
Clinician Scheduler Documentation

Release 1.0

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The clinician scheduler allows you to automatically generate and publish schedules that satisfy common constraints in an on-call system, while taking into account the preferences of clinicians.

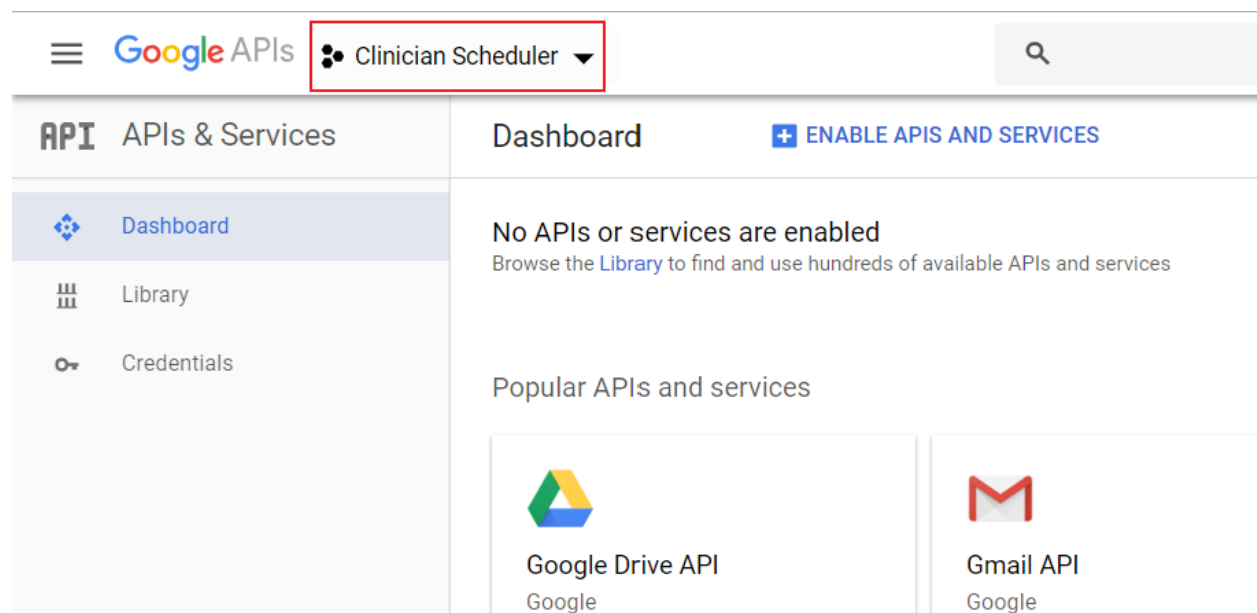
Download and unzip the compressed file to an appropriate folder.

1.1 Generating Google API credentials

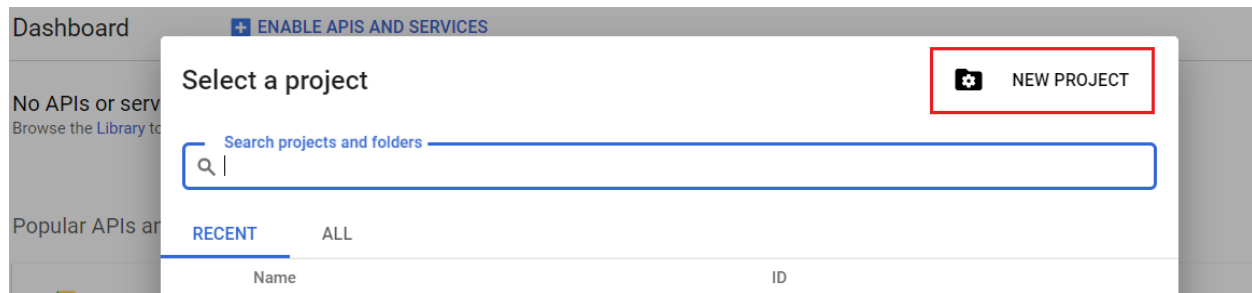
Note: This process should only be done the very first time you are running the program. If you have previously generated a credential file using this process you should be able to re-use it. Just make sure that the credential file is placed in the same folder as the executable (`scheduler.exe`).

The application uses Google calendar for retrieving clinician time-off requests and long weekend information, as well as uploading the generated schedule to the calendar. These operations require the use of Google API credentials, which can be generated as follows.

1. Sign into <https://console.developers.google.com>.
2. Click on the project selector at the top left of the page.



3. Click on *New Project*.



4. Enter “Clinician Scheduler” as the *Project Name* and click *Create*.

5. Now you should see the dashboard for the Clinician Scheduler project. You will need to enable the Google calendar API. Click on *Enable APIs and Services*.

6. Search for “Google calendar API” using the search bar, and select it.


7. Click *Enable*.

8. Now you should see the overview page for the Google calendar API. To generate the credentials, click *Create credentials*.

9. On the credentials form, choose “Google Calendar API” for *Which API are you using?*, then “Other UI (e.g. Windows, CLI tool)” for *Where will you be calling the API from?* and “User data” for *What data will you be accessing?*. Then click on *What credentials do I need?*.

Google APIs

New Project




You have 11 projects remaining in your quota. Request an increase or delete projects.
[Learn more](#)
[MANAGE QUOTAS](#)

Project Name *

Clinician Scheduler

Project ID: clinician-scheduler-228219. It cannot be changed later. [EDIT](#)

Location *

 No organization [BROWSE](#)

Parent organization or folder

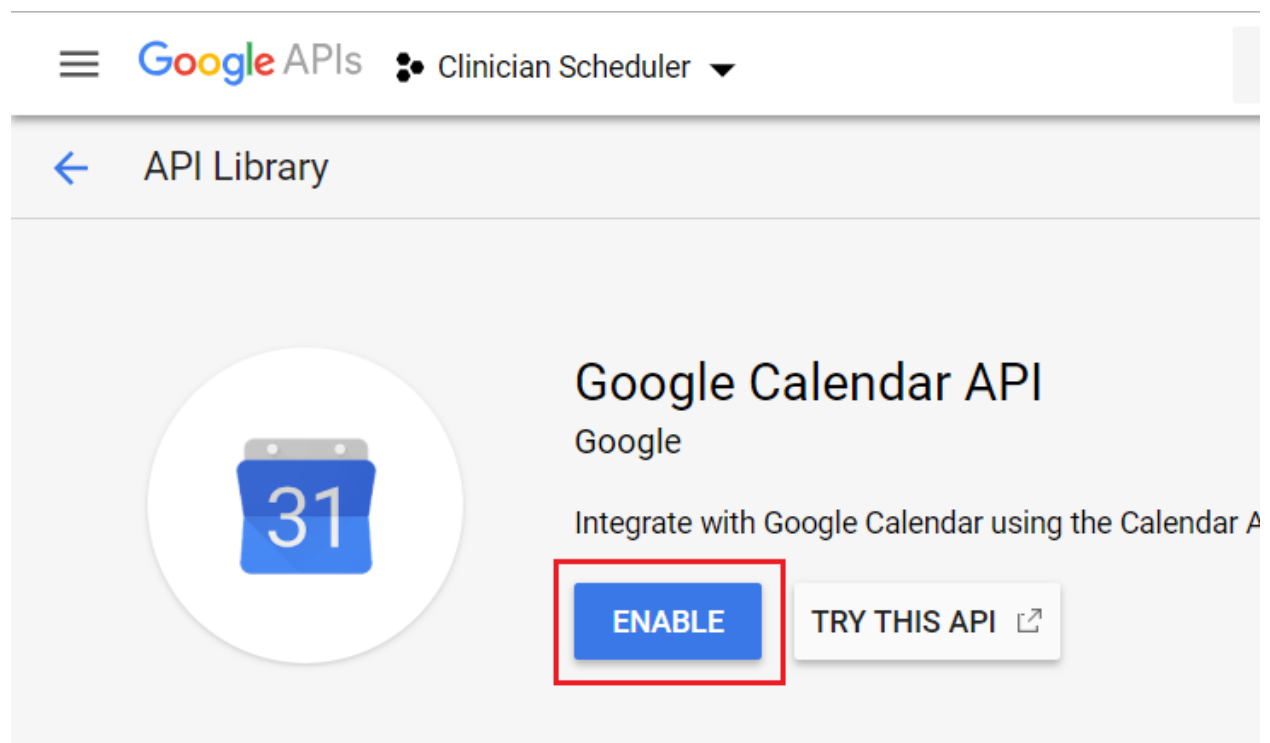
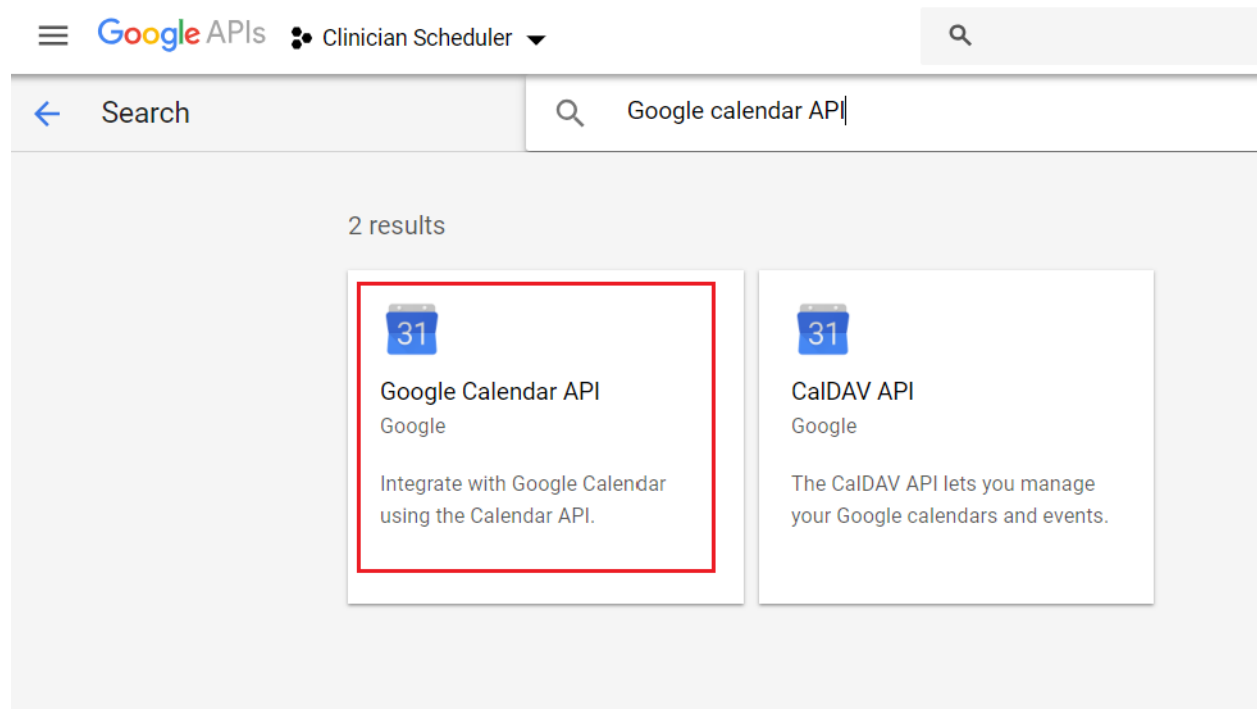
CREATE

CANCEL

Google APIs

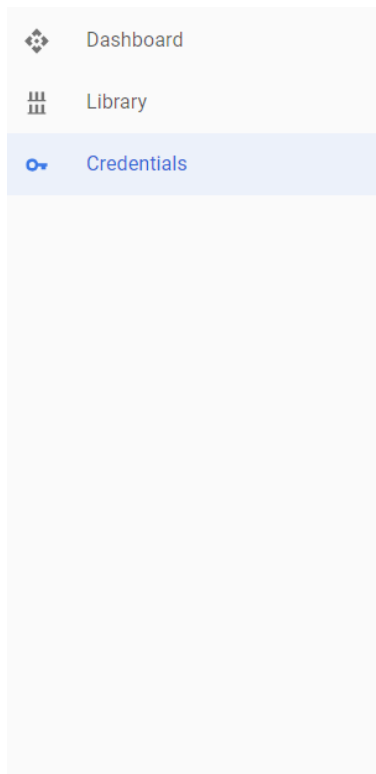
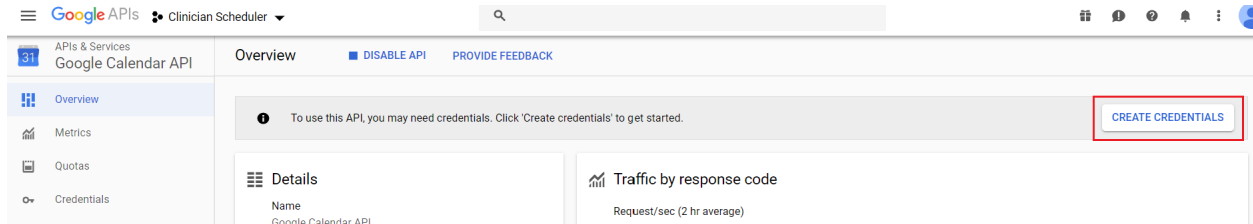
Clinician Scheduler

<div>API</div> <div>APIs & Services</div>	<div>Dashboard</div> <div> <div> <div></div> <div>ENABLE APIS AND SERVICES</div> </div> </div>
<div> <div></div> <div>Dashboard</div> </div> <div> <div></div> <div>Library</div> </div>	<p>No APIs or services are enabled</p> <p>Browse the Library to find and use hundreds of available APIs and services</p>



Type

Overview



Add credentials to your project

1 Find out what kind of credentials you need

We'll help you set up the correct credentials

If you wish you can skip this step and create an [API key](#), [client ID](#), or [service account](#)

Which API are you using?

Different APIs use different auth platforms and some credentials can be restricted to only call certain APIs.

Google Calendar API

Where will you be calling the API from?

Credentials can be restricted using details of the context from which they're called. Some credentials are unsafe to use in certain contexts.

Other UI (e.g. Windows, CLI tool)

What data will you be accessing?

Different credentials are required to authorize access depending on the type of data that you request.

☒ User data

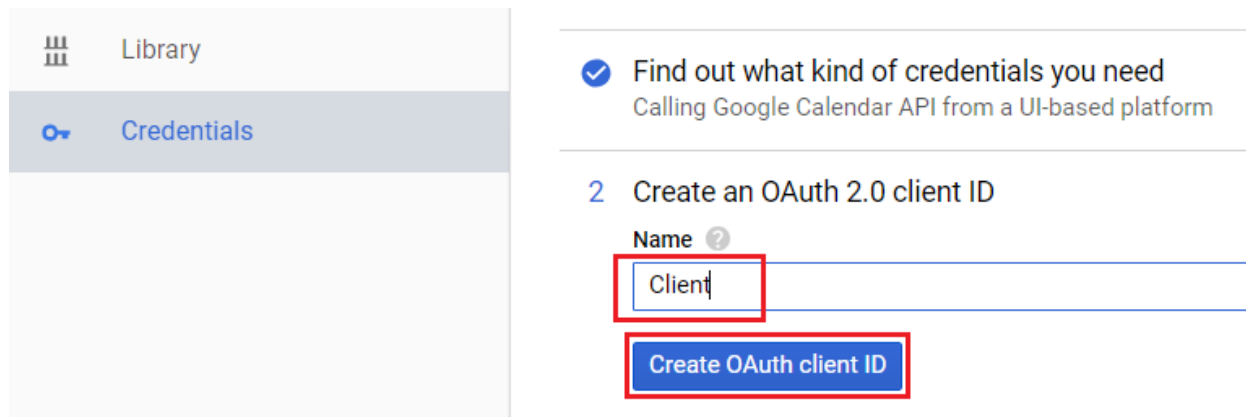
Access data belonging to a Google user, with their permission

☐ Application data

Access data belonging to your own application

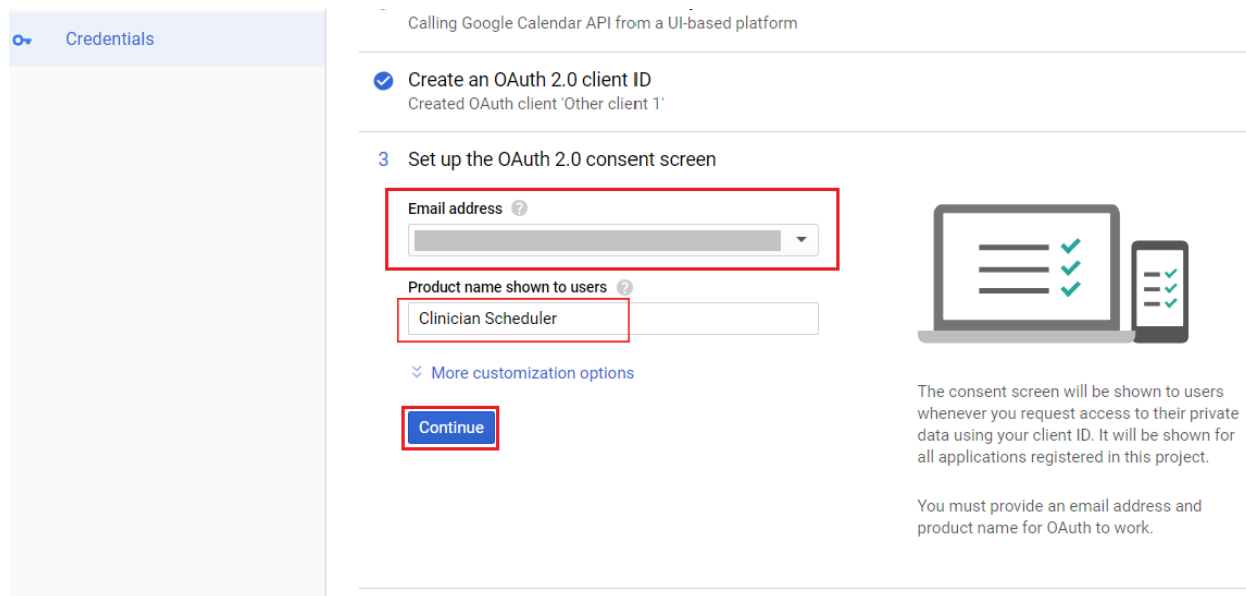
What credentials do I need?

10. Enter “Client” for *Name* and click on *Create OAuth client ID*.



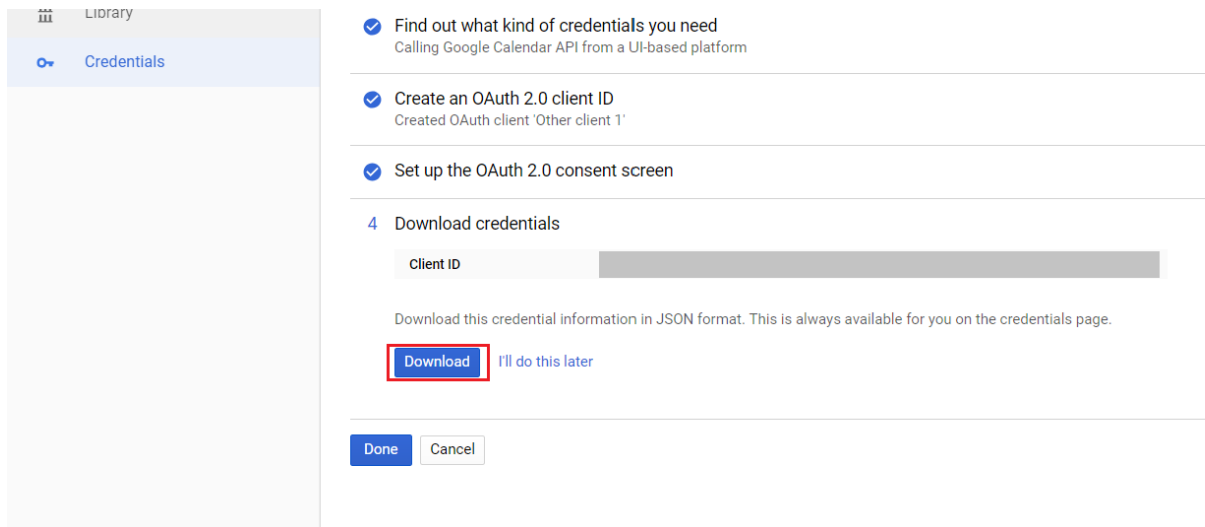
The screenshot shows the Google Cloud console interface. On the left, there is a sidebar with 'Library' and 'Credentials' options. The main content area shows a progress bar with two steps: 'Find out what kind of credentials you need' (completed) and '2 Create an OAuth 2.0 client ID' (current step). Below the progress bar, the 'Name' field is set to 'Client', and the 'Create OAuth client ID' button is highlighted with a red box.

11. Choose the email address associated to your account for *Email address* and enter “Clinician Scheduler” for *Product name shown to users*, then click *Continue*.



The screenshot shows the Google Cloud console interface. On the left, there is a sidebar with 'Credentials' option. The main content area shows a progress bar with three steps: 'Find out what kind of credentials you need' (completed), '2 Create an OAuth 2.0 client ID' (completed), and '3 Set up the OAuth 2.0 consent screen' (current step). Below the progress bar, the 'Email address' field is set to 'otherclient1@gmail.com' and the 'Product name shown to users' field is set to 'Clinician Scheduler'. The 'Continue' button is highlighted with a red box. To the right of the form, there is an illustration of a laptop and a smartphone, and a text box explaining the consent screen.

12. Your credentials are now generated! Make sure to download and save them in the same location that you unzipped the application, so that the credential file and the executable file (`scheduler.exe`) are in the same folder.



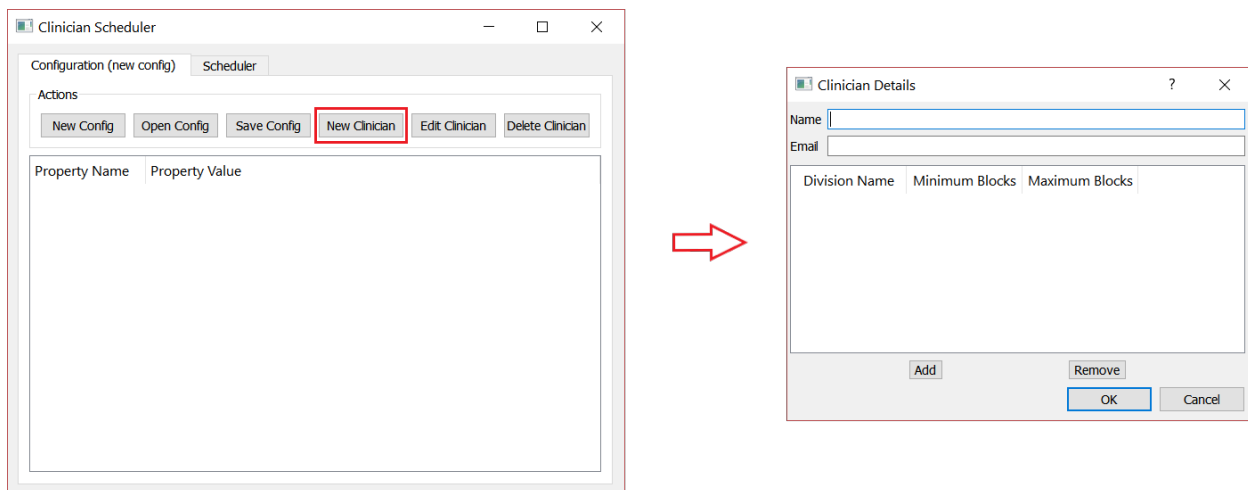
Attention: Make sure the credential file is saved as `credentials.json` (rename it, if necessary), or otherwise the application will not be able to recognize it!

2.1 Clinician Configuration

Before we can generate a schedule, we need to create a configuration file that specifies which clinicians are available, and how many weeks each clinician should fulfill.

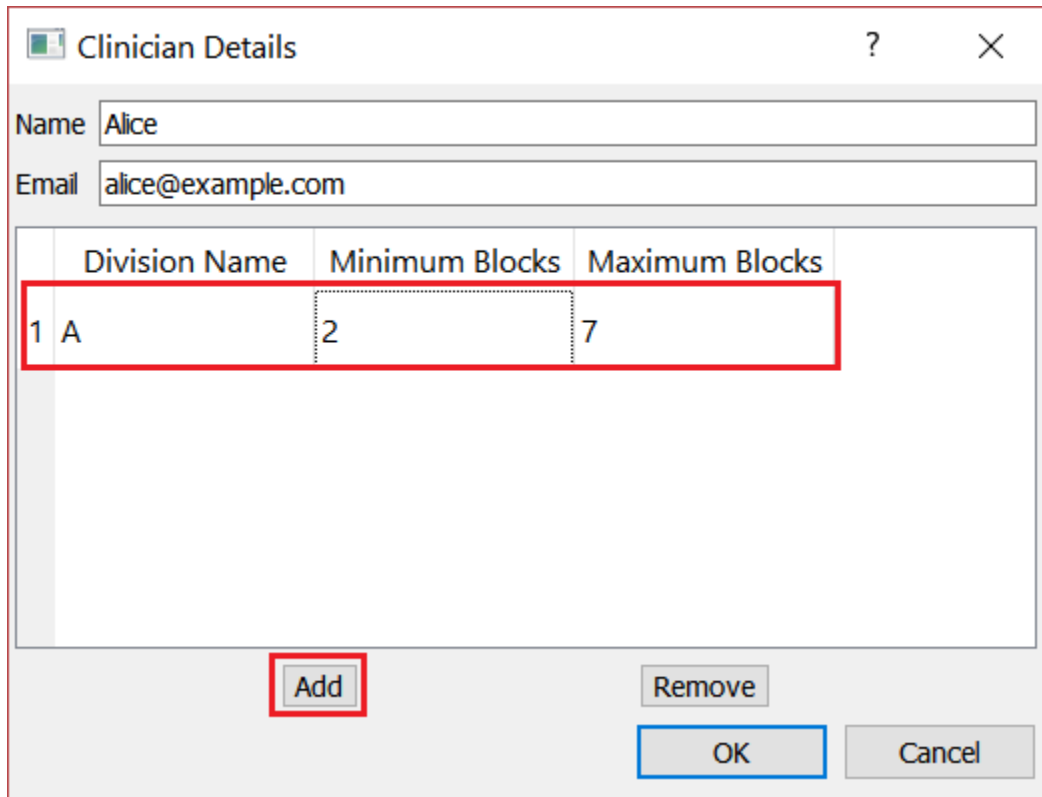
2.1.1 Adding a new clinician

1. From the configuration tab, click *New Clinician*. You should see a form for supplying details.



2. Fill out the name, email (optional), and divisions that the clinician will be covering. To add a division you can click on *Add* and a new row will be added to the table which you can fill out. You can set the minimum and maximum number of blocks that a clinician can work in a given division.

Note: A single block corresponds to two weeks.



Clinician Details

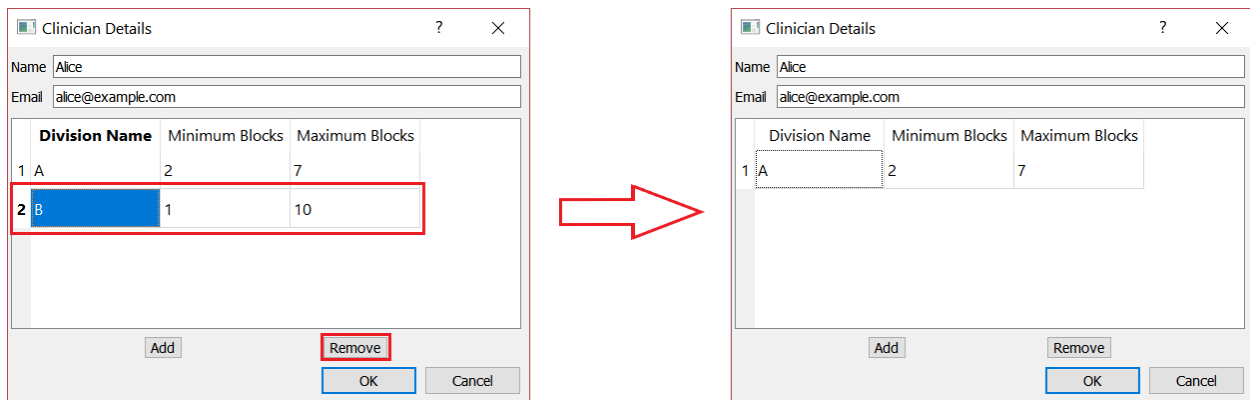
Name:

Email:

	Division Name	Minimum Blocks	Maximum Blocks
1	A	2	7

Add **Remove** **OK** **Cancel**

3. To delete a row from the table, select the row and then click *Remove*.



Clinician Details

Name:

Email:

	Division Name	Minimum Blocks	Maximum Blocks
1	A	2	7
2	B	1	10

Add **Remove** **OK** **Cancel**

→

Clinician Details

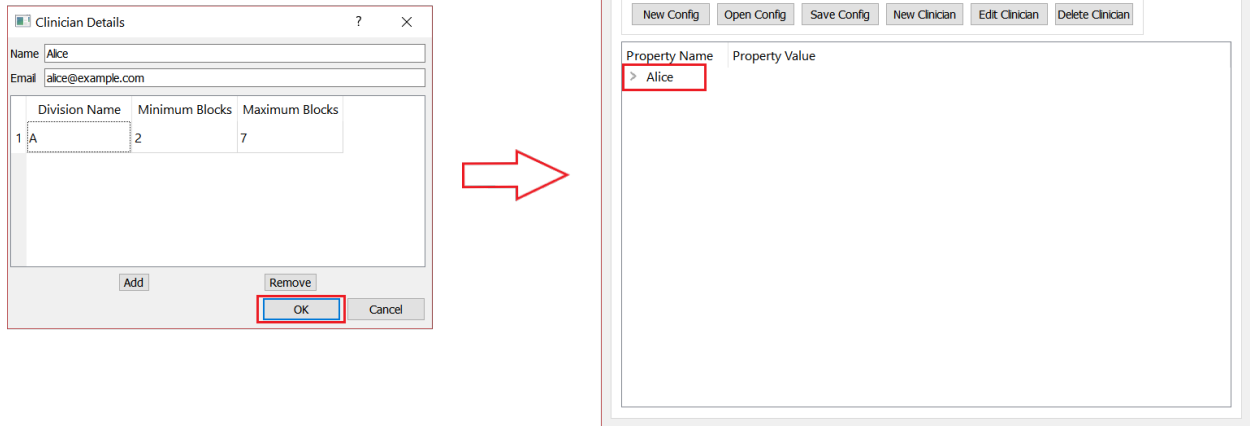
Name:

Email:

	Division Name	Minimum Blocks	Maximum Blocks
1	A	2	7

Add **Remove** **OK** **Cancel**

4. When you are finished entering the data for the clinician, click *Ok*. You should now see a new entry in the main table for that clinician.



2.1.2 Deleting an existing clinician

2.1.3 Editing an existing clinician

2.1.4 Saving the configuration to a file

2.1.5 Loading a configuration file

2.2 Google Calendar Configuration

2.2.1 Creating a calendar

2.2.2 Adding holiday events

2.2.3 Adding clinician requests

2.3 Scheduling

2.3.1 Loading a configuration file

2.3.2 Generating a schedule

2.3.3 Exporting a schedule

2.3.4 Publishing a schedule to Google Calendar