been introduced. There are 4 events in total:

- P off Camera – Patient off Camera
- P on Camera – Patient on Camera
- P on Camera 1 – Patient on Camera 1
- P on Camera 2 – Patient on Camera 2

An overview of patient video coverage is displayed on the timeline.



The total time the patient is seen on either camera is calculated and can be included in generated reports as a ratio of the original exam duration. The report field is called "PatientVideoCoverage". Another new field, "RecordedVideoRatio", represents the total recorded video length as a ratio of the original exam duration.

Active Directory User Integration (ER #9043)

Stratus can now authenticate users using Active Directory. Set this up by connecting an LDAP server with a Site. Note that different sites can connect to different LDAP servers.

Then, User Groups within Stratus can be set to mirror User Groups within the Active Directory.

Users must be synced occasionally by an administrator that has access rights to the AD.

Passwords from users that are brought over from an AD are not stored in Stratus database. When a user logs on, the Stratus EEG server will authenticate against the AD.

Heart Rate Trend (ER #563)

A trend showing heart rate can now be generated from ECG. R-R interval is also available. The calculation relies on the Pan Tompkins algorithm with some adjustments.

Configuration Access Control (ER # 9052)

Access to allow users to change configurations settings can now be granted under Roles. Only users with Roles that have the "Edit configurations" enabled can save changes to configurations such as Montages and Perspectives.

Audit Trail for Upload (ER #9057)

When importing an exam, an audit trail is generated. The action is called *Upload exam*.

Search

Site: All Sites

By User: All Users

Date from:

Date to:

Category: All Categories

Action: Upload Exam

Search

Minimize Button on Acquire Touch (ER #10347)

The Acquire Touch application can now be minimized during acquisition. A minimize button has been added in the top right corner of the application window.

Export Trend Values (ER #9047)



Trend analysis values can be exported to a text file. This is done by the *Export* button in the Edit Trend dialog.

Interface to Camino ICP (ER #2357)

It is now possible to connect Integra Camino ICP monitors to the system through a serial interface. ICP values are stored with the EEG and can be shown during review.

Fixed issues

Issues reported by users fixed in version 3.0.

Issue #	Issue Subject
10821	System losing connection to amplifier
6244	Preview exam: Cannot add description to an annotation event
3709	Ending a recording when TrackIt is out of battery
3696	Incorrect Timestamp on initiated exam on a Client
3416	Missing patient demographics when starting Nic1 Recorder from Centrum

3238	Unable to see last placed event in Remote Control
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Known Issues

Known issues in the Stratus EEG Version 3.0

Issue #	Issue Subject	Workaround
11141	All montages and perspectives visible even though they aren't associated with the user's user groups	No workaround.
10859	Bipolar impedances are not shown in review for Nic1 exams	No workaround.
11905	Stratus to Go - Exam data disappears after clicking Amplifier setup	Close the exam and re-open.
11725	Heart rate calculation - detects heart beat even if electrodes are not connected	No workaround.
11657	Occasional "Not enough quota" error when running Team Monitor.	Restart the application.
11222	The NLEO trend displays the "%" unit, but should be μV^2 .	No workaround.