

TEKTELIC TEMPO

SET-UP GUIDE

Document Type:	Set-Up Guide
Document Number:	T0006703_SUG
Document Version:	0.9
Product Name:	TEMPO Application
Product Codes:	T0006749, T0006086, T0006750, T0006093
Issue Date:	May 3, 2023

Revision History

Version	Date	Editor	Comments
0.1	November 7, 2019	C Karperien	First draft
0.2	December 4, 2019	C Karperien	General updates and template updates
0.3	January 28, 2019	C Karperien	Updates to the Setup flow
0.4	April 30, 2020	C Karperien	Separation of Set-Up Flow and general User's Guide
0.5	July 16, 2020	J Peterson	Update to include NS, Outlook and Google Calendar details. Change Name to TEMPO
0.6	August 14, 2020	J Peterson	Changes to set up flow
0.7	August 31, 2020	J Peterson	Readability for Outlook and Google Calendar
0.8	September 20, 2020	I Gerasimov	Set up flow update, Calendar integrations instruction attached, general updates
0.9	May 3, 2023	Y Voronina	Updates Tempo Application Setup Flow and Certificates & secrets

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1 Getting Started

1.1 Overview

The TEKTELIC TEMPO Application integrates seamlessly with TEKTELIC's TEMPO Tablet and Smart Room Devices to create an end-to-end room booking solution. The TEMPO application provides users with an intuitive and practical platform to easily book, cancel or modify meetings remotely from their PC or mobile device, or right at the meeting room location using the TEMPO Tablet. The information collected through the application allows users to better understand the utilization demand and trends for their office's shared meeting room spaces.

TEKTELIC's TEMPO Application is fully integrated with the leading meeting booking software platforms, Microsoft Azure and Google GSuite. The web-based application provides a bridge from the organization's meeting booking software to the TEMPO Tablet physically located at the meeting room location.

1.2 Setup Requirements

In order to ensure an efficient setup please ensure you have the following:

- 1) LoRaWAN gateway operating on Tektelic network server
 - <https://lorawan-ns-eu.tektelic.com/>
 - <https://lorawan-ns-na.tektelic.com/>
- 2) Tektelic TEMPO tablet with commissioning information
- 3) Access to Kona Core (Formally Tektelic Network Server)
- 4) Access to TEMPO Application (Formally Book Now Application)
 - <https://tempo.tektelic.com/>

If you are missing any of the above items please contact Tektelic via the support portal <https://support.tektelic.com>

NOTE: You will also require details for the Microsoft Outlook or Google Gmail account you integrating with. For Microsoft Azure this is a Tenant ID, Client ID, and Client Secret. For Google GSuite this is an API Key, Client ID, and Client Secret. Further Details on enabling the appropriate permissions for Microsoft Calendar and Google Calendar access can be found in the Appendices of this document. You canals raise a ticket through the Tektelic support portal, or contact either Microsoft or Google for support.

2 TEMPO Application Setup Flow

Setup flow can be performed only by office manager (has administrator rights). When logging in for the first time you will be prompted with set up flow in the below order. The information entered in the setup flow can be edited at a later date by navigating to the respective menu within the application. See users guide located on the support portal for more detail.

1) SMTP Settings

Enter the credentials of the email account that will be used to send outgoing mail from the application (such as password resets to users)

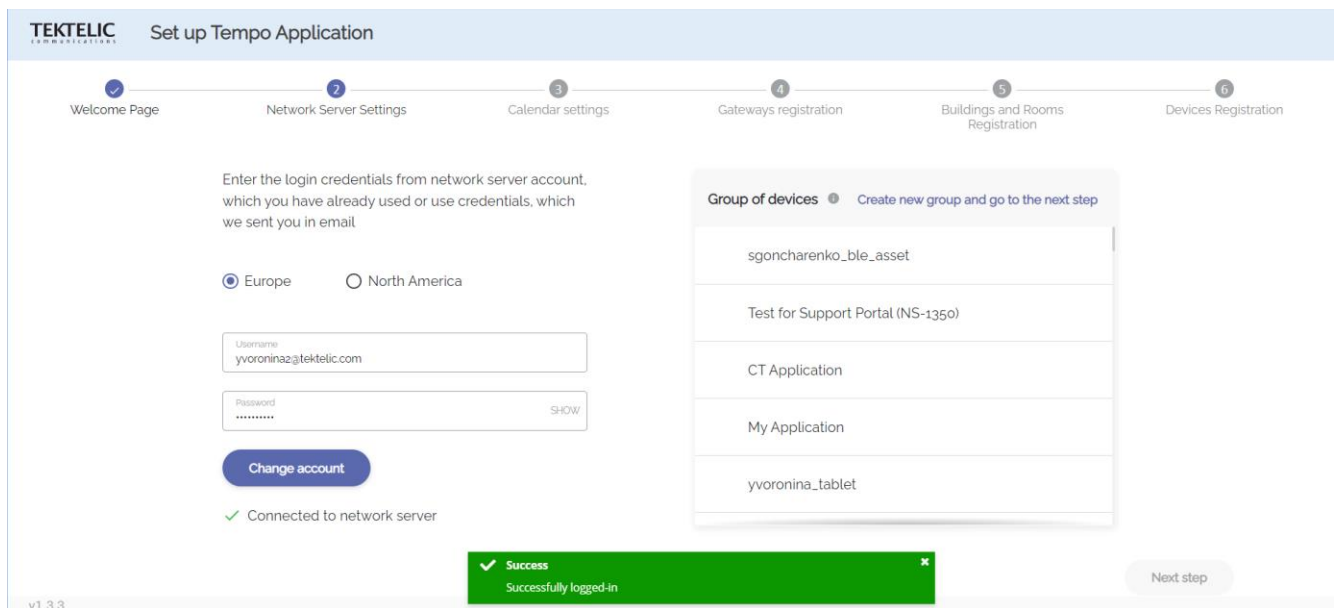
2) Welcome page

Read the information on the welcome page and if you have all the items select checkbox “I have checked list above” and click “Continue” button.

The screenshot shows the 'Set up Tempo Application' page. At the top, there is a progress bar with six steps: 1. Welcome Page (active), 2. Network Server Settings, 3. Calendar settings, 4. Gateways registration, 5. Buildings and Rooms Registration, and 6. Devices Registration. Below the progress bar, the text reads: 'Please proceed through a quick setup flow to complete the setup of your Tempo. You would need your Tempo tablet, Network Server and Microsoft/Google account to configure and synchronize your system. Before we start, please make sure you have all the items below checked:'. A bulleted list follows, detailing requirements for Gateway, Smart Room sensor, Gateway ID, DevEUI, AppEUI, AppKEY, Tektelic Kona Core Network Server account, and Google Workspace/Microsoft 365 business access. At the bottom of the list, there is a checkbox labeled 'I have checked list above' which is checked. A blue 'Continue' button is located at the bottom right of the page. The version number 'v1.3.3' is visible in the bottom left corner.

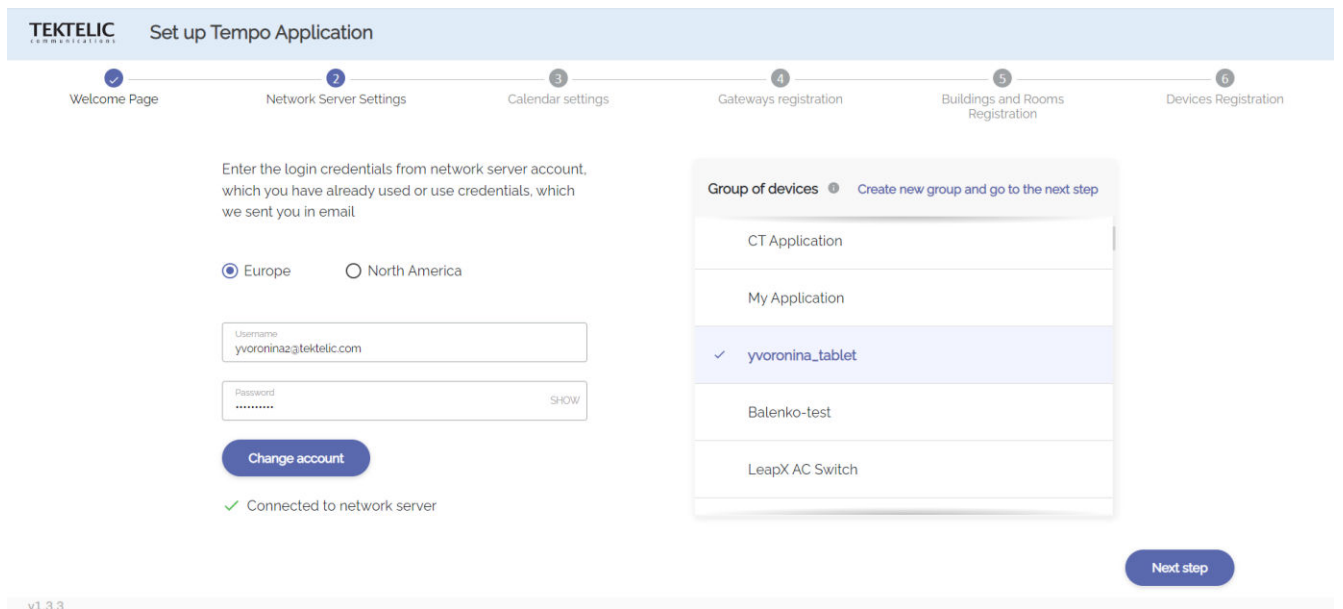
3) Network Sever Settings (KONA Core)

Select the region of your network server account and enter the login credentials of NS – username (email) and password and click “Connect” button. You will see the message “Successfully logged in”.



After connecting to your account on TEKTELIC NS you have 3 options:

- Select created before on TEKTELIC NS Group of devices and click “Next step” button.



- Create new group. To do this click on “Create new group and go to the next step” and fill the name of Group of Devices.
- Change account to another one. Click the “Change account” button and enter the login credentials of NS – username (email) and password and click “Connect” button. You will see the message “Successfully logged in”.

4) Calendar settings

Make integration with your existing calendar. Choose your service provider: Google calendar (Appendix B) or Microsoft Outlook Calendar (Appendix A). Make sure that you sign with rights of admin.

The screenshot shows the 'Set up Tempo Application' wizard at step 3, 'Calendar settings'. The progress bar at the top indicates that 'Welcome Page' and 'Network Server Settings' are completed, while 'Calendar settings', 'Gateways registration', 'Buildings and Rooms Registration', and 'Devices Registration' are pending. The main content area contains instructions: 'We want to make an integration with your existing calendar. Please choose your service provider: Google calendar or Microsoft Outlook calendar. Please make sure that you sign in with rights of admin.' Below this are two buttons: 'Google' with the Google logo and 'Outlook' with the Outlook logo. At the bottom right, there are 'Previous step' and 'Next step' buttons. The version number 'v1.3.3' is visible in the bottom left corner.

Note that if using Microsoft Outlook Calendar the setting it up involves 4 steps. After each step click “I have completed this step” to go to the next one. After the last step with API permissions click on the “Next Step” button to go to the Gateway Registration step.

Go to https://portal.azure.com/#blade/Microsoft_AAD_RegisteredApps/ApplicationsListBlade and find Tektelic Tempo application

Home > App registrations > Tektelic Tempo

App registrations

+ New registration | Endpoints | Troubleshooting | Download | Preview features | Got feedback?

Try out the new App registrations search preview! Click to enable the preview. →

Starting June 30th, 2020 we will no longer add any new features to Azure Active Directory Authentication Library (ADAL) and Azure AD Graph. We will continue to support these libraries until June 30th, 2020. We will continue to support Microsoft Authentication Library (MSAL) and Microsoft Graph. Learn more

All applications | **Owned applications**

Start typing a name or Application ID to filter these results

Display name

Tektelic Tempo

Previous step | I have completed this step

- Go to the https://portal.azure.com/#blade/Microsoft_AAD_RegisteredApps/ApplicationsListBlade and find Tektelic Tempo application.

Go to API permission tab and click on "Grand admin consent for..."

Home > App registrations > Tektelic Tempo

Tektelic Tempo | API permissions

Search (Cmd+/) | Refresh | Got feedback?

Overview | Quickstart | Integration assistant

Manage

- Branding
- Authentication
- Certificates & secrets
- Token configuration
- API permissions**
- Expose an API
- App roles | Preview
- Owners
- Roles and administrators | Preview

Configured permissions

Applications are authorized to call APIs when they are granted permissions by users/admins as part of the consent process. All the permissions the application needs. Learn more about permissions and consent

+ Add a permission | Grant admin consent for ACME Communications Inc.

API / Permissions name	Type	Description
Microsoft Graph (7)		
Calendars.Read	Delegated	Read user calendars
Calendars.Read	Application	Read calendars in all mailboxes
Calendars.Read.Shared	Delegated	Read user and shared calendars
Calendars.ReadWrite	Delegated	Have full access to user calendars
Calendars.ReadWrite	Application	Read and write calendars in all mailboxes
Calendars.ReadWrite.Shared	Delegated	Read and write user and shared calendars
User.Read	Delegated	Sign in and read user profile

Previous step | I have completed this step

Previous step | Next step

- Go to API permission tab and click "Grand admin access for ACME Communication Inc."

5) Gateway Registration

If you have already registered your gateways on the Kona Core (Network Server) and added your account details to the TEMPO Application (step 3) then simply select the Gateways Group and go to the next step.

TEKTELIC COMMUNICATIONS Set up Tempo Application

Welcome Page Network Server Settings Calendar settings Gateways registration Buildings and Rooms Registration Devices Registration

Gateway groups + Add gateway group

Gateway name	Gateway ID	Gateway model
GW-647FDA007AA1	647FDAFFFE007AA1	Kona Micro EU GW
647FDAFFFE00A547	647FDAFFFE00A547	Kona Micro EU GW

Previous step Next step

v1.3.3

Here you can either create a new gateway group by clicking “+ Add gateways group” button and fill the group name, then click the “Add group” button.

TEKTELIC COMMUNICATIONS Set up Tempo Application

Welcome Page Network Server Settings Calendar settings Gateways registration Buildings and Rooms Registration Devices Registration

Gateway groups + Add gateway group

TKperf_2.6.g

test

roman_ch_gw

My Gateways

add

Add gateway group

Enter group name

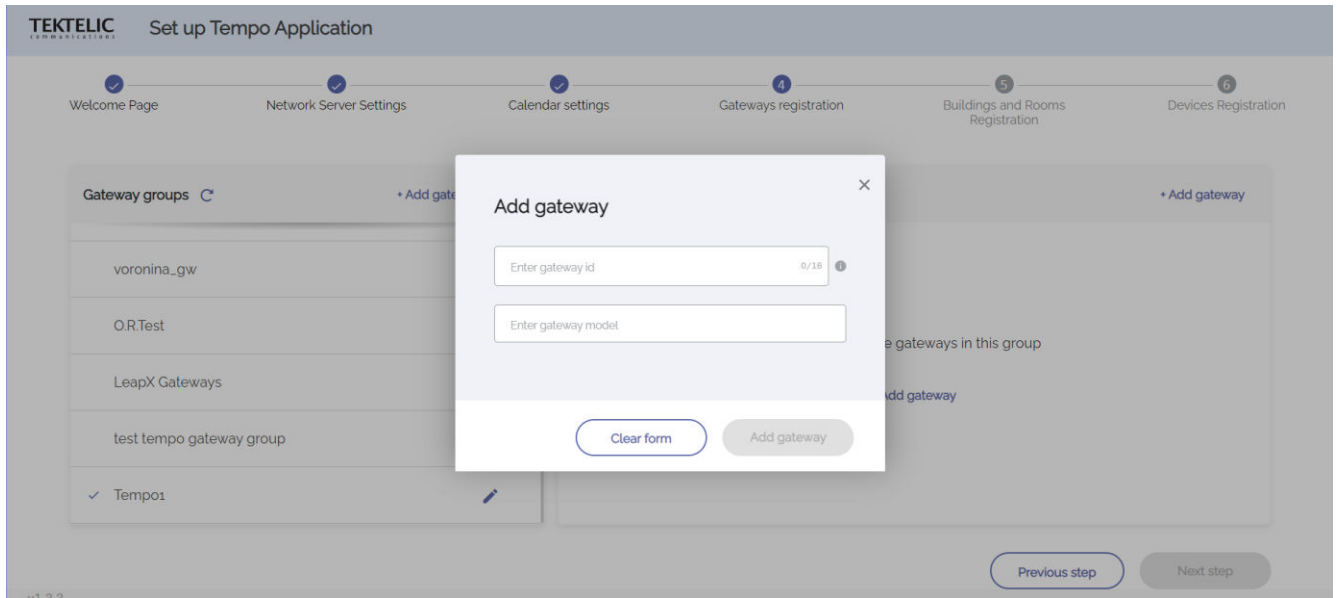
Tempo

Clear form Add group

Previous step Next step

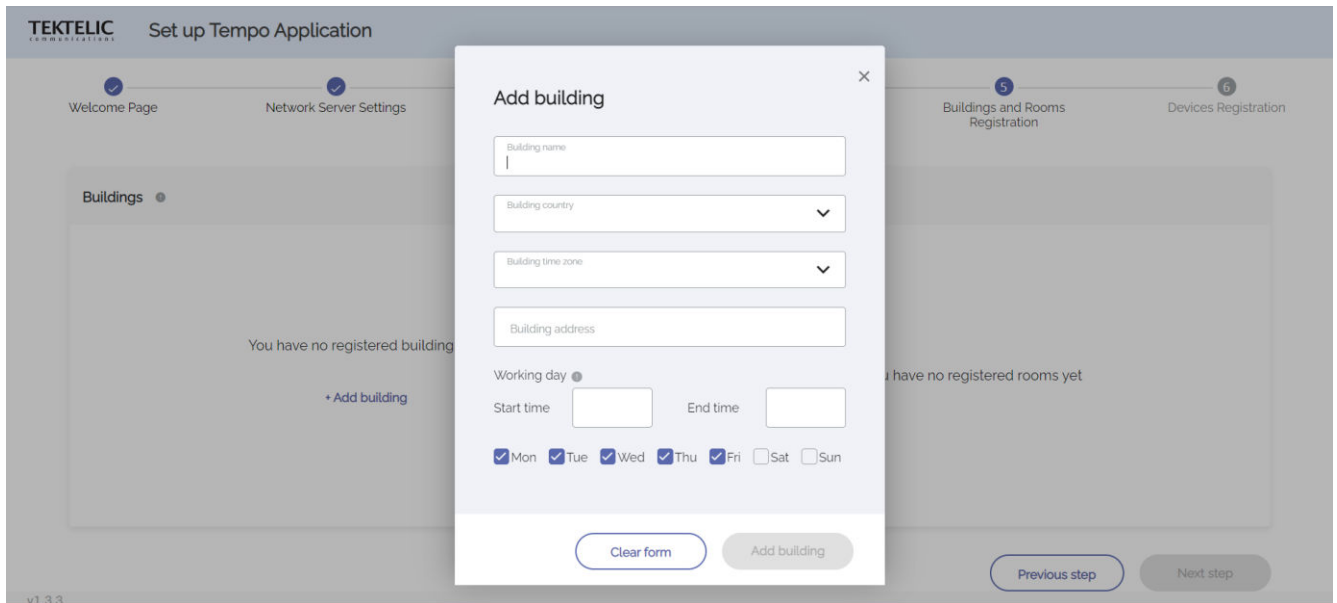
v1.3.3

After completing the previous step select the created group and click “Add gateway” button. Fill all fields as Gateway ID and Gateway model and click “Add gateway” button.

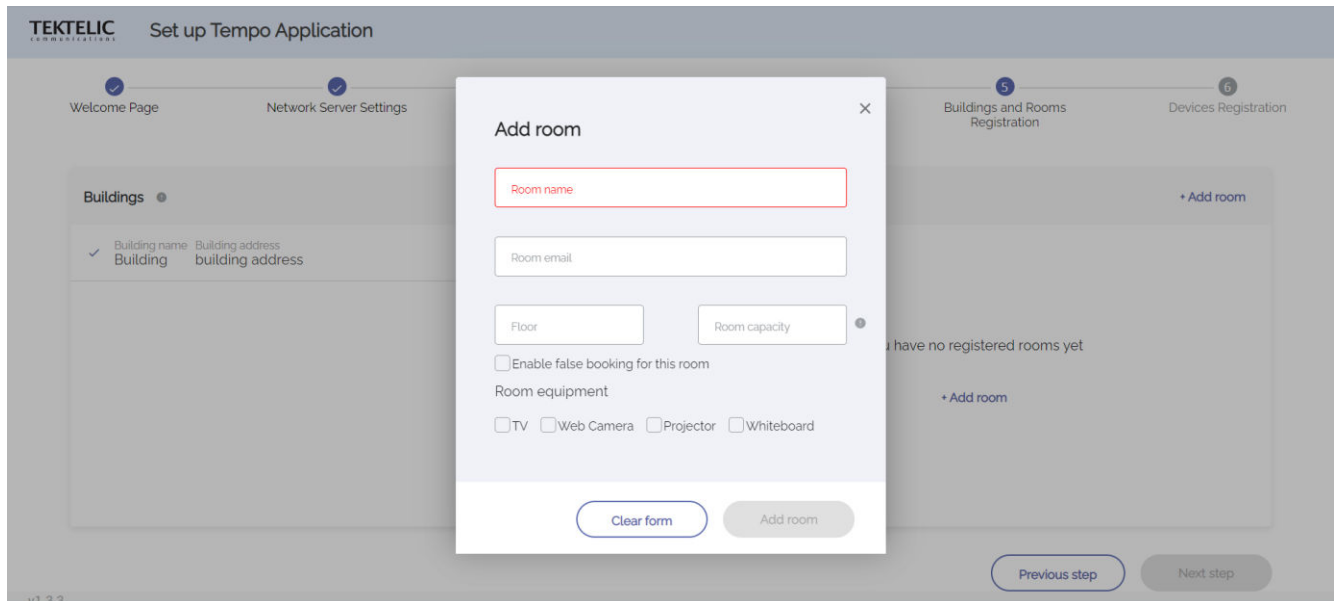


6) Buildings and Rooms Registration

Create a Building by clicking the “+ Add building” button and adding building name, building country, building time zone, building address and working day.



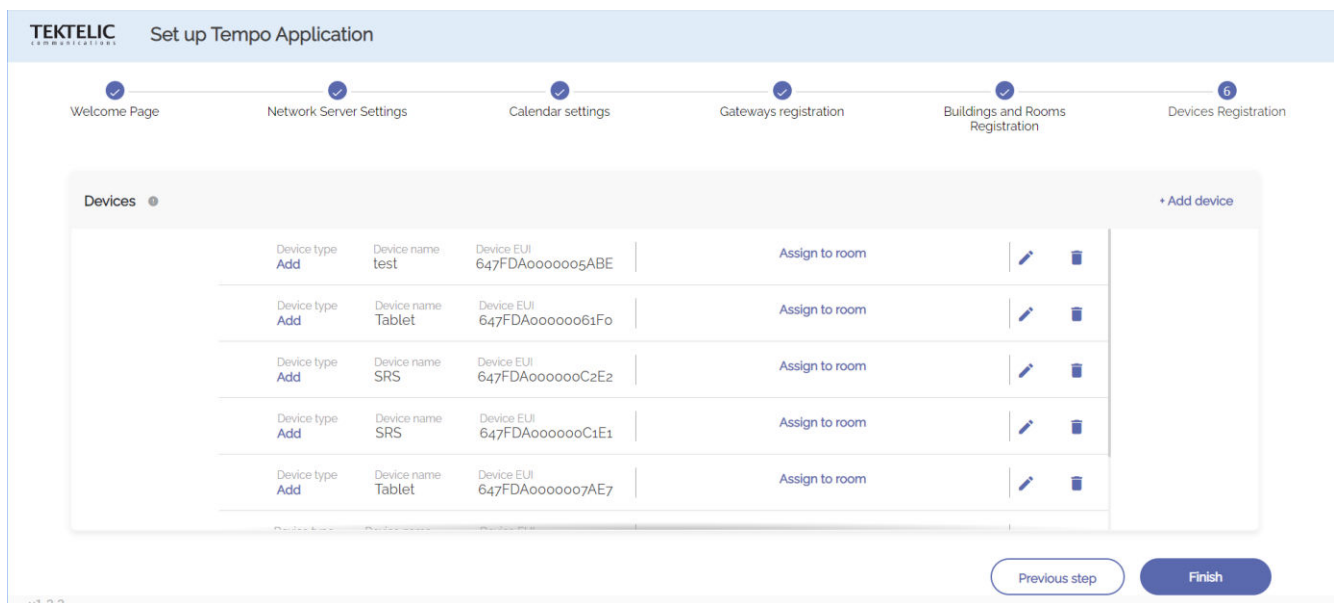
Select the created building and add a Room by clicking the “+ Add Room” button and adding the room name, room email, floor, room capacity, enable/disable “Enable false booking for this room” and room equipment.



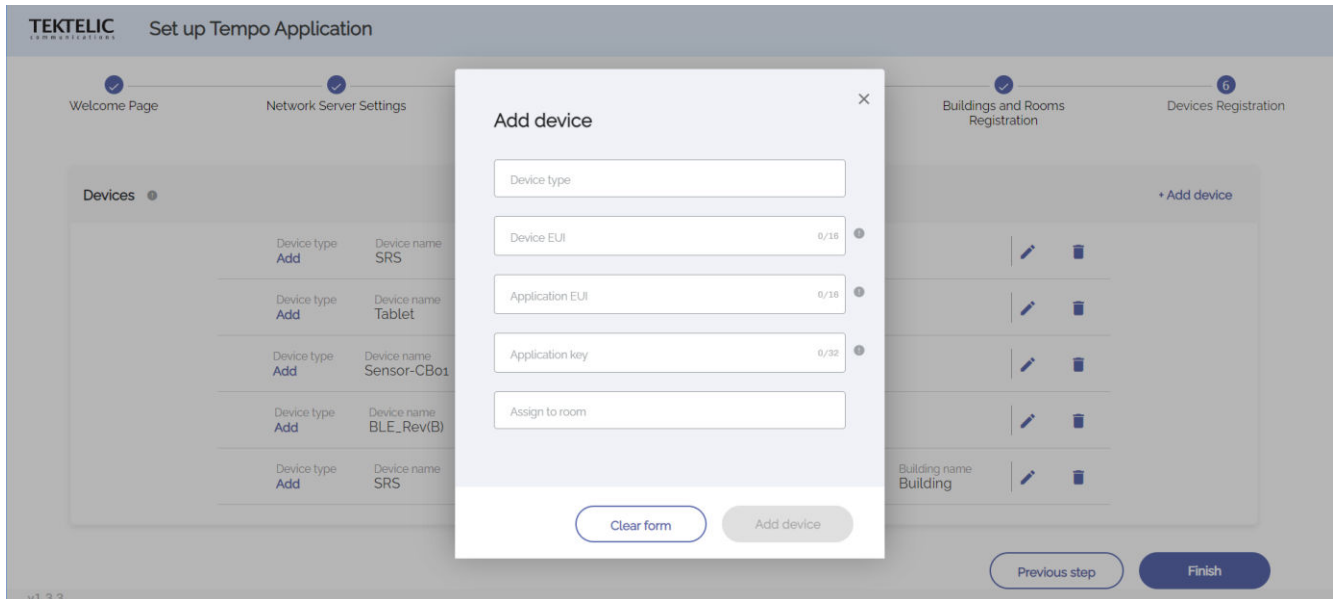
After creating Building and click “Next step” button.

7) Devices Registration

If you have already registered your devices on the Kona Core (Network Server) and added your account details to the TEMPO Application then simply select Device and go to the next step.

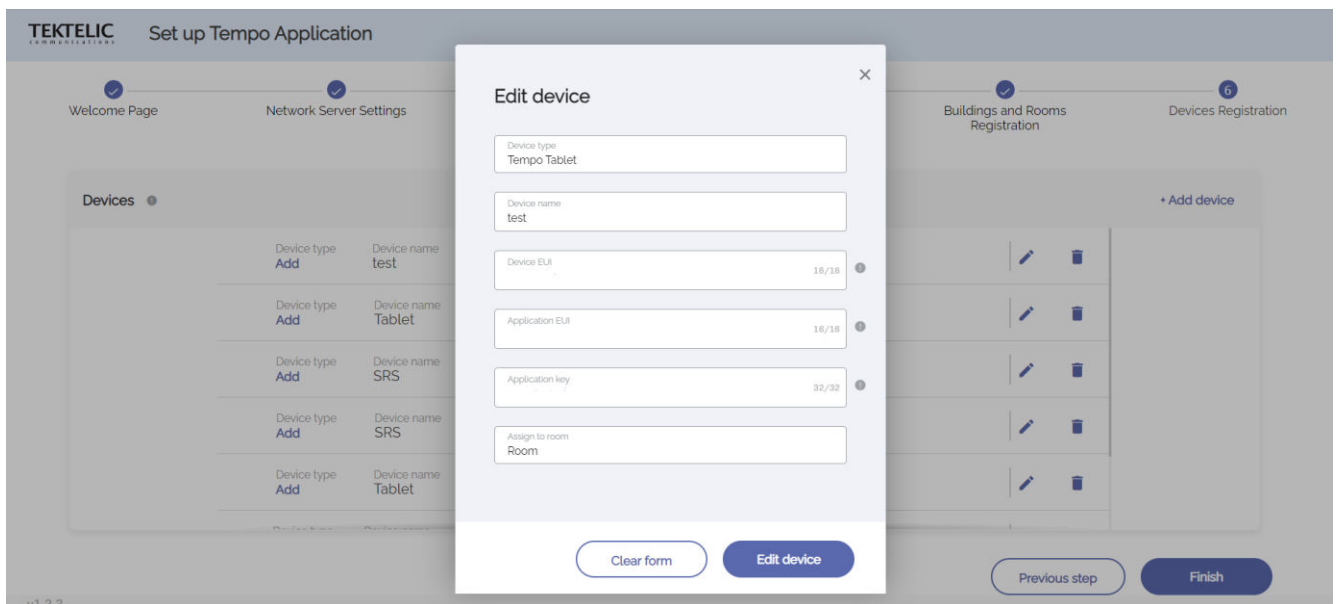


Here you can either create a new gateway group by clicking “+ Add device” button and fill in all necessary fields, then click the “Add device” button. Note: in this step you have the option to assign the device to the room. Click on “Assign to room” and select from the drop-down list the name of room.

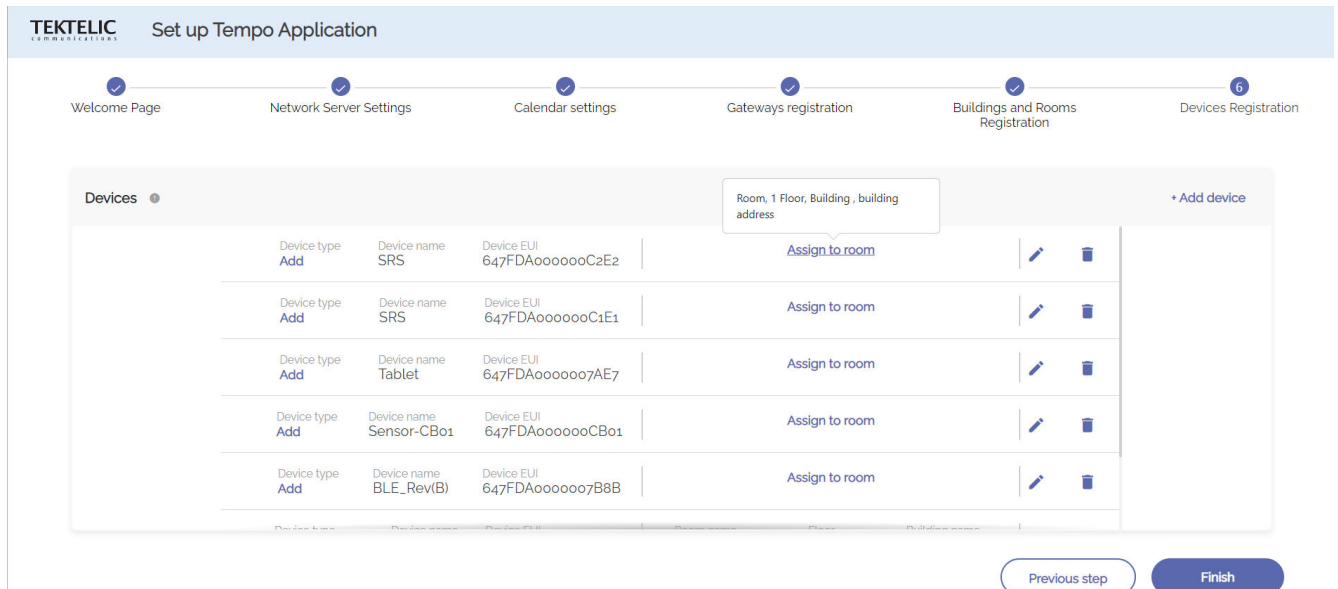


Also, you have the following option at this step:

- Edit existing device information. Click on the pencil button. After changes click “Edit device” button to apply changes.



- Delete existing device. To do this click trash button.
- Assign the device to room. Click on “Assign to room” button and click on the pop-up window with information about the room.



Note: if using an EU device: we strongly recommend adding channels 867.1, 867.3, 867.5, 867.7 and 867.9 to the CF list on network server. This is done by selecting the advanced network settings at either the device or application level.

If there is any difficulty with the above steps, please refer to Network Server (Kona Core) documentation located on the support portal <https://support.tektelic.com/>. This platform can also be used to contact a member of our support team directly.

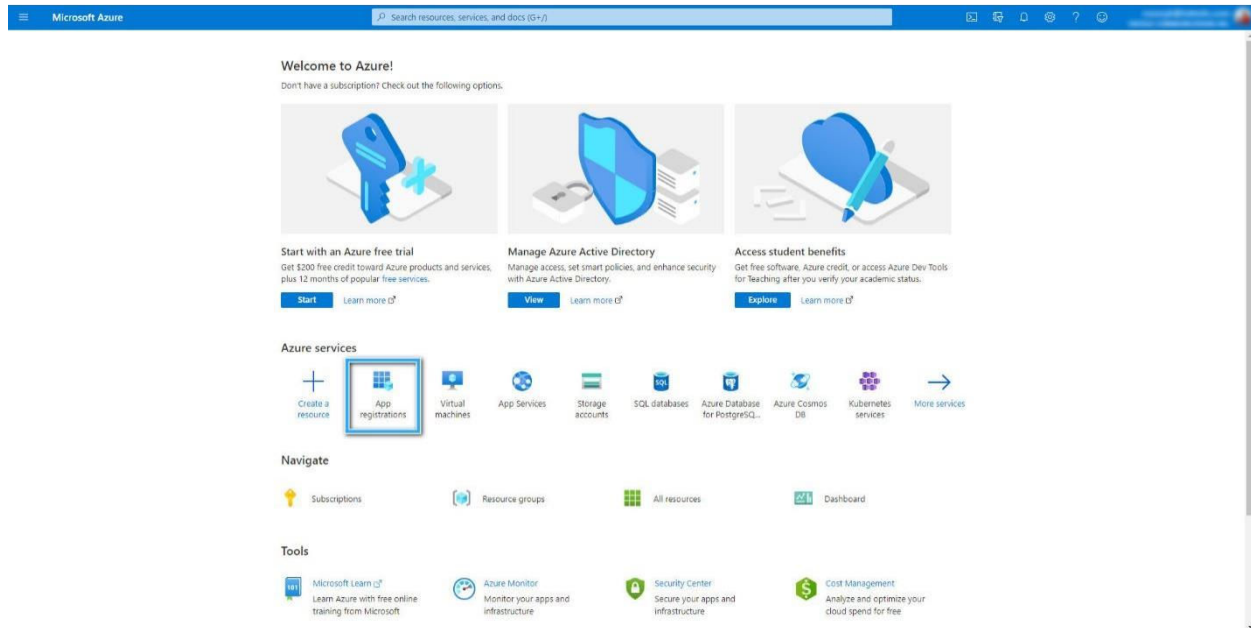
3 Appendix A - Microsoft (Azure, Outlook) Credentials

3.1 Log in to Azure

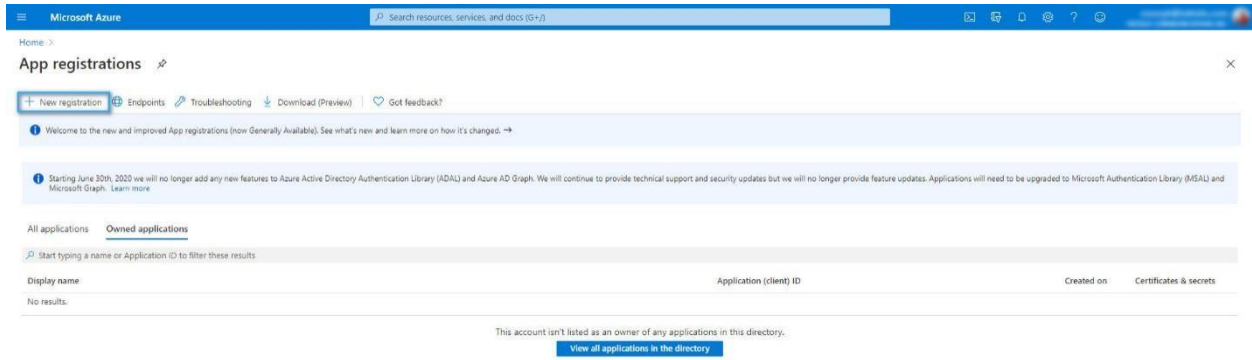
Login to <https://portal.azure.com> with admin credentials for your Microsoft account. **Select All Applications and add Graph Explorer to the list of user applications.**

3.2 App registration

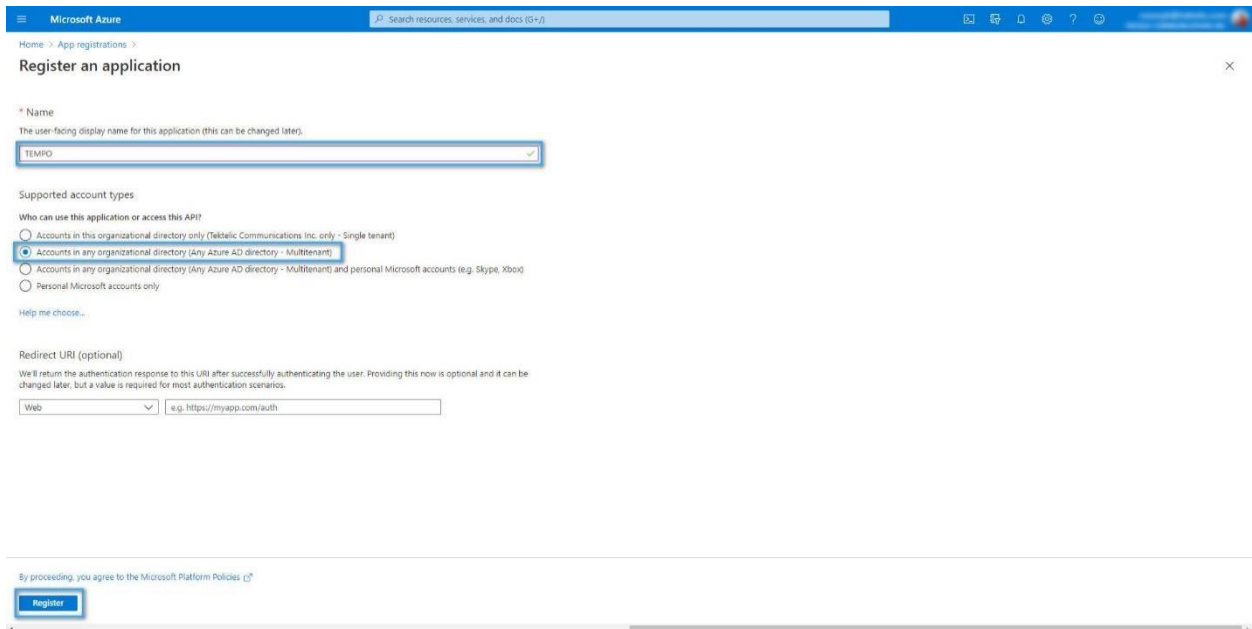
1. On the Home page choose Azure service “App registrations”.



2. Add a new application by clicking “+ New registration”.

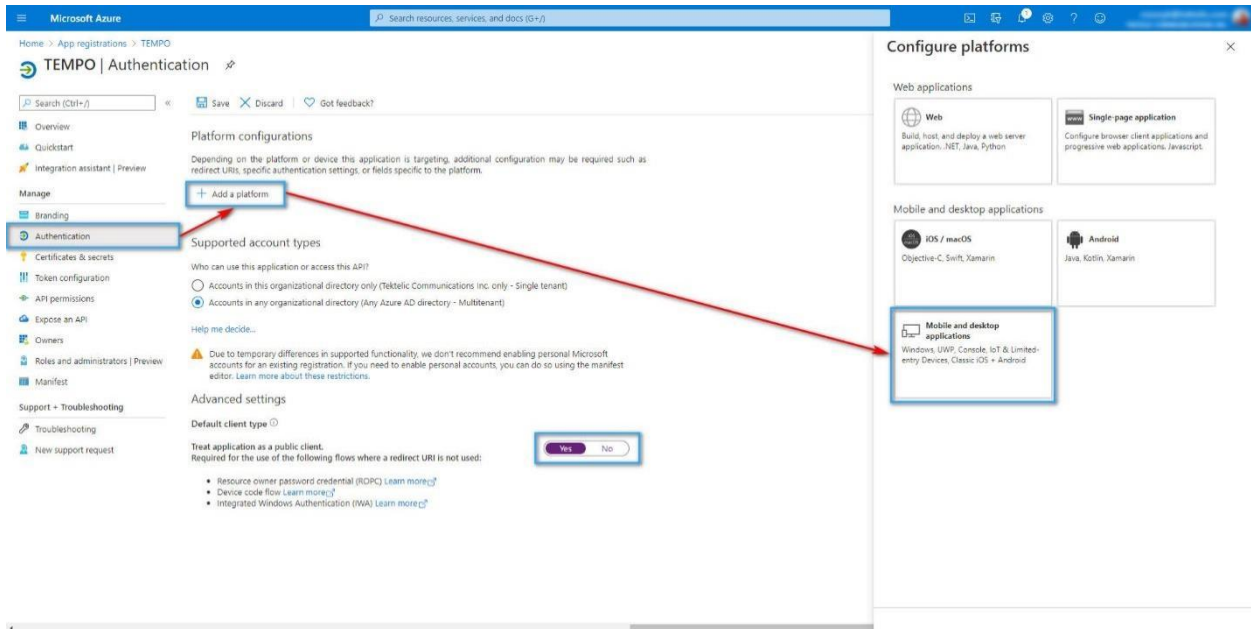


3. Register the new application by adding a Name, choose supported account type “Accounts in any organizational directory (Any Azure AD directory - Multitenant)” and click “Register”.

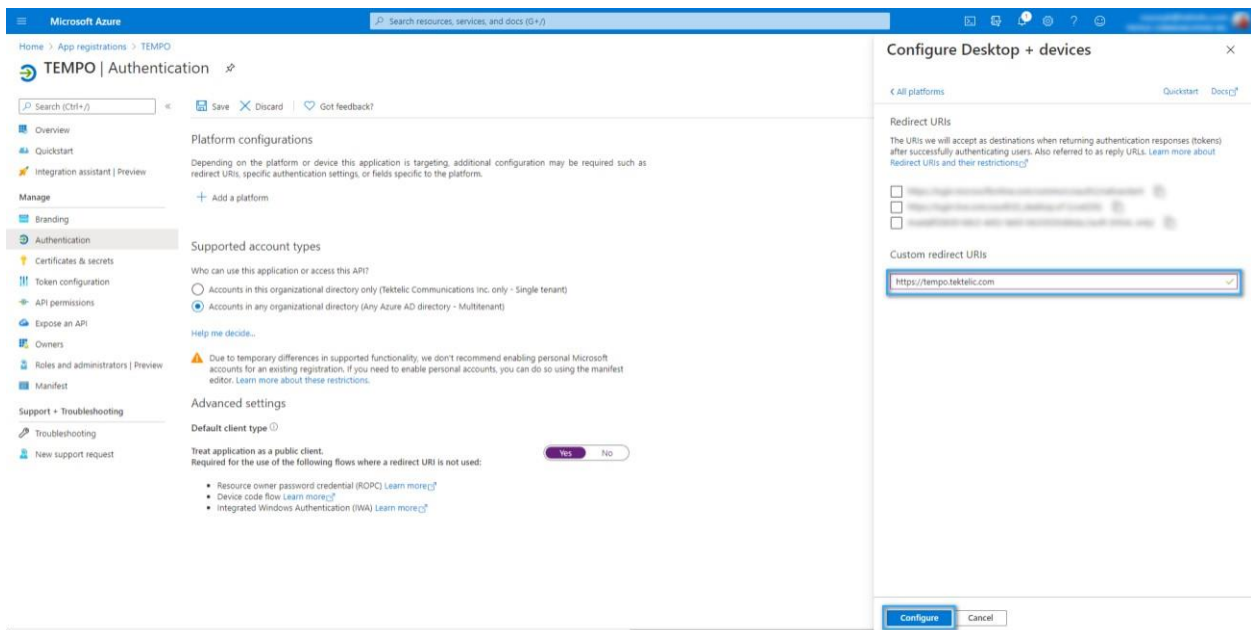


3.3 Authentication of the Application

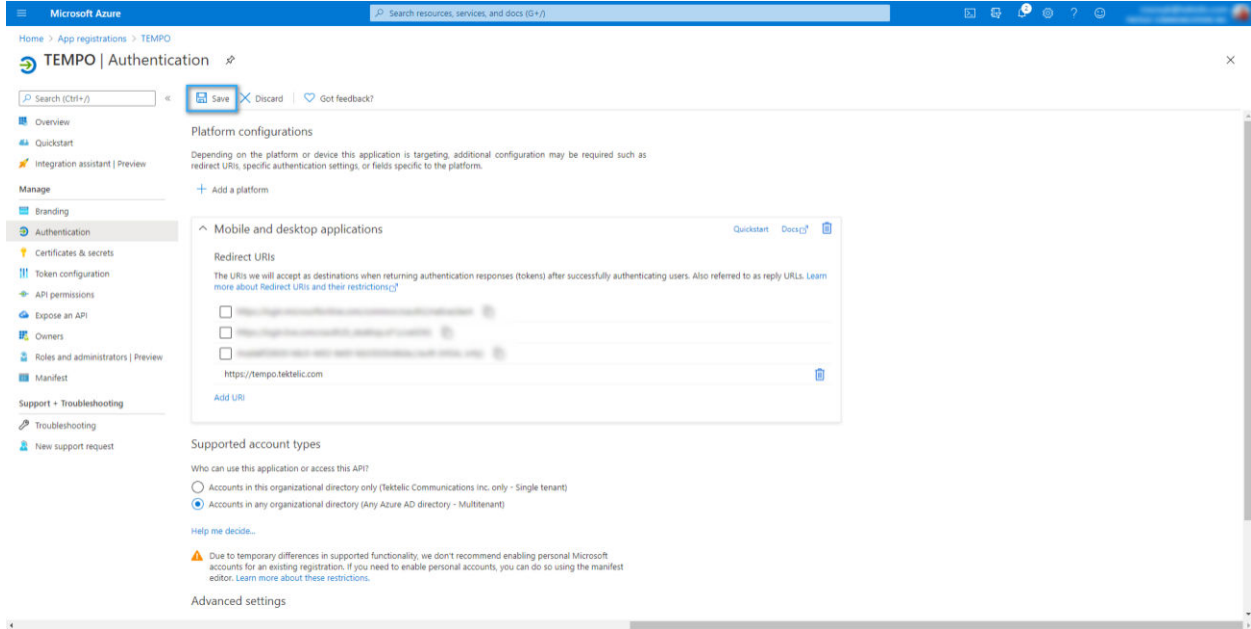
1. On the app registration menu panel choose “Authentication”.
2. In advanced settings choose “Treat application as a public client” as “YES”. Click on the button “+ Add platform” and on the right side choose “Mobile and desktop applications”.



3. Add “Custom redirect URIs” - TEMPO URI <https://tempo.tektelic.com/> and click the button “Configure”.



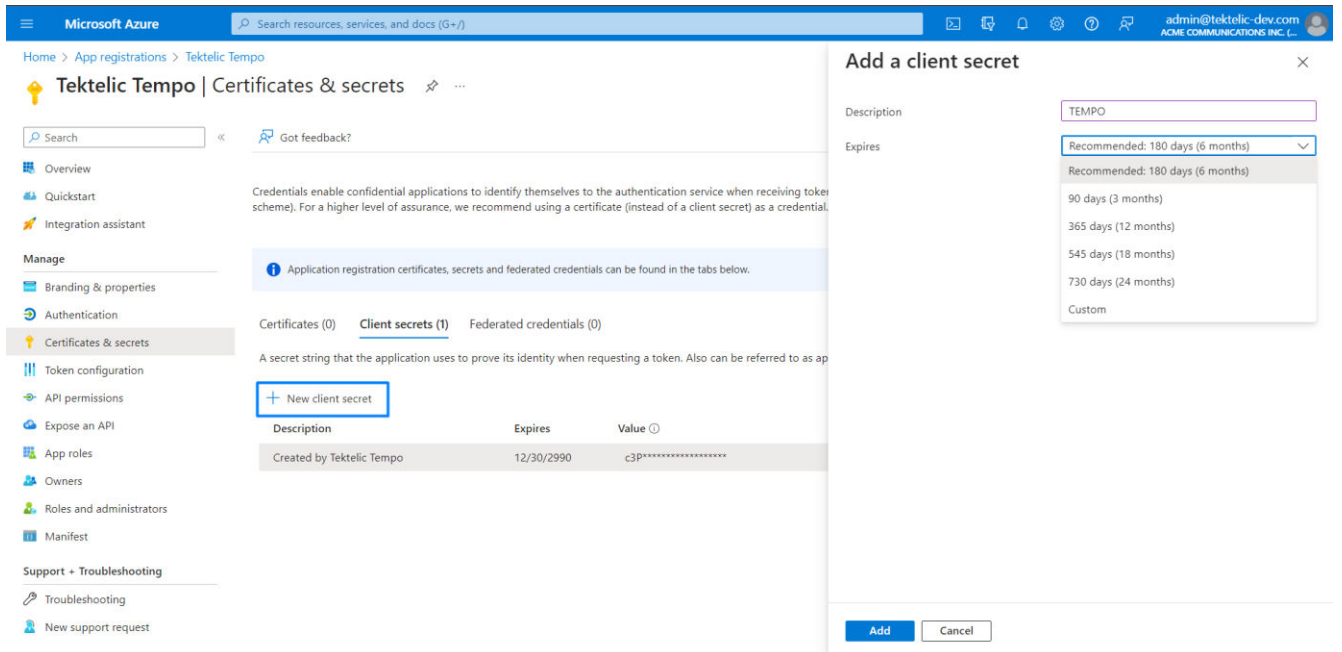
4. Save all changes.



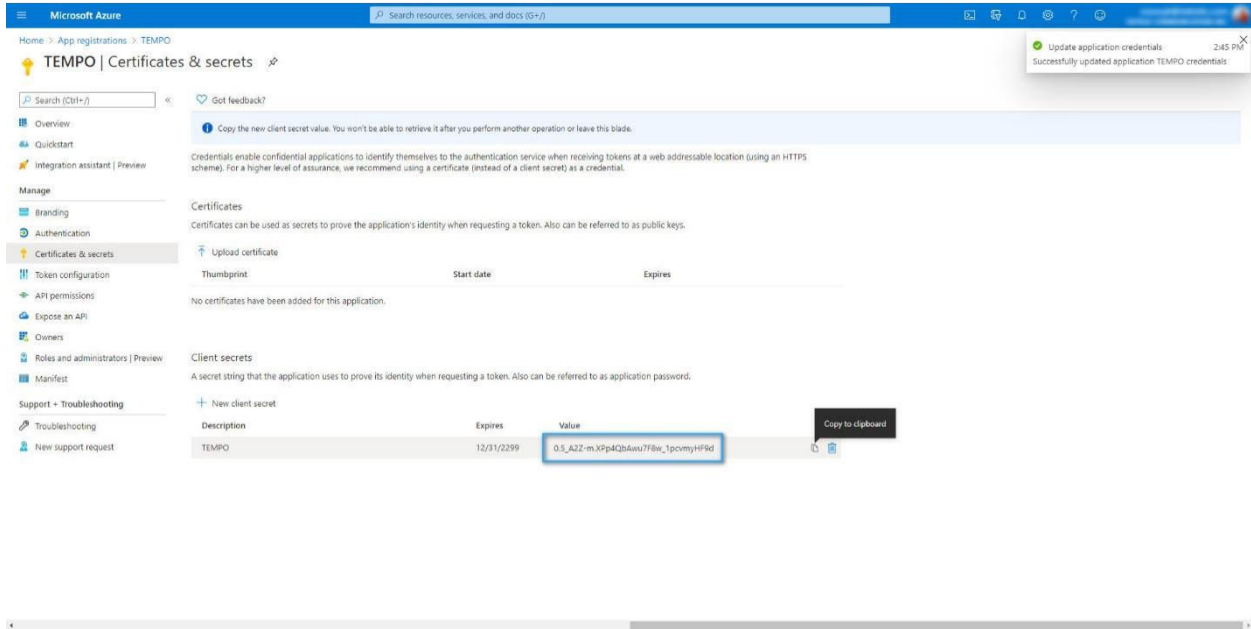
3.4 Certificates & secrets

1. Choose on the left menu “Certificates & secrets”.

2. Click on the button “Add client secret”, fill description and expires as “Custom” on 2 years. Then click on the button “Add”.

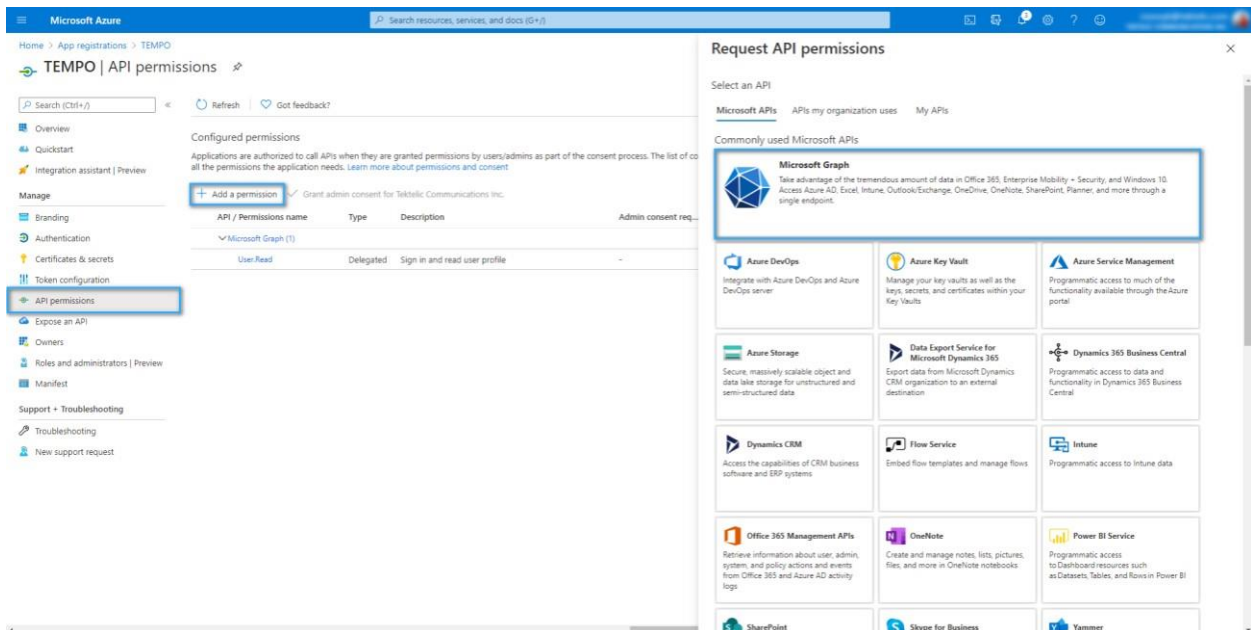


3. Copy Your Client Secret



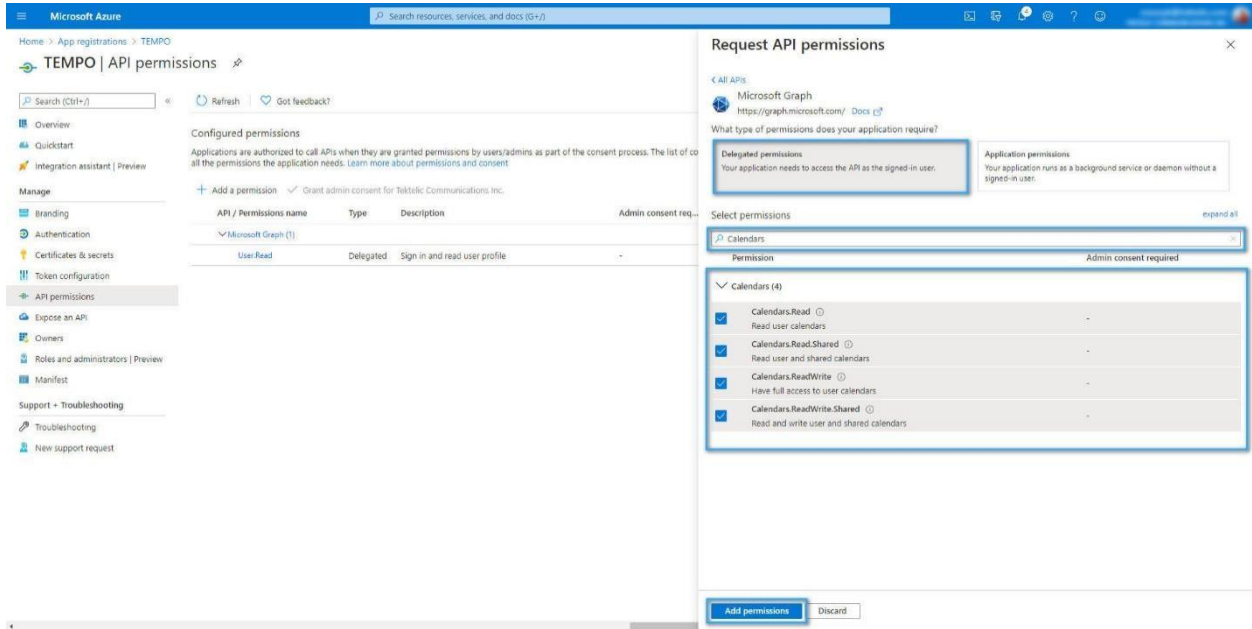
3.5 API permissions

1. Choose on the left menu “API permissions”. Click on the “+ Add permission” button and on the right side choose Microsoft Graph.



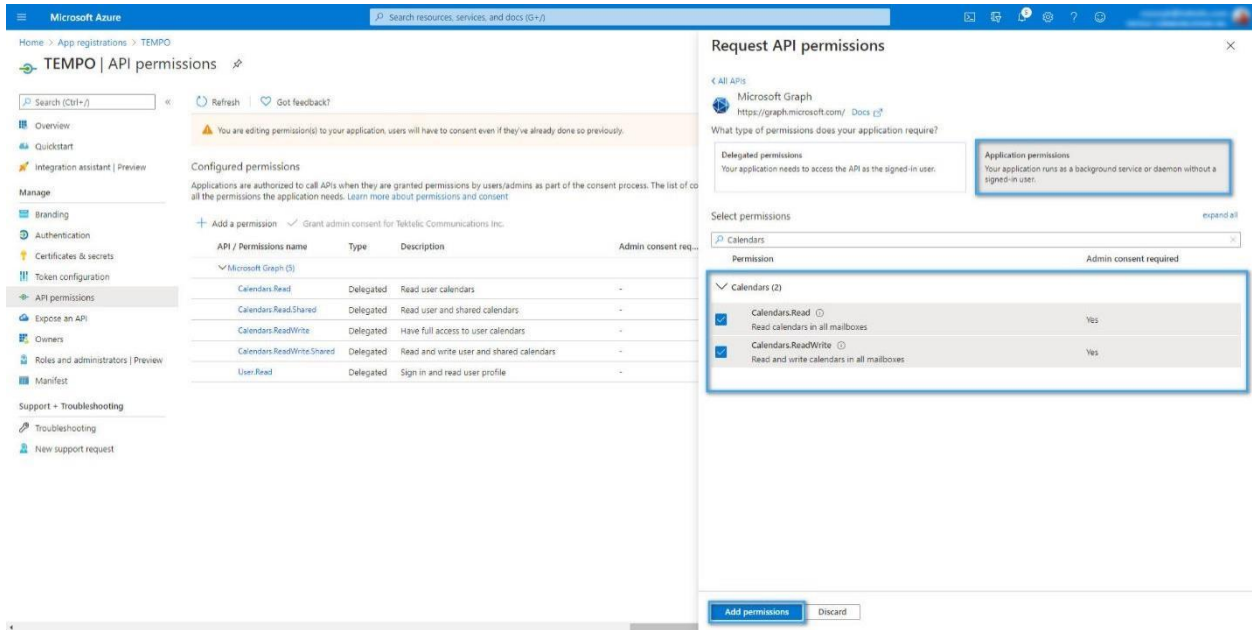
2. Click on the “Delegated permissions” button and add the next permission to Microsoft Graph for TEMPO (use Search to quickly find permissions):

- Read user calendars;
- Read user and shared calendars; •
Have full access to user calendars;
- Read and write user and shared calendars;



3. Click on the “Application permissions” button and add the next permission to Microsoft Graph for TEMPO (use Search to quickly find permissions):

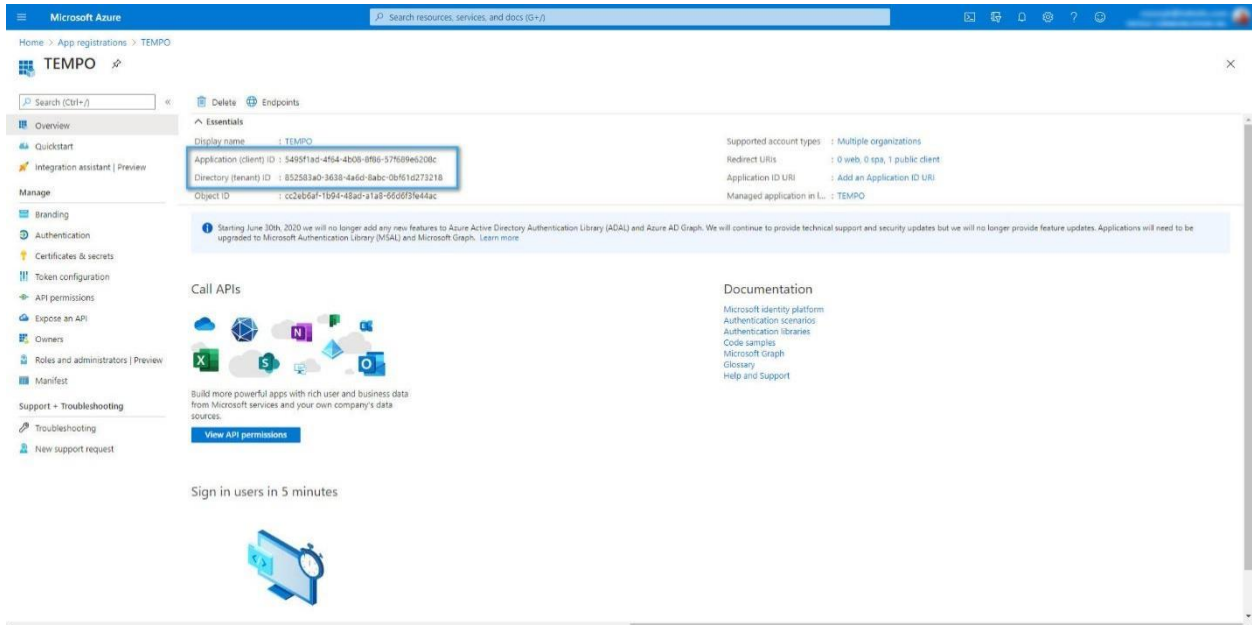
- Read calendars in all mailboxes;
- Read and write calendars in all mailboxes;



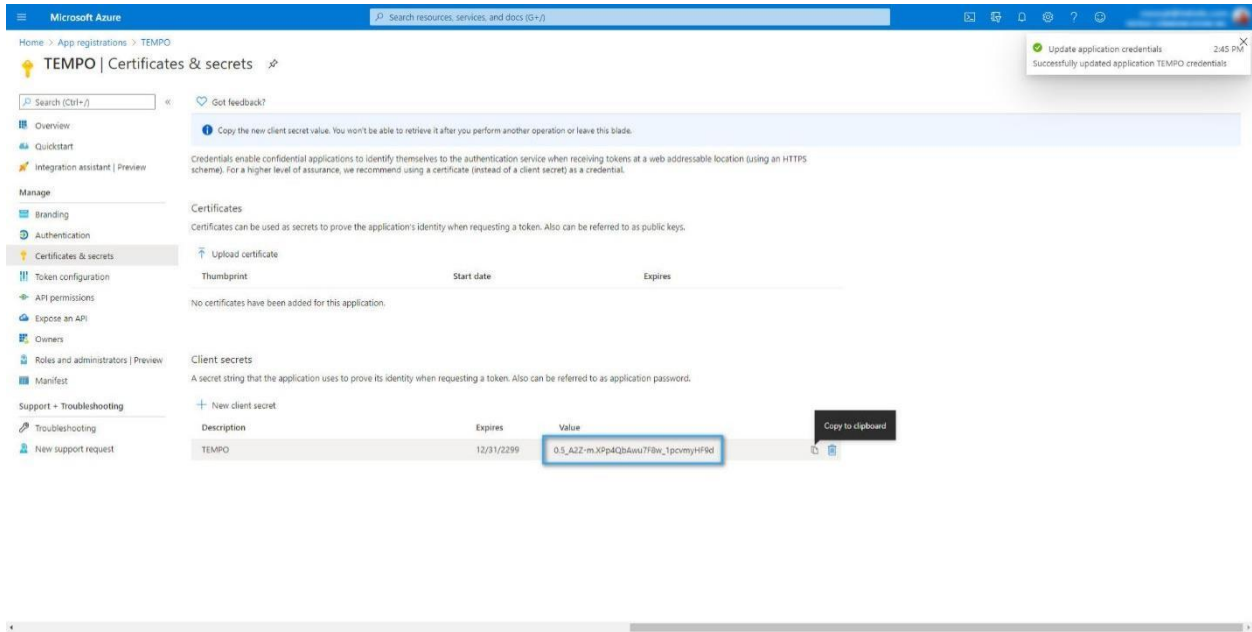
3.6 Copy Keys

For Integration with Tempo Application you will require:

- tenantID and clientID (Overview tab);

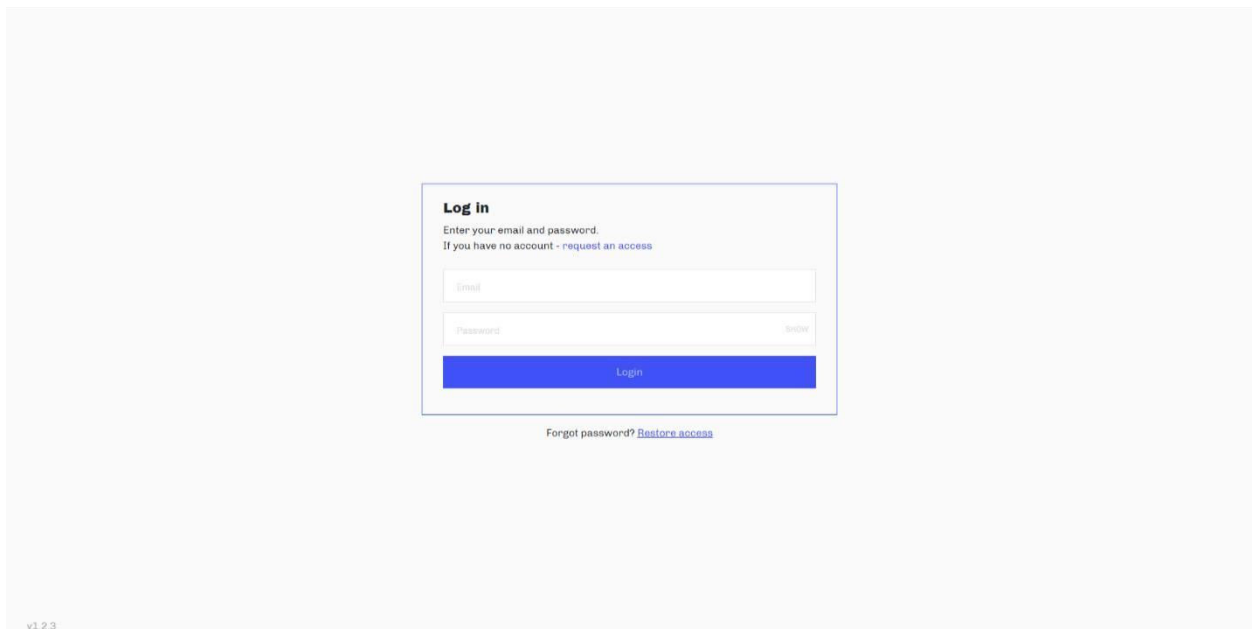


- clientSecret (Certificates & secrets tab).

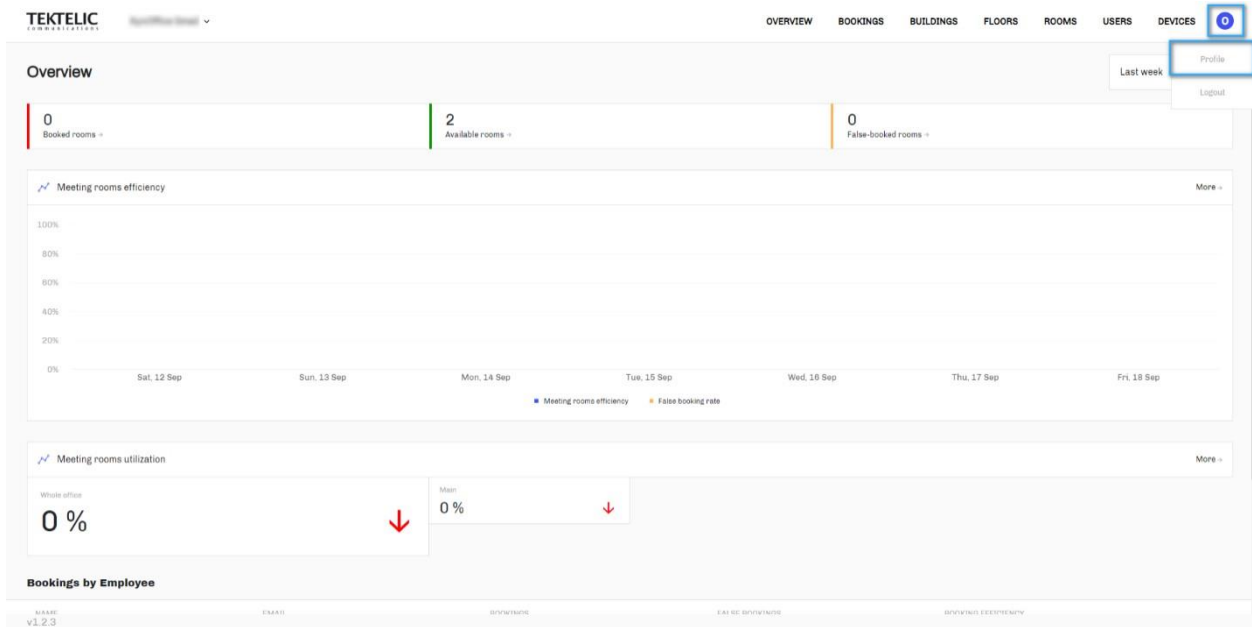


3.7 Paste copied credentials to BNA

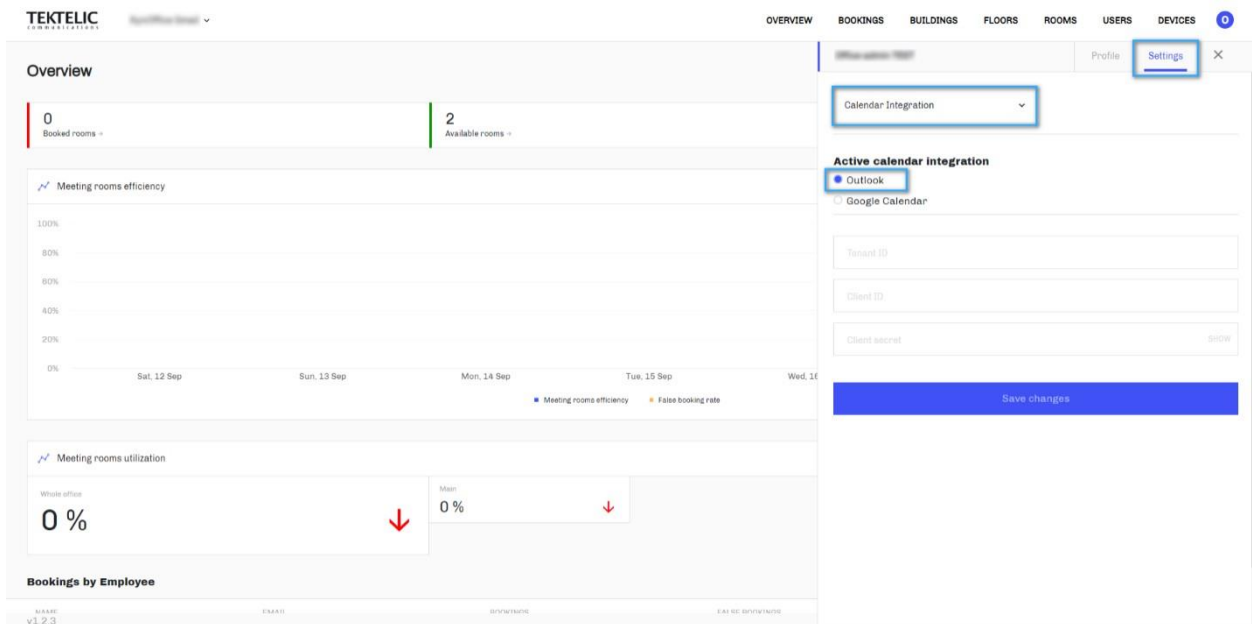
1. Log in to the TEMPO Application (<https://tempo.tektelic.com/>) as an OFFICE ADMIN.



2. Click on the user icon and choose the "Profile" menu item.



3. Go to the Settings tab. In the dropdown list choose Calendar Integration and then choose the Outlook option in the Active calendar integration list. TenantID, ClientID, and ClientSecret were obtained in Step 6 above.



4. Click on the Save changes button to save calendar integration.

Overview

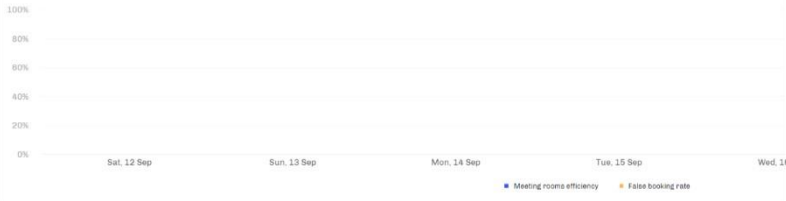
0

Booked rooms -

2

Available rooms -

Meeting rooms efficiency



Meeting rooms utilization



Bookings by Employee

NAME	EMAIL	DEPARTMENT	EXT OR SIP/PHONE
v1.2.3			

Office address: 1000

Calendar Integration

Active calendar integration

Outlook

Google Calendar

Outlook ID: [Redacted]

Outlook ID: [Redacted]

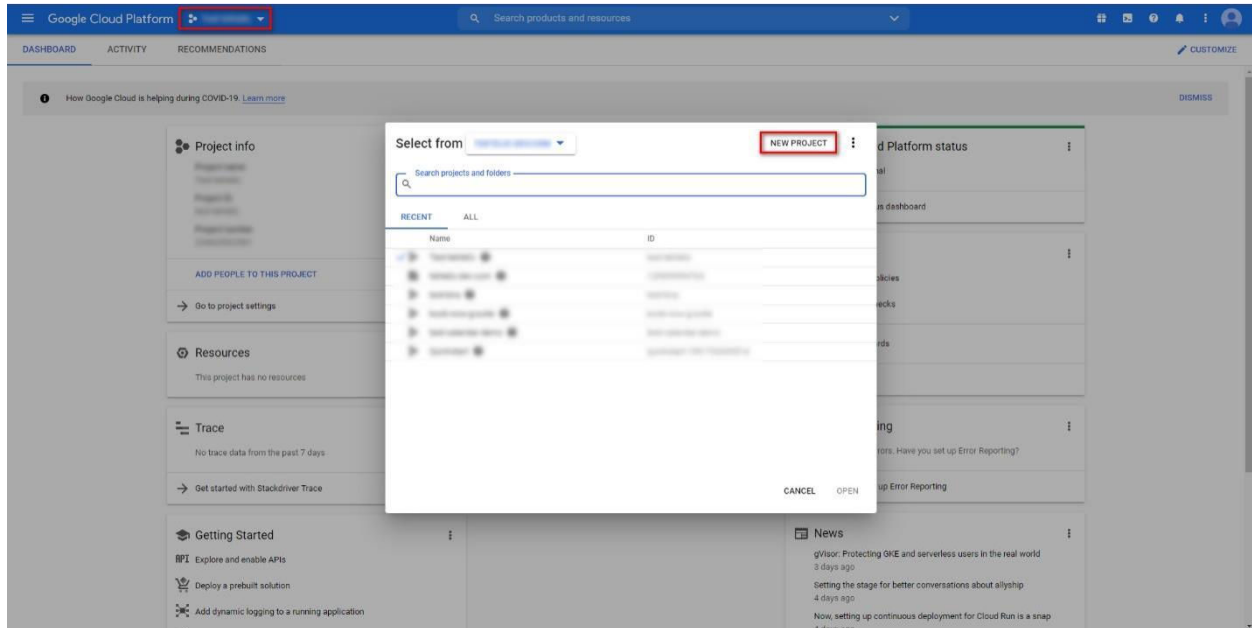
Outlook account: [Redacted] SHOW

Save changes

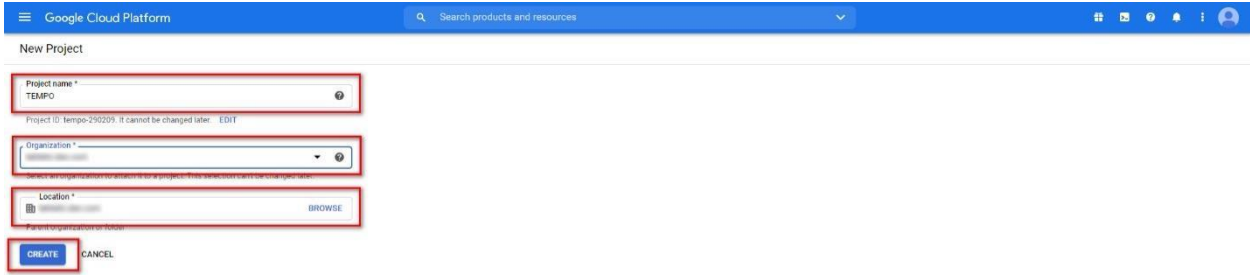
4 Appendix B – Google (GSuite, Gmail) Credentials

4.1 Create a New project

1. Go to Google Cloud Platform (<https://console.cloud.google.com/>) and log in as Administrator.
2. Click on the ... button and then click on the NEW PROJECT button in the open popup window to create a new project.

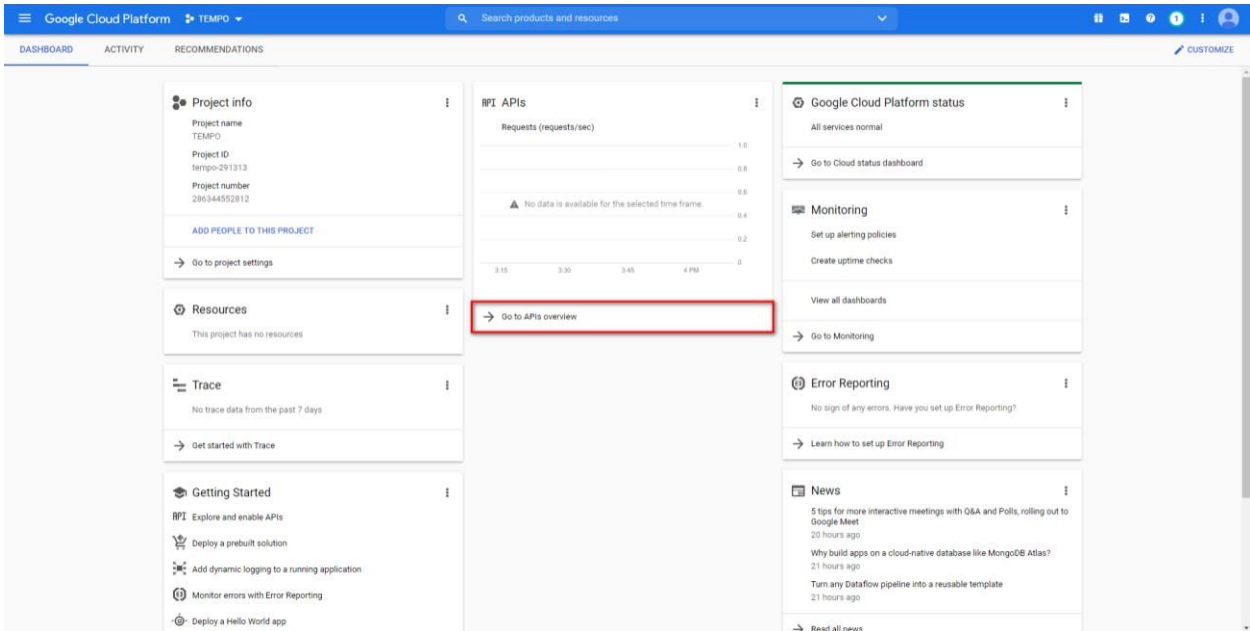


3. Fill all fields and click on the CREATE button.

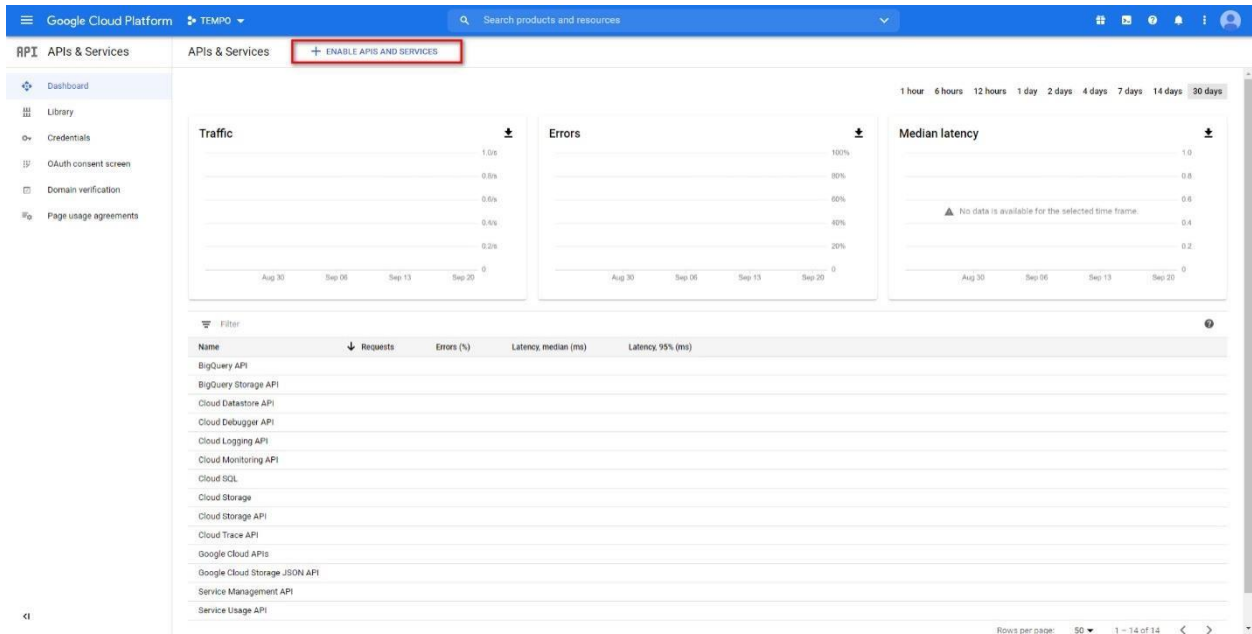


4.2 Add a Google Calendar API for a new project

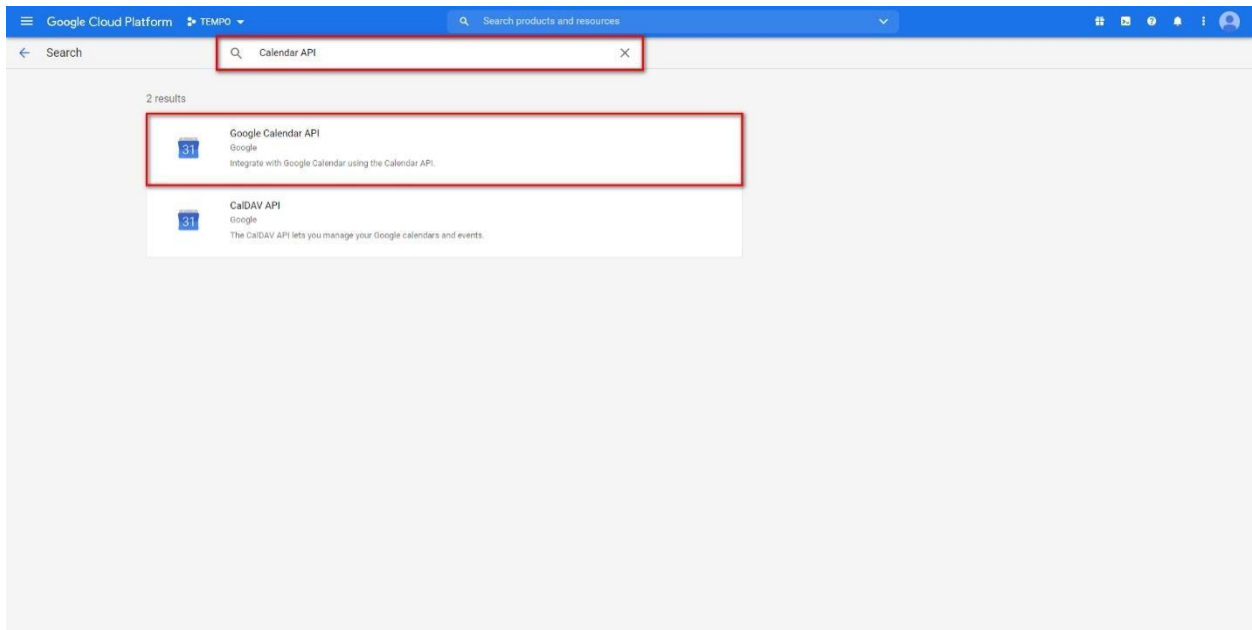
1. Click on the GO TO APIS OVERVIEW button.



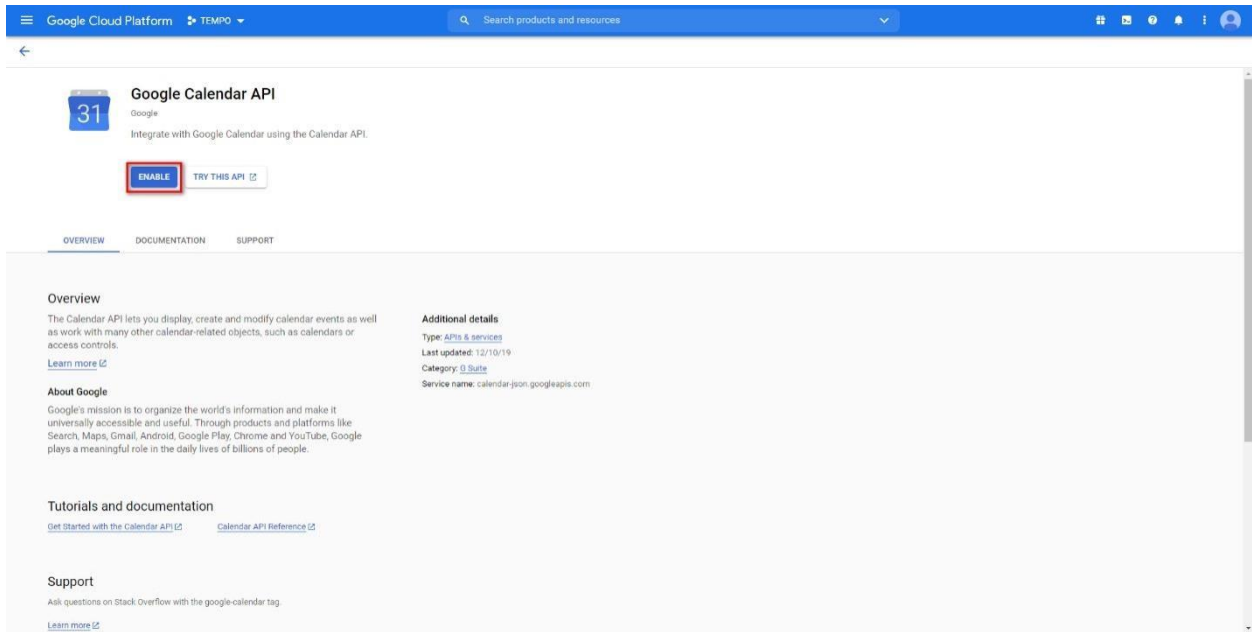
2. Click on the +ENABLE APIS AND SERVICES button.



3. Using the search field find Google Calendar API and choose it.

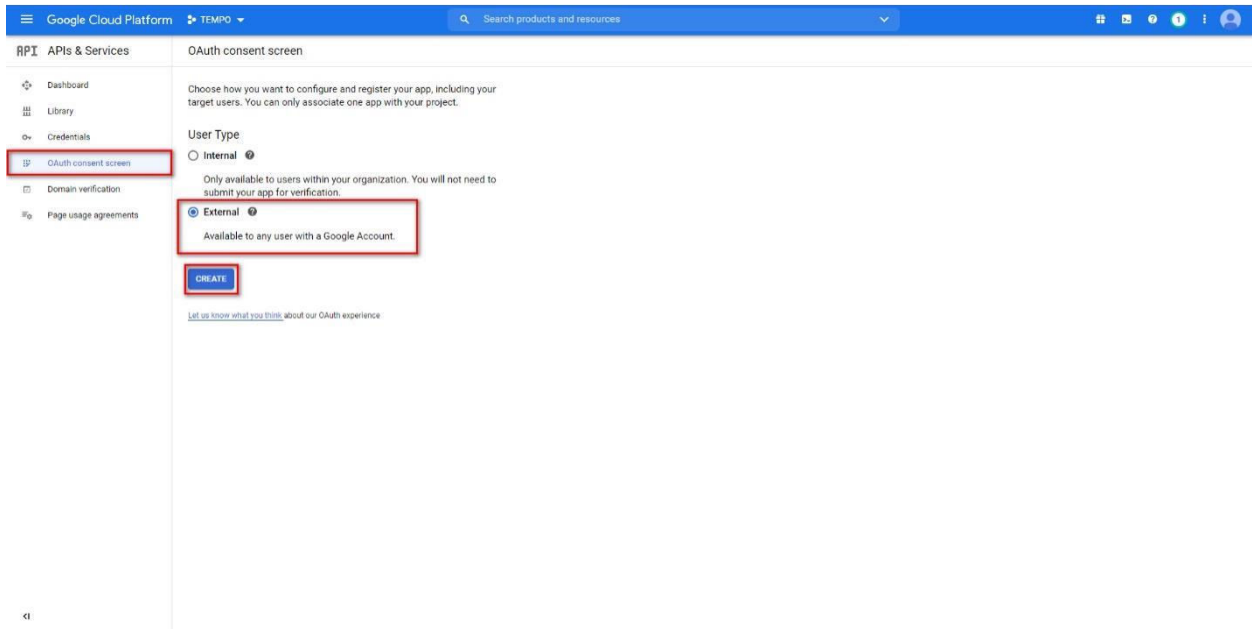


4. Click on the ENABLE button on the Google Calendar API page.

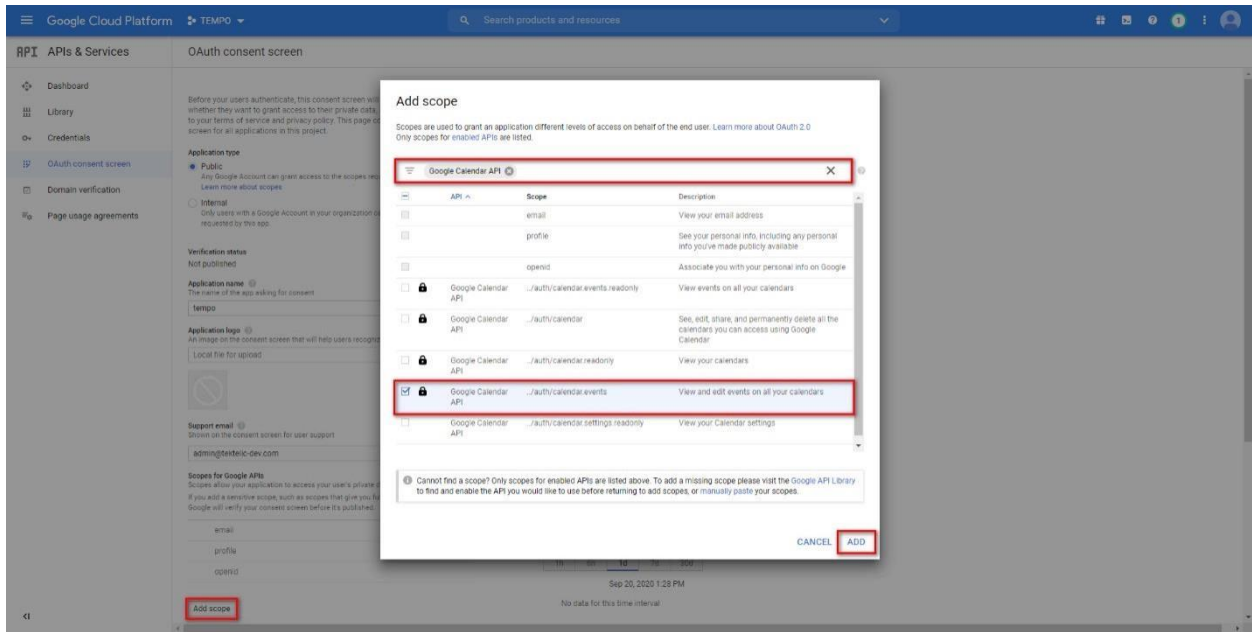


4.3 Setup OAuth consent screen

1. On the APIs & Services page click on the OAuth consent screen. On the opened page choose External user type and click on the CREATE button.



2. Add scope by click on the ADD SCOPE button. In the opened window using the search field find and that choose Google Calendar API. Click on the ADD button to save changes.



3. Fill the next fields: Application type, Application name, Support email, Authorized domains (add tektelic.com), Application Homepage link (add https://tempo.tektelic.com).

Application type

- Public
Any Google Account can grant access to the scopes required by this app. [Learn more about scopes.](#)
- Internal
Only users with a Google Account in your organization can grant access to the scopes required by the app.

Verification status

Needs verification

Application name
The name of the app asking for consent.

Application logo

Support email
Shown on the consent screen for user support.

Scopes for Google APIs
Scopes allow your application to access your user's private data. [Learn more](#)
If you add a sensitive scope, such as scopes that give you full access to Calendar or Drive, Google will verify your consent screen before it's published.

email

profile

openid

./auth/calendar-events

Authorized domains
To protect you and your users, Google only allows applications that authenticate using OAuth to use Authorized Domains. Your application's links must be hosted on Authorized Domains. [Learn more](#)

Application Homepage link
Shown on the consent screen. Must be hosted on an Authorized Domain.

Application Privacy Policy link
Shown on the consent screen. Must be hosted on an Authorized Domain.

Application Terms of Service link
Shown on the consent screen. Must be hosted on an Authorized Domain.

4. Click on the SAVE button to save the data

4.4 Create Credentials

1. On the APIs & Services page click on the Credential menu item.

The screenshot shows the Google Cloud Platform 'APIs & Services' page. The left sidebar contains a menu with 'Credentials' highlighted in red. The main area displays three charts: 'Traffic' (0.06% error rate), 'Errors' (0.03% error rate), and 'Median latency' (0.201 ms). Below the charts is a table of API services.

Name	Requests	Errors (%)	Latency, median (ms)	Latency, 95% (ms)
Google Calendar API	7,671	0	198	259
BigQuery API				
BigQuery Storage API				
Cloud Datastore API				
Cloud Debugger API				
Cloud Logging API				
Cloud Monitoring API				
Cloud SQL				
Cloud Storage				
Cloud Storage API				
Cloud Trace API				
Google Cloud APIs				
Google Cloud Storage JSON API				
Service Management API				
Service Usage API				

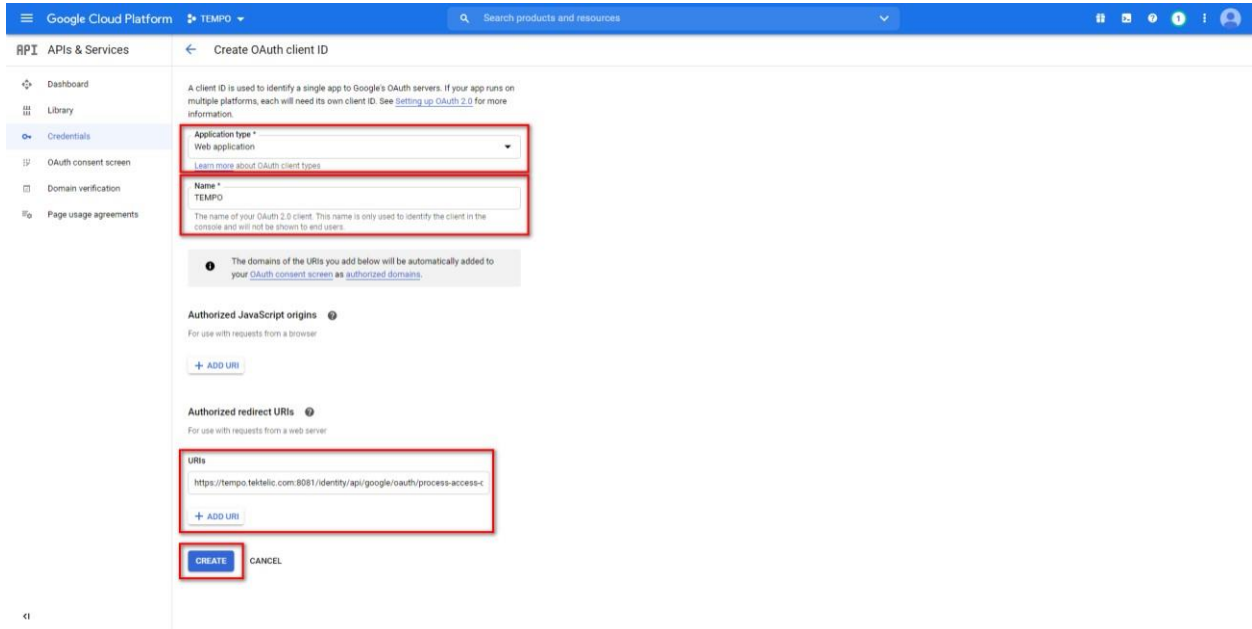
4.4.1 Create an OAuth Client ID

1. Click on the +CREATE CREDENTIALS button and click on the OAuth Client ID item in the dropdown list.

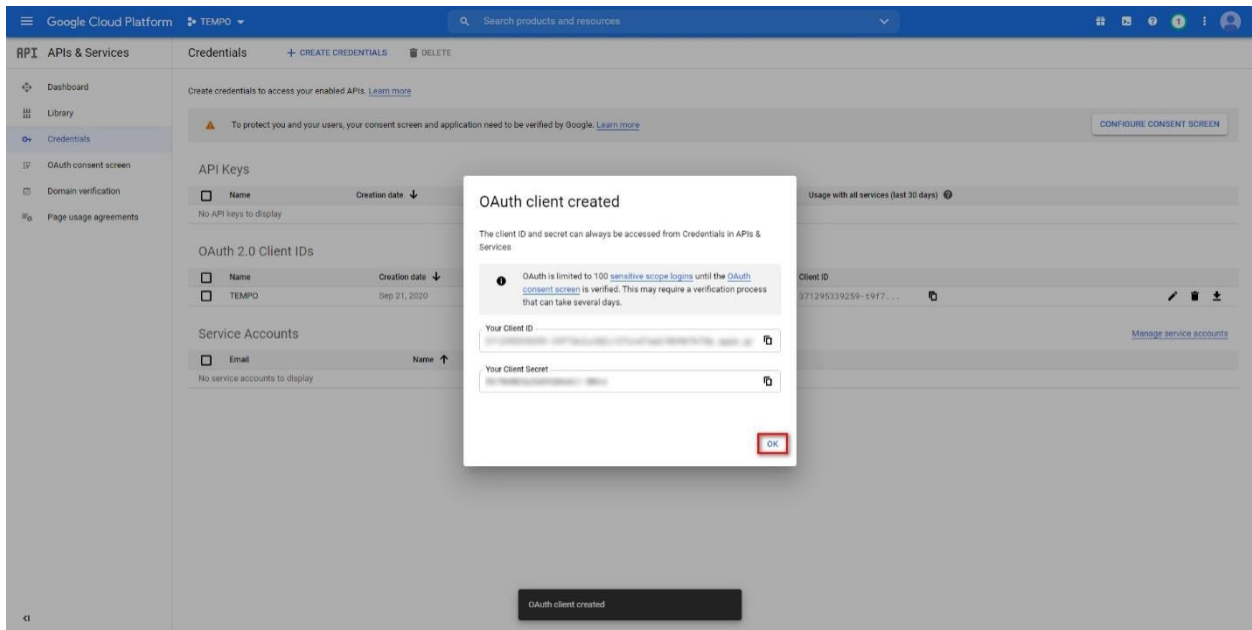
The screenshot shows the 'Credentials' page in Google Cloud Platform. The '+ CREATE CREDENTIALS' button is highlighted in red. A dropdown menu is open, showing options: 'API key', 'OAuth client ID' (highlighted in red), and 'Service account'. Below the dropdown, there are sections for 'API Keys', 'OAuth 2.0 Client IDs', and 'Service Accounts', each with a 'Name' field and a 'Usage with all services (last 30 days)' button.

2. Select the Web application type for the Application type field. Fill the Name field. Click on the +ADD URI button and type the next URI:

<https://tempo.tektelic.com:8081/identity/api/google/oauth/process-access-code> in the URI field. Click on the SAVE button for saving settings.

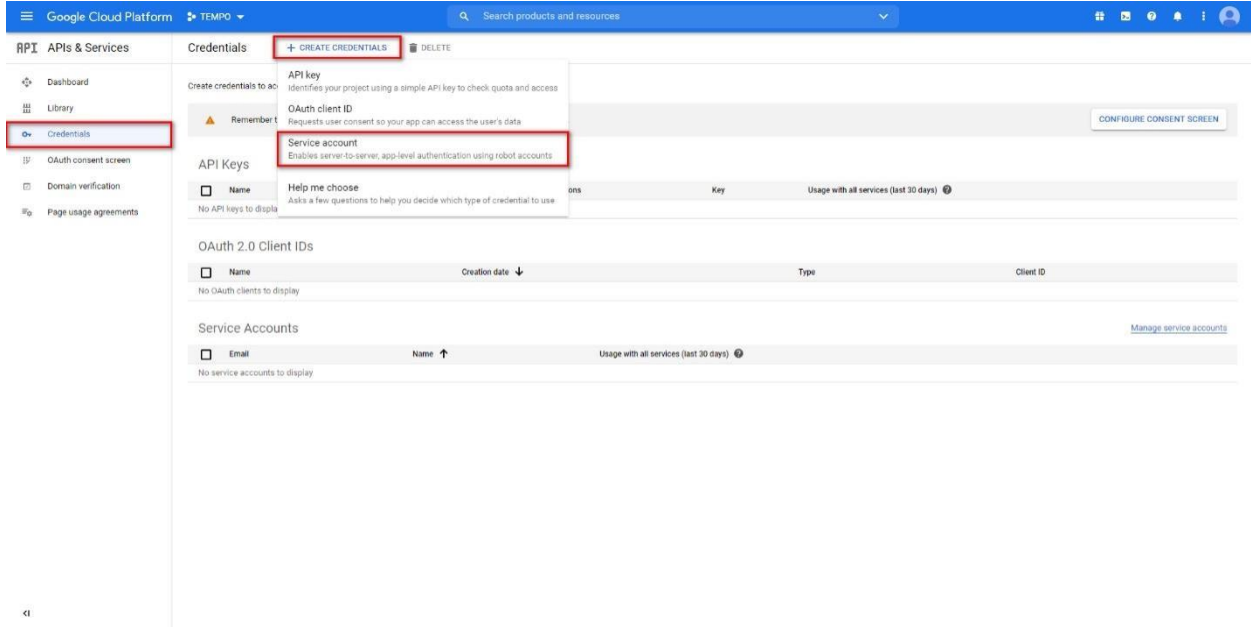


3. ClientID and Client secret are displayed in the next window. Those data can be copied in the future. Click on the OK button to close the window.

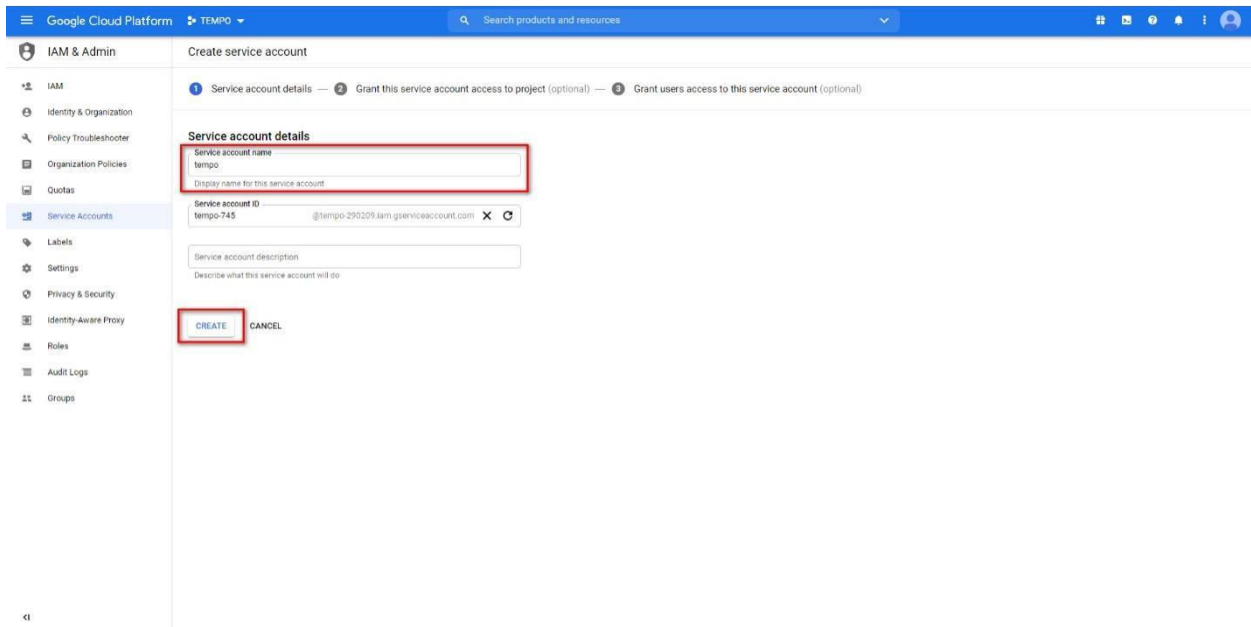


4.4.2 Create a Service Account

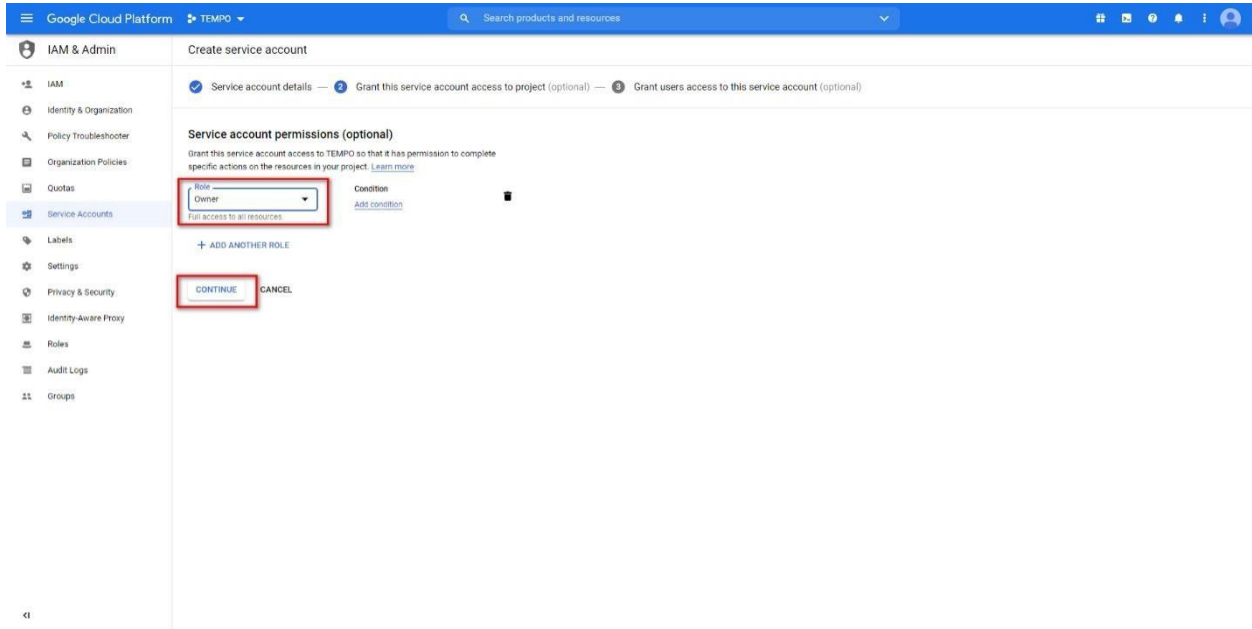
1. Click on the +CREATE CREDENTIALS button and click on the Service Account item in the dropdown list.



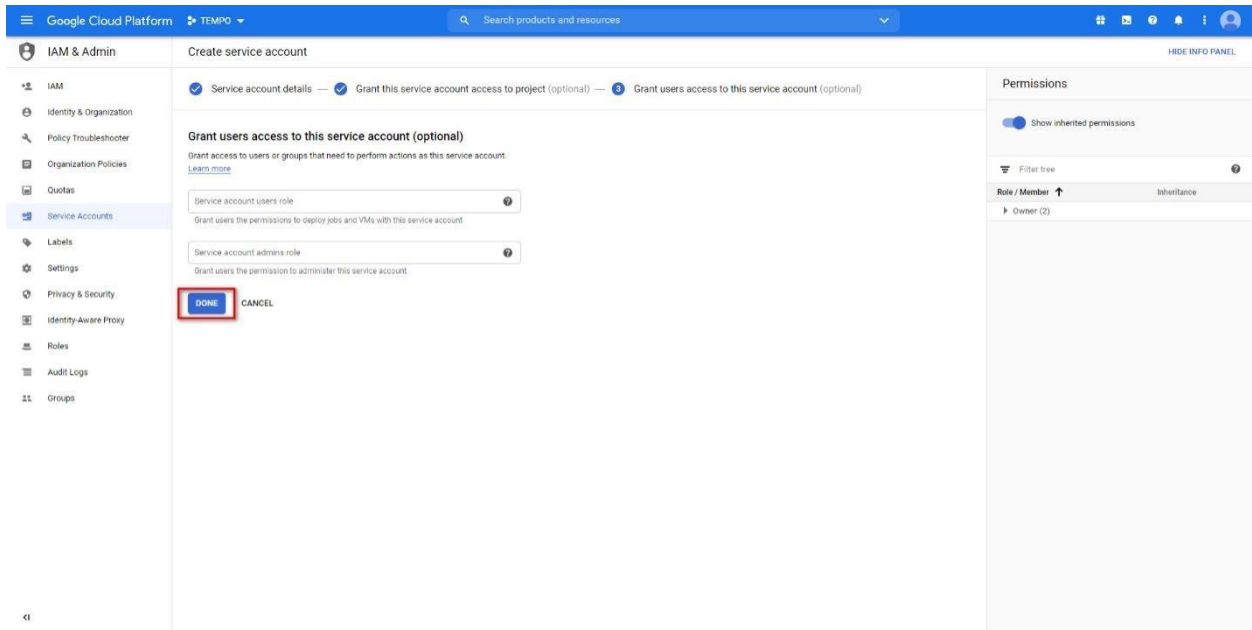
2. Fill the Service account name field. If necessary, change the name of the Service account ID and add the Service account description. Click on the CREATE button to complete the first step.



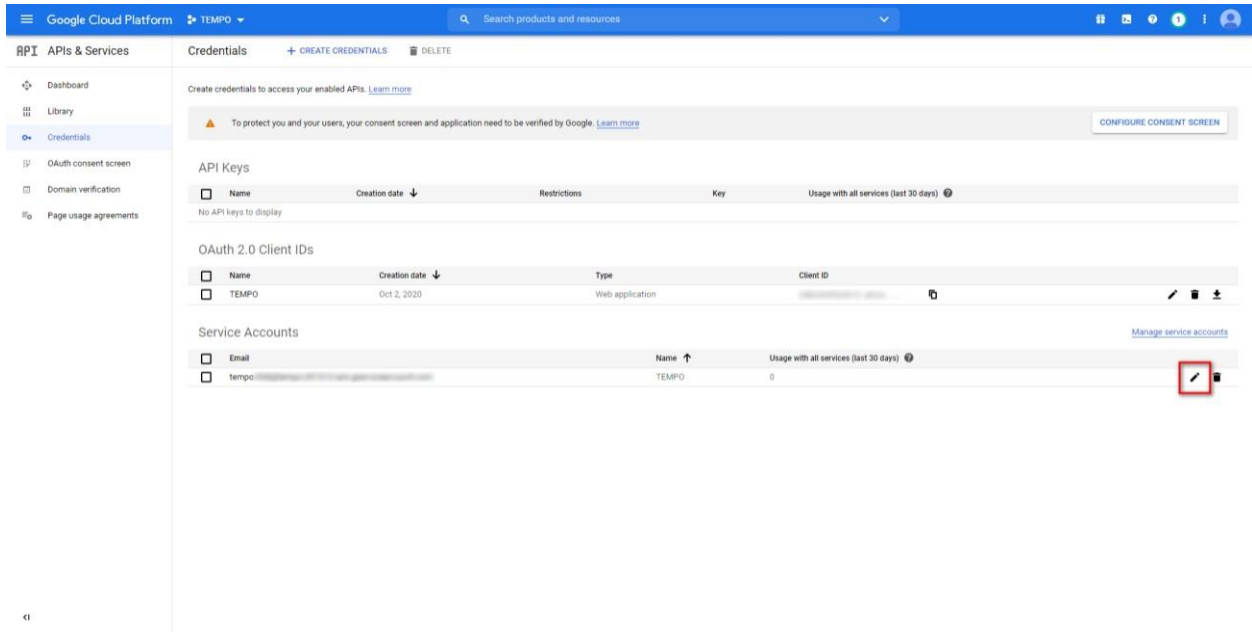
3. Click on the Select a role field and add Owner role to the Project. Click on the CONTINUE button to complete the second step.



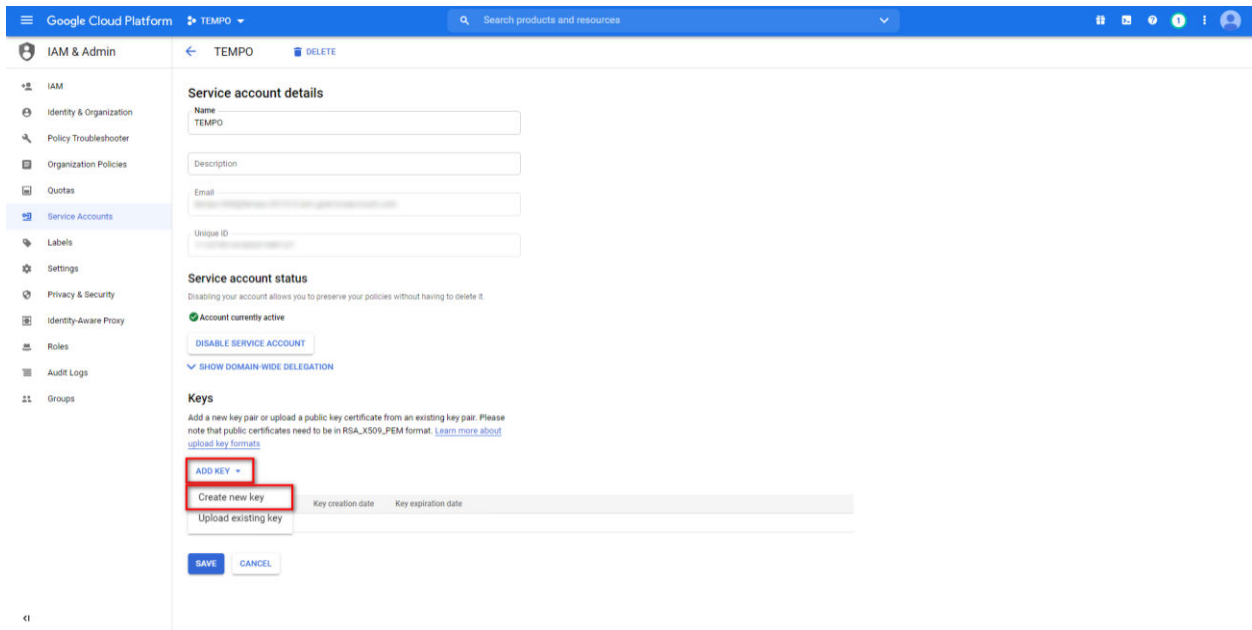
4. Click on the DONE button to complete the third step.



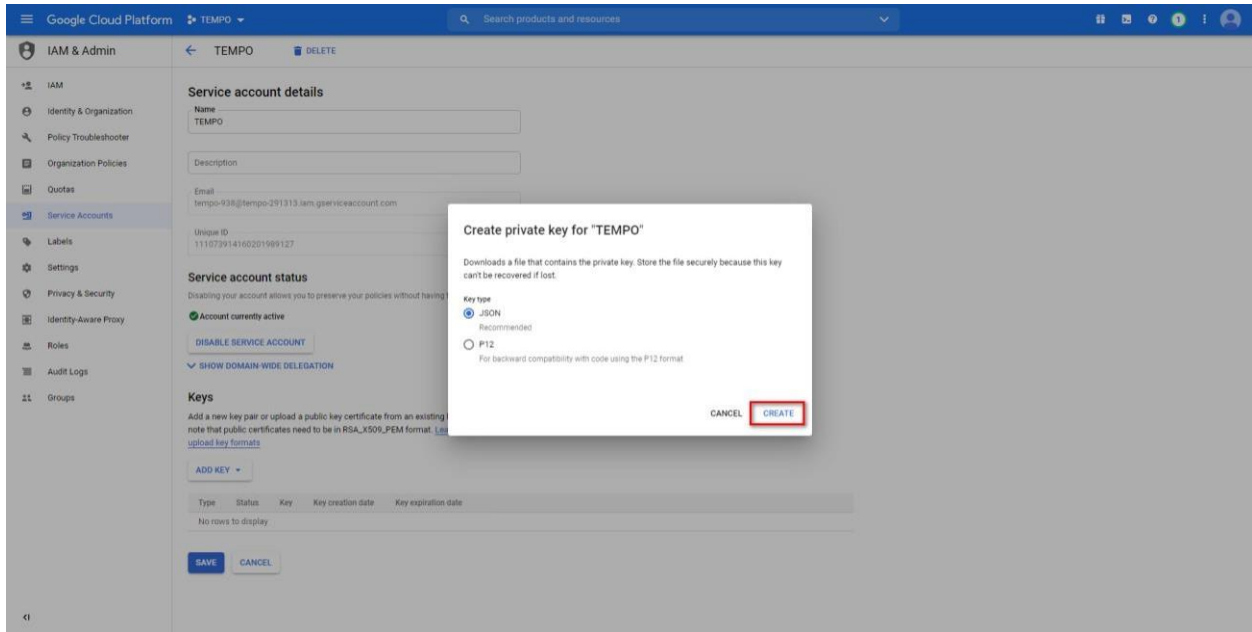
5. Click on the EDIT button of the created Service Account.



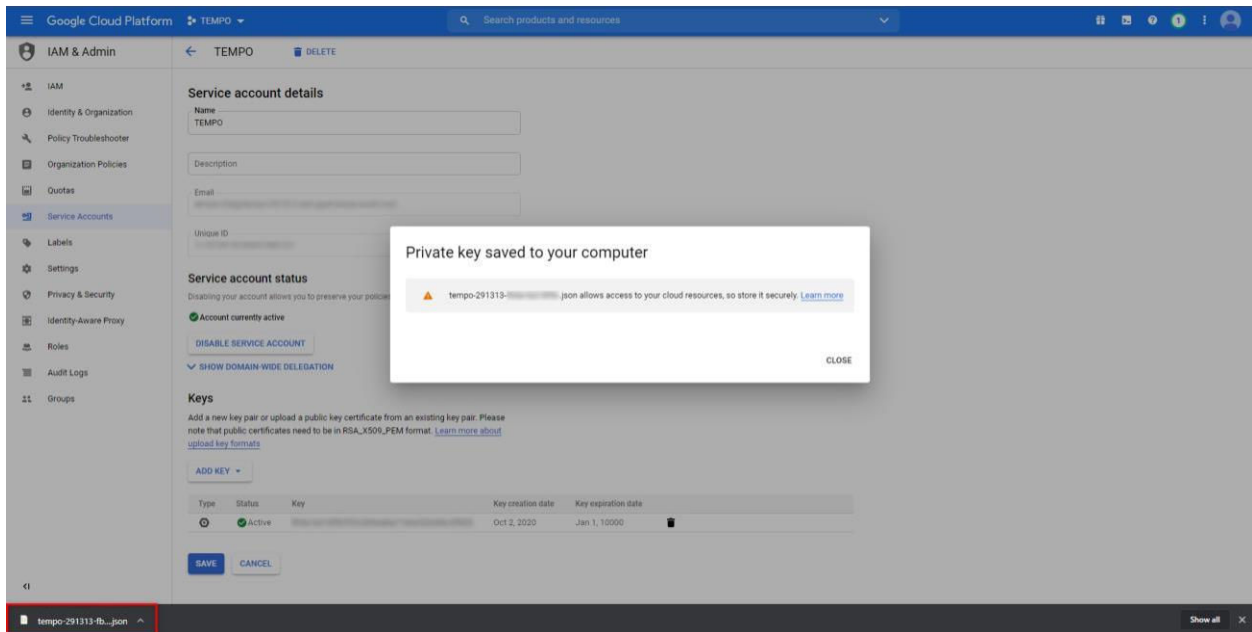
6. Click on the ADD KEY button and select the Create a new key item in the dropdown list.



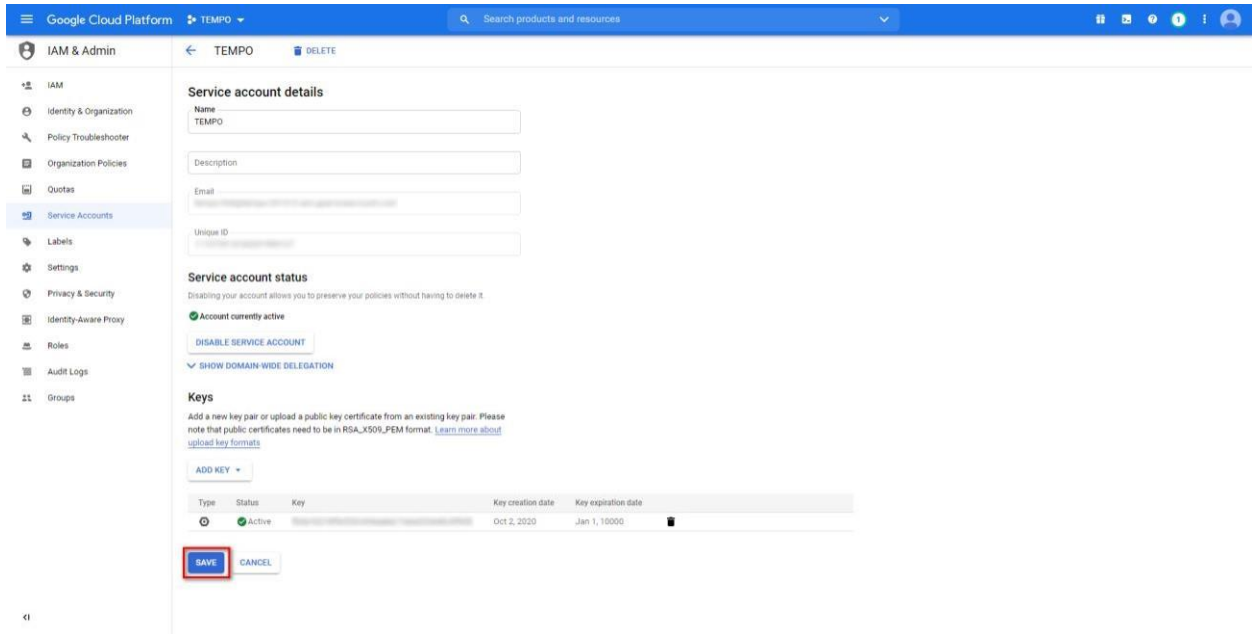
7. Choose the JSON in the Key type checklist and click on the CREATE button.



8. The private key will be saved automatically on your computer.

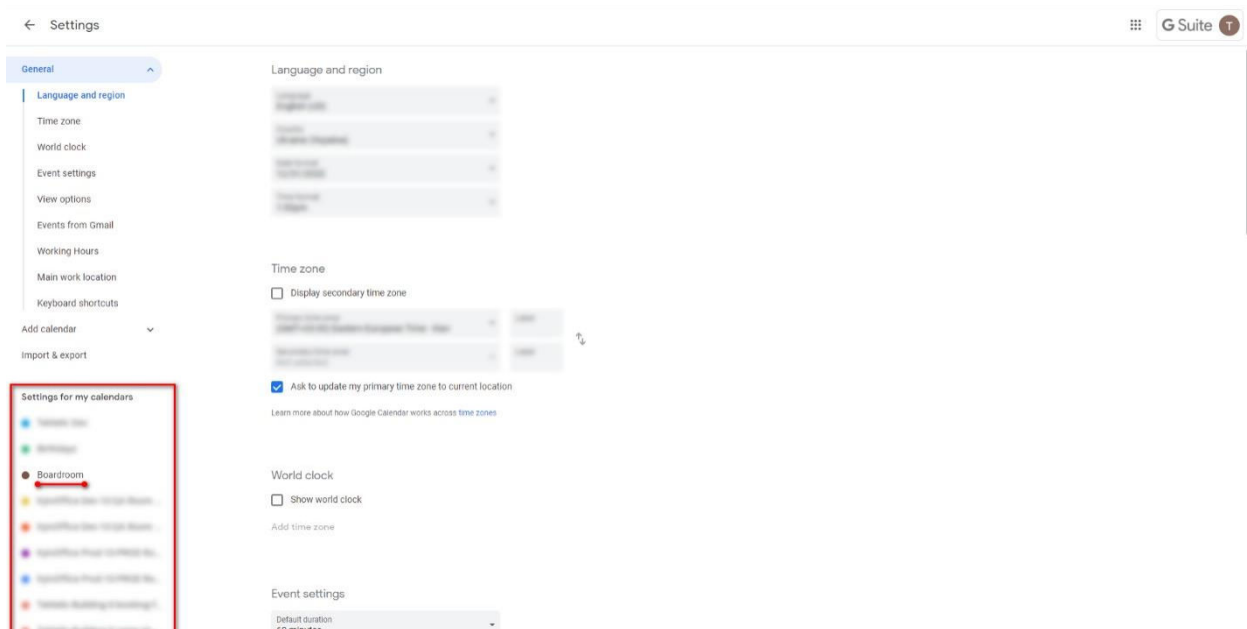


9. Click on the SAVE button to save changes.

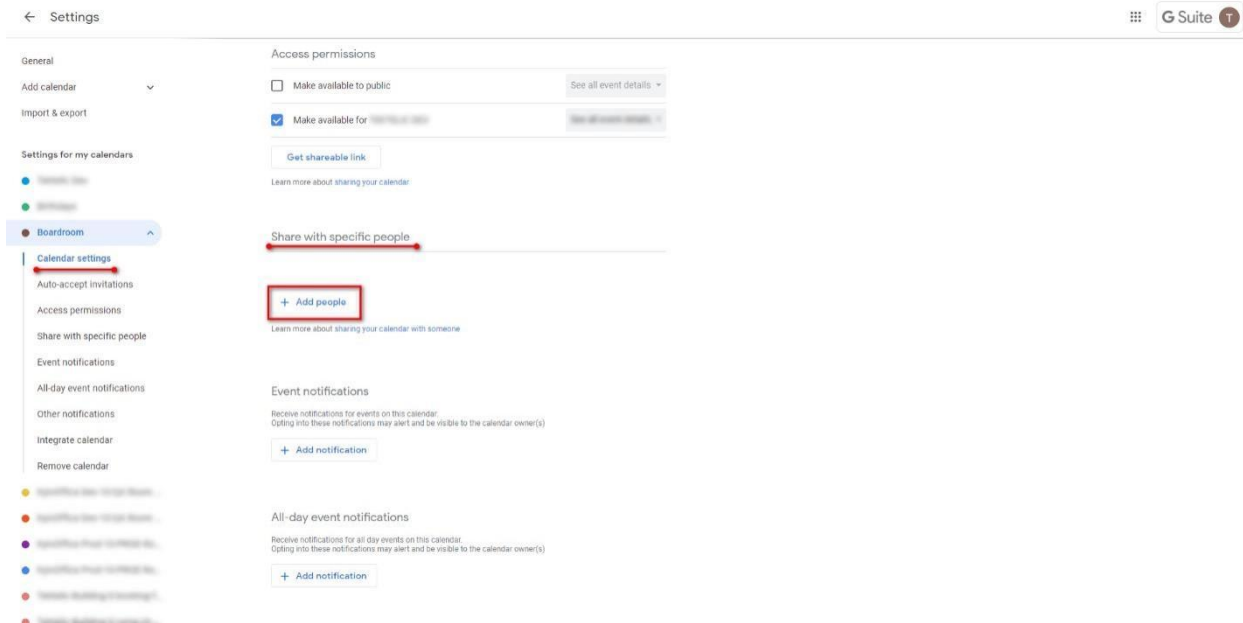


4.5 Add Service account to room permissions

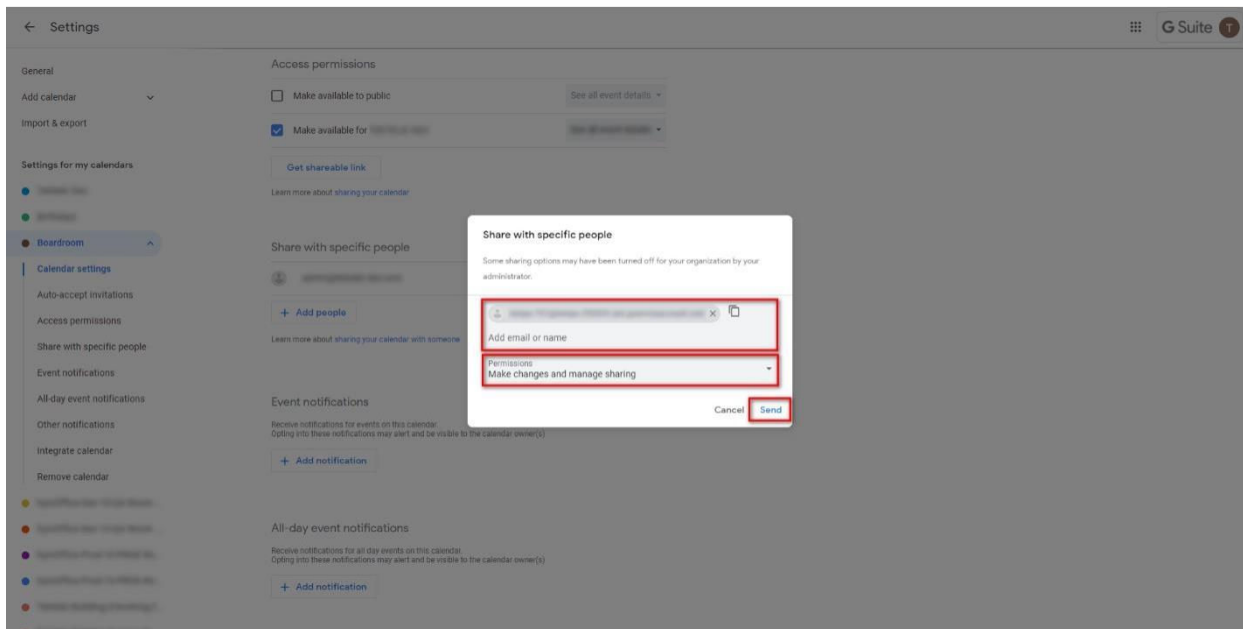
1. Go to <https://calendar.google.com/calendar/u/0/r/settings> and log in as the administrator.
2. Select the Room calendar from the Settings for my calendars list.



3. At the Calendar settings menu item scroll down until the Share with specific people settings and click on the +ADD PEOPLE button.



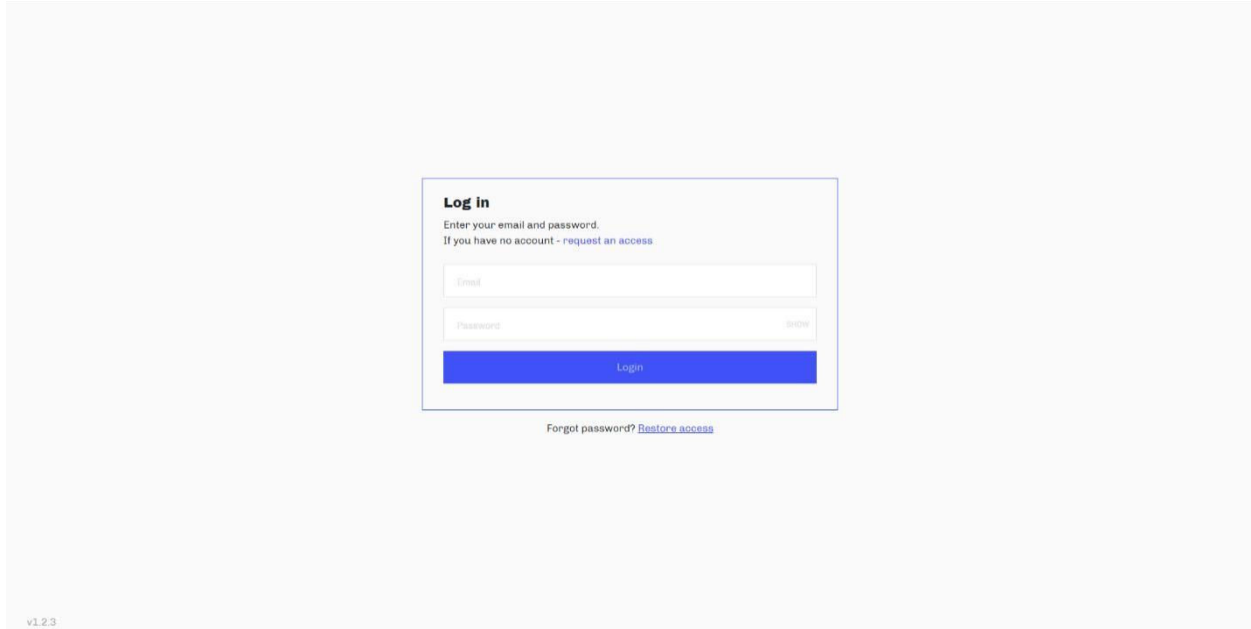
4. Paste Service account email from Step 4.2 of this guide to the Add email or name field. Select the Make changes and manage sharing list item at the Permissions dropdown list. Click on the SENT button to get room calendar permission for the Service account.



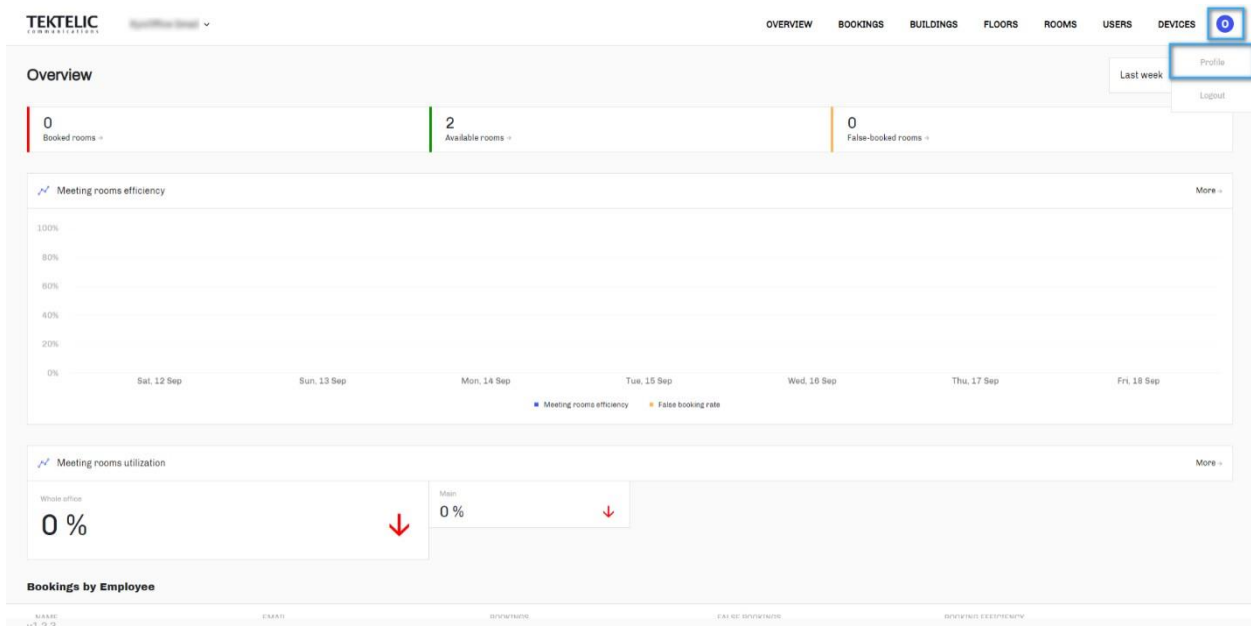
5. Repeat steps 5.2 - 5.4 for all rooms calendar.

6. Paste copied credentials to TEMPO Application.

1. Log in to TEMPO Application (<https://tempo.tektelic.com/>) as an OFFICE ADMIN.

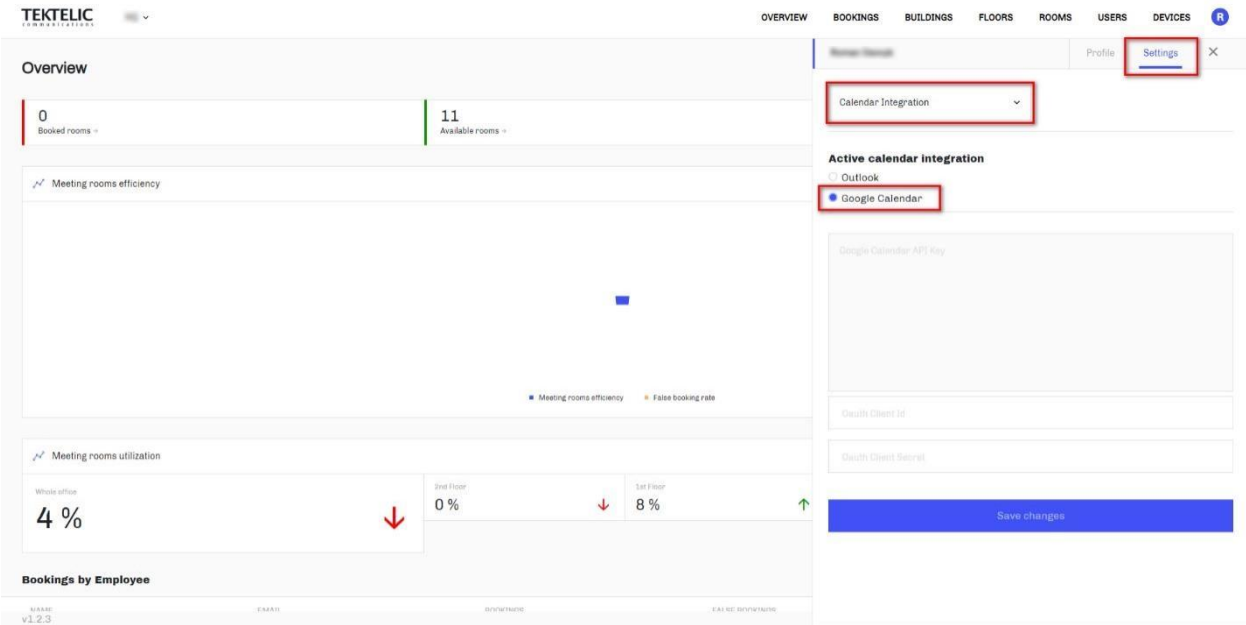


2. Click on the user icon and choose the Profile menu item.



3. Go to the Settings tab. In the dropdown list choose Calendar Integration and then choose the Google Calendar option in the Active calendar integration list. Google Calendar API Key was

obtained in Step 4.2.8 above. OAuth ClientID and OAuth ClientSecret were obtained in Step 4.1.3 above.



4. Click on the Save changes button to save calendar integration.

