



## Zmachine<sup>®</sup> Synergy

Client Software: Study Data - Upload and Scoring  
Version 1.0



## About this Guide

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**You are advised to read and understand this entire guide before using the Zmachine Synergy.**

The information in this guide has been carefully checked and is believed to be accurate. However, in the interest of continued product development, General Sleep Corporation reserves the right to make changes and improvements to this guide and to the product(s) that it describes, at any time, and without notice or obligation. If you do not understand the instructions contained in this guide, or require assistance in setting up, using, or maintaining this equipment, please contact your healthcare provider or General Sleep Corporation.

***Caution:***

*Federal Law (USA) restricts this device to sale by, or on the order of, a physician or other qualified healthcare practitioner licensed by the law of the state in which he or she practices to use or order the use of this device.*

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## Table of Contents

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About this Guide .....	i
Table of Contents .....	ii
Introduction .....	1
Zmachine Synergy Study Data .....	1
Checking Upload Credits .....	2
Purchasing Consumable Kits and Upload Credits .....	3
Uploading Study Data .....	4
Ready for Scoring Data .....	7
Study Status .....	8
Patient Information.....	8
Attached Files.....	8
Send For Scoring.....	9
Generating Reports .....	9
Scoring Data.....	10

## Introduction

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The Synergy Client Software is a Windows application that facilitates using data acquired on the Zmachine Synergy device. Its functions include:

- Managing and viewing Zmachine Synergy user information and billing history
- Uploading new study data from the Zmachine Synergy to General
- Sending uploaded data to other users of the Synergy Client Software for scoring and/or interpretation
- Viewing and Scoring of uploaded data
- Generating reports for scored data based on customizable report templates

This Document describes the process for uploading data from the Zmachine Synergy, scoring data, and generating reports.

## Zmachine Synergy Study Data

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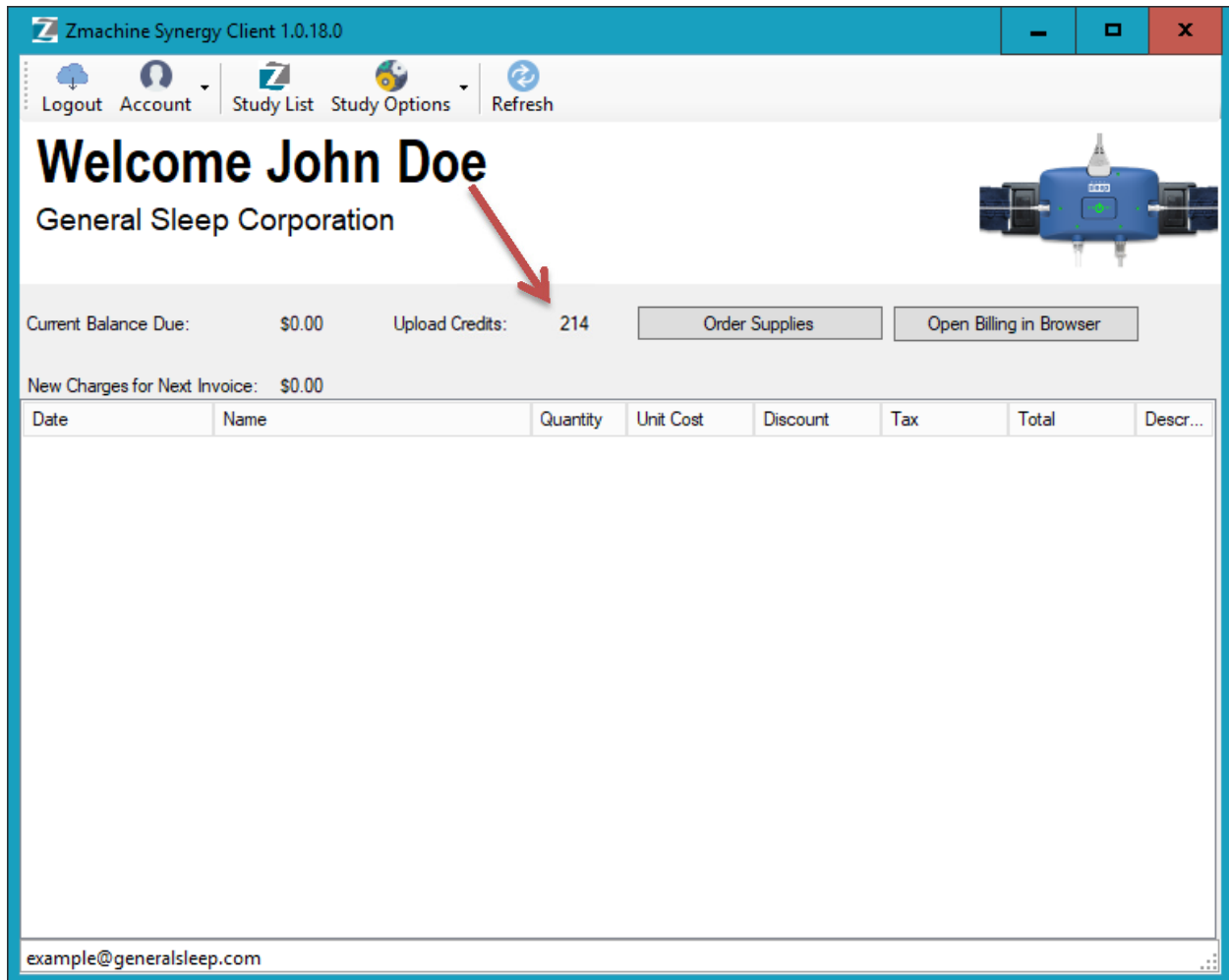
After a study has been completed with the Zmachine Synergy, the data from the device needs to be uploaded so that it can be scored, interpreted, and a report created.

The Synergy Client Software is used to upload the data from the Zmachine Synergy to the portal hosted by General Sleep Corporation. Each time study data is uploaded to the portal, an upload credit is used. Upload credits are included with each Zmachine Synergy consumables kit.

## Checking Upload Credits

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Click on the Account | Billing menu item to go to the billing screen. Your organizations current upload credit count is listed along the top, center of the panel.



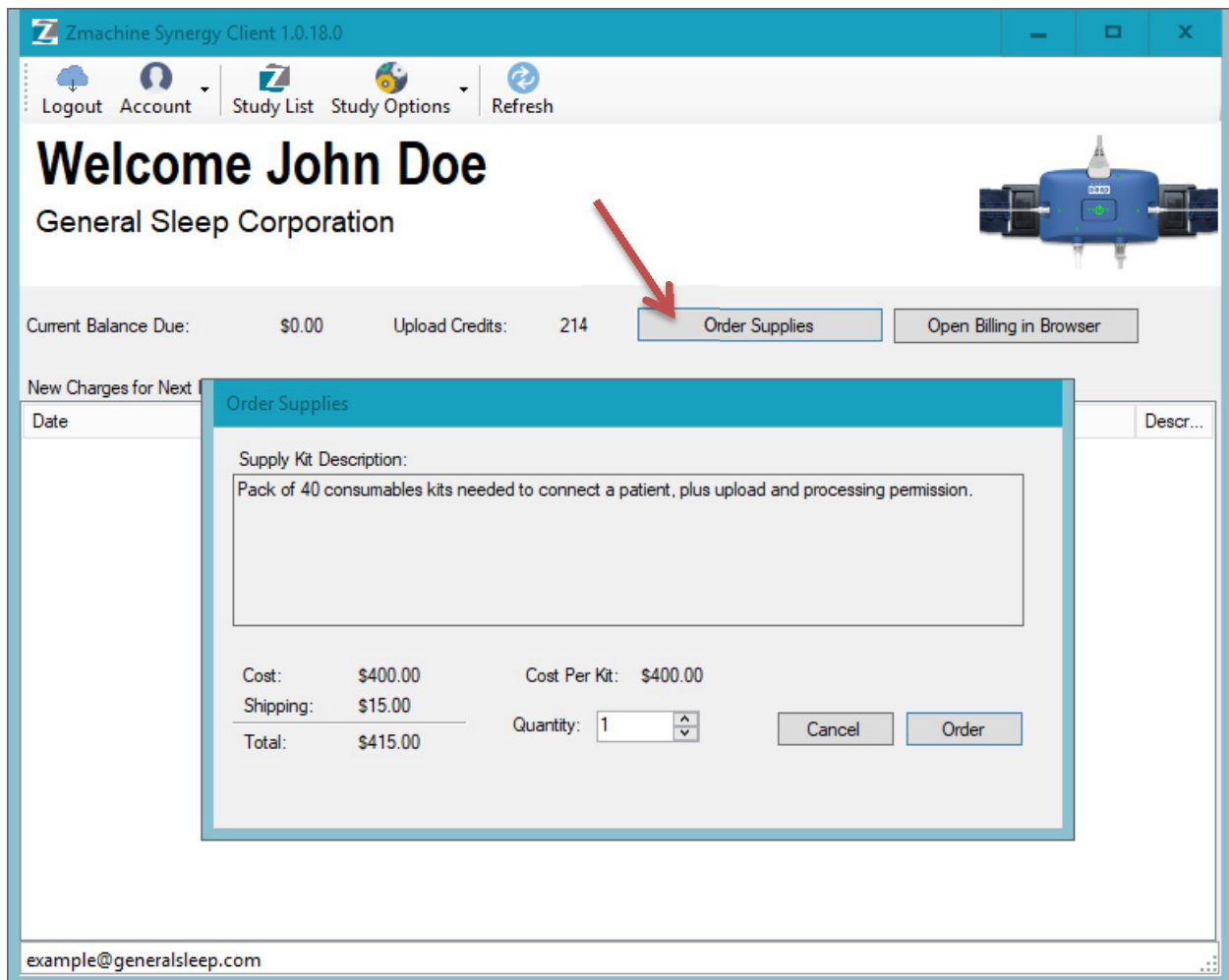
The screenshot displays the Zmachine Synergy Client 1.0.18.0 interface. At the top, there is a navigation bar with icons for Logout, Account, Study List, Study Options, and Refresh. Below this, a large heading reads "Welcome John Doe" for "General Sleep Corporation". A red arrow points to the "Upload Credits: 214" value. To the right of this value are two buttons: "Order Supplies" and "Open Billing in Browser". Below the welcome message, it shows "Current Balance Due: \$0.00" and "New Charges for Next Invoice: \$0.00". A table with columns for Date, Name, Quantity, Unit Cost, Discount, Tax, Total, and Description is visible but empty. The footer of the window shows the email address "example@generalsleep.com".

Date	Name	Quantity	Unit Cost	Discount	Tax	Total	Descr...
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## Purchasing Consumable Kits and Upload Credits

If you need to purchase additional consumable kits (including upload credits), the clicking Account | Billing menu shows a screen with a “Order Supplies” button. Clicking that button brings up the “Order Supplies” window, where you can order additional consumable kits. Each kit includes everything needed to conduct a study, and an upload credit for each night of consumables.

Ordering Consumable Kits will incur a charge, as shown.



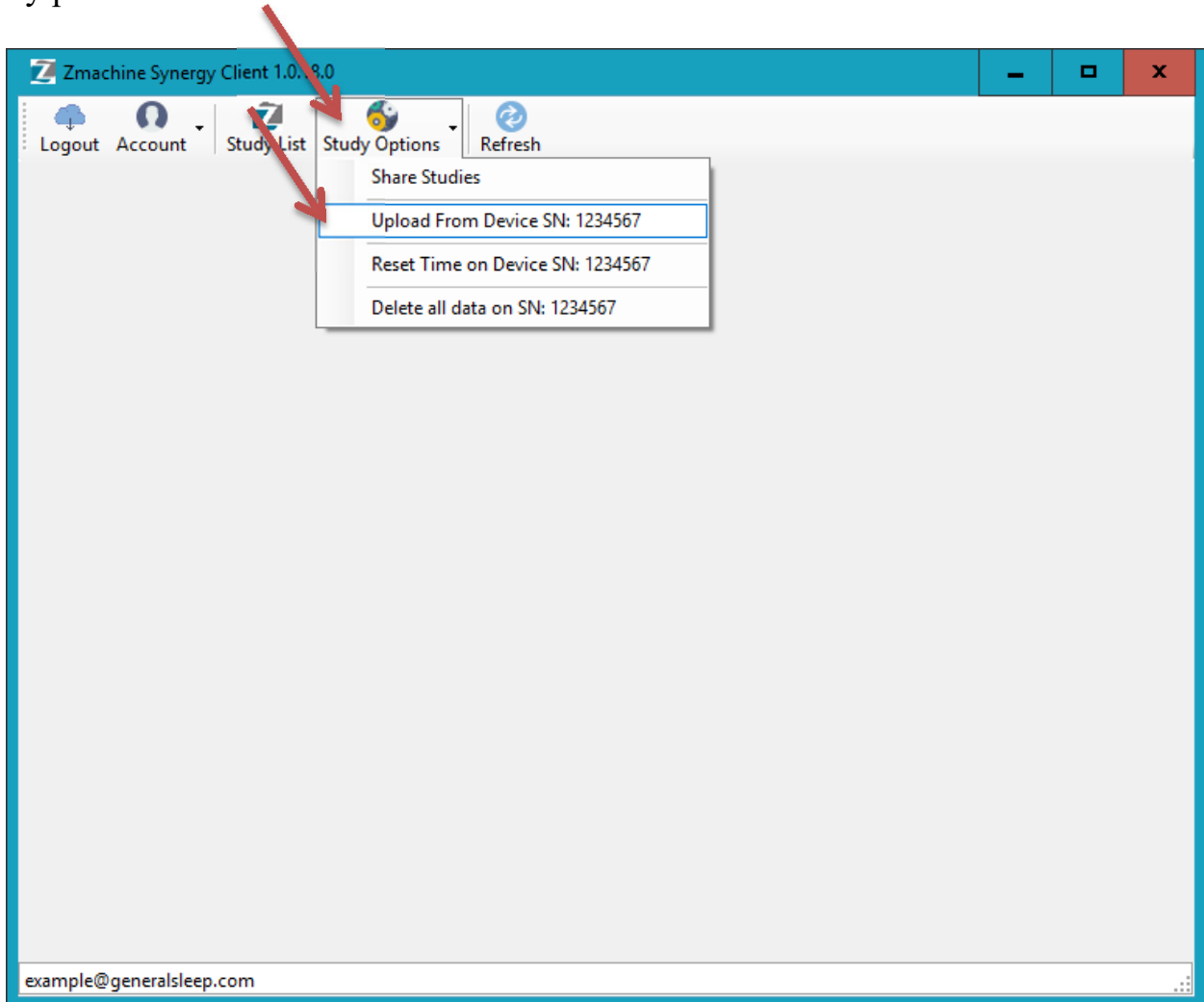
If you have any questions about upload credits, or consumable kits, please contact General Sleep Corporation.

## Uploading Study Data

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If you have upload credits in your account (see “Checking Upload Credits” section above) you can upload study data to the General Sleep Corporation portal.

Click on the “Study Options” button on the menu bar to see a list of Zmachine Synergy devices currently connected to the computer. Select “Upload From Device SN: nnnnnnnnn” to upload data from the device with the listed serial number. The New Sleep Study panel will then show





Fill in the patient information as desired. At least a First Name must be entered, but the other information is optional and can be entered later.

The list on the right side of the screen shows all the recording sessions currently stored on the Zmachine Synergy device. Only the recording sessions that have a check in the “Selected” column will be uploaded. If there are some sessions which you know do not contain useful data, such as recording sessions that were created while demonstrating how to use the Zmachine Synergy, then you should uncheck the box next to that session.

Press the “Upload” button to start the data transfer from the Zmachine Synergy to the cloud portal.

**New Sleep Study Information**

First Name:  Middle Name:

Last Name:

Gender:

Birth Date:  MM/DD/YYYY

Height:

Weight:

Ref Physician:

Fill out information above. Then select which recording sessions to use for this study in the list to the right. Finally, press the Upload button to send the data for processing.

Upload Credits Available: 214

**Recording Sessions:**  
Sessions shorter than 1 minute are not shown.

Selected	ID	Start Date	Start Time	Duration (hours.mi...)
<input checked="" type="checkbox"/>	0	3/31/2017	12:42 PM	00:01:30
<input checked="" type="checkbox"/>	3	3/31/2017	12:44 PM	00:03:23
<input checked="" type="checkbox"/>	13	3/31/2017	1:05 PM	00:03:25
<input checked="" type="checkbox"/>	16	3/31/2017	1:11 PM	00:15:00
<input checked="" type="checkbox"/>	17	4/12/2017	1:31 PM	00:01:02
<input checked="" type="checkbox"/>	18	4/12/2017	1:32 PM	00:08:40
<input checked="" type="checkbox"/>	26	4/12/2017	1:56 PM	00:01:19
<input checked="" type="checkbox"/>	60	4/17/2017	11:12 AM	00:01:21
<input checked="" type="checkbox"/>	61	4/17/2017	11:14 AM	00:07:10
<input checked="" type="checkbox"/>	62	4/17/2017	11:21 AM	00:04:56
<input checked="" type="checkbox"/>	64	4/17/2017	11:27 AM	00:02:55
<input checked="" type="checkbox"/>	65	4/17/2017	11:31 AM	00:01:19
<input checked="" type="checkbox"/>	67	4/17/2017	11:36 AM	00:01:33
<input checked="" type="checkbox"/>	69	4/17/2017	11:38 AM	00:02:08
<input checked="" type="checkbox"/>	70	4/17/2017	11:40 AM	00:02:11
<input checked="" type="checkbox"/>	72	4/17/2017	11:43 AM	00:06:48
<input checked="" type="checkbox"/>	73	4/17/2017	11:51 AM	00:02:11
<input checked="" type="checkbox"/>	75	4/17/2017	11:57 AM	00:13:10

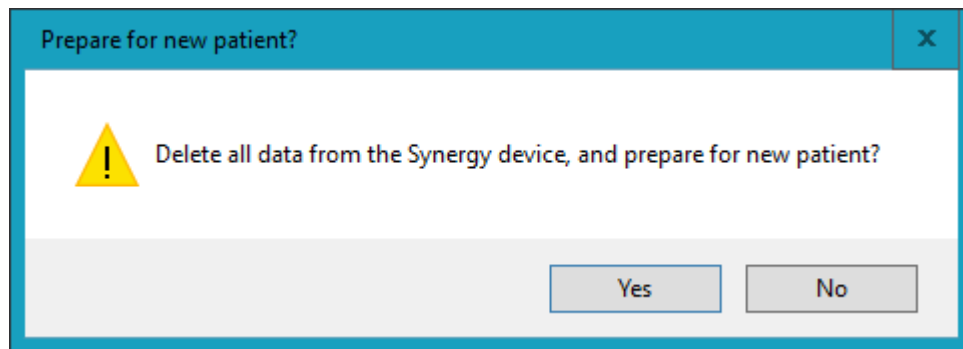
example@generalsleep.com

Be aware that the General Sleep auto scoring functions may not process data that is larger than 24 hours long. If there is more than 24 hours of data stored on the device, then this should be considered more than one study, and uploaded as two or more studies. To do this, select the recording sessions for the first study and upload them, then open the New Sleep Study panel again and select the next recording session and upload it. Repeat as needed until all the studies have been created from the data on the Zmachine Synergy.

After a study has been uploaded, a window will appear asking if you would like to delete all the data from the Synergy device.

**If you still have recording sessions on the device, then press “No.”** Nothing will be deleted from the Zmachine Synergy device, and you can upload other recording sessions as a new study.

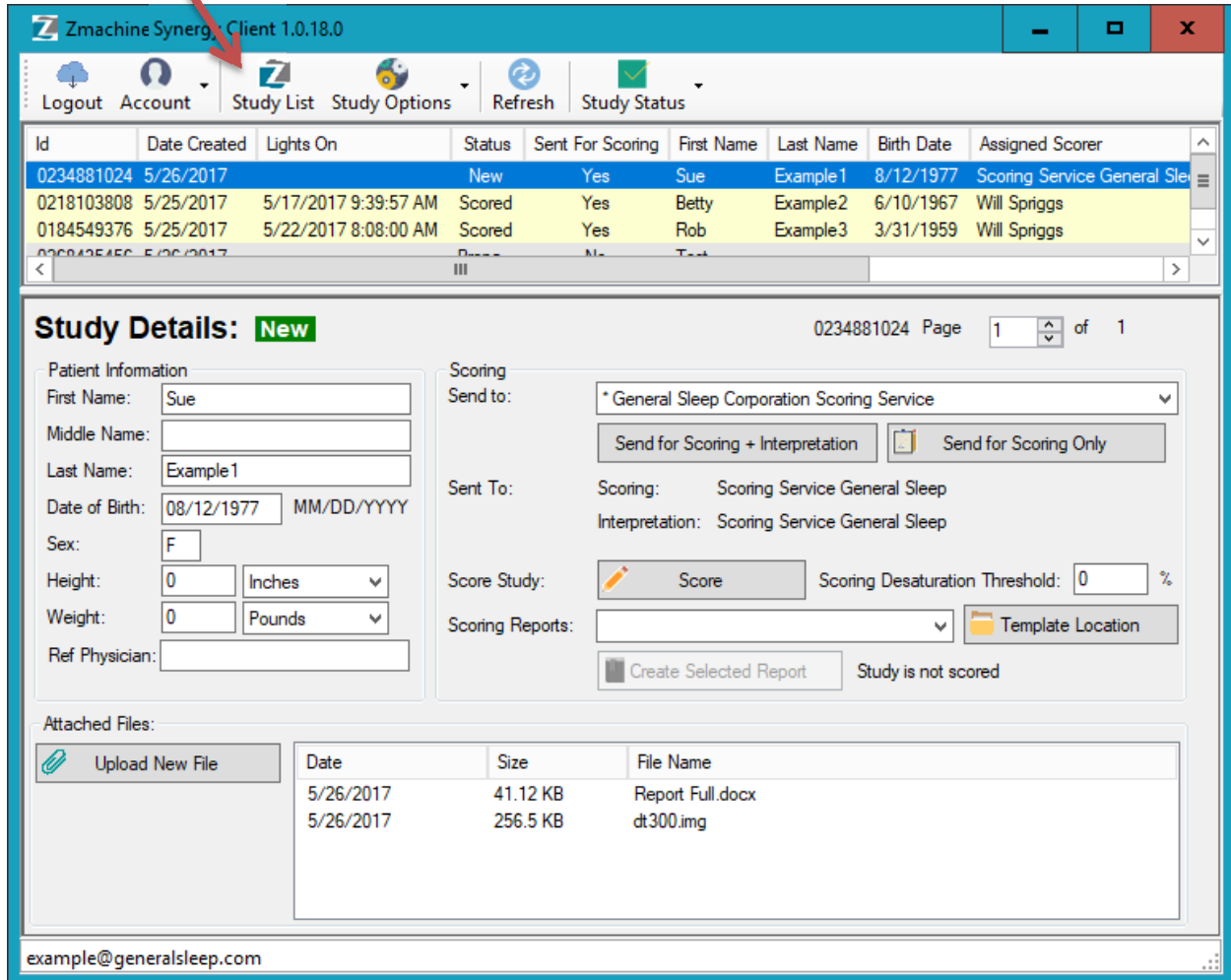
If you have uploaded all the needed data from the device, then select “Yes” and all data on the device will be deleted. The Zmachine Synergy is now ready to be used by the next patient.



After the study upload is complete, a window will appear indicating that the upload has finished and you can use the “Study List” menu button to view your study data.

## Ready for Scoring Data

The “Study List” menu button allows you to see all your organizations uploaded study data.



The screenshot shows the Zmachine Synergy Client 1.0.18.0 interface. A red arrow points to the 'Study List' menu button in the top navigation bar. Below the navigation bar is a table of study data:

Id	Date Created	Lights On	Status	Sent For Scoring	First Name	Last Name	Birth Date	Assigned Scorer
0234881024	5/26/2017		New	Yes	Sue	Example1	8/12/1977	Scoring Service General Sle
0218103808	5/25/2017	5/17/2017 9:39:57 AM	Scored	Yes	Betty	Example2	6/10/1967	Will Spriggs
0184549376	5/25/2017	5/22/2017 8:08:00 AM	Scored	Yes	Rob	Example3	3/31/1959	Will Spriggs

Below the table is the 'Study Details' section for the selected study (ID: 0234881024). The study is marked as 'New'. The patient information is as follows:

Patient Information:  
First Name: Sue  
Middle Name:   
Last Name: Example1  
Date of Birth: 08/12/1977 MM/DD/YYYY  
Sex: F  
Height: 0 Inches  
Weight: 0 Pounds  
Ref Physician:

Scoring details:  
Send to: \* General Sleep Corporation Scoring Service  
Buttons: Send for Scoring + Interpretation, Send for Scoring Only  
Sent To: Scoring: Scoring Service General Sleep  
Interpretation: Scoring Service General Sleep  
Score Study: Score (with pencil icon) | Scoring Desaturation Threshold: 0 %  
Scoring Reports: [Dropdown] | Template Location  
Buttons: Create Selected Report, Study is not scored

Attached Files:

Date	Size	File Name
5/26/2017	41.12 KB	Report Full.docx
5/26/2017	256.5 KB	dt300.img

The email address example@generalsleep.com is visible at the bottom of the window.

## Study Status

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A study in the list shows one of several status descriptions:

- **Preparing:** The study data has been uploaded, and is being processed by the General Sleep Portal. After a few minutes, press the “Refresh” menu button and this study status should change to “New.” If a study does not change to “New” after half an hour, please contact General Sleep for assistance.
- **New:** The study data is ready for scoring
- **Scored:** The status has been changed to “Scored” by the scorer to indicate that scoring is complete and a report can be generated
- **Interpreted:** The status has been changed to “Interpreted” by the interpreter to indicate interpretation is complete and an interpretation file should be attached in the “Attached Files” list

## Patient Information

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Patient information is shown on the left side of the study details window. This information can be edited at any time and will automatically save.

## Attached Files

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Files can be attached to a study, including generated report and interpretation documents. Press the “Upload New File” button to upload a file from your computer and attach it to a study.

## Send For Scoring

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To invite another Synergy Client Software user to score a study's data, use the Scoring section in the Study Details window.

First, select the name of the desired scorer in the "Send To" drop down list. Then click either the "Send for Scoring + Interpretation" button, or the "Send for Scoring Only" button, as desired.

The selected user will be sent an email informing them that they have study data to score and interpret, and they will be given access to this study data. Their name will also be listed in the "Sent To" area, so you know who is responsible for scoring the data.

## Generating Reports

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Reports can be generated for any data that has been scored.

A customizable report template is used to generate a report. A template is a special Microsoft Word document that has field codes that will be replaced with study data when the report is run.

You can make a directory on your computer with your own templates, or you can use the default templates provided by General Sleep Corporation.

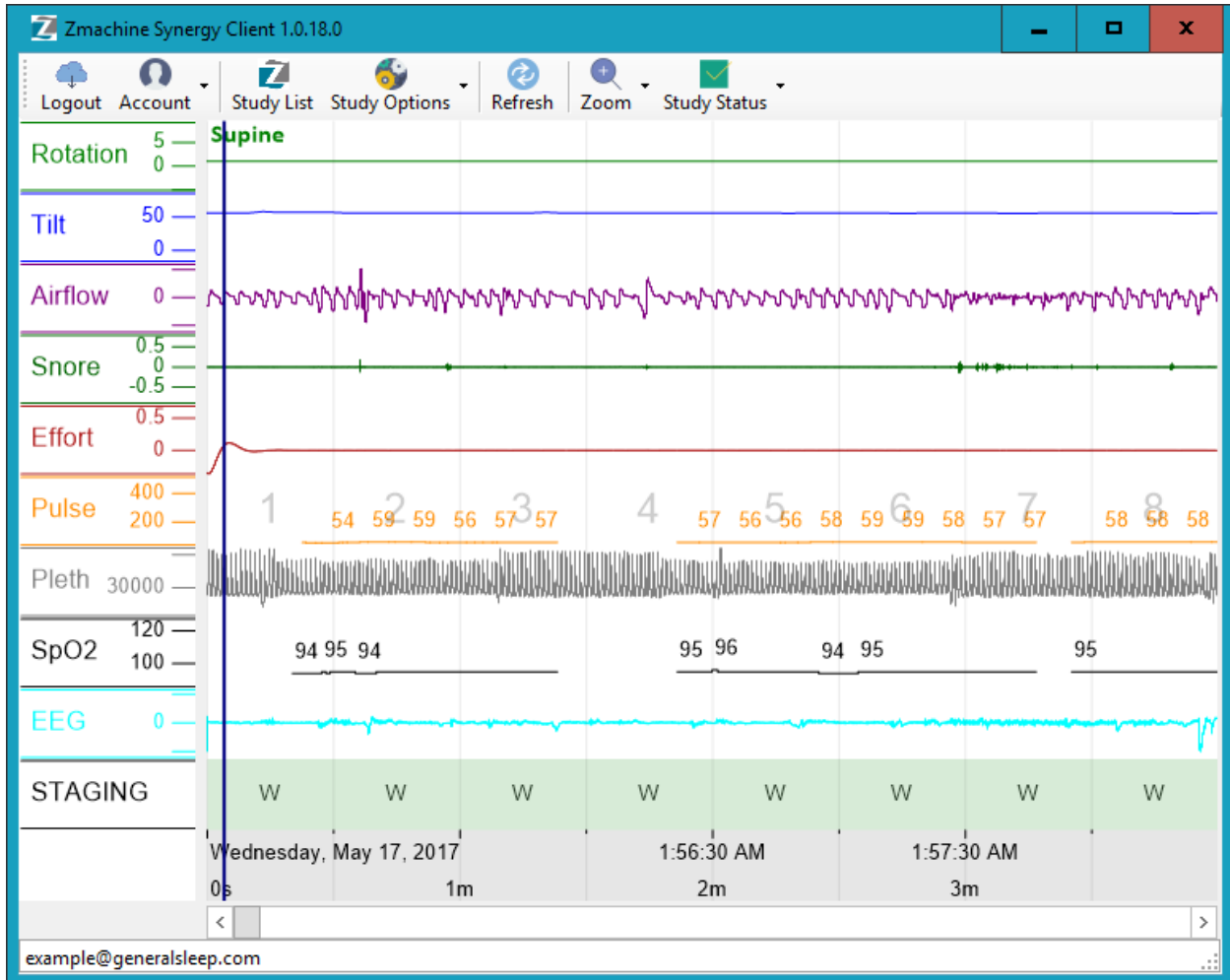
To change the default template directory, click the "Template Location" button and choose the directory where you keep your custom templates.

All templates in the chosen directory will be shown in the "Scoring Reports:" drop down list. Select the desired template in the list, and click the "Create Selected Report" button.

It can take up to 30 seconds for the server to calculate all the statistics needed for the report. When it is finished, a window will appear asking where to save the report. After you save the report, it will automatically open in Microsoft Word or WordPad for your review.

## Scoring Data

To Score the data, click the “Score” button to view the scoring window. It may take a minute or so to download the study data.



The study data is shown in strip chart format, and annotations can be added by the scorer.

When scoring is complete, make sure to remember to change the study status to “Scored” using the “Study Status” menu button.

