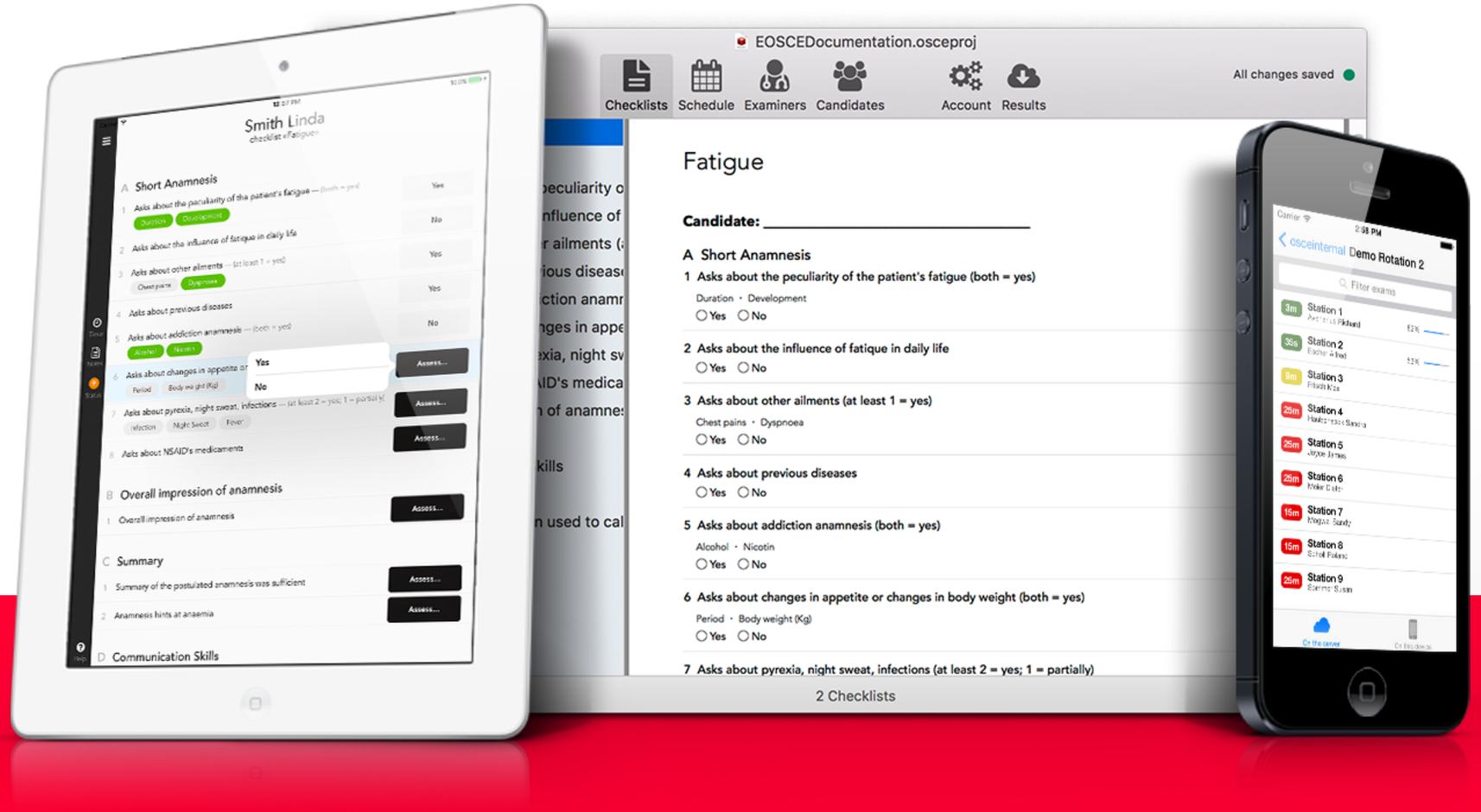


EOSCE®

Updated in September 2023

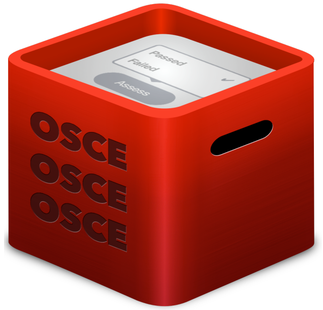
Introduction

The *E*OSCE system consists of three applications:

OSCE-Eval allows examiners to assess the candidates using digital checklists.

Current Version 3.12.5

Requires iPad with iOS 15 or later



OSCE-Editor helps you prepare examinations and the checklists right on your Mac. It also allows you to export the results after an exam has finished.

Current Version 1.12.4

Requires Apple macOS 11 or later

OSCE-Track allows exam administrators to track the progress of an OSCE exam as it happens.

Current Version 2.15.4

Requires iPhone or iPad with iOS 15 or later

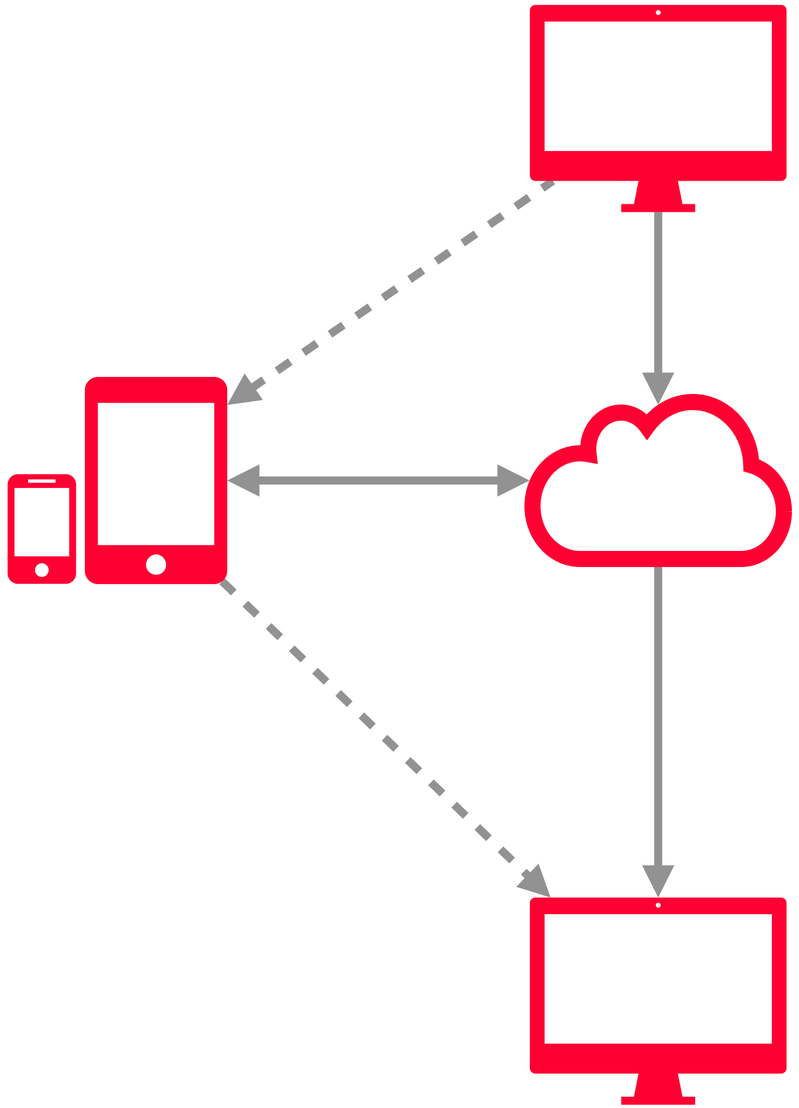
Exam Procedure

1) OSCE-Editor is used to create OSCE checklists and to create the exam schedule, where checklists, examiners and candidates are assigned to stations.

2) The exam can be published to a server and distributed to all OSCE-Eval iPads. (It is also possible to manually load the exam to iPads without a server)

3) During the exam, OSCE-Eval will make backups of all the data to the server. OSCE-Track allows the observation of all iPads connected to the server and shows details about the device and the exam progress.

4) At the end of an exam, the OSCE-Editor can download all the exam results from the server and export it for grading, further analysis and archival as Excel and PDF files.



OSCE-Editor - Overview

Installation

To install the OSCE-Editor, extract the application from its archive and move it to your applications folder. Note, the application is self-contained and can run from everywhere on your system.

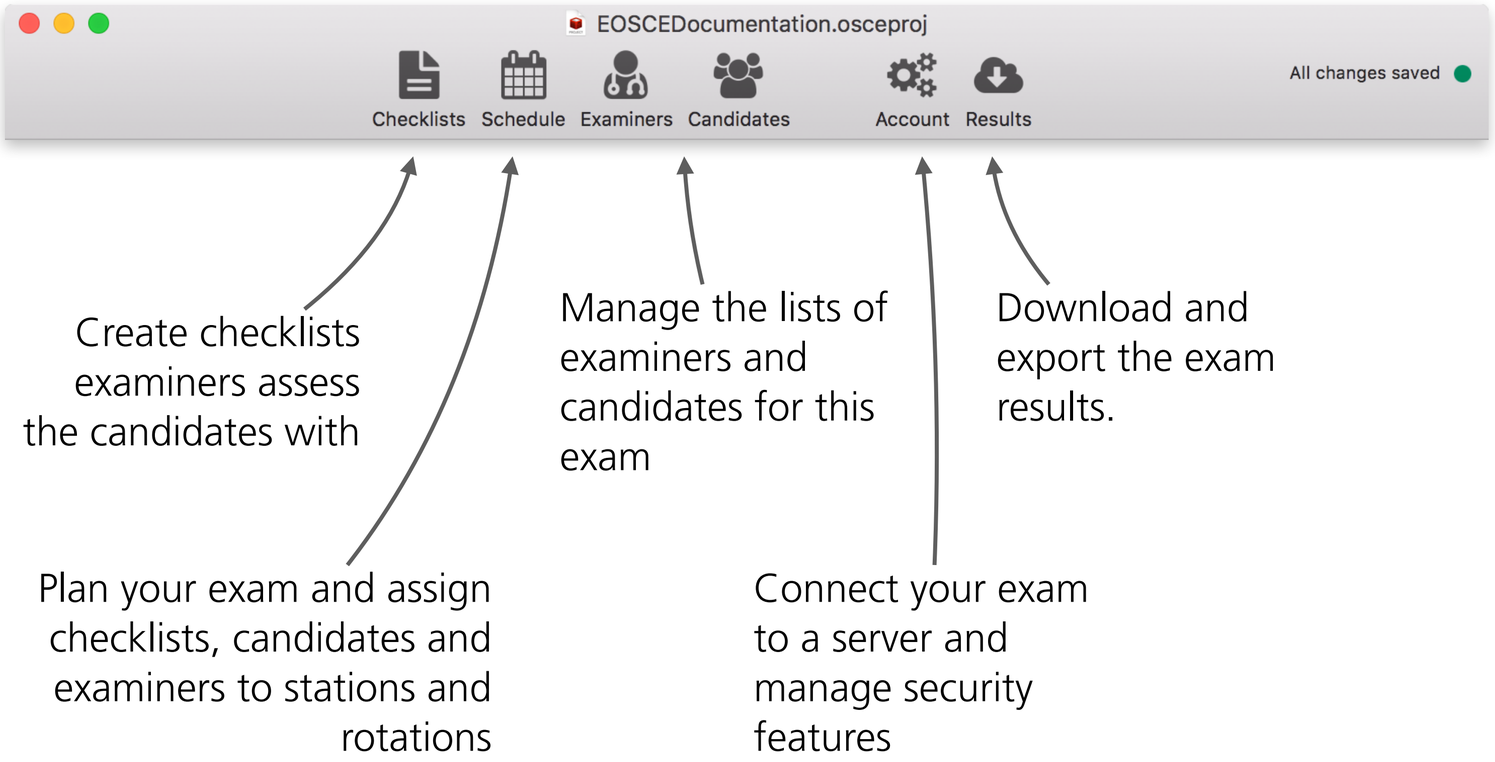
Upon the first run of the OSCE-Editor you will be asked to register with your email address.
By letting us know who you are, you allow us to continue to distribute OSCE-Editor on a trust basis and foster a hassle-free installation and update procedure. No personal data will be collected.

You can obtain a copy of the OSCE-Editor by sending a request to hello@eosce.ch

Overview

The OSCE-Editor is the central component to create your exam and manage its data.

The application provides six sections to manage all the data:



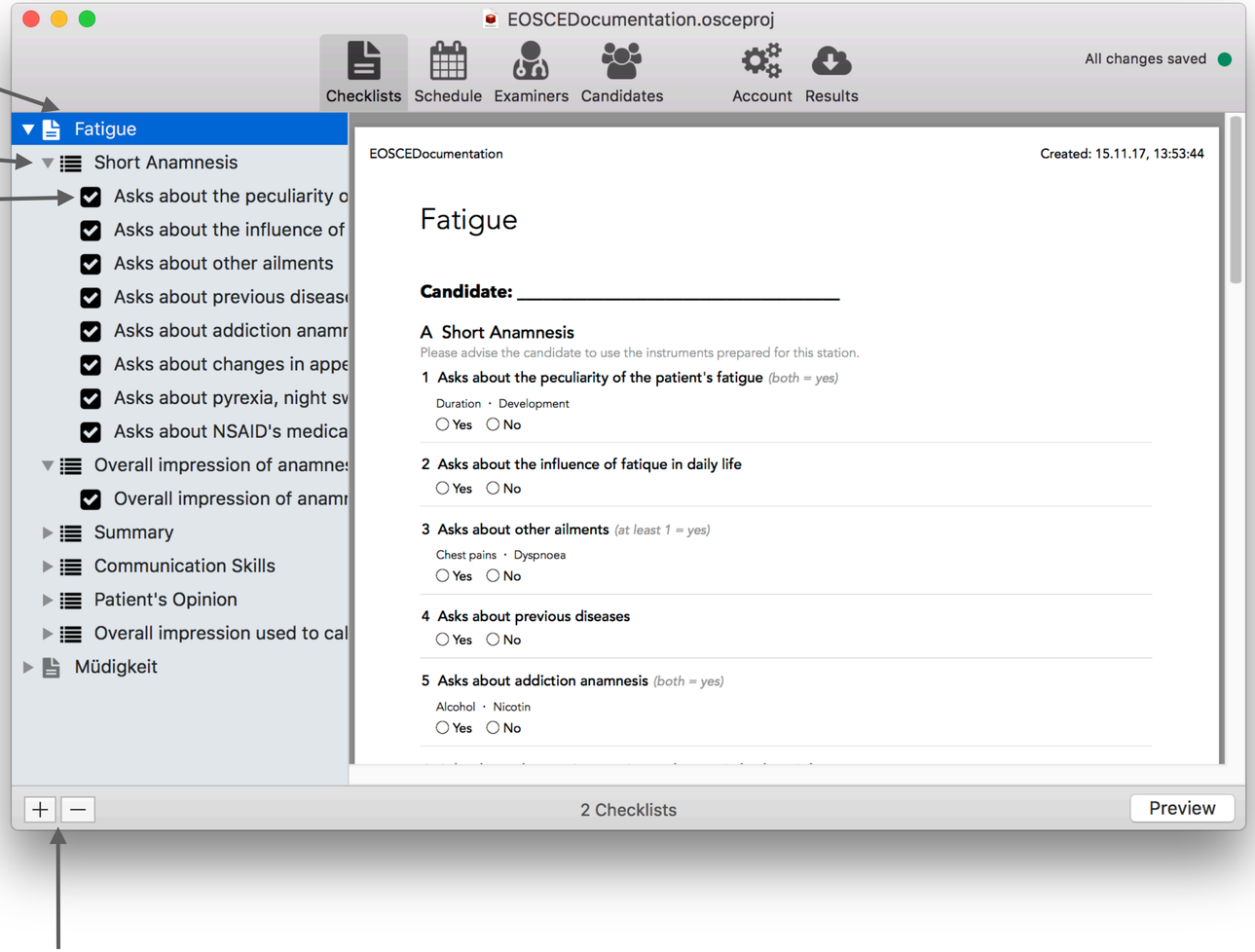
OSCE-Editor - Checklists

This section lists all checklists in the exam and allows you to add, edit, delete, preview and print checklists.

The top-level element represents a checklist. The selected checklist will show a paper version for printing.

The second-level elements are checklist section elements. Use these elements to group information in your checklist.

The third and fourth-level elements are checklist item elements. These elements are the questions in your checklist.



Export & Import

- To export one or multiple checklists, just drag & drop them to the desktop.
- To import a checklist, go to "File → Import" and select the ".oscechecklist" file to use.

Tips:

- You can select multiple elements by holding command (⌘).
- You can rearrange elements using drag & drop.
- You can duplicate elements by holding alt (⌥) while dragging an element to a new location.
- You can navigate/edit the tree using the arrow and tab keys.
- You can expand/collapse the whole checklist tree with alt (⌥) + click on the arrow.

Add a new child element and remove selected elements.

OSCE-Editor - Checklist Preview

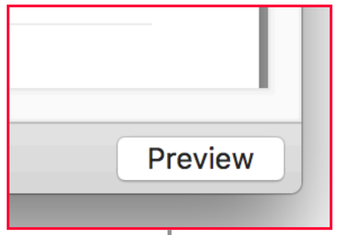
It is possible to preview a checklist directly in OSCE-Eval using AirDrop.

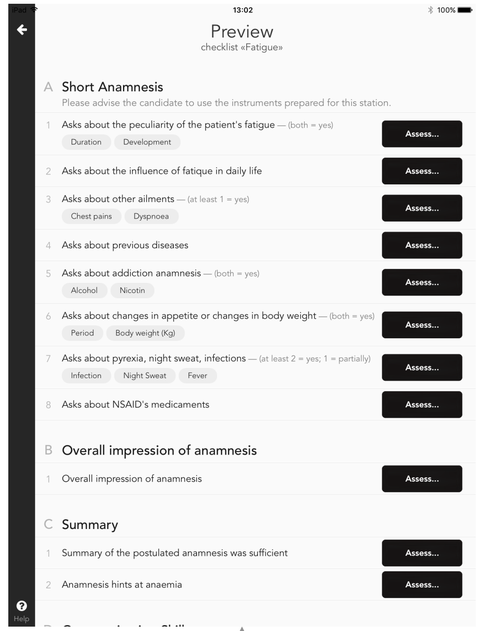
1) Make sure the iPad is connected to the same network, has Bluetooth turned on and AirDrop is set to visible for "Everyone".

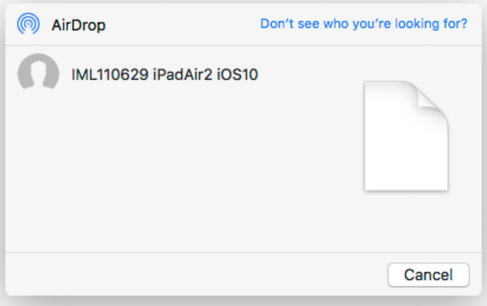
2) Select the checklist and click the "Preview" button in the bottom right corner of the OSCE-Editor.

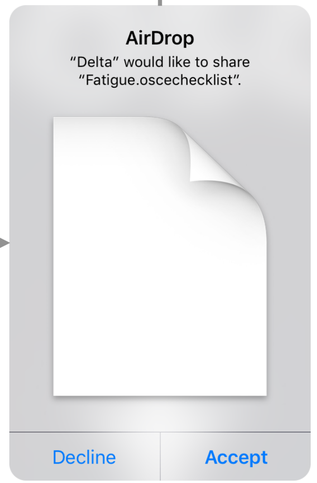
3) Select your device in the follow-up popup.

4) Accept the incoming document on your device, to display it in OSCE-Eval.







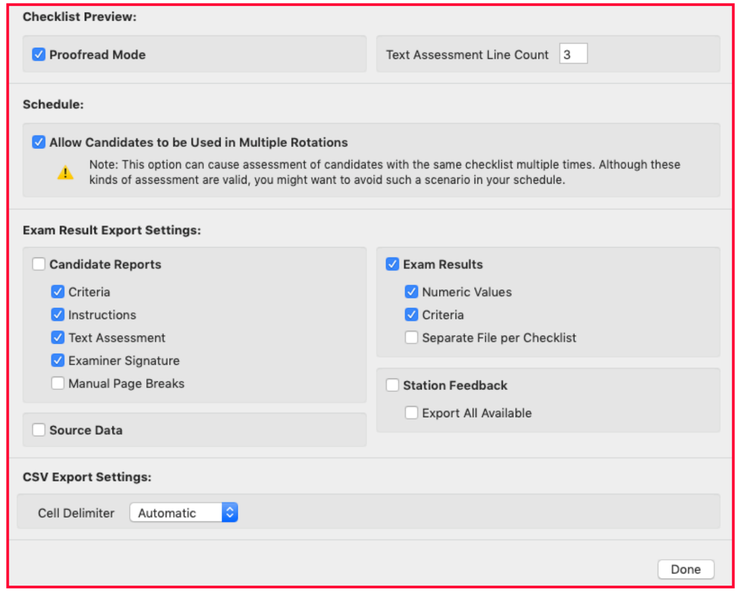


According to Apple:
To send items to an iPhone, iPad, or iPod touch, or to receive items from those devices, you need a 2012 or later Mac model with OS X Yosemite or later, excluding the Mac Pro (Mid 2012).

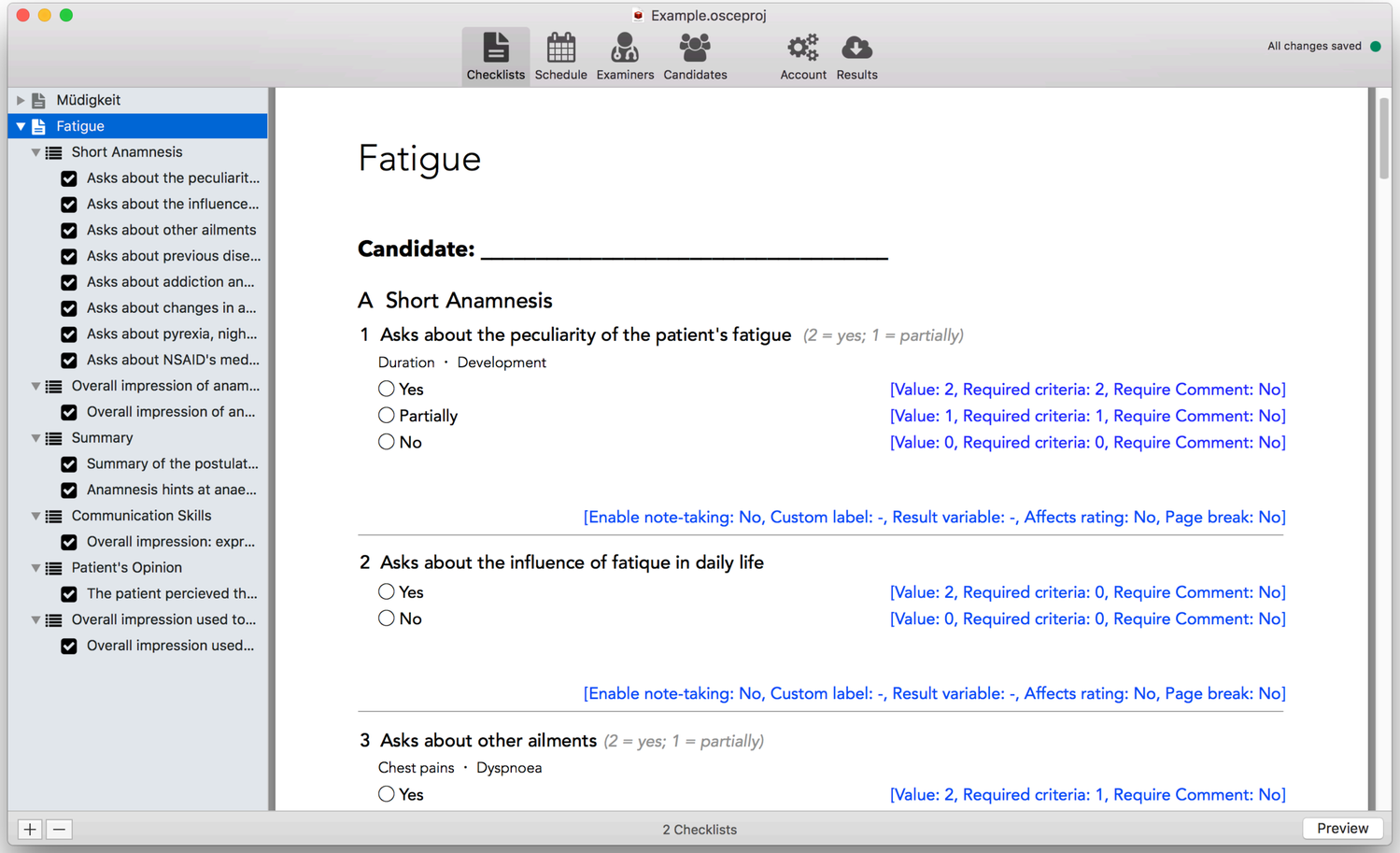
OSCE-Editor - Proofreading

A checklist can be printed or saved as a pdf through the standard print dialogue.
But the pdf will not contain all the information that make up a checklist.

In order for the checklist to contain all the information, the proofreading mode can be activated in the preferences of the application (Application menu → Preferences).



With this option enabled, all information of a checklist is added in the checklist. This is most helpful for proofreading by users without access to the Editor or the project.



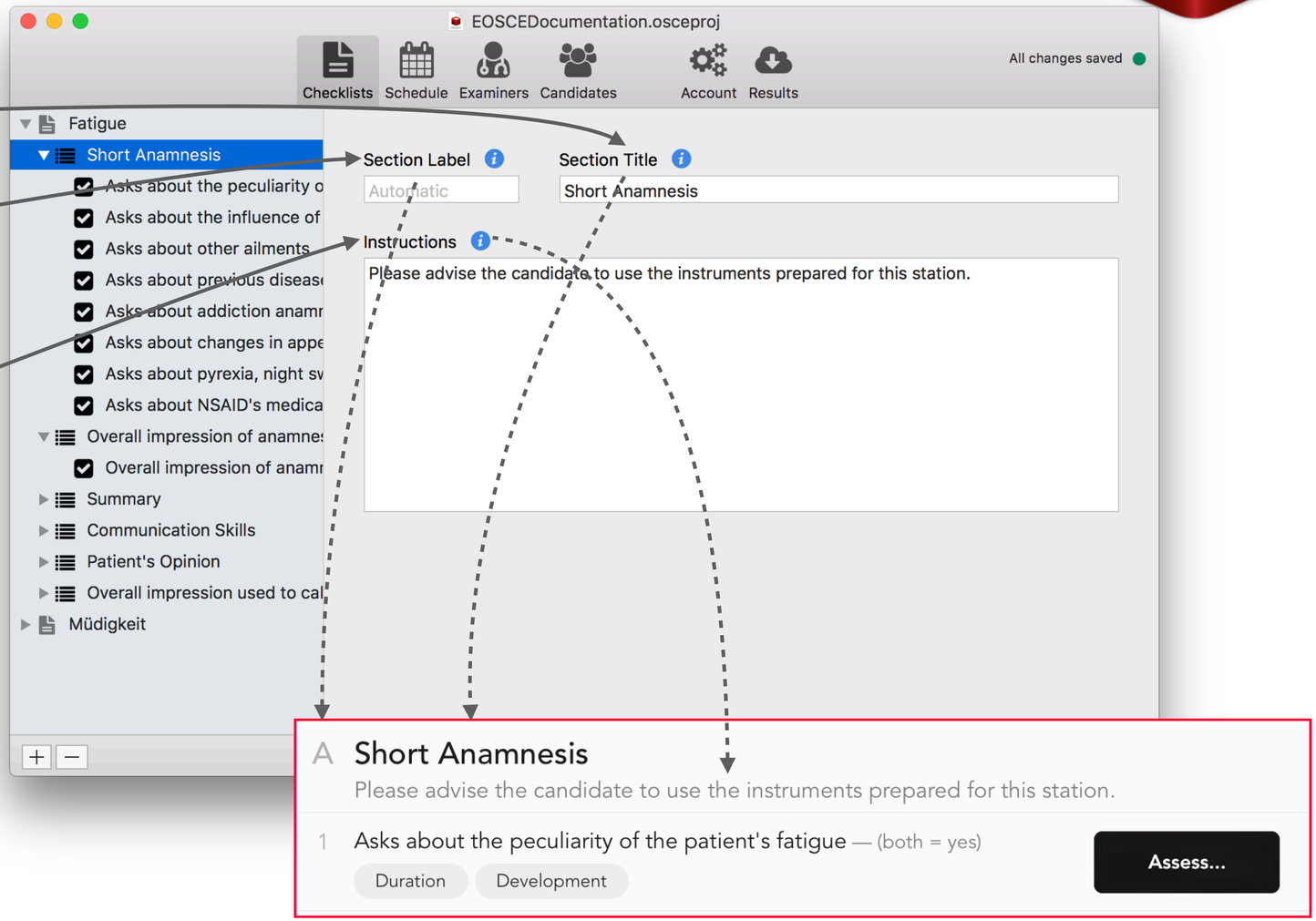
OSCE-Editor - Checklist Section

A section element is used to group information in your checklist.

This field defines the title of the section.

Use the label field to define a custom checklist section label. If you leave the field empty, the section will have an alphabetically enumerated label.

Use the instructions field to provide an additional instruction text for the corresponding checklist section. For example, it may explain what to pay most attention to when assessing the candidate.



In OSCE-Eval

OSCE-Editor - Checklist Item

There is a large variety of options to customise a checklist item:

The description field allows you to define the assessment subject.

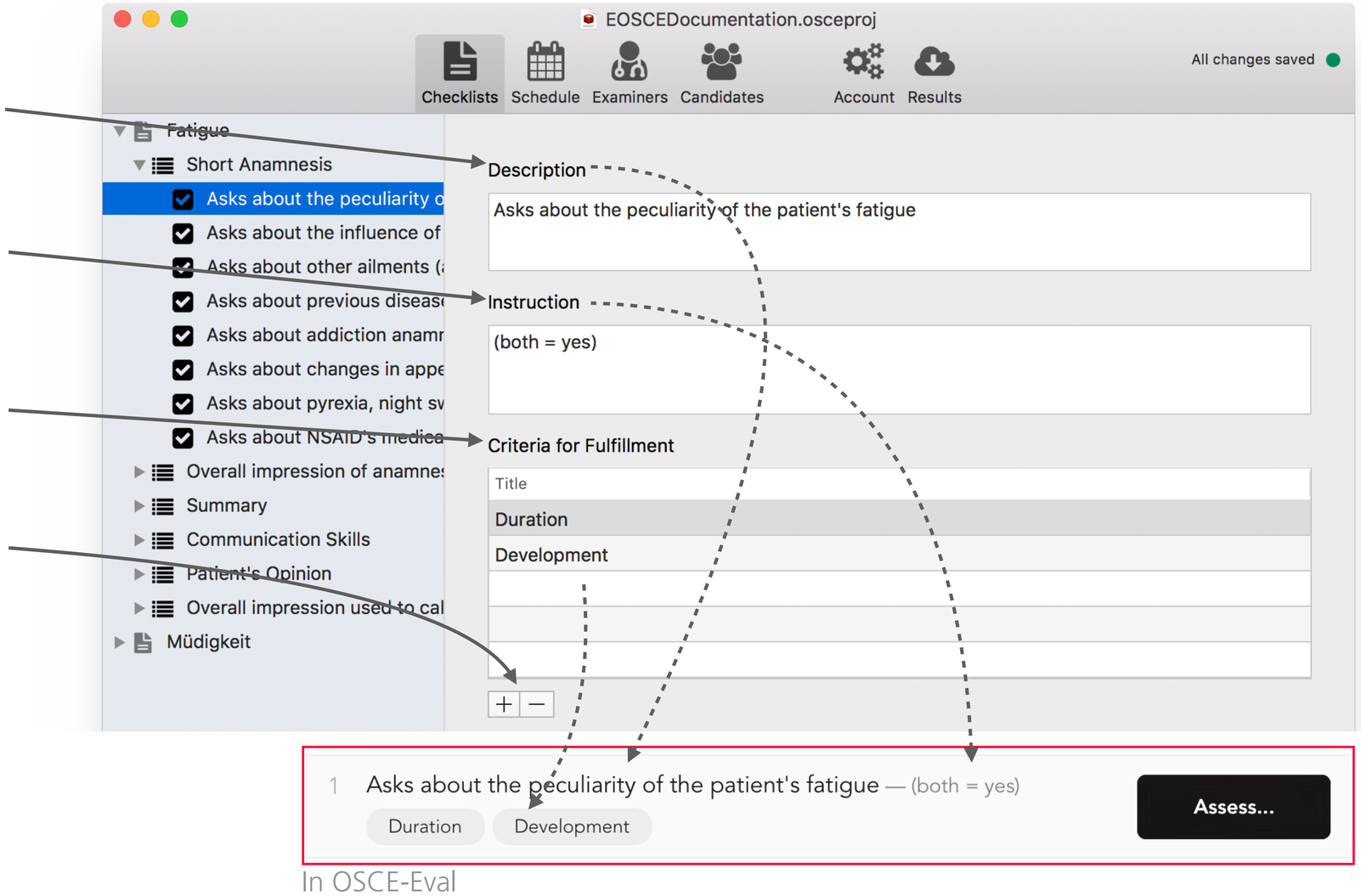
The optional instruction field allows you to give more details to the examiner on the subject or how to assess.

The fulfilment criteria can be selected individually by the examiner, to give more details about the candidates' performances.

You can add and remove as many criteria as needed.

Tips:

- You can navigate to the next field or button using the Tab (⇥) and Shift + Tab (⇧ + ⇥) to navigate to the previous.
- If you navigate to a button using Tab (⇥), you can activate it by hitting the space bar.



In OSCE-Eval

OSCE-Editor - Checklist Item

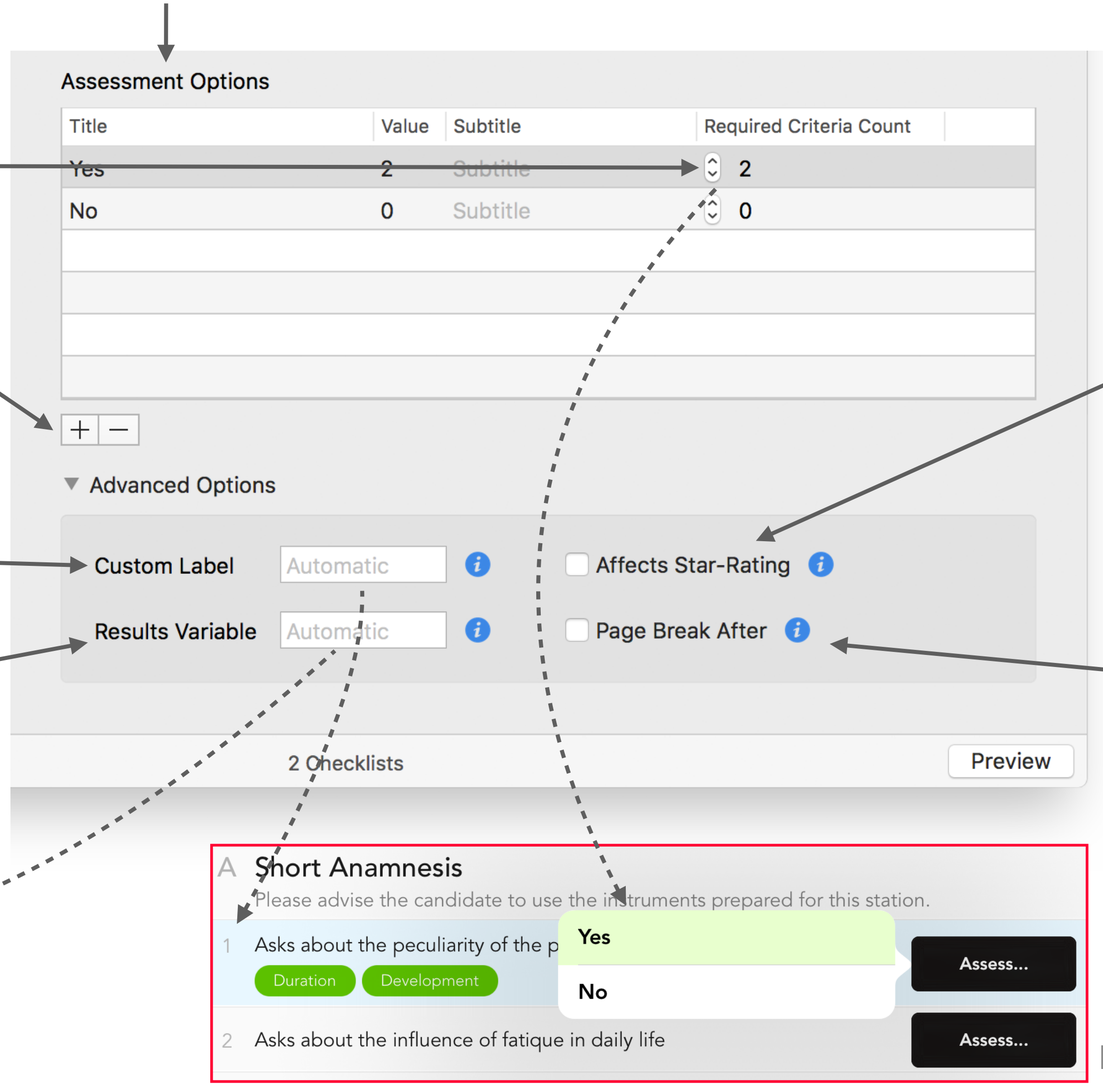
Assessment options allow you to define multiple items for the examiner to choose from.
The title is the option representation for the examiner and the value defines the assessment points.

Required criteria count allows to indicate which option should be selected, based on the number of fulfilment criteria, by the examiner. The matching option will be highlighted in OSCE-Eval.

You can add and remove as many assessment options as needed.

As with checklist sections, you can use the label field to define a custom checklist item label. If you leave the field empty, the item will have a numerical label generated.

Use this field to set a custom identifier for the corresponding checklist element in the exam results export (Excel).



In OSCE-Eval

This checkbox affects the star rating of a candidate in the list of candidates in OSCE-Eval.

You can force a manual page break in the PDF of the checklist (OSCE-Eval is not affected). The page break will be inserted after the current checklist item.

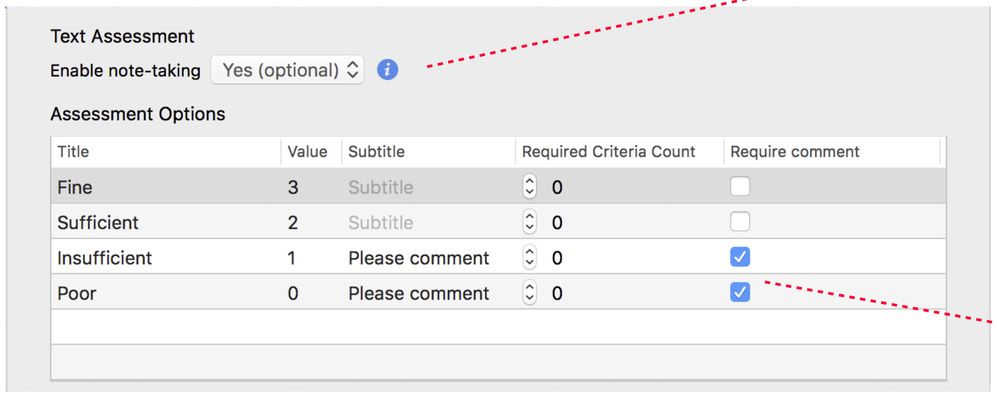
	J	K	L	M	N	O	P	Q	R	S	T
1	Candidate Last Name	Present	A1	A2	A3	A4	A5	A6	A7	A8	B1
2	Lummergut	Yes	0	2	0	2	0	2	0	1	3
3	Roffler	Yes	2	0	0	2	0	0	2	1	1
4	Rohner	Yes	2	0	2	0	2	0	2	0	2

Sheet1

OSCE-Editor - Checklist Item

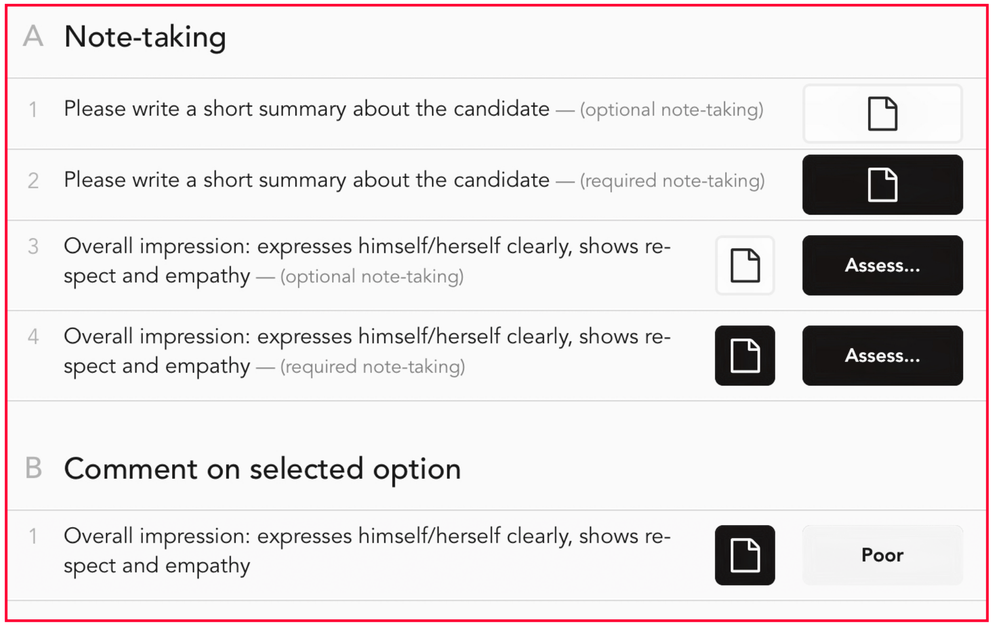
With the text assessment setting, you can allow examiners to take notes, or to comment on the candidate's performance on this particular item. This can be used for general, less structured feedback (e.g. formative assessments) or to augment assessments with the examiners' comments.

It is possible to use the note-taking feature on its own or in combination with assessment options and it can be set either as optional or required.
If set to required, the checklist item will only be marked as answered if the examiner adds notes.



It is also possible to require a comment on a specific assessment option.
In this example, the text button will appear if the examiner chooses either 'Insufficient' or 'Poor'. The comment will be required regardless of the note-taking setting and the checklist item will be marked as answered only, if the examiner adds a comment.

In OSCE-Eval



Without assessment options

With assessment options

OSCE-Editor - Examiners

The examiners section shows all examiners participating in the exam.

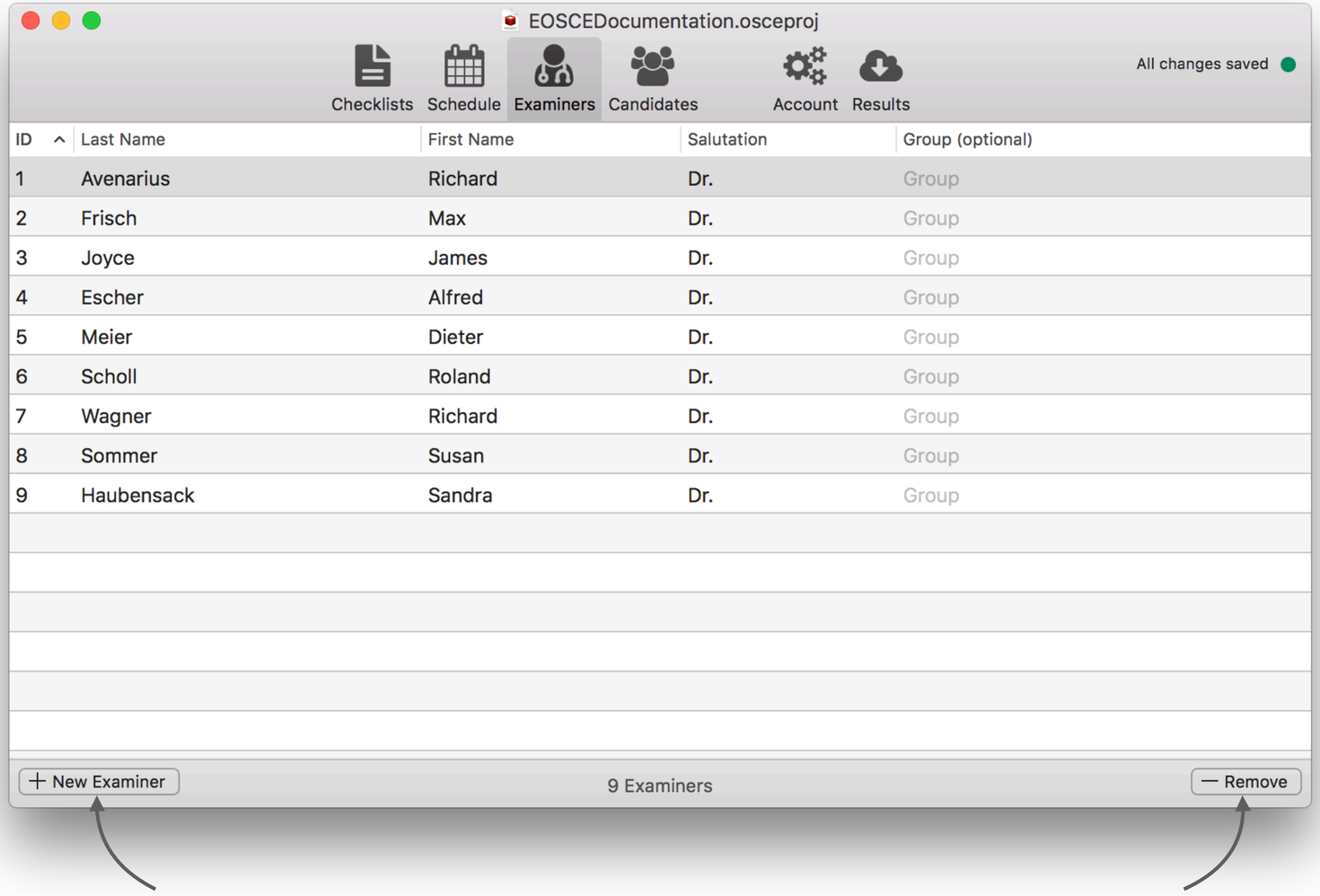
An examiner record consists of id, last name, first name, a salutation and an optional group field.

The group field is used to group/sort the entries in the examiner dropdown in the scheduler section.

Import

To import a list of examiners, go to "File → Import" and select the ".osceexaminers" file to use.
The file has to contain comma separated values (csv) with the same columns as in the OSCE-Editor. To create such a file, save your data in Excel as csv in UTF-8 encoding and rename the extension "csv" to "osceexaminers".

	A	B	C	D	E
1	1	Avenarius	Richard	Dr.	9
2	2	Frisch	Max	Dr.	8
3	3	Joyce	James	Dr.	7
4	4	Escher	Alfred	Dr.	6
5	5	Meier	Dieter	Dr.	5
6	6	Scholl	Roland	Dr.	4
7	7	Wagner	Richard	Dr.	3
8	8	Sommer	Susan	Dr.	2
9	9	Haubensack	Sandra	Dr.	1



Manually add a new examiner

Remove selected examiner(s)

OSCE-Editor - Candidates

The candidates section shows all candidates participating in the exam.

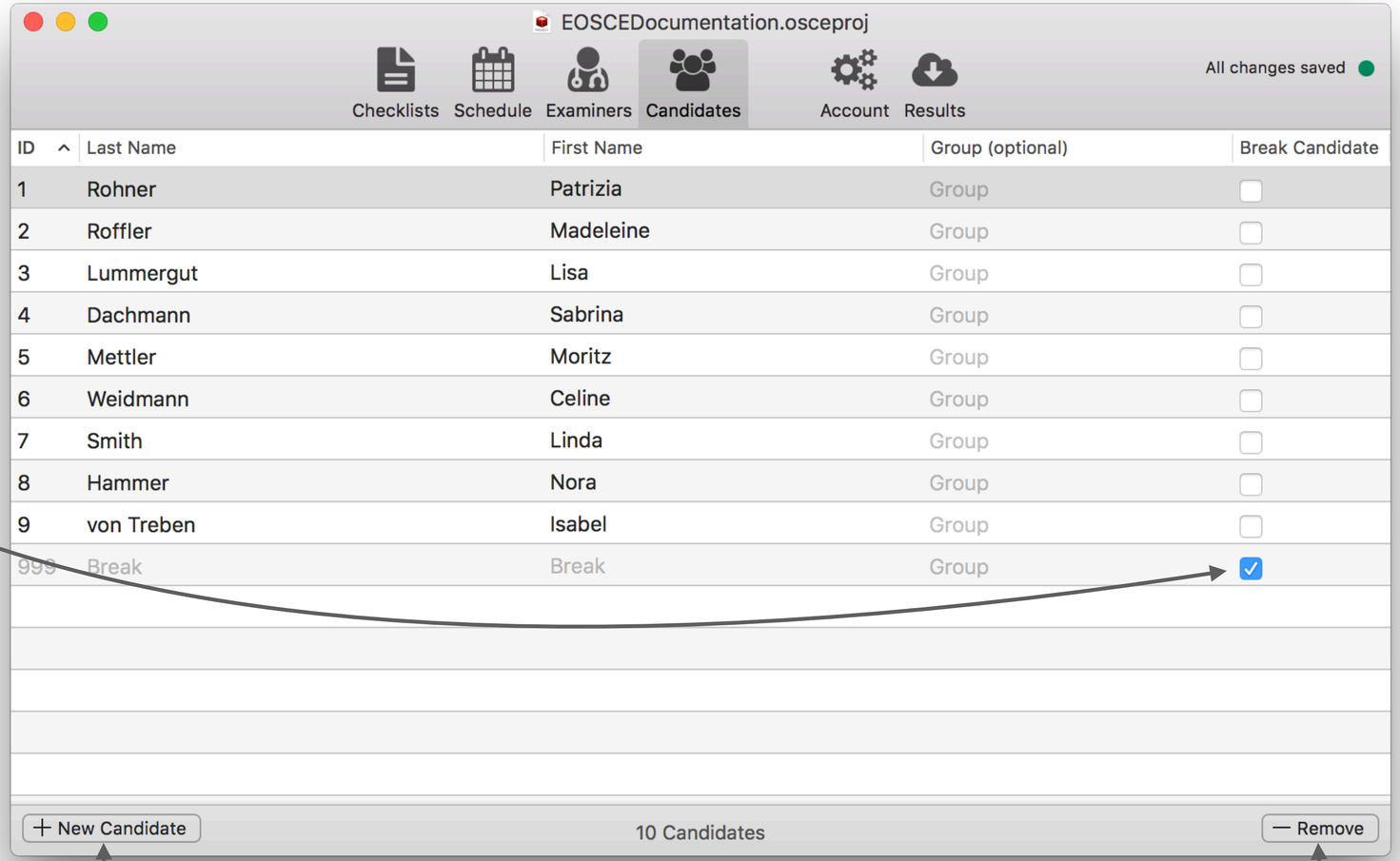
A candidate record consists of id, last name, first name and an optional group field followed by break candidate flag.

The group field is used to group/sort the entries in the candidates dropdown in the scheduler section.

"Break Candidates" are dummy-entries that are used to fill-up rotations with more stations than candidates. For example, to indicate a break for station during the course of a OSCE rotation/circuit.

Import

To import a list of candidates, go to "File → Import" and select the ".oscecandidates" file to use.
The file has to contain comma separated values (csv) with the same columns as in the OSCE-Editor.
To create such a file, save your data in Excel as csv in UTF-8 encoding and rename the extension "csv" to "oscecandidates".



Manually add a new candidate

Remove selected candidate(s)

OSCE-Editor - Schedule

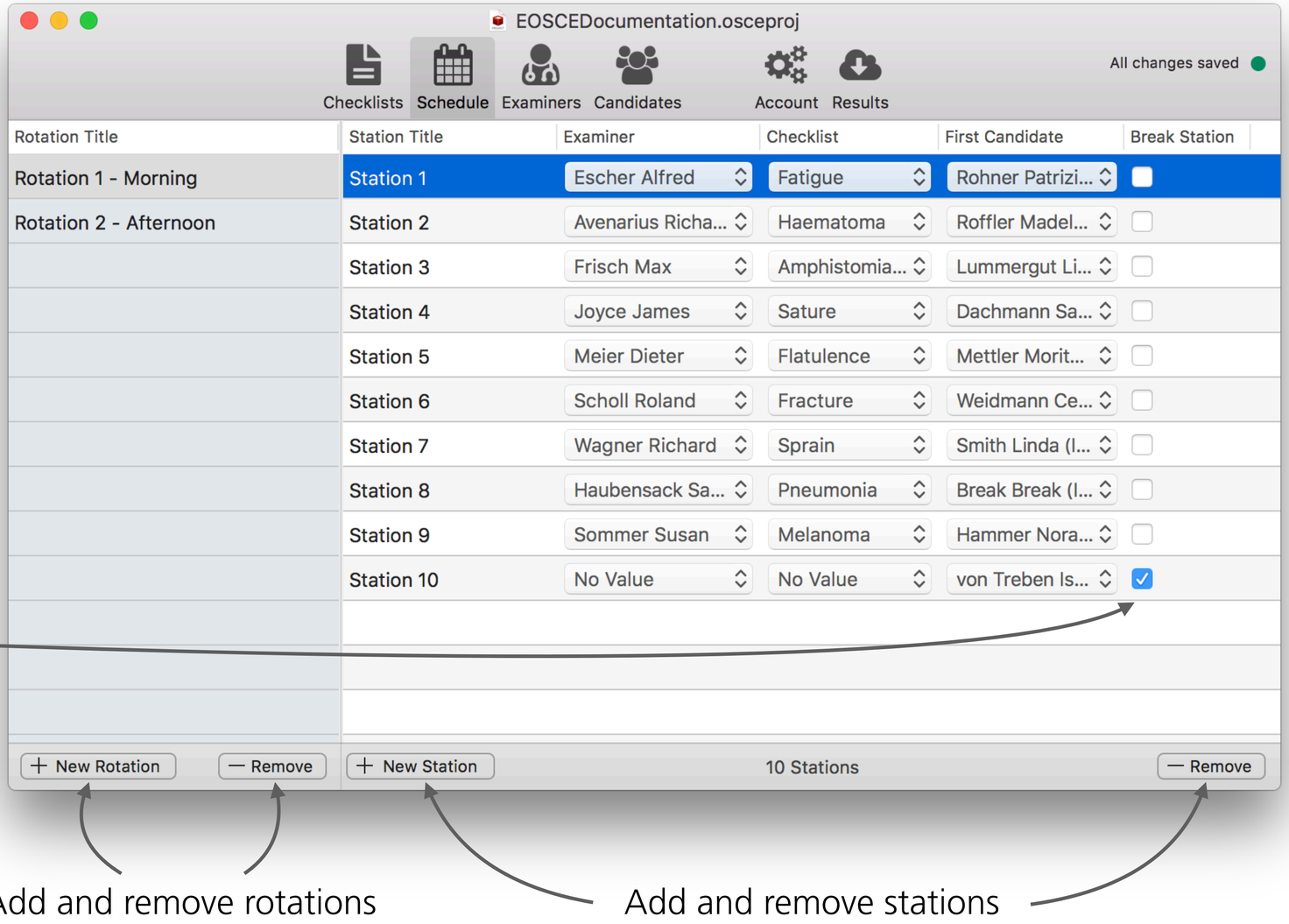
The scheduling section is where you plan your OSCE exam.

Here you define the different rotations/circuits of the exam.

Each rotation can have multiple stations, each consisting of a station title, an assigned examiner, the checklist and the first candidate to start with.

Keep in mind that all candidates in a rotation will pass by each station. In the schedule, you only define the first candidate for the station, but in OSCE-Eval, the examiner will see all the candidates of the rotation, sorted specifically for the station.

"Break Stations" are dummy-stations that are used in case there is the need to have breaks for the candidates in the exam (no assessment takes place)



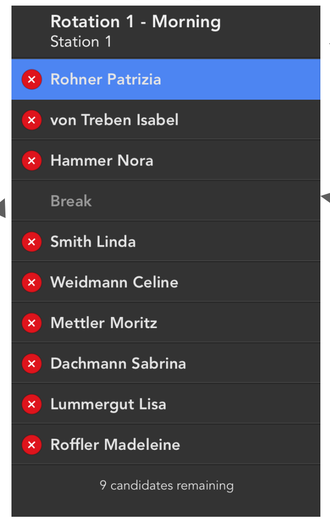
OSCE-Editor - Schedule

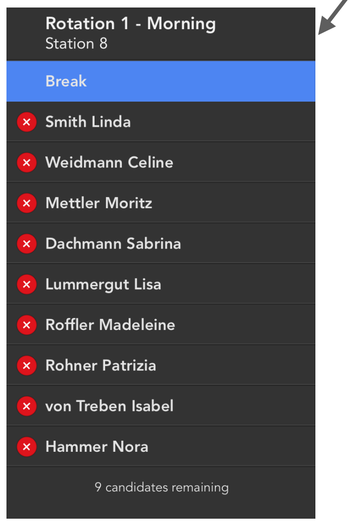
Upon publishing an exam, the OSCE-Editor will generate a candidate list for each station processed in OSCE-Eval.

The first station will start with the candidate "Rohner Patrizia" as defined in the schedule. The following candidate will be the last candidate from station 10 (von Treben Isabel), and then the one from station 9 and so forth.

As you can see, we assigned a "Break Candidate" on station 8. This results in a break for each examiner when that "Break Candidate" passes by, in case of station 1 it's the fourth candidate.
The same of course applies for station 8 where we start with the "Break Candidate" followed by the candidates from the previous stations.

In this example, we can see the candidate list for two stations in OSCE-Eval:





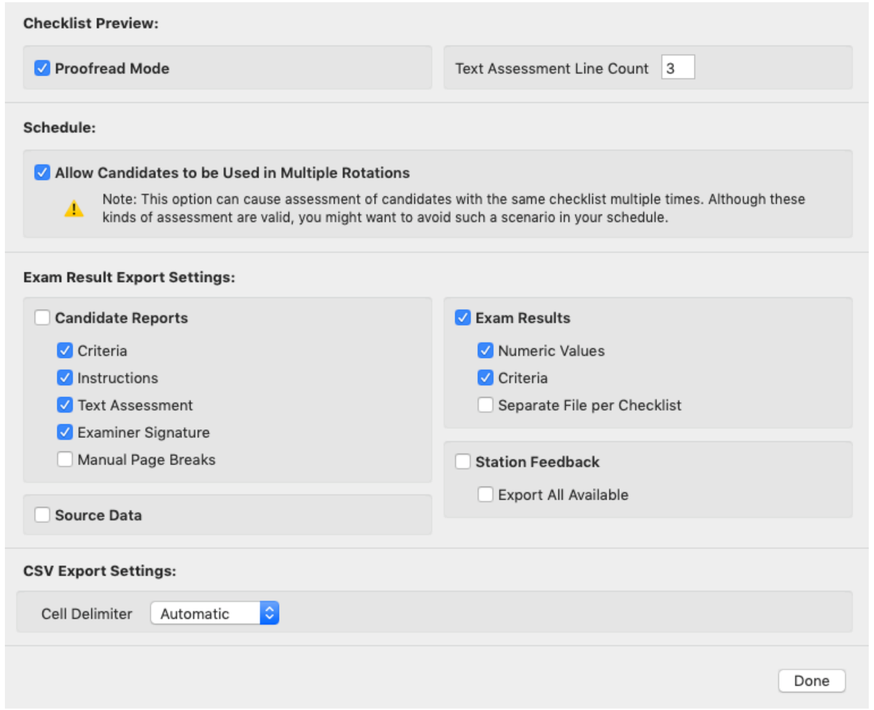
Station Title	Examiner	Checklist	First Candidate	Break Station
Station 1	Escher Alfred	Fatigue	Rohner Patrizi...	☐
Station 2	Avenarius Richa...	Haematoma	Roffler Madel...	☐
Station 3	Frisch Max	Amphistomia...	Lummergut Li...	☐
Station 4	Joyce James	Sature	Dachmann Sa...	☐
Station 5	Meier Dieter	Flatulence	Mettler Morit...	☐
Station 6	Scholl Roland	Fracture	Weidmann Ce...	☐
Station 7	Wagner Richard	Sprain	Smith Linda (I...	☐
Station 8	Haubensack Sa...	Pneumonia	Break Break (I...	☐
Station 9	Sommer Susan	Melanoma	Hammer Nora...	☐
Station 10	No Value	No Value	von Treben Is...	☑

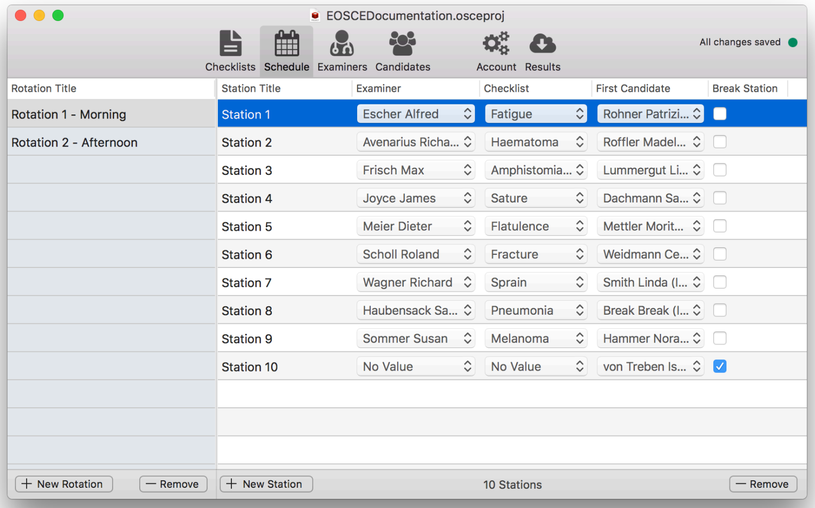
As station 10 is defined as a "Break Station", the application will not generate any data for this station as it does not physically exist.
This means that the candidate (von Treben Isabel) will skip this station and start at station 1 when the candidates rotate to the next station.

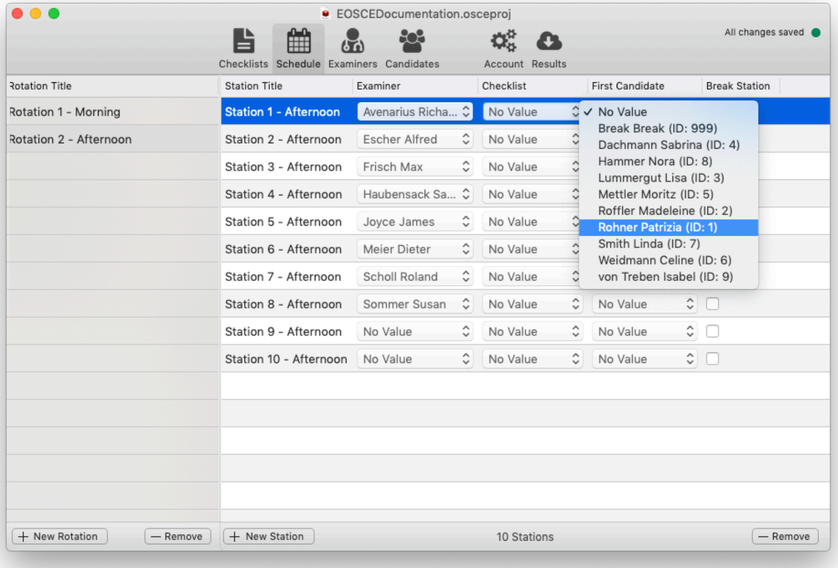
OSCE-Editor - Schedule

By default, it is possible to assign a candidate as *first candidate* only once across all rotations.

In case it is needed to have candidates appearing in multiple rotations, the option "*Allow Candidates to be Used in Multiple Rotations*" can be enabled in the preferences.







As you can see here, it is possible to assign Rohrer Patrizia in the second rotation as well.

OSCE-Editor - Account

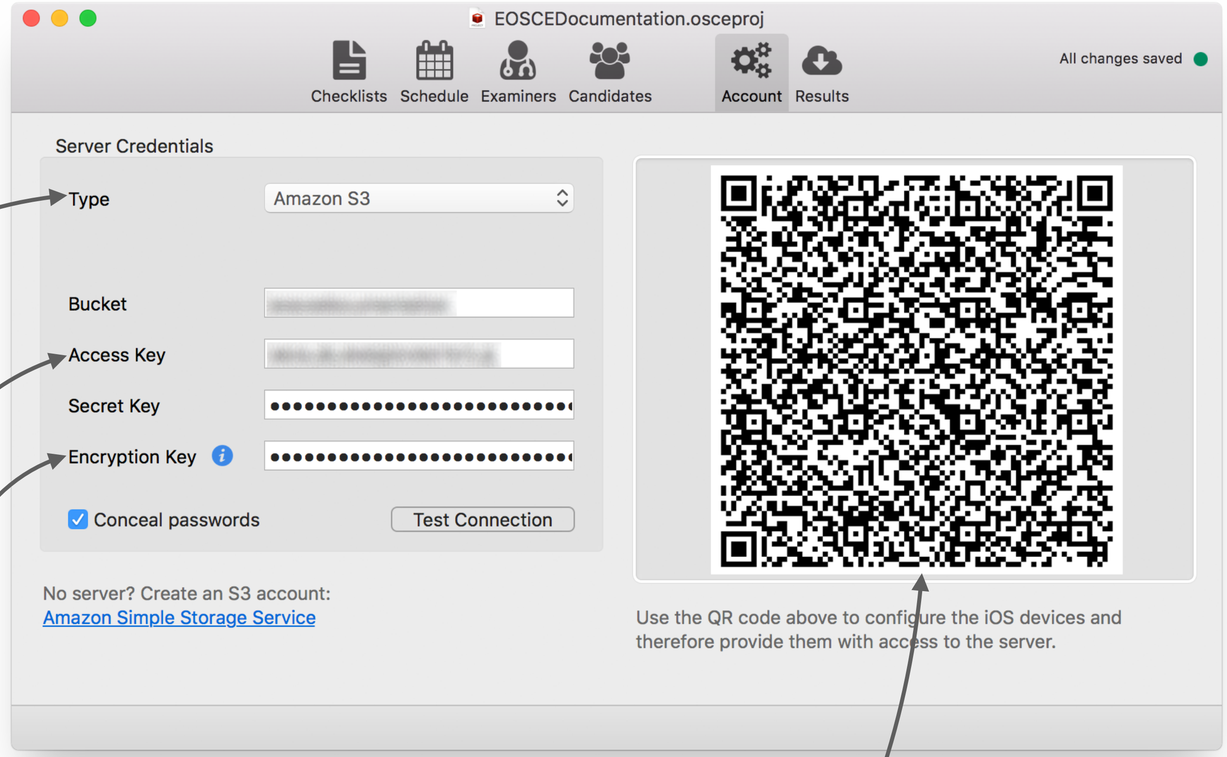
The account section allows you to configure a server to publish the exam to.

The EOSCE applications uses Amazon S3 buckets as its server. But it is possible to use your own, provided it is compatible with Amazon S3 server. In case you use a custom server, select "Custom S3" from the dropdown and add your server endpoint in the field that will appear.

S3 uses an access, and a secret key along with a bucket name.
Upon entering the credentials, click the "Test Connection" button to confirm connectivity.

The encryption key is used by the EOSCE applications to encrypt all the data stored on the S3 server.

Please do not lose you encryption key! There is no way for our support team to recover any exam files encrypted with an unknown key!



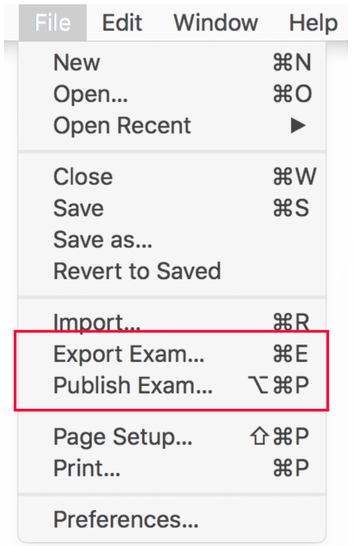
The generated QR code can be scanned by OSCE-Eval and OSCE-Track to connect the devices to the server. You can print this section to supply the QR code to the people responsible for setting up the devices.

You can also drag & drop the QR code to your desktop. This results in two files being saved to the desktop. "Server-credentials.png" is the QR code image and "Server-credentials.oscecredentials" contains the credentials you can use to manually upload to the devices using the Finder (see "Accessing device data") or import in another project using OSCE-Editor.

OSCE-Editor - Publishing

When you publish an exam, the OSCE-Editor generates an exam file for each station in all rotations.

These files can be supplied to the OSCE-Eval iPads either by publishing to the server or by exporting the files and manually supplying them using the Finder (see "Accessing device data").



Publishing via server

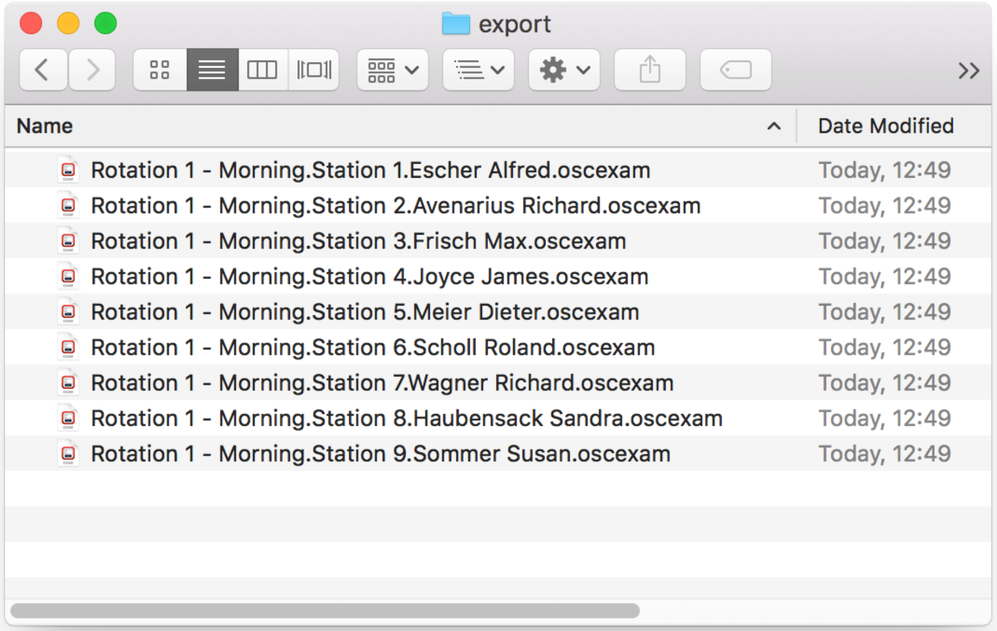
The easiest way to publish the exam is using the server, by choosing "File → Publish Exam…". This will generate and upload all station files to the server.
Make sure you have a valid server configured in the account section.

Manual publishing

To manually supply your devices with the exam you have to export the exam files by clicking "File → Export Exam…". This will generate a file for each station and store them at the given location.

You can supply your devices with these files using the Finder (see "Accessing device data").

The filenames are structured as follows:
{rotation}.{station}.{examiner}.oscexam



The use of a S3 server is strongly recommended as OSCE-Eval will make backups periodically during the exam which improves security and reliability greatly.

OSCE-Editor - Results

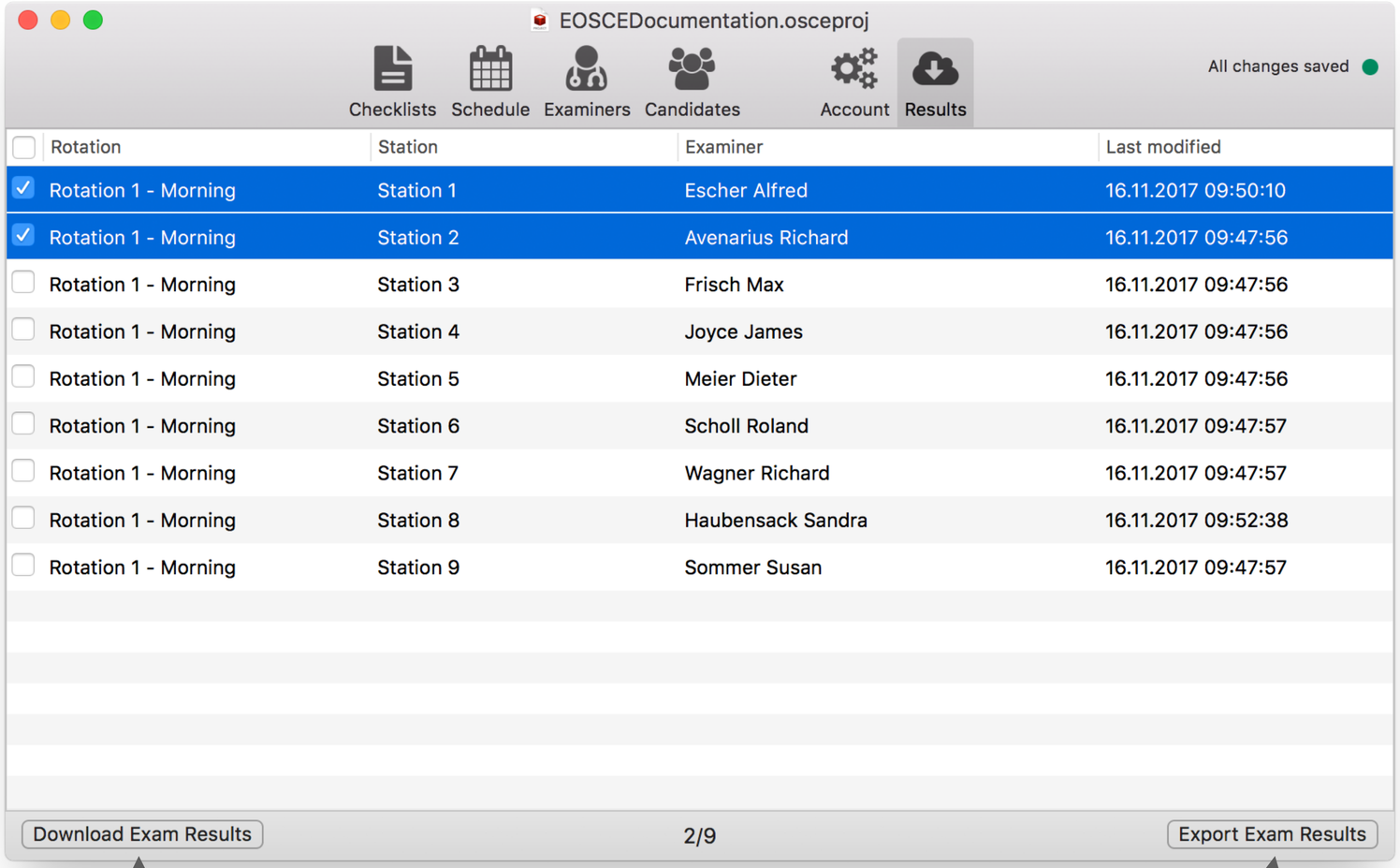
This section is for managing the exam results. The table lists the stations' result file, each containing the results of all candidates to the checklist assigned to that station.

To fetch the results from the server, just click "Download Exam Results". You will be asked if you want to download only finalised results or not. Finalised results are signed station files with the examiners signature. If you uncheck this box, all (including unfinished) exams will be downloaded as well.

If you manually distributed the exam to the OSCE-Eval iPads, you can extract the files the same way and drop them on this screen.

It is possible to selectively export stations, or all stations by checking the box above the section column.

To export the selected station results, click the "Export Exam Results" button.



Download the exam from the server

Export the selected station exams

OSCE-Editor - Results

This dialogue allows you to configure all aspects of the export, and shows detailed information about the export progress.

"Export Folder" displays the export location. The Editor will generate a folder with a time stamp.

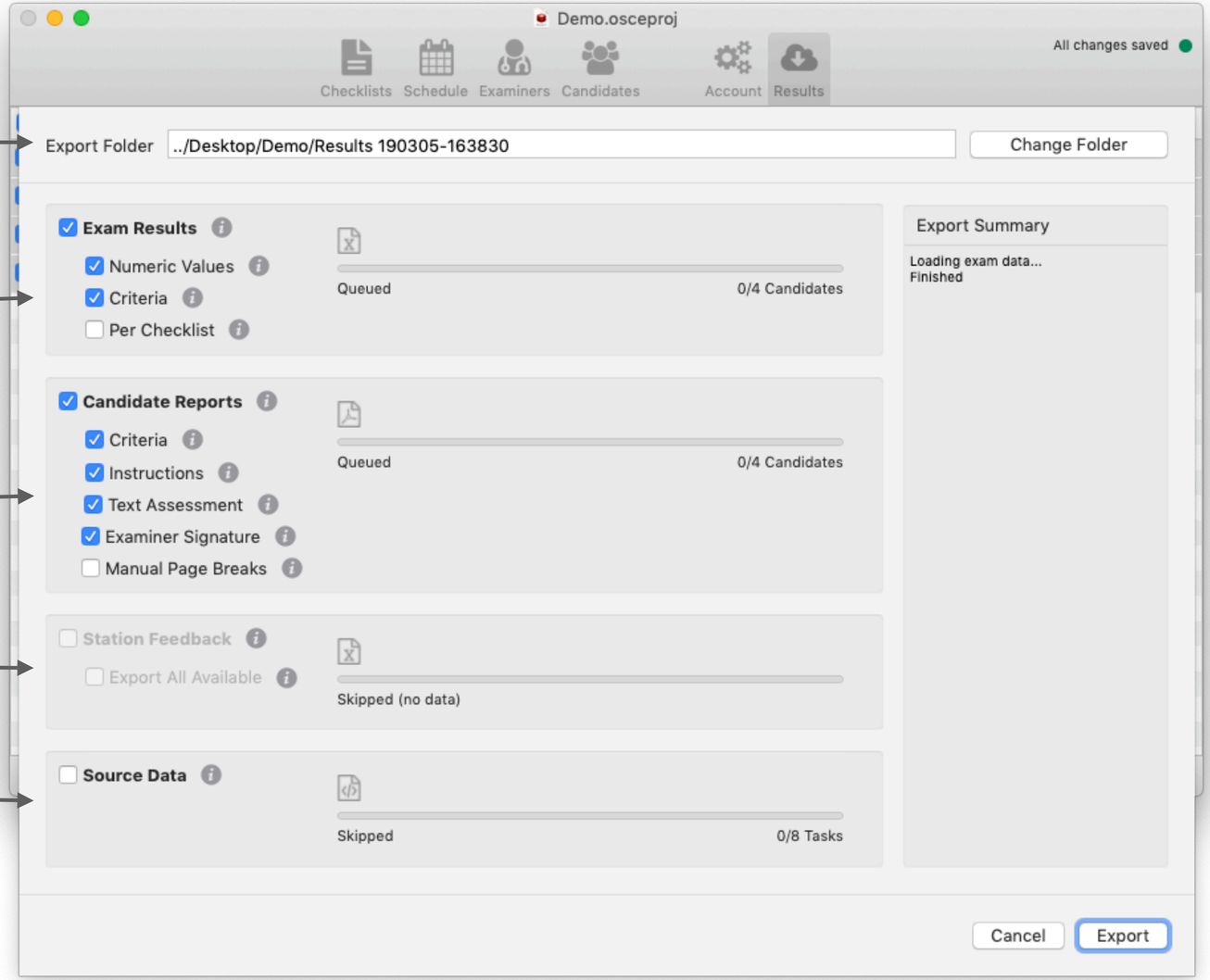
"Exam Results" option generates a CSV document for each checklist. These files can be used for grading, analysis and statistics with tools such as SPSS.

"Candidate Reports" option generates reports as PDF for each candidate, containing their marks for each station.

"Station Feedback" option exports examiner feedback for each station.

"Source Data" option exports all data as a JSON file for processing in third-party applications.

Your preferred default selection can be defined in the application preferences.



OSCE-Editor - Results

"Numeric Values" exports numeric values instead of text labels:

	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	Candidate Last Name	Present	A1	A2	A3	A4	A5	A6	A7	A8	B1	C1	C2	D1	E1	F1
2	Weidmann	Yes	2	2	2	2	0	0	0	0	4	2	2	3	4	4
3	Lummergut	Yes	0	0	0	0	0	0	0	0	1	0	0	0	2	1
4	Dachmann	Yes	2	2	0	0	2	2	1	0	3	2	2	1	4	3
5	Rohner	Yes	2	2	2	2	2	2	2	1	3	2	2	2	4	4
6	Mettler	Yes	0	0	0	0	0	0	0	0	2	0	2	1	3	3
7	von Treben	Yes	2	2	0	2	0	2	1	1	3	2	2	3	5	4
8	Roffler	Yes	2	2	2	2	2	2	2	1	4	2	2	3	5	5
9	Hammer	Yes	0	2	0	0	2	0	1	1	3	2	2	1	4	4
10	Smith	Yes	2	0	2	0	2	0	2	1	4	2	2	2	4	3

Text labels:

	J	K	L	M	N	O	P	Q	R	S	T	U
1	Candidate Last Name	Present	A1	A2	A3	A4	A5	A6	A7	A8	B1	C1
2	Lummergut	Yes	No	No	No	No	No	No	No	No	Insufficient	No
3	Hammer	Yes	No	Yes	No	No	Yes	No	Partially	Yes	Good	Yes
4	Smith	Yes	Yes	No	Yes	No	Yes	No	Yes	Yes	Very Good	Yes
5	Rohner	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Good	Yes
6	von Treben	Yes	Yes	Yes	No	Yes	No	Yes	Partially	Yes	Good	Yes
7	Dachmann	Yes	Yes	Yes	No	No	Yes	Yes	Partially	No	Good	Yes
8	Roffler	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Very Good	Yes
9	Mettler	Yes	No	No	No	No	No	No	No	No	Sufficient	No
10	Weidmann	Yes	Yes	Yes	Yes	Yes	No	No	No	No	Very Good	Yes

"Criteria" exports all criteria belonging to an item as separate columns containing the examiner's selection of the criterion:

	K	L	M	N	O	P	Q	R	S
1	Candidate Last Name	Present	A1	A1-criterion-Duration	A1-criterion-Development	A1-critera-count	A1-criteria-required	A1-criteria-warning	A2
2	Rohner	Yes	Yes	Yes	Yes	2	2	No	Yes
3	Roffler	Yes	No	No	No	0	0	No	No
4	Lummergut	Yes	Yes	Yes	Yes	2	2	No	No
5	Dachmann	Yes	Yes	Yes	Yes	2	2	No	Yes
6	Mettler	Yes	No	No	No	0	0	No	No
7	Weidmann	Yes	Yes	Yes	Yes	2	2	No	No
8	Smith	Yes	No	No	No	0	0	No	No
9	Hammer	Yes	Yes	Yes	No	1	2	Yes	Yes

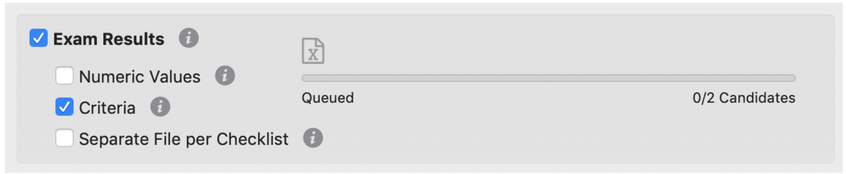
Additional columns are added for:

- The count of the selected criteria.
- The required criteria count for fulfilment of the selected option.
- A warning if these values do not match.

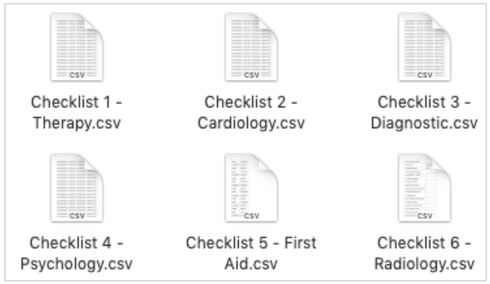
If deselected no criteria detail will be exported:

	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
1	Candidate Last Name	Present	A1	A2	A3	A4	A5	A6	A7	A8	B1	C1	C2	D1	E1	F1	Notes
2	Rohner	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Partially	Yes	Sufficient	Yes	Yes	Fine	Appropriate	Excellent	
3	Roffler	Yes	No	No	No	No	No	Yes	Partially	Yes	Good	Yes	Yes	Sufficient	Mostly appropriate	Good	
4	Lummergut	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Very Good	Yes	Yes	Fine	Appropriate	Excellent	
5	Dachmann	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Good	Yes	Yes	Sufficient	Mostly appropriate	Sufficient	
6	Mettler	Yes	No	No	No	No	No	Yes	Partially	No	Insufficient	No	No	Sufficient	Mostly appropriate	Sufficient	
7	Weidmann	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Good	Yes	Yes	Sufficient	Neutral	Sufficient	
8	Smith	Yes	No	No	Yes	Yes	Yes	No	Partially	No	Sufficient	No	No	Sufficient	Neutral	Excellent	
9	Hammer	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Sufficient	Yes	Yes	Fine	Appropriate	Excellent	

OSCE-Editor - Results



"Per checklist": exports the results of each checklist in a separate file:



When the option "Per checklist" is **not selected**, the results of all checklists are exported to a single file "Results.csv".

The first 3 columns contain candidates' personal information.

Then come results columns. They are formatted in blocks by checklist.

- The first columns contain general information (Checklist, station, examiner, etc)
- The others contain results

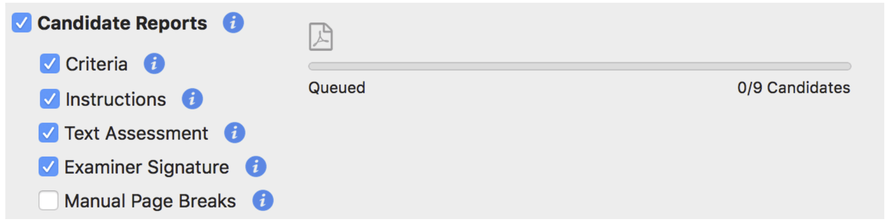
The block's headers contain a prefix "C[Index]_", where the index corresponds to the index of the checklist block within the results file. Such as **C0_** in the picture below**.**

Directly after the first checklist's block comes the next checklist's block.

It is normal to observe **empty lines**. This is when a candidate hasn't been assessed with that checklist.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Candidate ID	Candidate First Name	Candidate Last Name	C0_Station ID	C0_Station Name	C0_Checklist	C0_Rotation	C0_Examiner ID	C0_Examiner First Name	C0_Examiner Last Name	C0_Cover Examiner	C0_Present	C0_A1	C0_A2	C1_Station ID	C1_Station Name
2	1	Marc	Wyller	87SDW-5KDLDI3	Station 1 - Blue	Checklist 1	Blue	1	Eleonore	Matter		1	0	0	AUD-491-ZZLD	Station 2 - Blue
3	2	Daniel	Chapuis	123ABC-930KK91	Station 1 - Red	Checklist 1	Red	1	Paul	Skywalker	Alfred Aebischer	1	5	1	8A7O-8911-KL	Station 2 - Red
4	3	Patrick	Aebischer													
5	4	Frédéric	Mulhauser													
6	5	Anna	Lęborski	87SDW-5KDLDI3	Station 1 - Blue	Checklist 1	Blue	1	Eleonore	Matter		1	0	3	AUD-491-ZZLD	Station 2 - Blue
7	6	Zeo	Channel	123ABC-930KK91	Station 1 - Red	Checklist 1	Red	1	Paul	Skywalker	Alfred Aebischer	1	5	3	8A7O-8911-KL	Station 2 - Red
8	7	Peter	Schmidt													
9	8	Dominik	Wójcik	123ABC-930KK91	Station 1 - Red	Checklist 1	Red	1	Paul	Skywalker	Alfred Aebischer	1	5	4	8A7O-8911-KL	Station 2 - Red
10	9	Irena	Hammer	87SDW-5KDLDI3	Station 1 - Blue	Checklist 1	Blue	1	Eleonore	Matter		1	0	1	AUD-491-ZZLD	Station 2 - Blue
11	10	Olivia	Zelmer	123ABC-930KK91	Station 1 - Red	Checklist 1	Red	1	Paul	Skywalker	Alfred Aebischer	1	5	2	8A7O-8911-KL	Station 2 - Red

OSCE-Editor - Results



"Criteria" highlights fulfilled criteria, as indicated by the examiner. If unchecked, the criteria are displayed but not highlighted.

"Instruction" includes item instructions, as displayed for examiners.

"Text Assessment" includes all notes and comments an examiner might has given.

"Examiner Signature" includes the examiner name and signature at the end of the station section.

"Manual Page Breaks" respects manually defined page breaks. If unchecked, you will get a more compact PDF.
(Note that manual page breaks must be added in the advanced options of a checklist item before publishing the exam.)

With:

Checklist: Fatigue

A Short Anamnesis

Please advise the candidate to use the instruments prepared for this station.

1 **Asks about the peculiarity of the patient's fatigue** *(both = yes)*
Duration · Development
◉ Yes ○ No

2 **Asks about the influence of fatique in daily life**
◉ Yes ○ No

3 **Asks about other ailments** *(at least 1 = yes)*
Chest pains · Dyspnoea
◉ Yes ○ No

4 **Asks about previous diseases**
◉ Yes ○ No

5 **Asks about addiction anamnesis** *(both = yes)*
Alcohol · Nicotin
◉ Yes ○ No

Without:

Checklist: Fatigue

A Short Anamnesis

1 **Asks about the peculiarity of the patient's fatigue**
Duration · Development
◉ Yes ○ No

2 **Asks about the influence of fatique in daily life**
◉ Yes ○ No

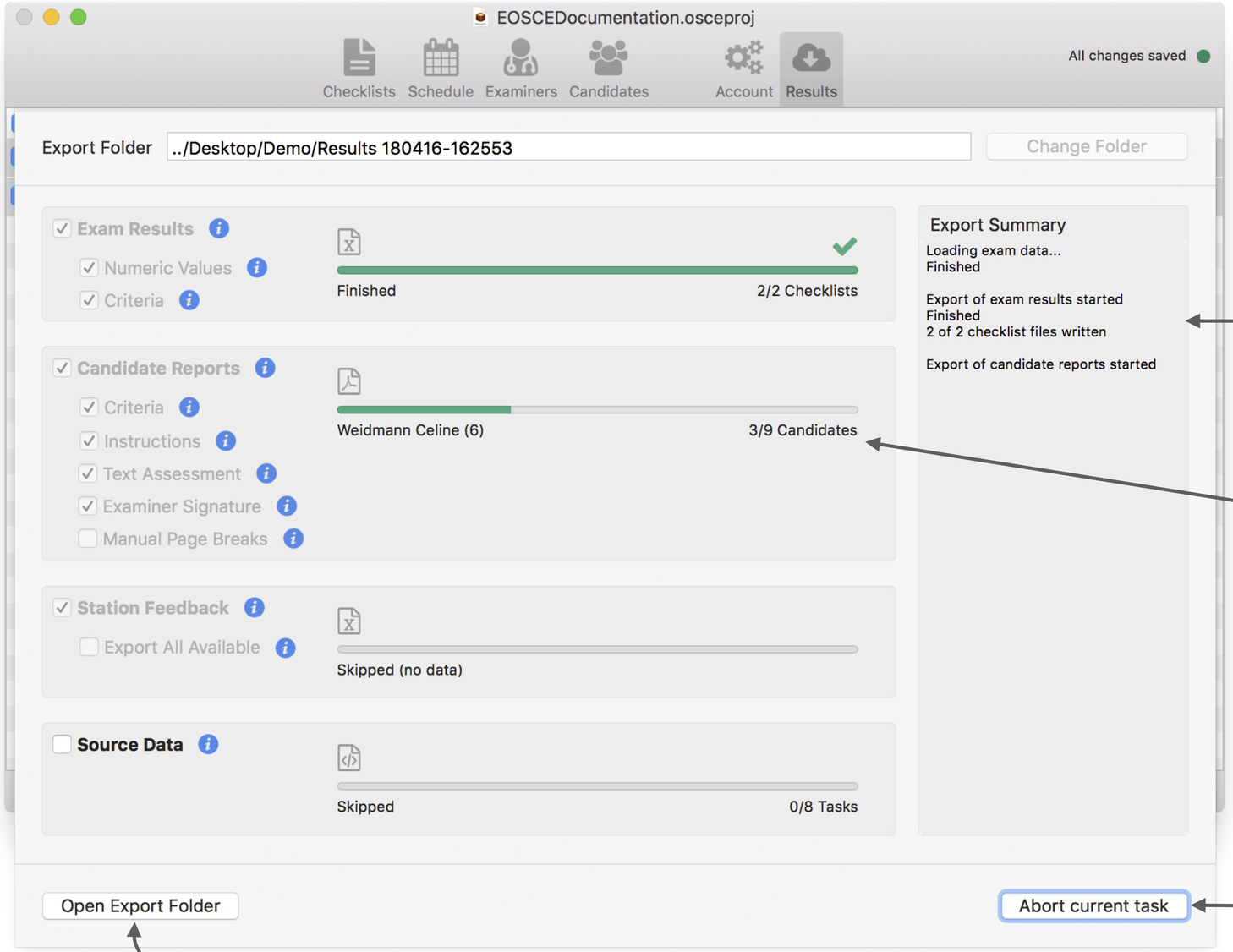
3 **Asks about other ailments**
Chest pains · Dyspnoea
◉ Yes ○ No

4 **Asks about previous diseases**
◉ Yes ○ No

5 **Asks about addiction anamnesis**
Alcohol · Nicotin
◉ Yes ○ No

Please contact our support for more information about "Station Feedback" and "Source Data".

OSCE-Editor - Results



The "Export Summary" shows process details. If there is an issue with a specific item, it will be reported in this summary.
A more detailed log is saved to a text file (log.txt) stored in the export folder.

This area shows the progress of the individual tasks. If there is a warning the progress bar will turn orange and the item causing the issue will get skipped. If there is an error, the progress bar will turn red and the task will be stopped (e.g. the decryption key is incorrect or missing)

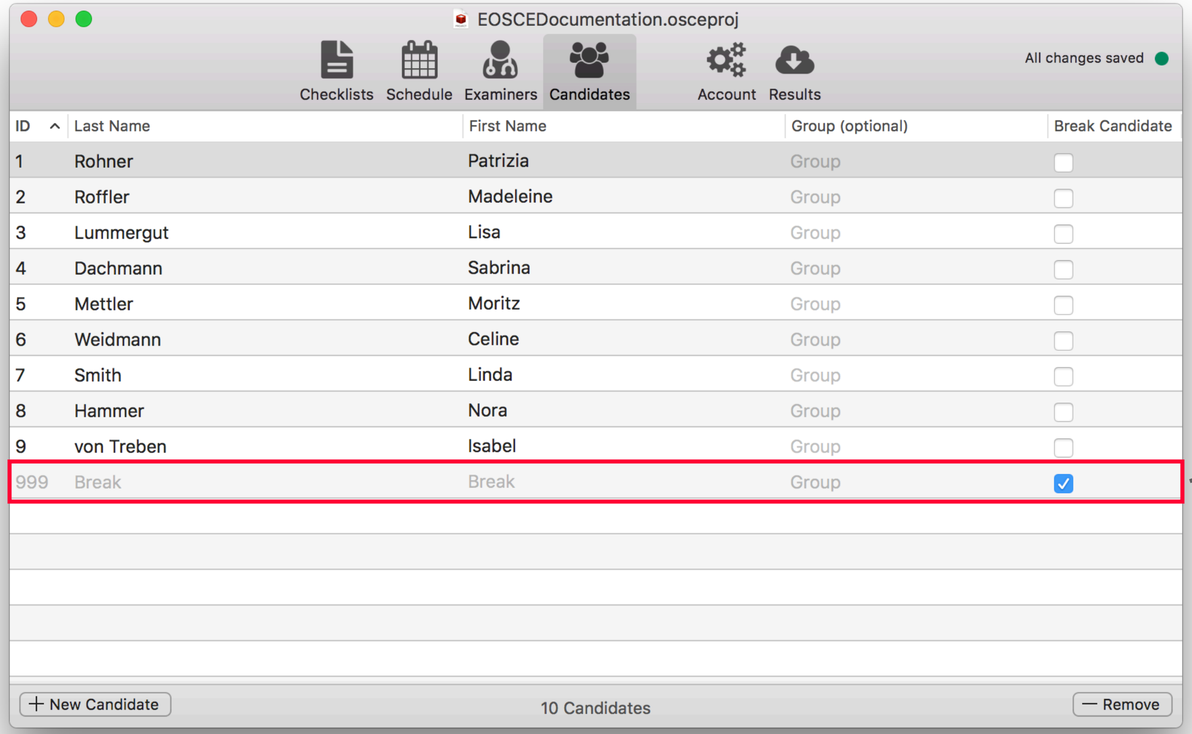
You can abort the export tasks at any time.

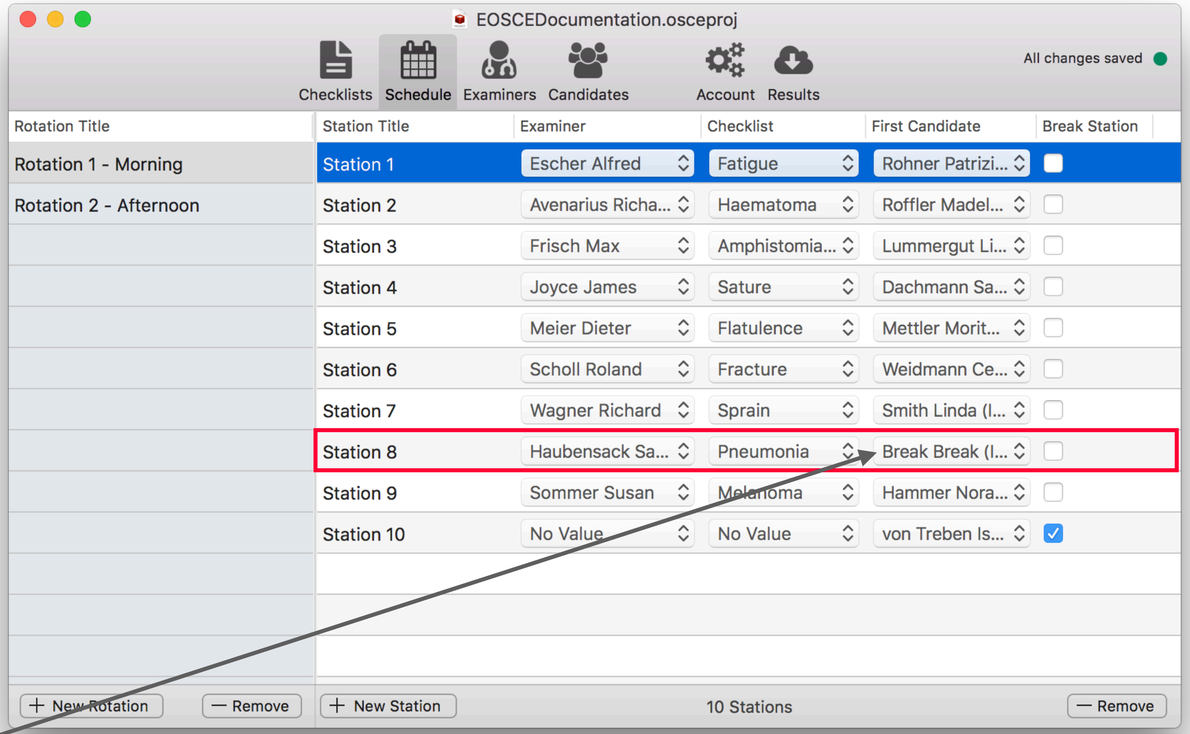
This button will open the export folder in a new finder window.

OSCE-Editor - Special Cases

More Stations than Candidates

- If there are more OSCE stations than there are candidates, a "Break Candidate" must be inserted.
- To do so create a new candidate and click the "Break Candidate" checkbox.

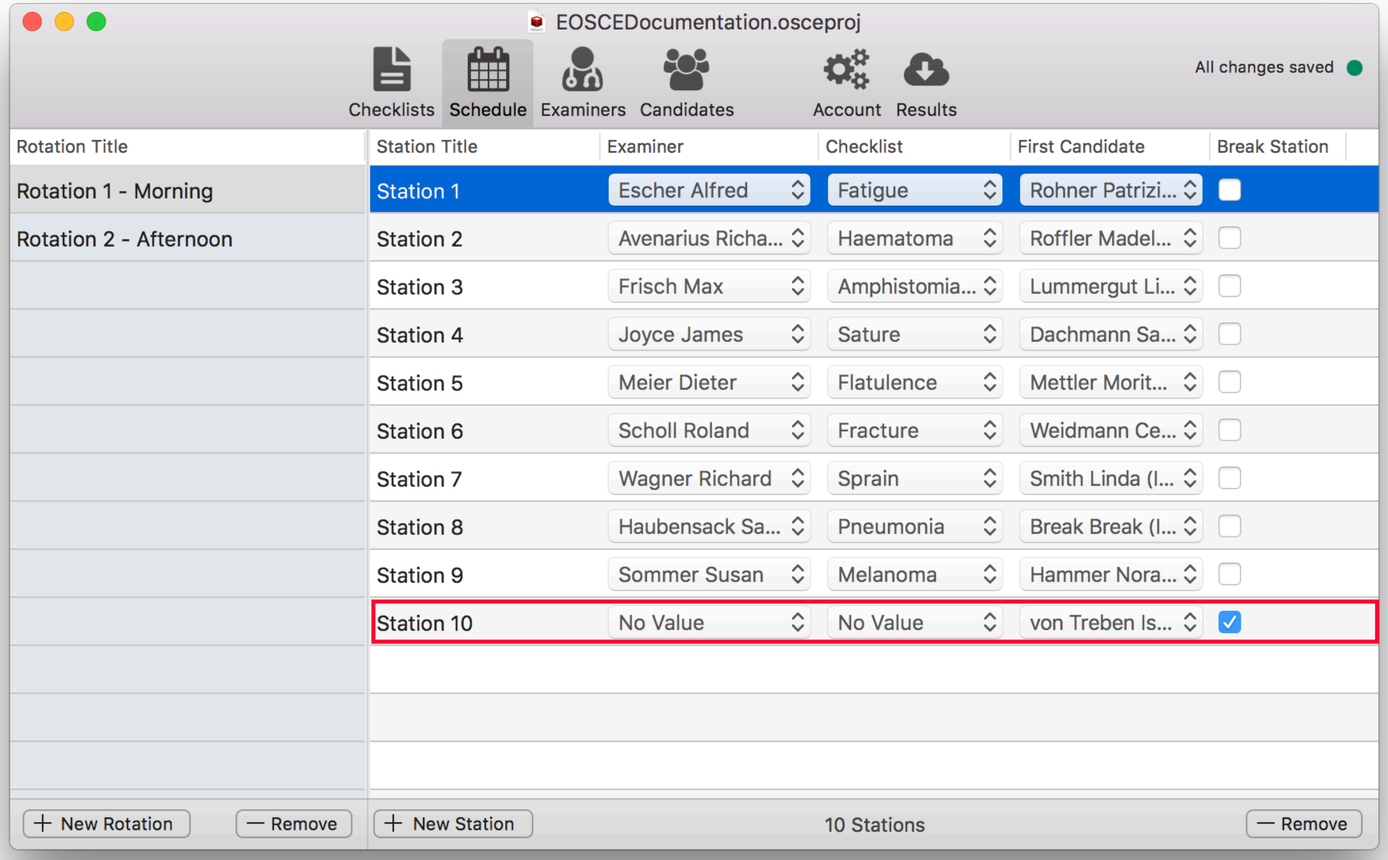




OSCE-Editor - Special Cases

More Candidates than Stations

- If there are more candidates than there are OSCE stations, a "Break Station" must be inserted.
- To do so create a new station and click the "Break Station" checkbox.



OSCE-Editor - Special Cases

Unassigned Candidates

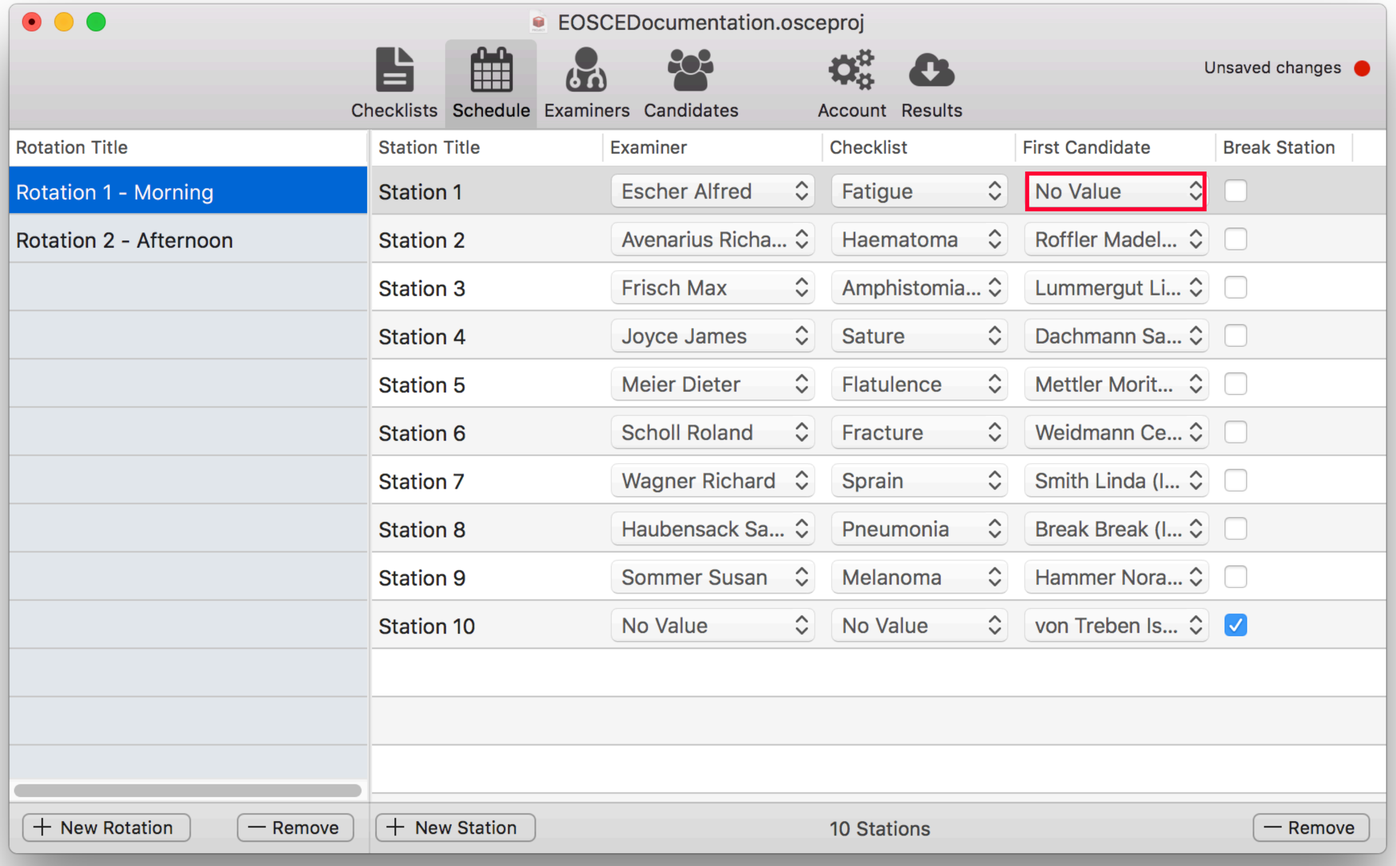
Problem:

No exam files are exported for a station.

If no starting candidate is set for a station, the rotation plan will not include that station.

Solution:

Assign a "First Candidate" value for each station.



OSCE-Editor - Special Cases

Unassigned Examiners

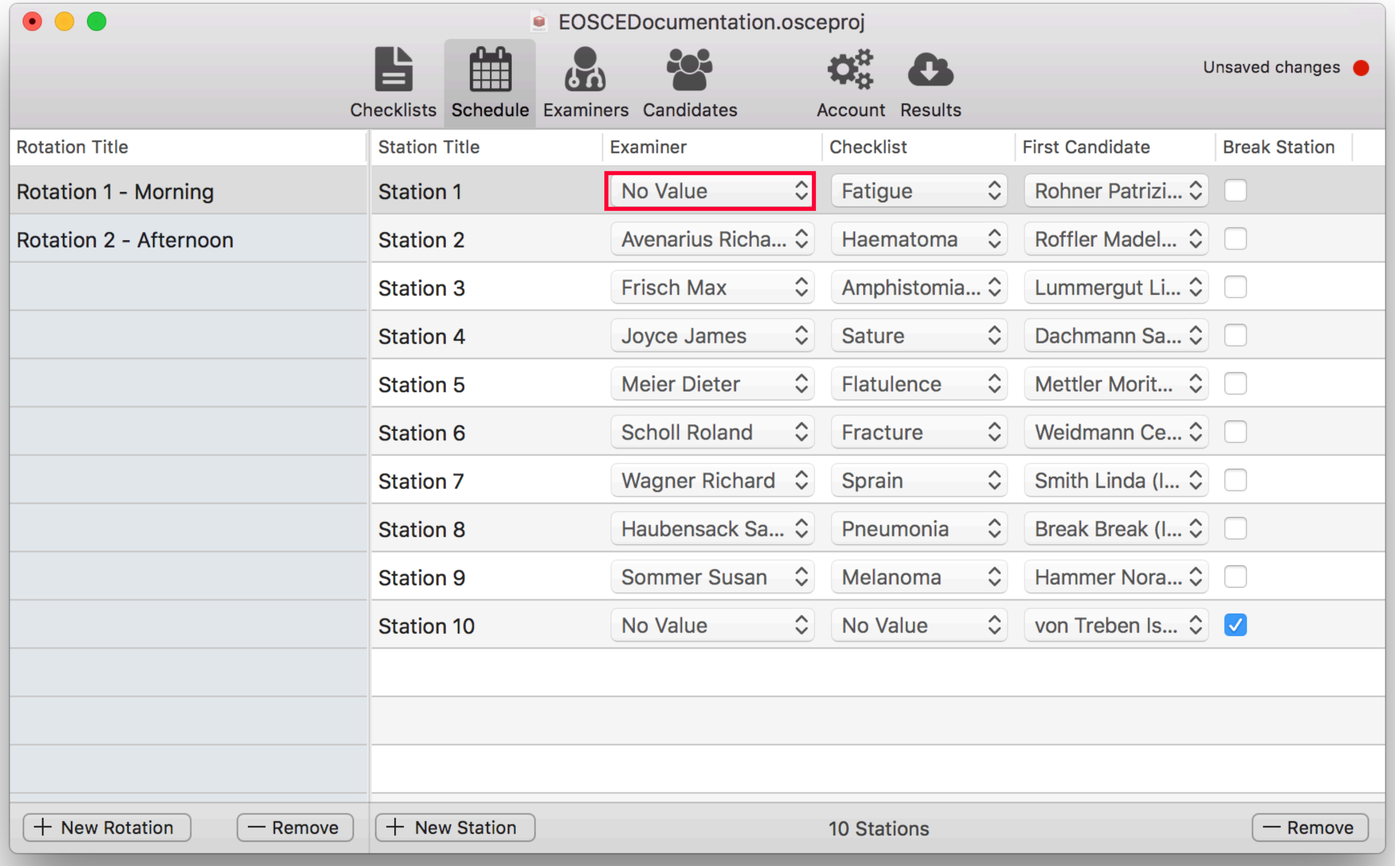
Problem:

No exam files are exported for a station.

If no examiner is set for a station, the rotation plan will not include that station.

Solution:

Assign an examiner for each station that is no break station.



OSCE-Editor - Special Cases

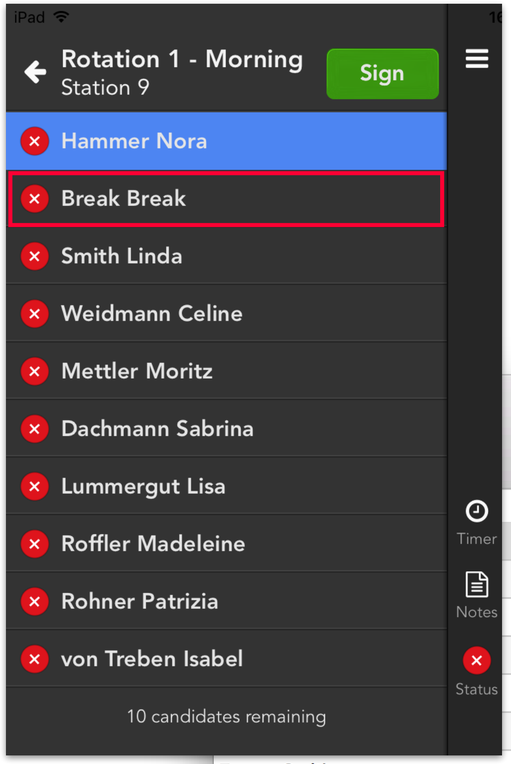
"Break Candidates" displayed as normal candidates

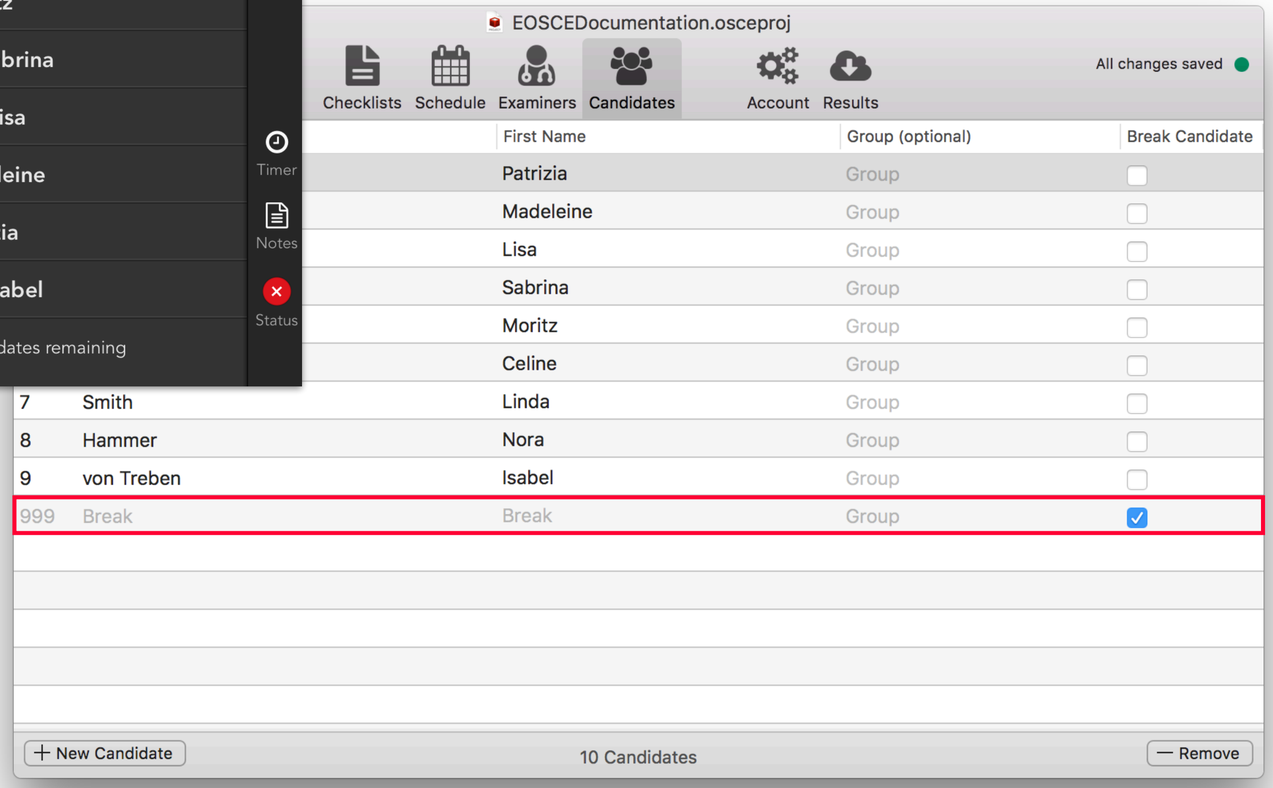
Problem:

The "Break Candidate" is showing up as a normal candidate in the list and is therefore assessable.

Solution:

Make sure you have selected the "Break Candidate" checkbox for the break candidate(s) and publish the exam again as every station will be affected.





OSCE-Eval - Overview

Installation

To install OSCE-Eval, download the app from [Apples iTunes Store.]

OSCE-Eval runs on all iPads with iOS 9 and above.

Usage

When you open the app the first time, you will see the home screen with two demonstration checklists.

Tap on a checklist to open it.

On the right side is the questionnaire, in this case for the candidate "Lummergut Lisa", where the examiner can set answer options and mark the appropriate fulfilment criteria.

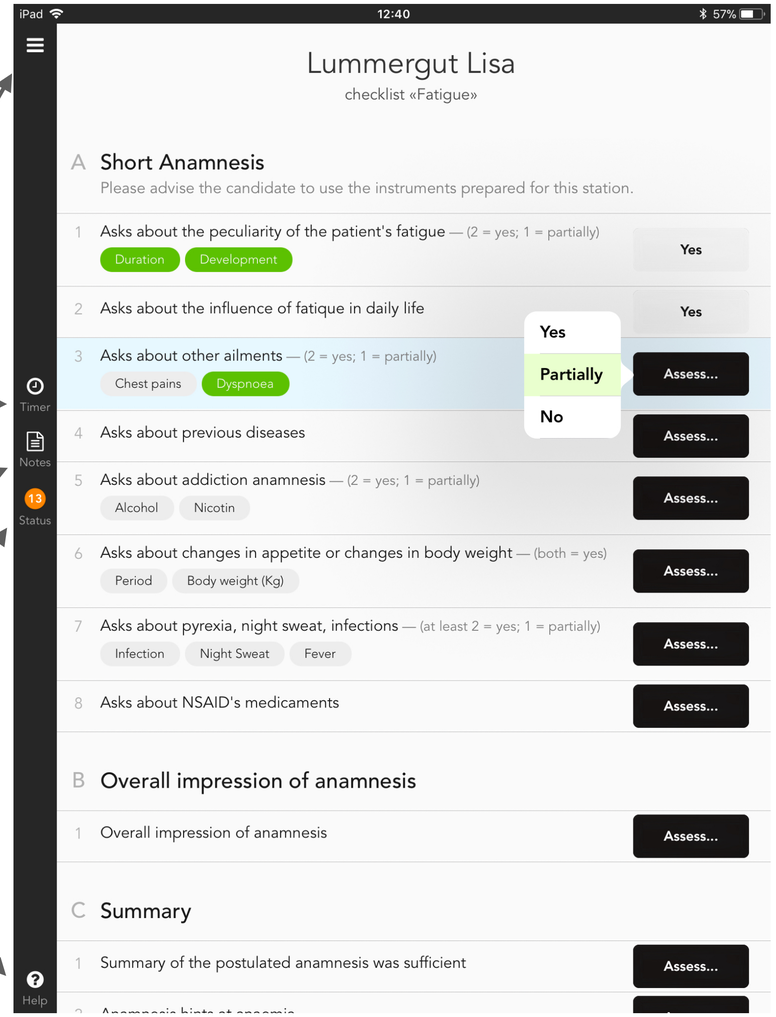
The left side shows a menu icon on the top, to open the candidate list and other options.

A timer icon allows to set a timer, which will sound a tone after the set time.

The notes button allows adding comments about the current candidate.

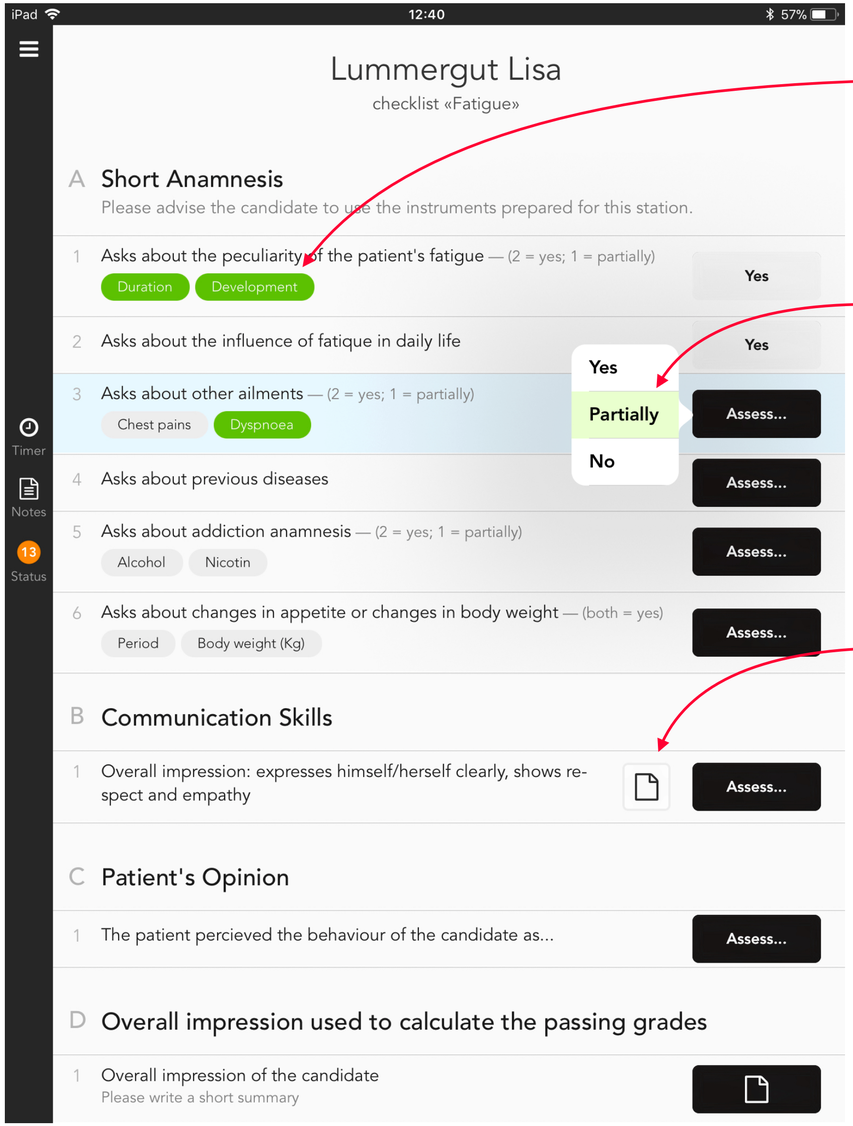
A status icon shows the remaining questions to answer. When tapping the icon, the answered questions will be hidden.

In the bottom corner, there is a help icon which opens information for the examiner.



OSCE-Eval - Assessment

Assessment

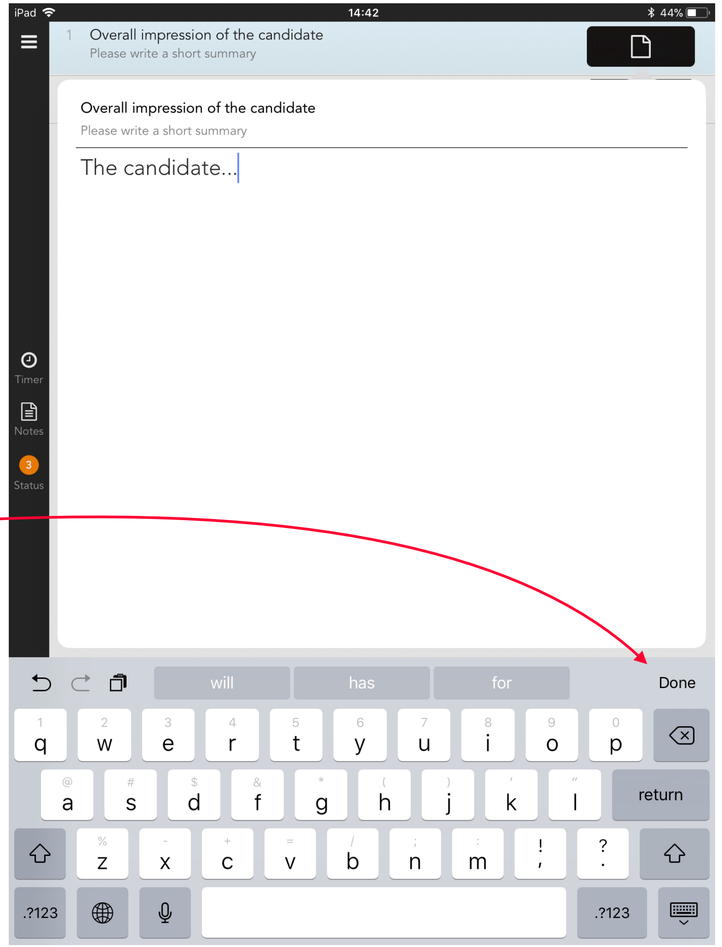


OSCE-Eval knows three elements to assess a candidate:

"Fulfillment criteria" are keywords a candidate has to mention or use.
Tap on the item to select it.

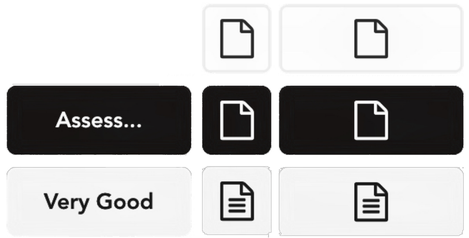
"Assessment options" are used to grade the candidate. Tap on the assess button to select one of the predefined options. Depending on the checklist, the suggested option is highlighted in green depending on the criteria selection.

"Text assessment" allows examiners to take notes and comment on a particular item. Tap the text icon to open the text editor. Tap "Done" to dismiss the dialogue and save the comment.



Buttons can have multiple states:

- Optional
- Required
- Answered



OSCE-Eval - Exam

The candidate overview lists all candidates participating at this station. They are listed in the order of the rotation with the first beginning at the top.

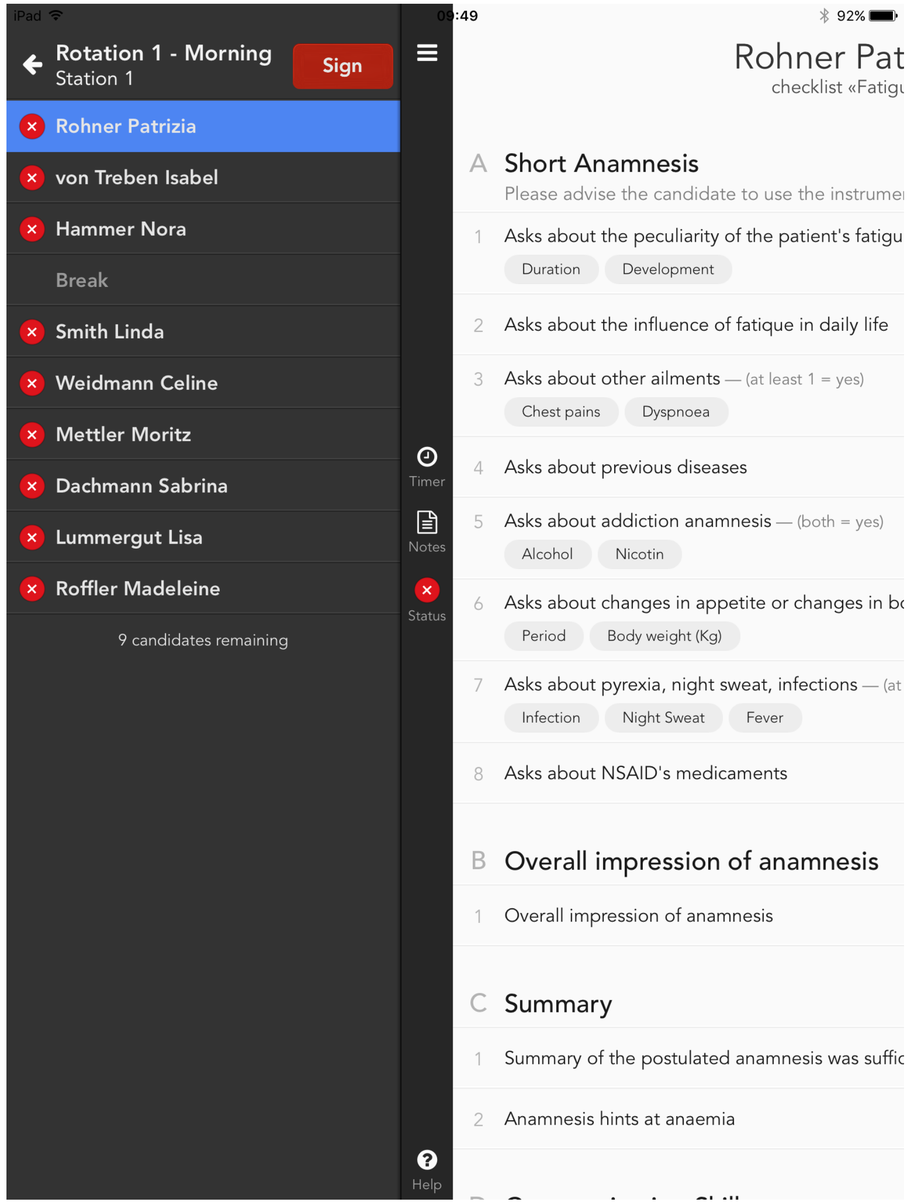
Going back to the home screen is done by tapping the arrow in the top left.

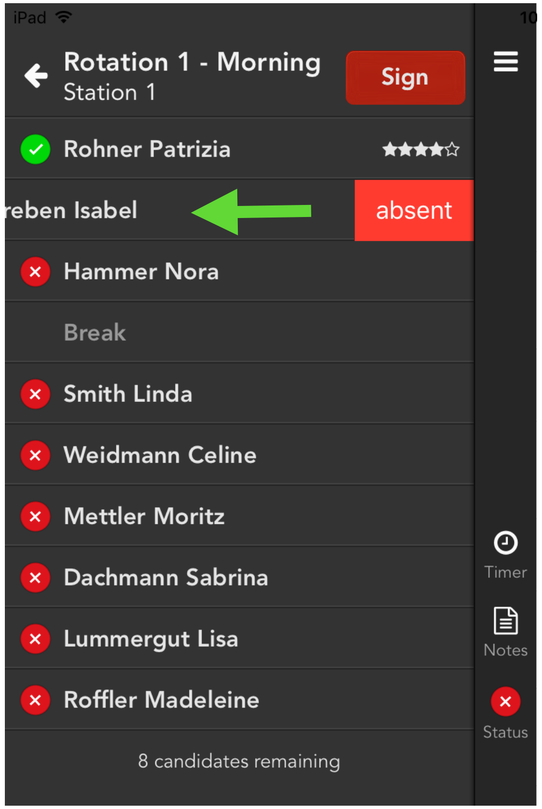
As the exam progresses, the candidate list shows which candidates are finished, indicated by the icon on the left side of the candidate.

If for some reason a candidate is absent, a left swipe on the candidate reveals the option to mark candidate accordingly.

Assuming rating information have been set in OSCE-Editor on the questions using the "Affects star-rating" checkbox, the candidate list will show the rating on the right side of a candidate.

Please make sure the correct candidate is selected when filling the questionnaire, as the data cannot be transferred to another candidate.





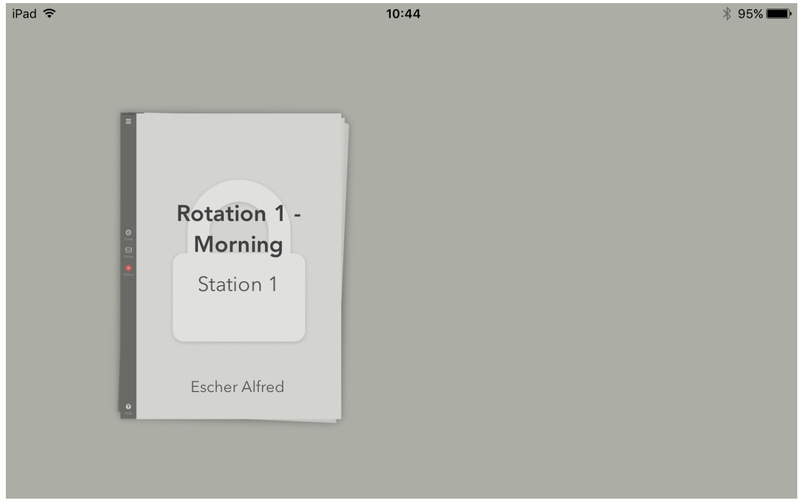
OSCE-Eval - Exam

When all candidates have been assessed at this station, the examiner has to sign the exam.

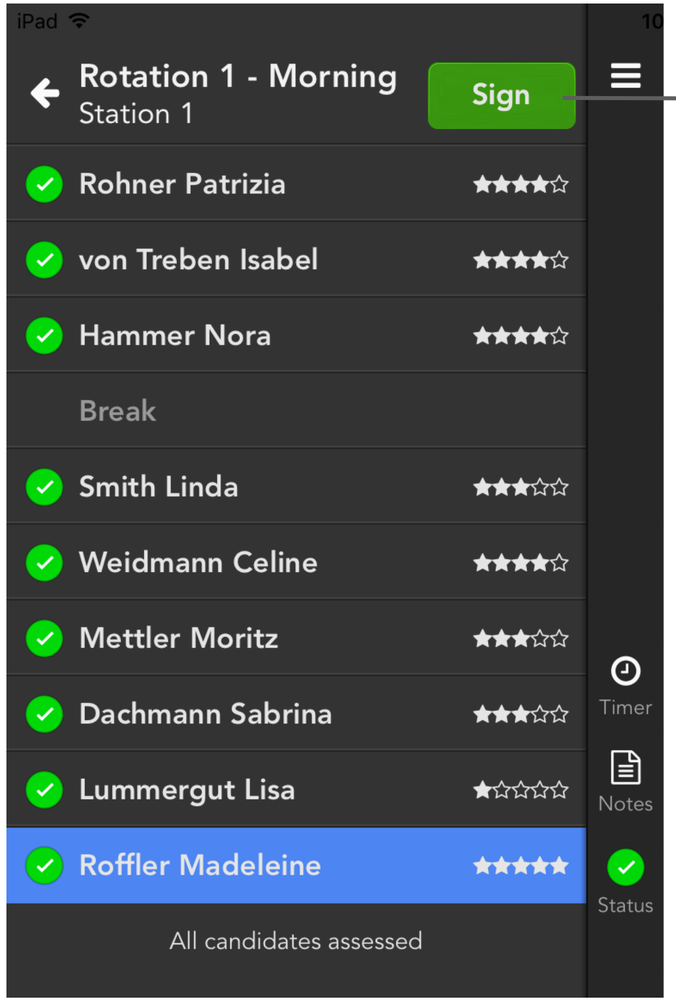
The examiner can only do so if all items for all candidates have been marked.

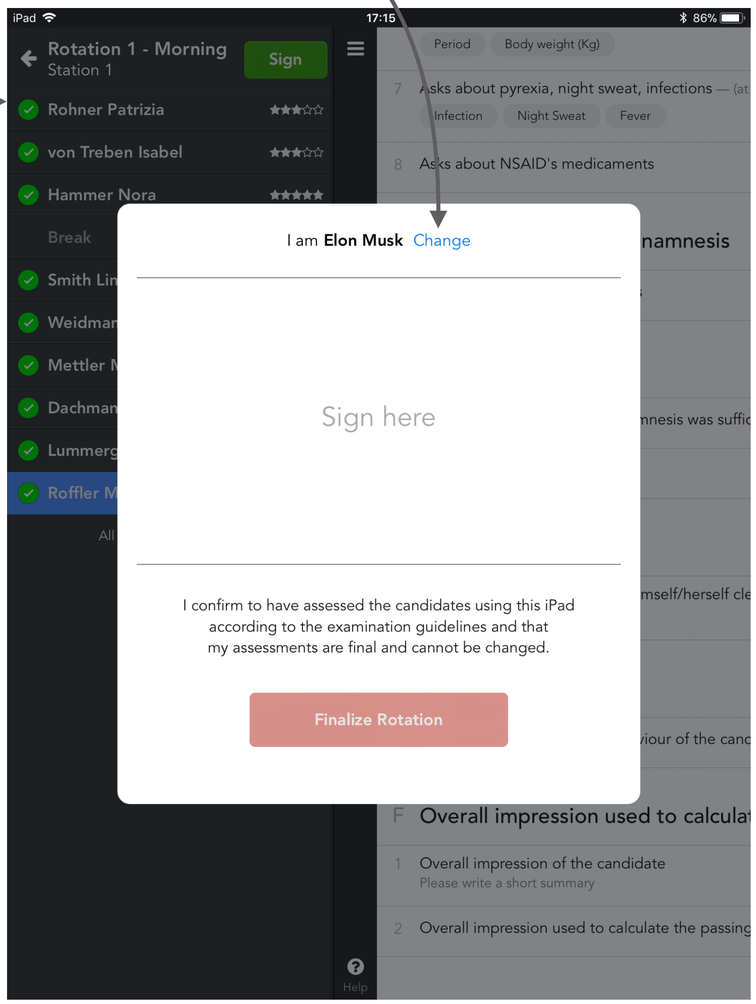
The exam can be signed by tapping the "Sign" button and draw the signature by finger in the following signature overlay.

A station file cannot be changed after signing the exam and will be locked. It will appear so on the home screen.



If another examiner had to cover for the scheduled examiner, the name can be changed in the signing dialogue.



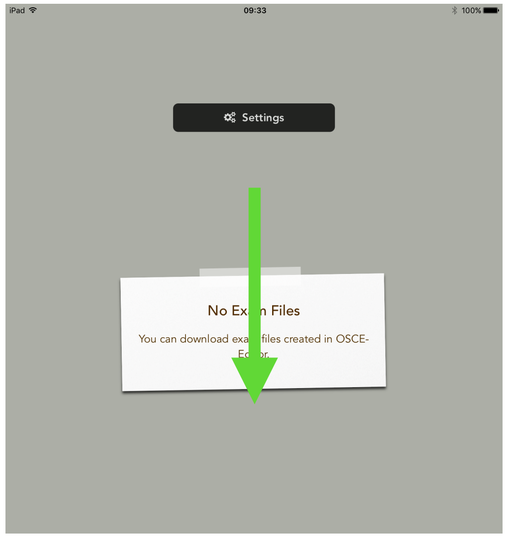


OSCE-Eval - Settings

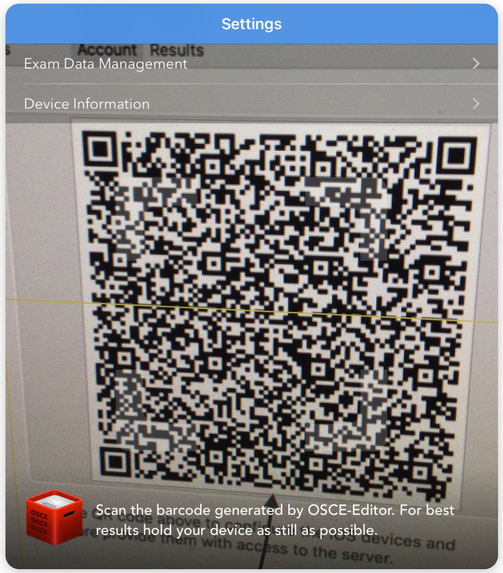
Unless you supplied OSCE-Eval manually with data using Finder (see "Accessing device data"), it will have no data on it (there might be two example checklists).

To download checklists from the server, you have to configure it in the settings.

For this, swipe down on the main screen with one finger until the "Settings" button is revealed and tap with another finger firmly on the button.

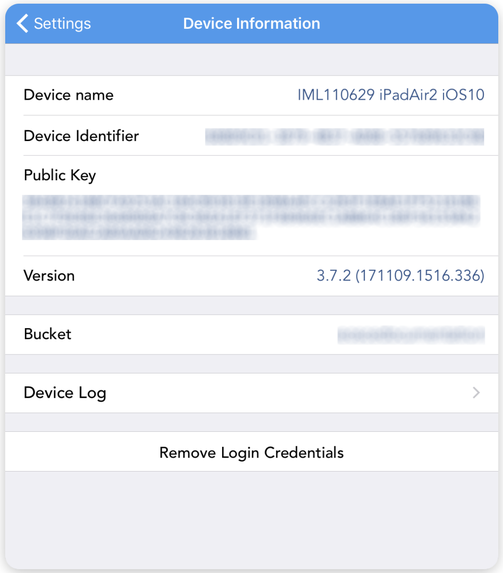


The initial screen allows you to scan the credentials QR code directly from the OSCE-Editor or printed QR code sheet. Make sure you give OSCE-Eval access to the camera.
Depending on the age of your device, QR code recognition time may vary. Hold the device as stable as possible.
When the QR code is recognised, the video feed will stop.



Tap outside the setting overlay to close the settings.

The "Device Information" section in the settings shows details about the device and configuration. The credentials you scanned in or supplied through Finder (see "Accessing device data") can be completely removed here (no data will be deleted from your device when you remove the login credentials)



OSCE-Eval - Settings

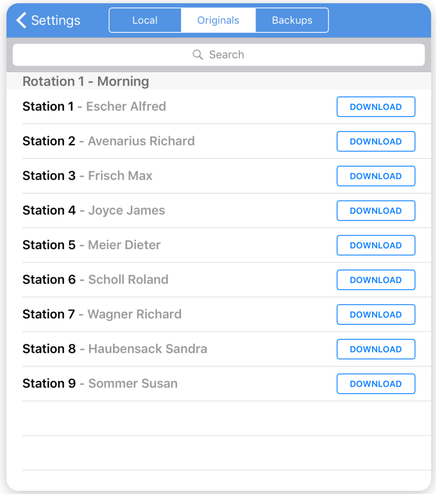
To download the exam to the device, go to "Originals". This section lists all empty station files (without candidate data) grouped by rotation.

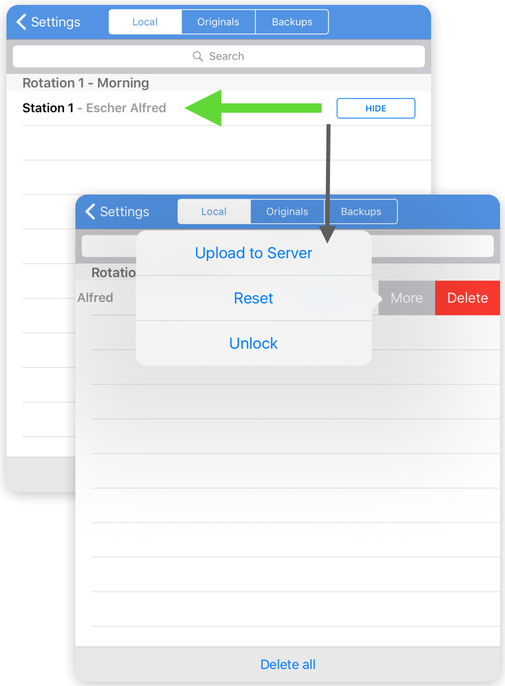
Tap on the download button to download this station's checklist.

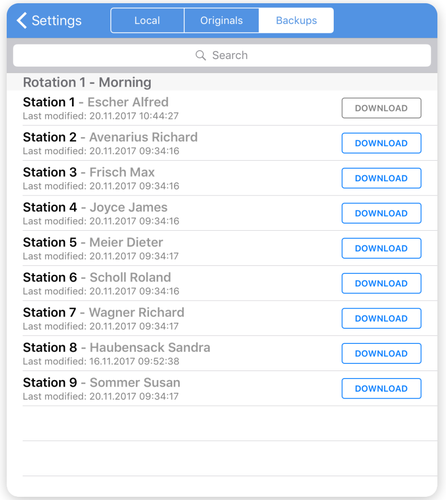
We suggest you only download the file for the current station, as multiple iPads with the same station file might overwrite each other's results.

Downloaded files are visible in the "Local" section. You have the possibility to hide and delete files. If you swipe left on an item, more options are revealed:

- For deleting a single file.
- Force uploading to the server will overwrite the server's data with your current file.
- Resetting a file will remove all candidates evaluation stored in the file.
- Unlocking will remove the examiners signature and allow you to change candidate evaluation.







OSCE-Eval saves all changes periodically to the server. Those files are listed in the "Backup" section and contain the candidate evaluation data.

You can download these backups to another device.

This is particularly helpful if an active device fails (e.g. run out of battery), as you can easily download the stations backup file and continue the exam on another device. Download the file from the "Backup" and not from "Originals", as only the backup file contains all data.

OSCE-Track - Overview

Installation

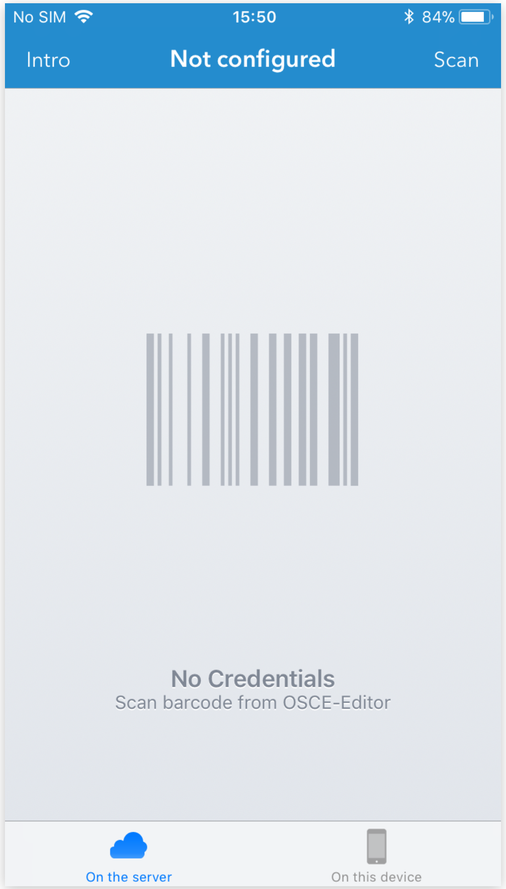
To install OSCE-Track, download the app from Apples iTunes Store.

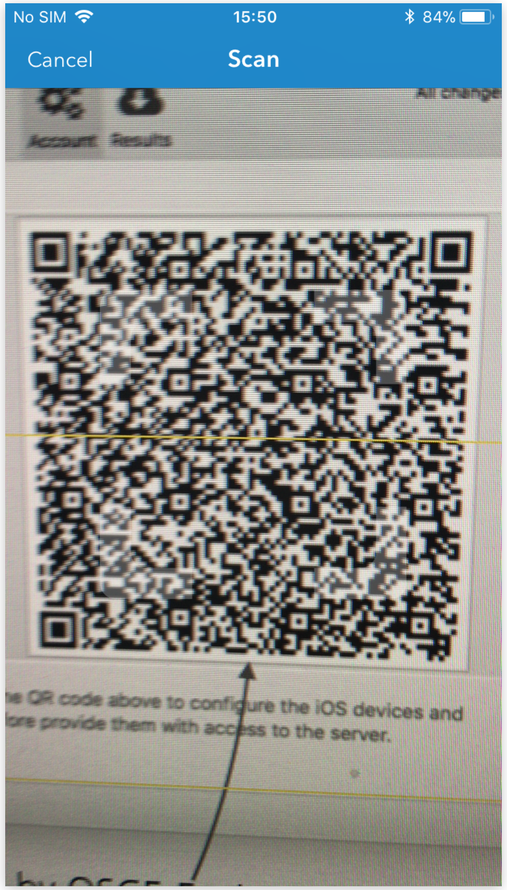
OSCE-Track runs on all iPads and iPhones with iOS 9 and above.

Overview

The app is designed to help the support team of an OSCE exam. It shows in detail the state of the individual stations and allows to create a full backup of all the data to the device.

It is to note, that OSCE-Track can only be used utilising a S3 server to observe the exam progress.





As with OSCE-Eval, the app can obtain the credentials by scanning the QR code, either on the screen of OSCE-Editor or the printed QR code sheet, or by uploading the credential file using the Finder (see "Accessing device data").

Tap the "Scan" button to initialise scanning.

OSCE-Track - Monitoring

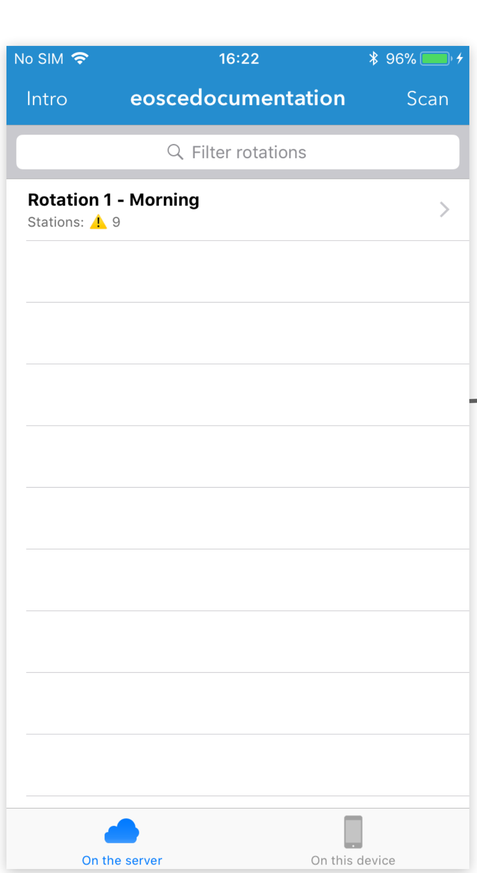
As soon as you are connected to the server, the app will display a list of ongoing rotations showing its list of stations.

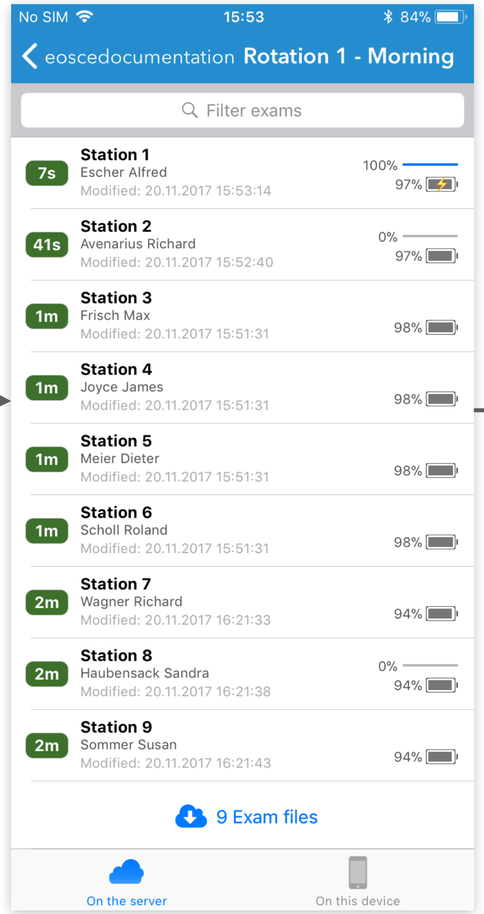
In the detail of the rotation, all stations are listed. The left indicator shows the time since the station last synchronised with the server or it will show a lock symbol if the station is finished.

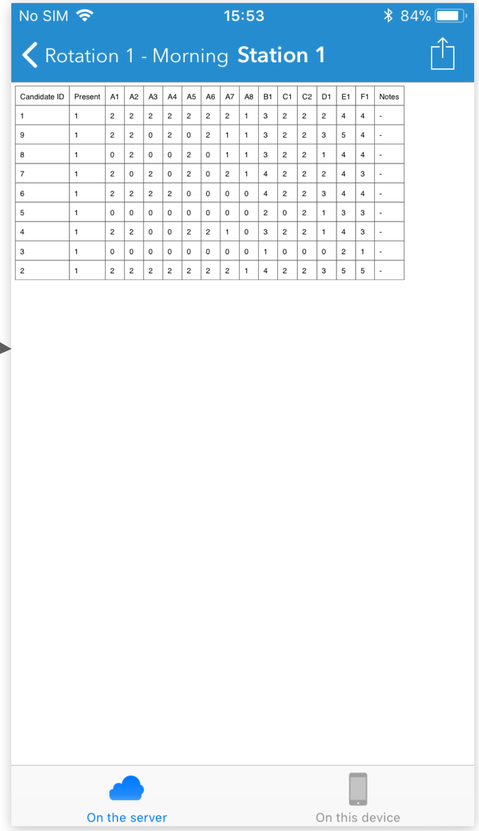
The progress bar on right shows how much the exam has progressed.

Below the progress bar is the battery indicator, showing the battery level and if the device is currently plugged in and charging.

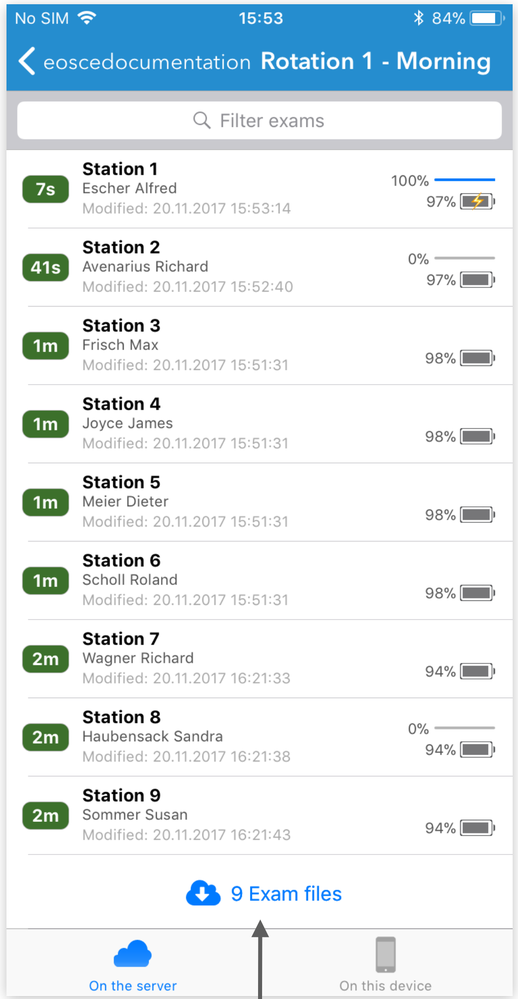
A tap on a station reveals the current data for the candidates.



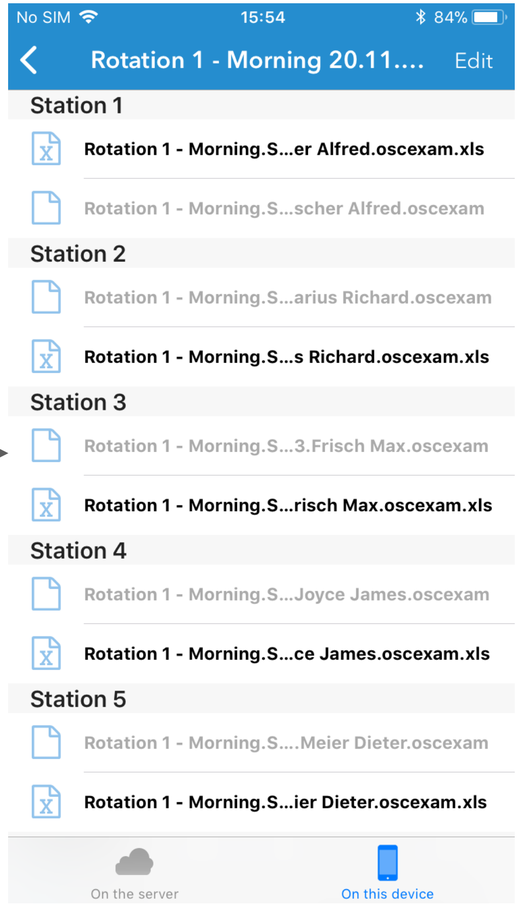




OSCE-Track - Backup



To back up all the data, tap the download entry at the bottom of the station list.



You can make as many backups as needed. They will get listed by date in the section "On this device". The detail of the backup will show each file that has been downloaded per station.
You can extract these files using the Finder (see "Accessing device data") and provide either OSCE-Editor (result section) or OSCE-Eval with the backup files.

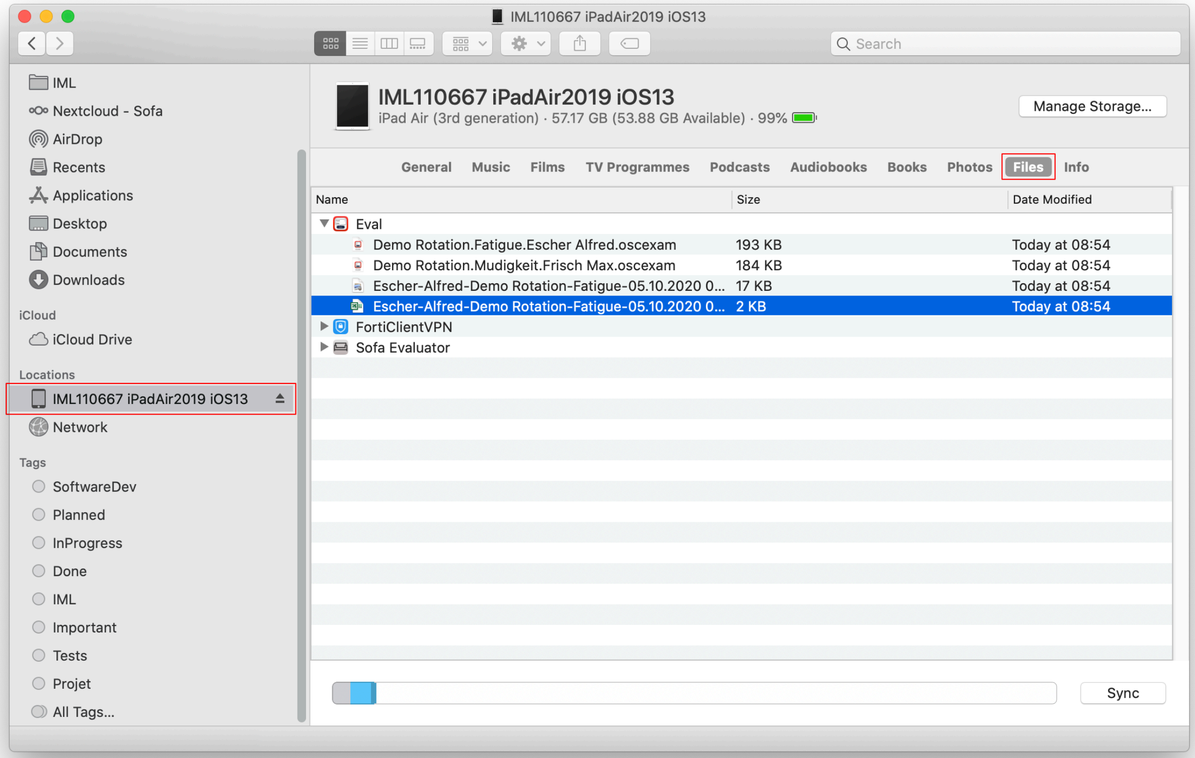
In Depth - Accessing Device Data (macOS 10.15+)

To access data on the iPad or iPhone stored in OSCE-Eval or OSCE-Track, connect your device to your Mac and open the Finder. In the left area, in the section “Locations”, a device icon will appear.
Upon clicking the icon, the device details will appear. Select "Files" and then "Eval". The detail view lists all files contained in the app.

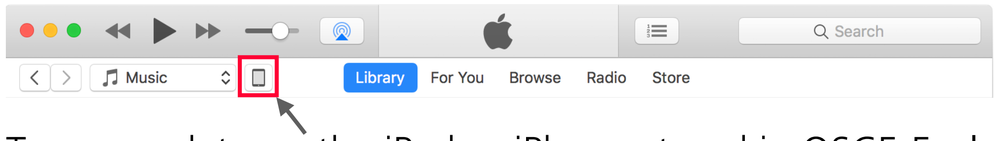
You can add your exam files by dragging them onto the file list, or select "Add…" to get a selection menu.

When an exam is finished, the same exam files can be downloaded and added to the result screen in the OSCE-Editor. A finished exam will also result in a couple of jpg and xls files containing the results and the examiners signature.

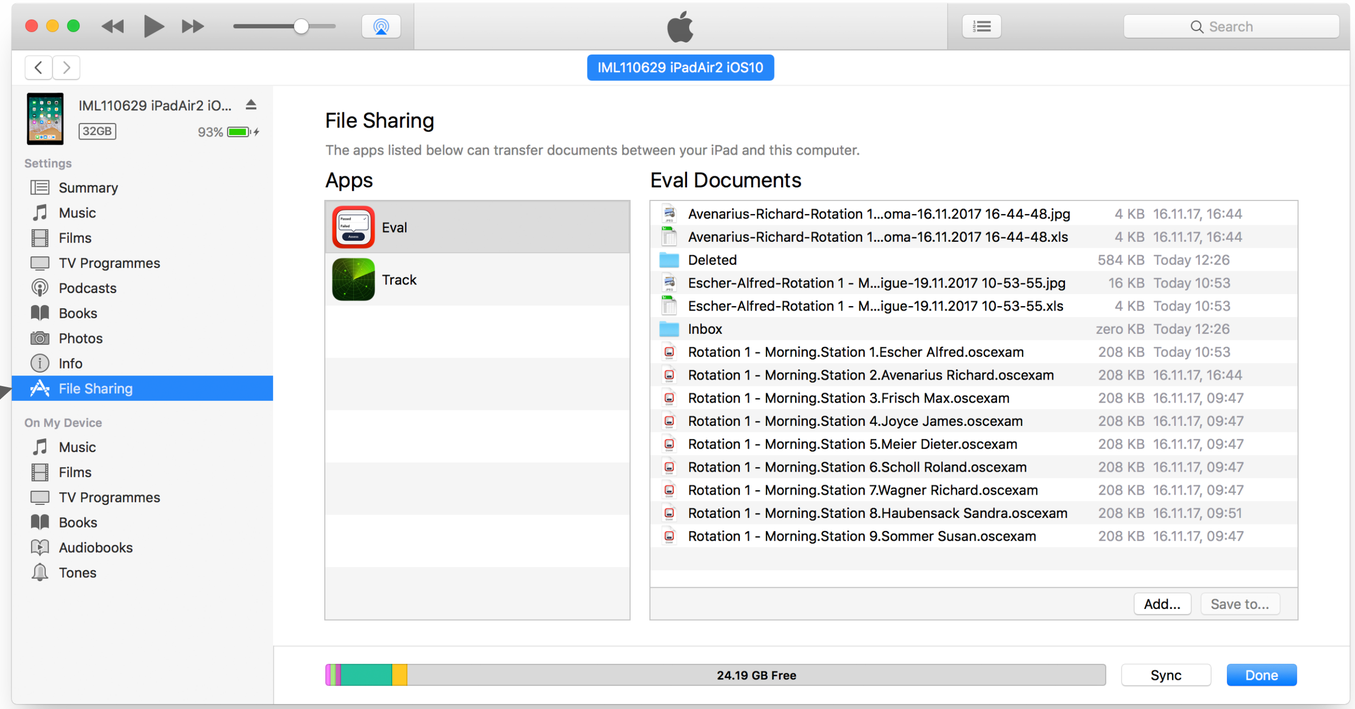
The deleted folder contains files that have been deleted, grouped by deletion date (save the whole folder to your computer to inspect the files).
The inbox folder holds exam preview files that have been sent to the device.



In Depth - Accessing Device Data (macOS 10.14)



To access data on the iPad or iPhone stored in OSCE-Eval or OSCE-Track, connect your device to your Mac and open iTunes. In the top left area, a device icon will appear.
Upon clicking the icon, the device details will appear. Select "File Sharing" and then "Eval". The detail view lists all files contained in the app.

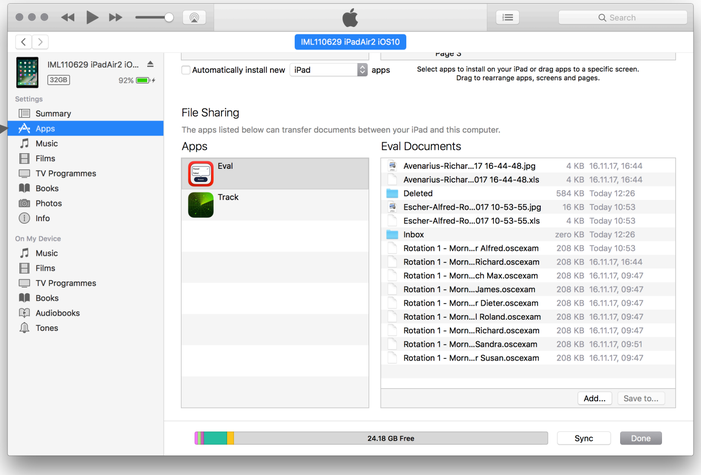


You can add your exam files by dragging them onto the file list, or select "Add…" to get a selection menu.

When an exam is finished, the same exam files can be downloaded and added to the result screen in the OSCE-Editor. A finished exam will also result in a couple of jpg and xls files containing the results and the examiners signature.

The deleted folder contains files that have been deleted, grouped by deletion date (save the whole folder to your computer to inspect the files).
The inbox folder holds exam preview files that have been sent to the device.

Be aware that in iTunes versions prior 12.7 the file sharing option is on the bottom of the Apps section below the list of all apps on the device.

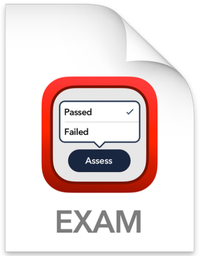


In Depth - File Types

The EOSCE system exclusively works with files and a optional S3 server is used for backup and data exchange purposes.
This simple concept makes the process reliable and error proof (think offline exams).

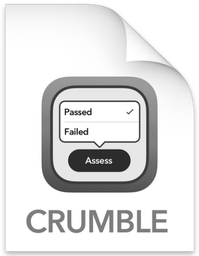
Project File *.osceproj

Contains all the checklists, stations, examiners, candidates of the exam. These files are created in OSCE-Editor.



Exam Files *.oscexam

Contains all the data needed to perform the exam for one station on the iPad. These files are generated by OSCE-Editor.



Encrypted Exam Files *.oscexam.crumble

Same content as the exam files but encrypted. Typically, these files are stored on the exam server.

Make sure to you do not lose your encryption key!

Credentials File *.oscecredentials

Contains the server credentials. These files can be used to exchange server credentials between OSCE-Editor, OSCE-Eval and OSCE-Track.

Checklist File *.oscechecklist
Candidates File *.oscecandidates
Examiners File *.osceexaminers

These files can be used to import data to OSCE-Eval.

"oscecandidates" and "osceexaminers" are simple comma separated files containing the data in the same order as in the sections of the OSCE-Editor.

"oscechecklist" is a json file to export and import checklists between projects.

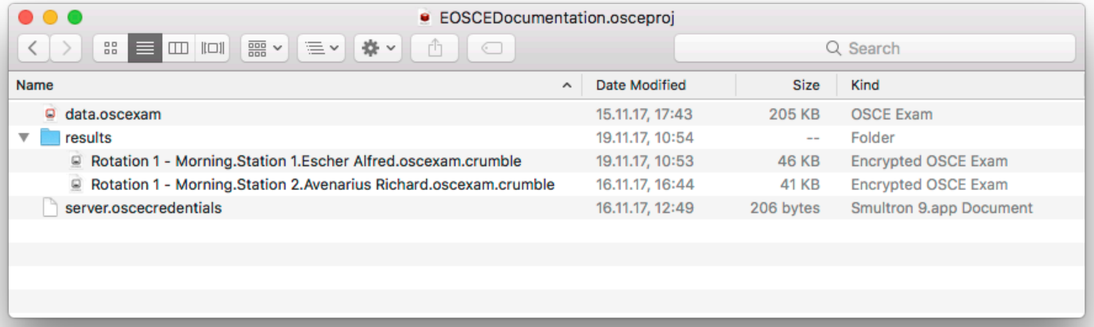
Make sure these files are properly encoded as UTF-8.

In Depth - Project & Exam Files

One of the two most important files in the EOSCE system is the project file (osceproj).

- It is a container file consisting of multiple subfiles:
- "data.osceexam" is the main database (sqlite) file containing all the relational data of the project.
- "server.oscecredentials" containes the access data for the S3 server.
- "results" folder contains all exam files downloaded from the S3 server in the "Results" section of OSCE-Editor. This has the implication of the project file also being a valid file for archiving a completed exam.

You can inspect the contents of your project file by right clicking on the file and selecting "Show Package Contents"



The second most important file in the EOSCE system is the exam file (oscexam) and the encrypted version (oscexam.crumble) respectively.

The encrypted version of the file will always be used where a server is involved.

It is a database (sqlite) file containing all the relational data for an exam for a specific station.

When an exam gets published, OSCE-Editor will create an exam file for each station, containing the checklist along with the schedule and candidate list for just this station.

OSCE-Eval will add all the assessment data to file for each candidate during the course of the exam.

Please do not lose you encryption key! There is no way for our support team to recover any exam files encrypted with an unknown key!

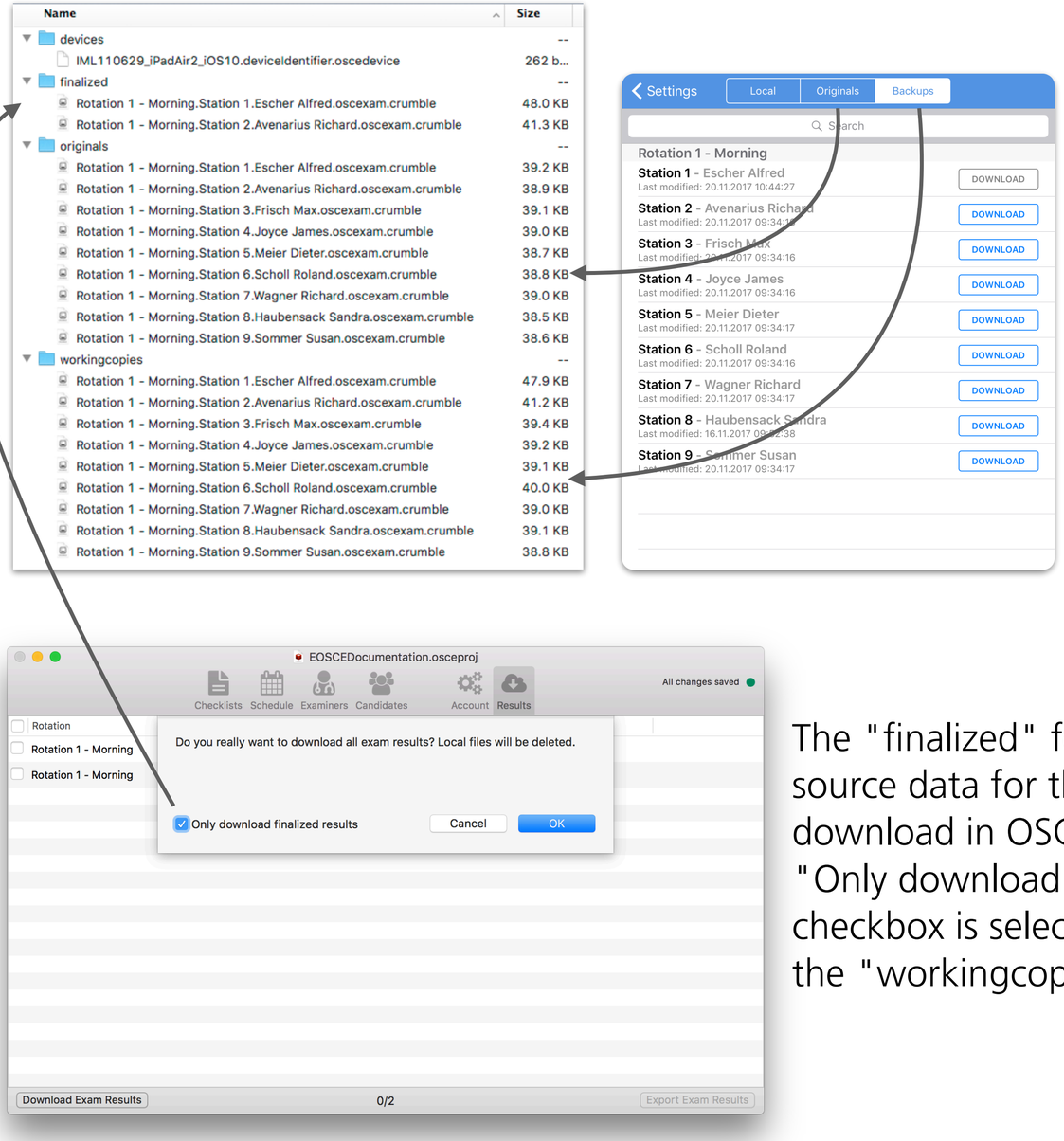
In Depth - S3

The S3 server is used to distribute the exam and to store the results by OSCE-Eval. More details on how to setup an S3 bucket can be found in our online documentation.

You can inspect the Amazon's S3 server with most FTP clients. If you use a custom S3 server (like Ceph, Scality, Zenko etc.), we suggest using the s3browser.

On the server we create 4 folders:

- "devices" contains a list of all connected devices. When a device gets registered (e.g. scanning the QR code), it will create this file and upload it to the server.
- "originals" contains the exam files for each station. These files are uploaded during publishing the exam with OSCE-Editor. This folder corresponds to the "Originals" tab in OSCE-Eval.
- "workingcopies" is the folder where all intermediate files processed by OSCE-Eval get stored. It corresponds to the "Backup" tab in OSCE-Eval and is the source folder OSCE-Track works with.
- "finalized" is the folder OSCE-Eval stores a copy of the exam file as soon as the exam is finished and signed by the examiner.



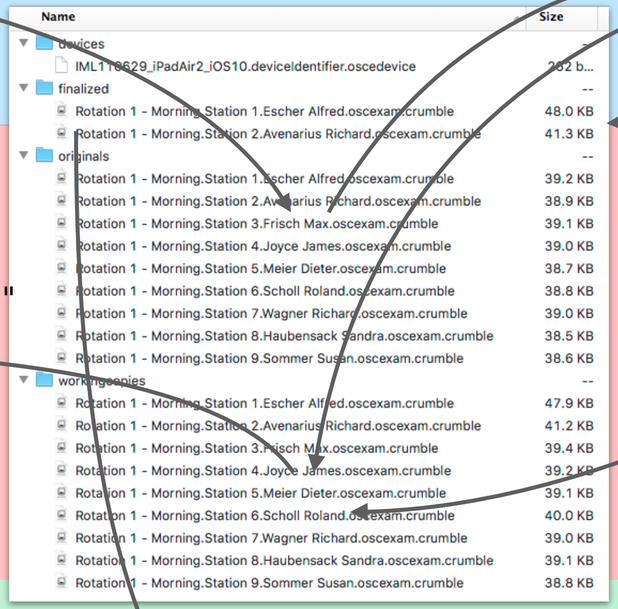
The "finalized" folder is the source data for the exam download in OSCE-Editor if the "Only download finalized results" checkbox is selected, otherwise the "workingcopies" is used.

In Depth - File Activity

Preparation Phase

Exam creation

Publish exam files to "originals".



Connect device and load exam file from "original". As soon as an exam file is loaded, a backup is stored to the "workingcopies"

Execution Phase

Backup extraction

Read and back up from "workingcopies"

Exam files are saved to "workingcopies" periodically (1 minute) and on major changes (closing checklist etc.). Finished exam files get stored to the "finalized" folder after signing through the examiner.

Evaluation Phase

Download results from "finalized" folder.

Export results to various formats

In Depth - Troubleshooting

In complex exams like the OSCE exams, things may not always go smoothly.

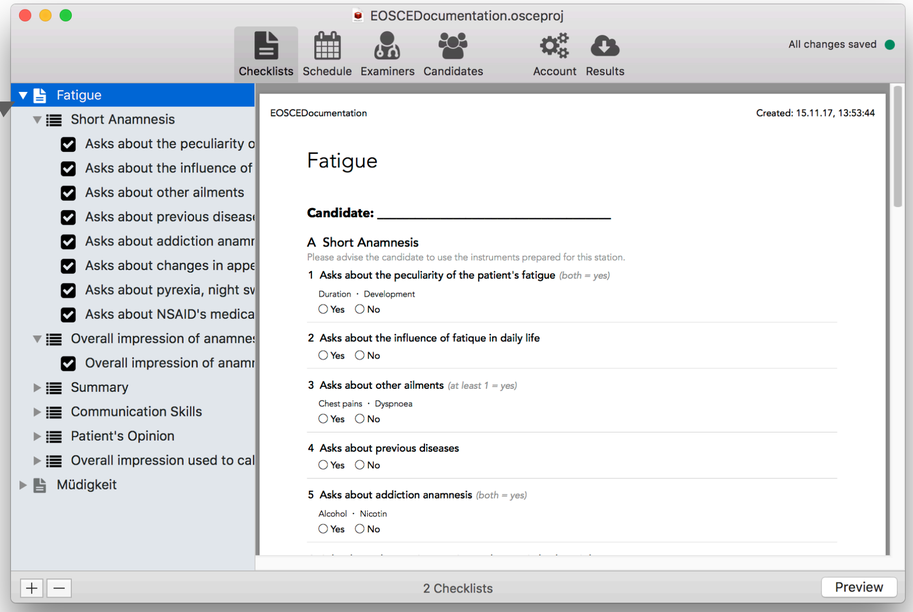
This guide should help you being prepared in case issues arise and spot them early:

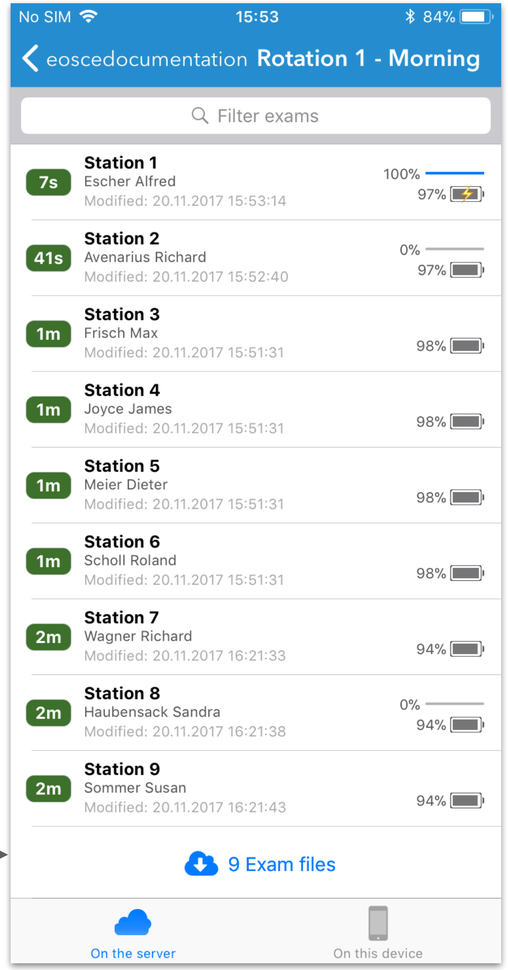
- Always have printed checklists prepared for each station. They can be printed in the OSCE-Editor, by selecting the checklist and select "File → Print" or press "⌘ + P".

- Observe an exam closely with OSCE-Track. It will show you if a battery is getting low or a station has not submitted any data for a longer period of time and might have a connection issue.

- Back up data using OSCE-Track during the exam.

- Depending on the exam size, have a couple of spare iPads ready and connected to the server, in order to replace a faulty device quickly.





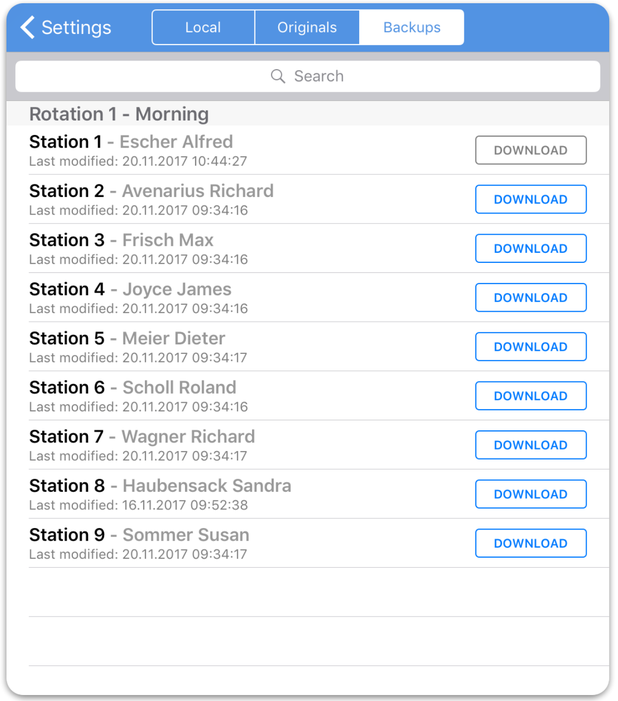
In Depth - Troubleshooting - Failing iPad

First of all, instruct the examiner to use the paper checklist, until the device is replaced.

An iPad can easily be replaced by using two ways:

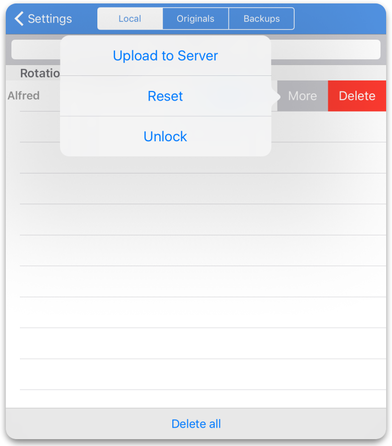
Transfer files via server
If the faulty device had no problem synchronising data with the server (OSCE-Track will show the time since a station synchronised the data), follow these steps:

- Take the previous device offline, to avoid overwritten data (if applicable).
- Make sure your replacement device is connected to the server.
- Go to the "Backup" tab in the settings of the device.
- Download the station file of the affected device.
- Hand the device to the examiner and instruct the examiner to transfer the assessments from the paper checklist to the iPad during a break.



Do not download file from the "Originals" tab! These files contain no assessment data, and in doing so, you would overwrite the file in "Backups" with an empty station file.

Since the new device most likely does not contain changed data compared to the server, OSCE-Eval might not synchronise the data right away.
To ensure the device can synchronise with the server, force-upload the station file in the settings of the app, by swiping left on the exam file and tap "Upload to Server". Validate the synchronisation time again in OSCE-Track.

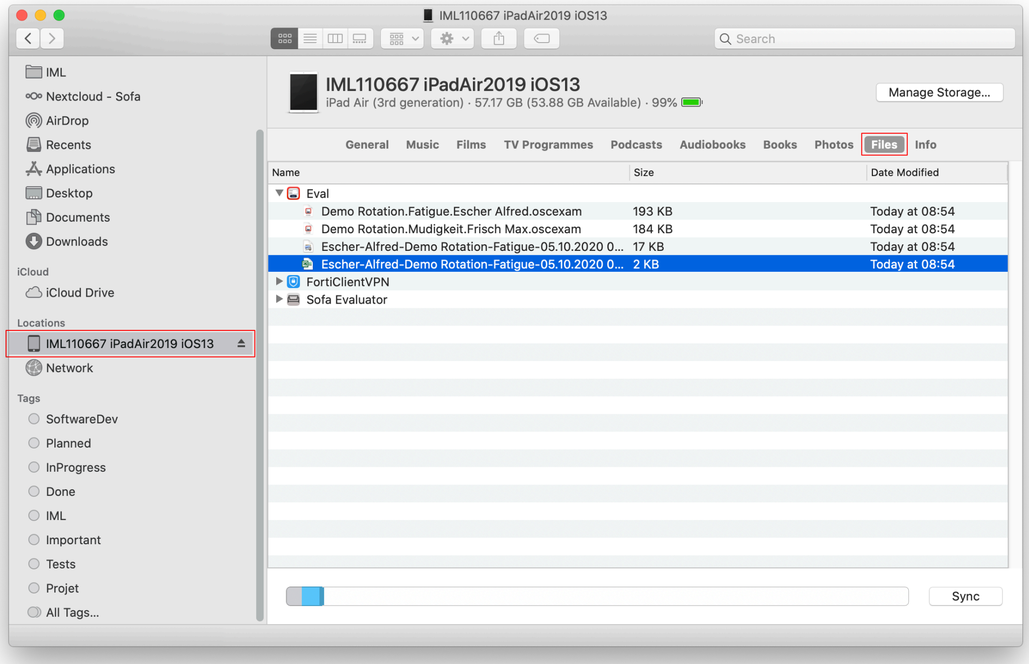


In Depth - Troubleshooting - Failing iPad (mac OS 10.15+)

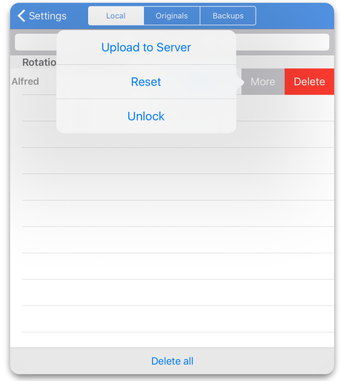
Transfer files via the Finder

Use this method if the device was not able to synchronise with the server (e.g. no internet connectivity) and the device is still accessible, or if you want to recover backups from OSCE-Track.

- Connect the faulty device to you Mac.
- In the “File" section, download the station file (*.oscexam) to a folder on you Mac.
- Disconnect the device and connect the replacement device.
- Add the station file from your Mac in the "File Sharing" section.
- Disconnect the new device and open OSCE-Eval to find the checklist loaded.
- Make sure the new device synchronises the data correctly using OSCE-Track.
- Hand the device to the examiner and instruct the examiner to transfer the assessments from the paper checklist to the iPad during a break.



If the device does not synchronise with the server instantly, force-upload the station file in the settings of the app, by swiping left on the exam file and tap "Upload to Server", to ensure the device can synchronise.
Validate the synchronisation time again in OSCE-Track.

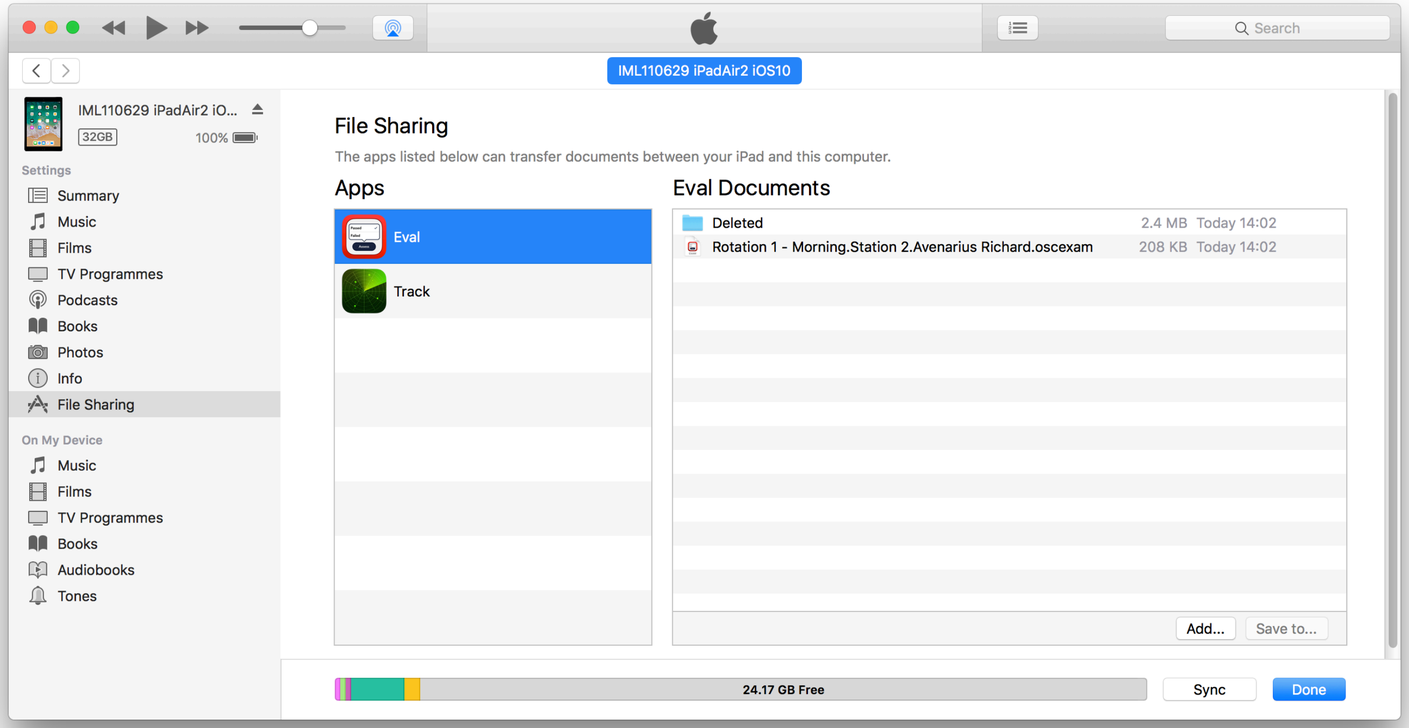


In Depth - Troubleshooting - Failing iPad (macOS 10.14)

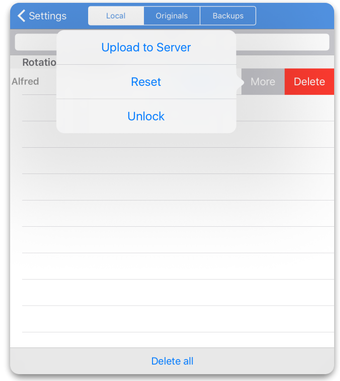
Transfer files via iTunes

Use this method if the device was not able to synchronise with the server (e.g. no internet connectivity) and the device is still accessible, or if you want to recover backups from OSCE-Track.

- Connect the faulty device to you Mac.
- In the "File Sharing" section, download the station file (*.oscexam) to a folder on you Mac.
- Disconnect the device and connect the replacement device.
- Add the station file from your Mac in the "File Sharing" section.
- Disconnect the new device and open OSCE-Eval to find the checklist loaded.
- Make sure the new device synchronises the data correctly using OSCE-Track.
- Hand the device to the examiner and instruct the examiner to transfer the assessments from the paper checklist to the iPad during a break.



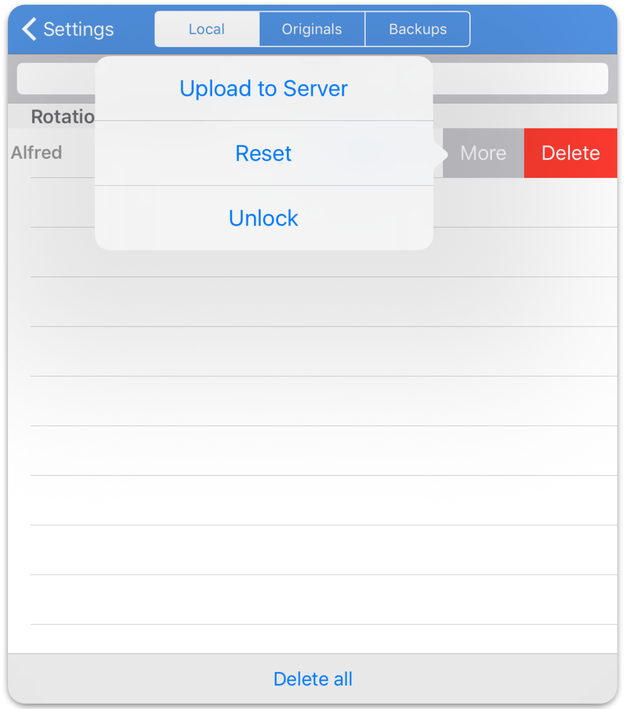
If the device does not synchronise with the server instantly, force-upload the station file in the settings of the app, by swiping left on the exam file and tap "Upload to Server", to ensure the device can synchronise.
Validate the synchronisation time again in OSCE-Track.

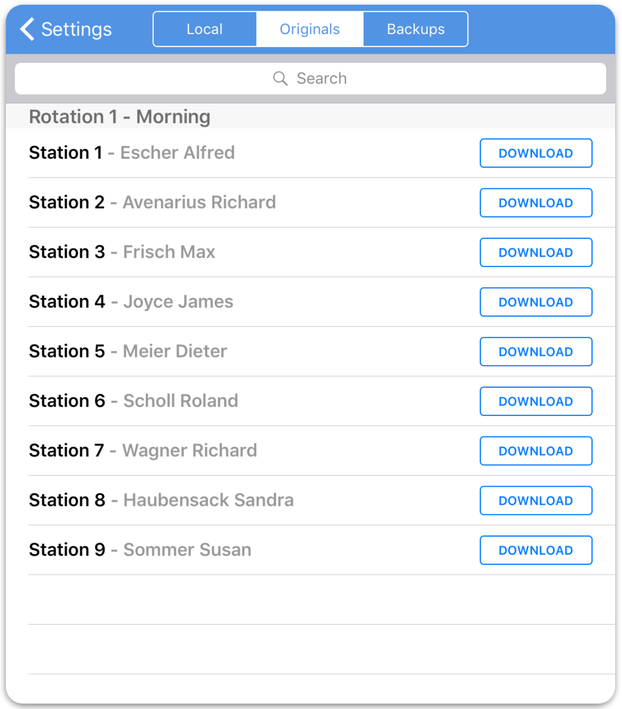


In Depth - Troubleshooting - Exam Contains Mistakes

If you find a mistake in an exam that is already published, follow these steps:

- Use OSCE-Editor to correct the mistake.
- Click on the "File" menu in the menu bar and select "Publish exam…".
- Confirm the dialog by clicking "Publish Exam".
- Take the affected iPads and open the exam management panel.
- In the "Local" section, delete the exam files containing the incorrect data. You can do so by swiping the cell to the left and then tapping "Delete".
- Switch to the "Originals" section and download the corrected version of the exam file(s).





Note, when publishing an exam, the exam files with the same name will be overwritten. If the corrections contain changes to the rotation name, the station title or the assigned examiner, multiple exam files for one station will exist on the server.

Do not publish changes to an exam in progress!