Microsoft Project Online Link to Office Timesheets

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Using the Microsoft Project Online Link to Office Timesheets

Office Timesheets includes direct two-way integration with Microsoft Project Online. In summary, Office Timesheet will allow a user to sync task assignments stored in a Microsoft Project Online project plan, populate user's timesheets with their task assignments, and send the time spent on those tasks back to the project plan as Actual Work.

The Microsoft Project Online to Office Timesheets sync app enables customers to use best-in-class applications for both planning and tracking projects: Office Timesheets for time and expense tracking and analysis; and Microsoft Project for project planning and scheduling.

How data is transferred between Office Timesheets and Microsoft Project Online

There are quite a few elements of data that are transferred between Office Timesheets and Microsoft Project Online when syncing between the two applications using the Microsoft Project Online Link to Office Timesheets app. However, the fundamental operation of Office Timesheets' integration with Microsoft Project Online is to sync project plan assignments from Microsoft Project plans into Office Timesheets; placing appropriate assignments in an employee's (resource) timesheet as tasks.

Time is then recorded by the employee against those tasks, and is then sent back to the Microsoft Project plan as Actual Work, to update the assignments with the employee's progress.

How data is transferred from Microsoft Project Online to Office Timesheets

As mentioned above, assignments from a Microsoft Project plan are extracted and placed on employee timesheets. Data from each Microsoft Project plan that is synced into Office Timesheets is mapped to fields in Office Timesheets based on the structured data hierarchy of Microsoft Project plans and your Office Timesheets database. This concept is quite simple once you have a basic understanding of how task hierarchies in Microsoft Project and Office Timesheets work.

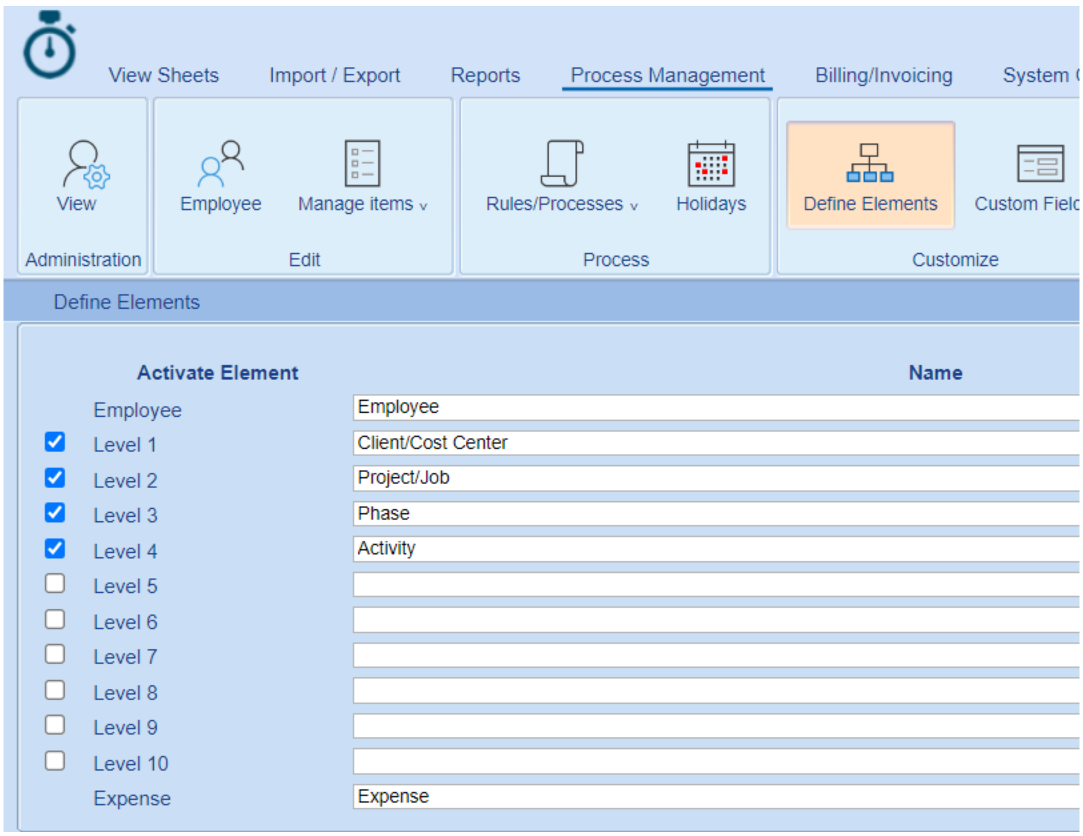
Understanding Microsoft Project Task Hierarchy

Within Microsoft Project you can break down your task list to make it appear more organized and readable by indenting and outdenting the project's tasks to create an outline of the summary tasks (summary task: a task that is made up of subtasks and summarizes those subtasks).

To simplify this concept, we refer to each indent level simply as Indent 1, Indent 2, Indent 3, and so on. At the lowest level of each task's indent is an Assignment: a task that is assigned to one or more employee resources.

Understanding Office Timesheets' Task Hierarchy

Office Timesheets uses a similar type of hierarchical relationship for structuring tasks called Element Levels. However, the element hierarchy within Office Timesheets is not as "freeform" as it is in Microsoft Project. Office Timesheets' task hierarchy is defined by its Element Level structure, which can include a total of 10 tracking levels. The Office Timesheets administrator is responsible for defining the number of levels in which will be tracked, each level's name, and the hierarchy (or order) of those Elements Levels. In the example shown below, this particular Office Timesheets database has a total of four (4) element levels defined for tracking purposes (not including the Employee/Resource).



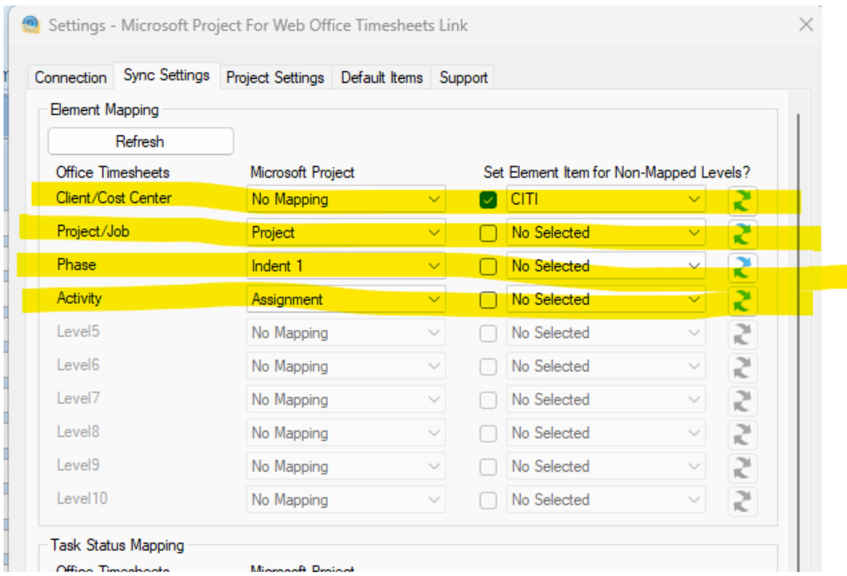
Item lists are then maintained for each defined element level within Office Timesheets. For example, a list of clients, projects, phases, activities, and so on…

Tasks are then created by using a combination of items from your defined Element level lists…

While a task within Office Timesheets can contain many extra pieces of information (start date, end date, task rate, billable/complete flags, etc.), a task within Office Timesheets, at a minimum, must contain an Employee + one (1) other item from a defined element level.

How your project file's task structure is mapped to your Office Timesheets task structure

For logical reasons, task data in Office Timesheets and task data in Microsoft Project is structured somewhat differently. However, Office Timesheets' project link configuration allows you to map the unique structure of each of your Microsoft Project plans to your Office Timesheets database element hierarchy so that data flows between the applications in a logical way.



In fact, you can have two or more project plans with different task hierarchies and still map them properly to Office Timesheets as sync settings can be configured to map each Microsoft Project plan, separately. Based on the mapping shown in the previous screenshots, task data from the specified Microsoft Project file will link up the following way:

MS Project	**Office Timesheets**
Project Name	Project
Indent 1	Phase
Assignment	Activity

You can also choose not map any data to a particular level with Office Timesheets by choosing the option "No Mapping", leaving the item selection at the specified element level blank, or optionally linking it to an existing element item. For example, you may have an element tracking level named "Client" and, thus even though your client information is not defined within your Project Plan, you can include it as part of the task information synced from a specified project plan.

How data is transferred back to Microsoft Project Online from Office Timesheets

When an employee (resource) has entered time against task assignments synced from Microsoft Project Online to appear on their timesheet, Office Timesheets can send the time entry data back to Microsoft Project Online, as Actual Work, to update your project plan. This allows the project management team to see the actual progress of their project plan and compare it with the original schedule.

Using the Microsoft Project Online Link to Office Timesheets App

To get started with syncing your Microsoft Project Online plans with Office Timesheets you'll first need to download and install the [Microsoft Project Online Office Timesheets Link app from here](), if you haven't done so already. To start the Microsoft Project Online Office Timesheets Link app, click the Windows Start menu; open the Microsoft Project Online Office Timesheets Link folder; and then click on the application **Microsoft Project Online Office Timesheets Link …**

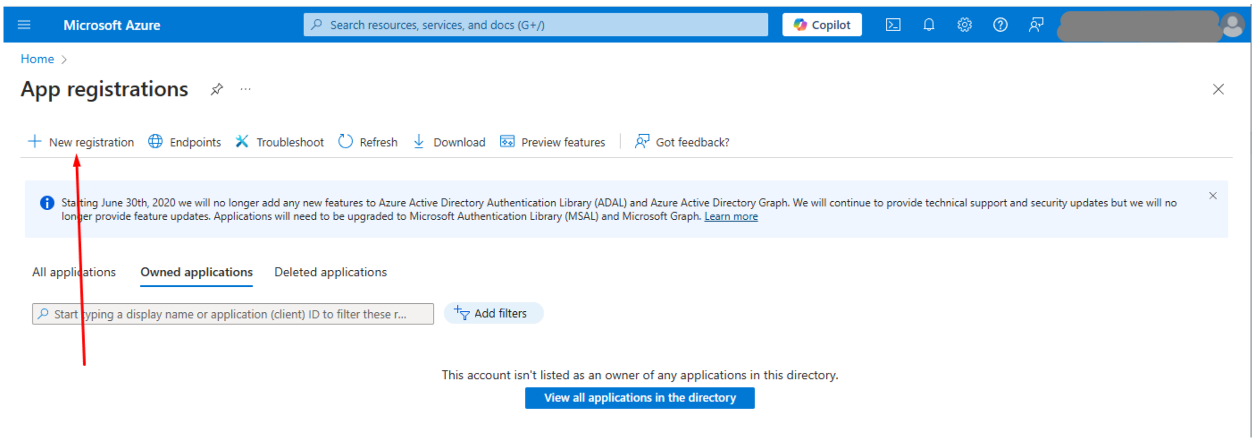
NOTE: The Microsoft Project Online Timesheets Link app always runs in the background once started. Thus, if closed, you can re-open the application by right-clicking on the application in the Windows Task menu; and selecting ***Open****.*

One-Time Microsoft Azure Configuration

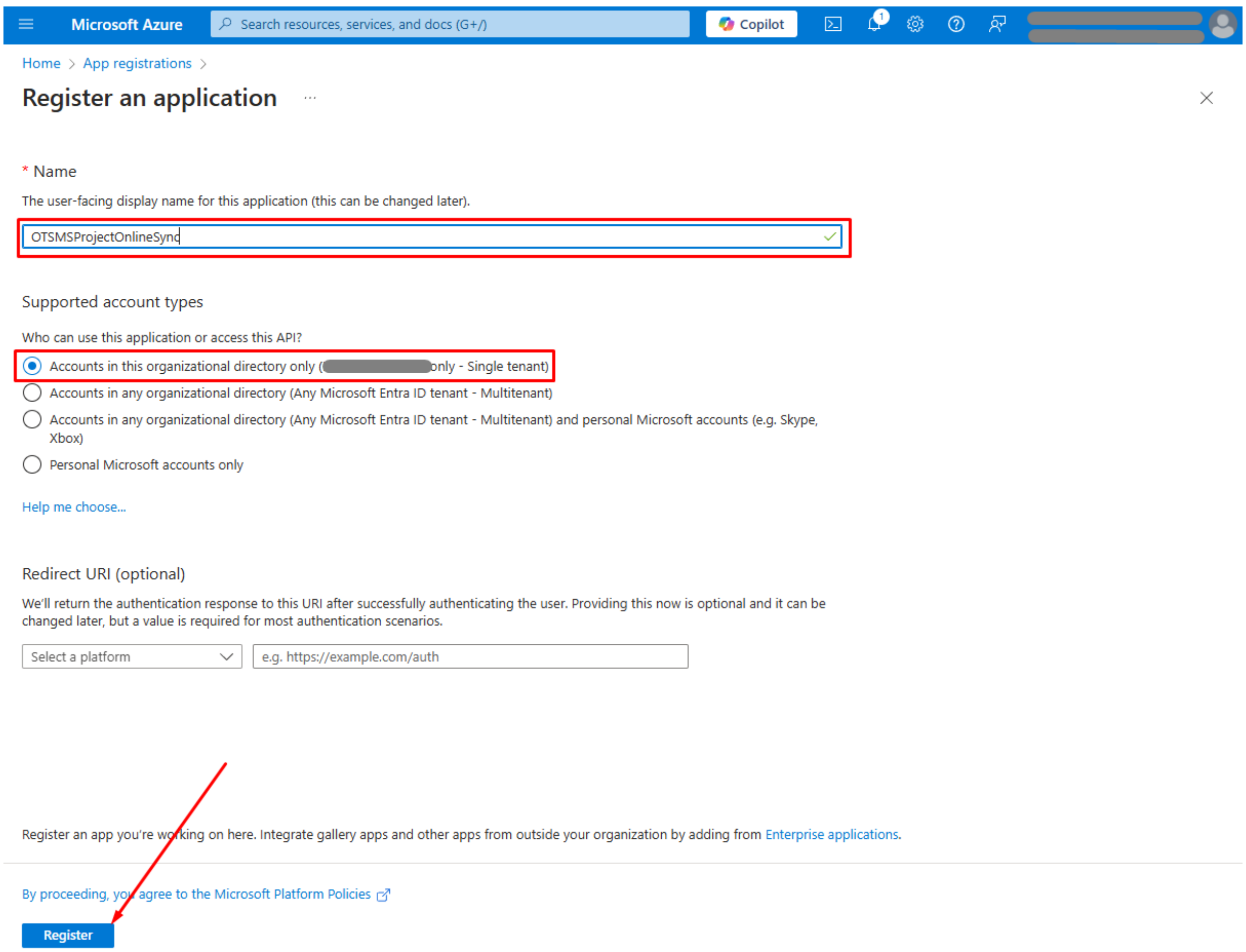
In order to sync Office Timesheets with your Microsoft Project Online account, a one-time configuration in your company's Microsoft Azure Control Panel is necessary. The user that performs this configuration will require administrative privledges to your company's Microsoft Azure Portal.

If you are already using Azure AD Auth for OTS, then skip steps 1, 4 and 5. and start from step #2 of these instructions, where you'll need to add a Redirect URL to the existing application that you are using for Azure AD/EntraID Authentication in Office Timesheets. And, then continue the to the next steps for the existing application.

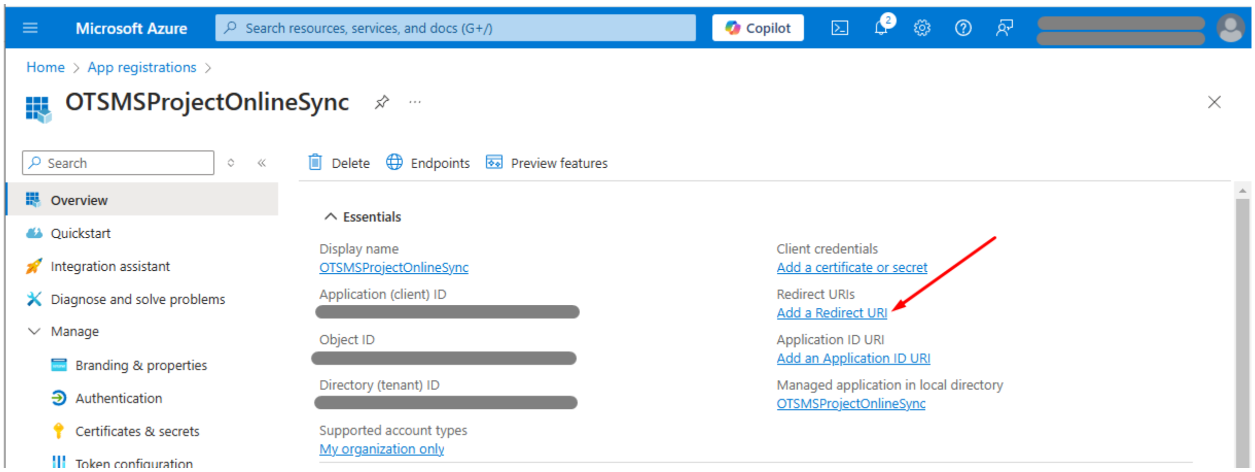
1. To configure **OTSMSProjectOnlineSync** for connection to **Microsoft Project Online (PWA)** you'll need to adjust OTS Password Options – by registering the application and adjusting some items. To do this, log into your Azure Control Panel; and to to **App Registration -> New registration**.



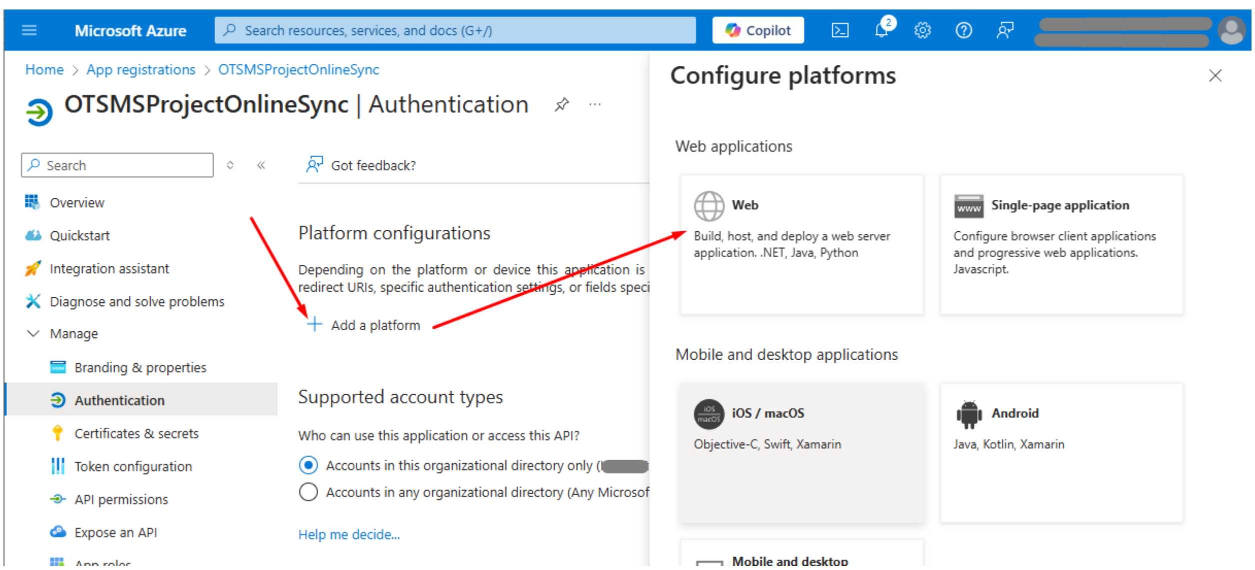
2. Create/Register a new application that will be used by OTS…



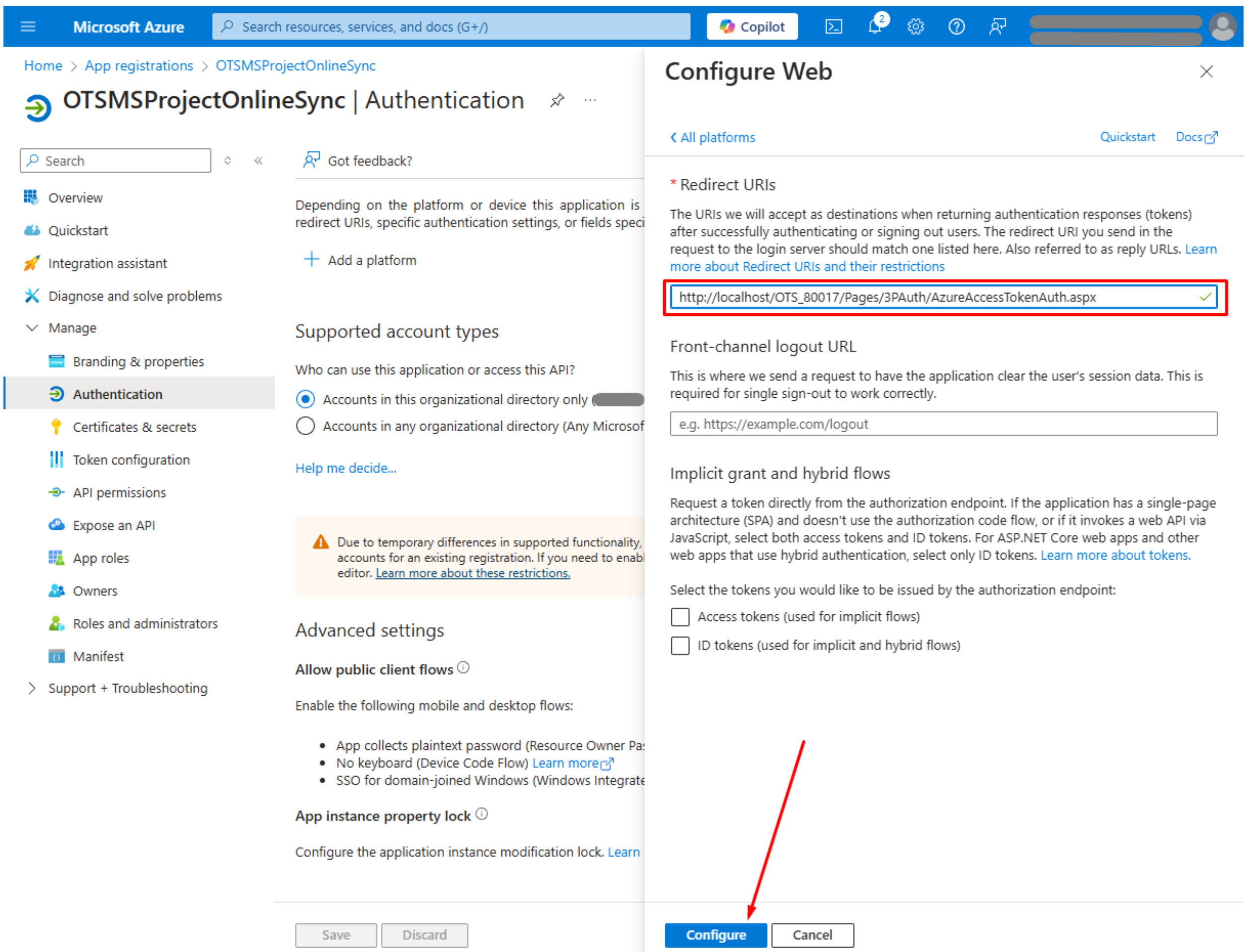
3. Add a Redirect Url to the application…



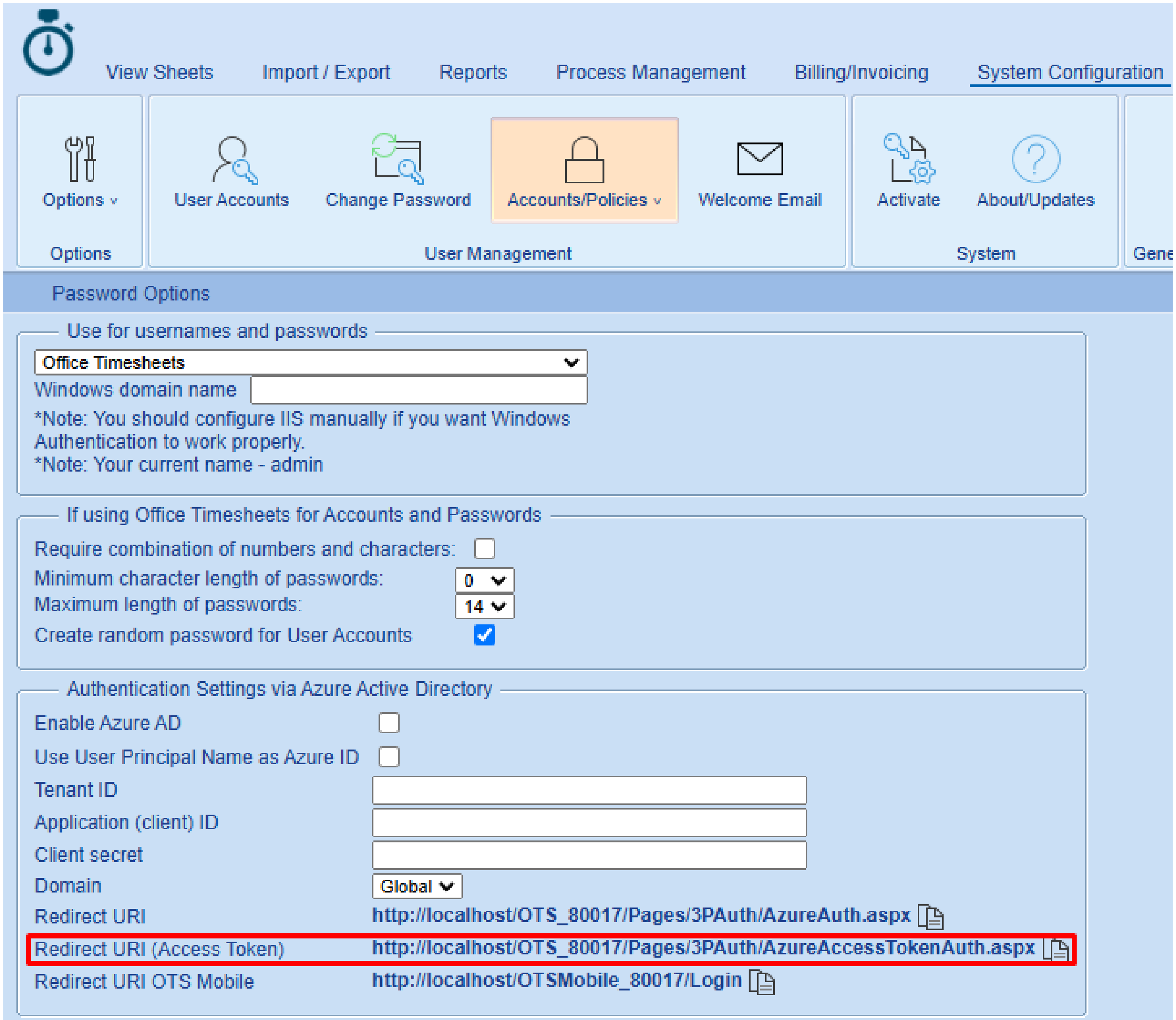
4. Add a “Web” platform…



5. Fill in the redirect Url from Office Timesheets and Configure…

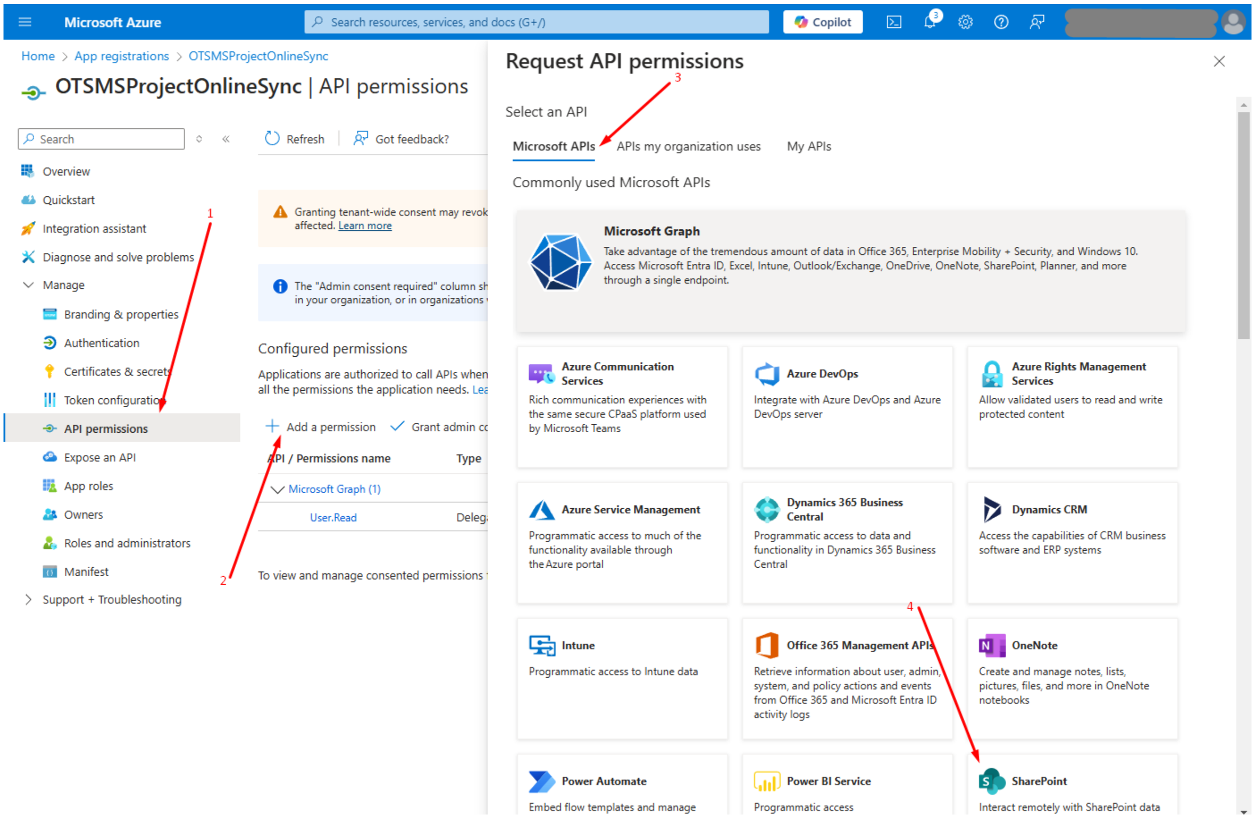


NOTE: The Redirect URL should correspond to the special OTS page link that can be found in OTS on the Password Option Page here (System Configuration -> Accounts/Policies -> Password Options):

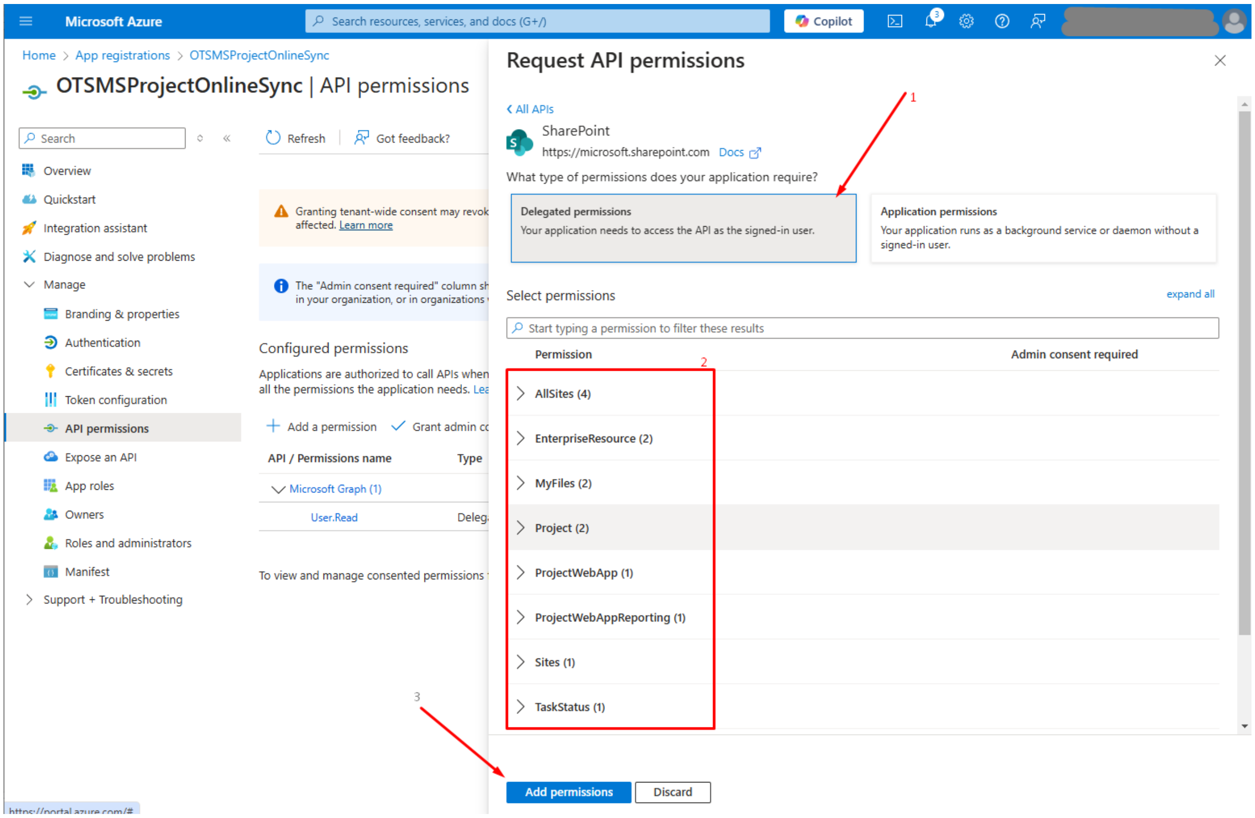


6. Assign "SharePoint" permissions to the created Application.

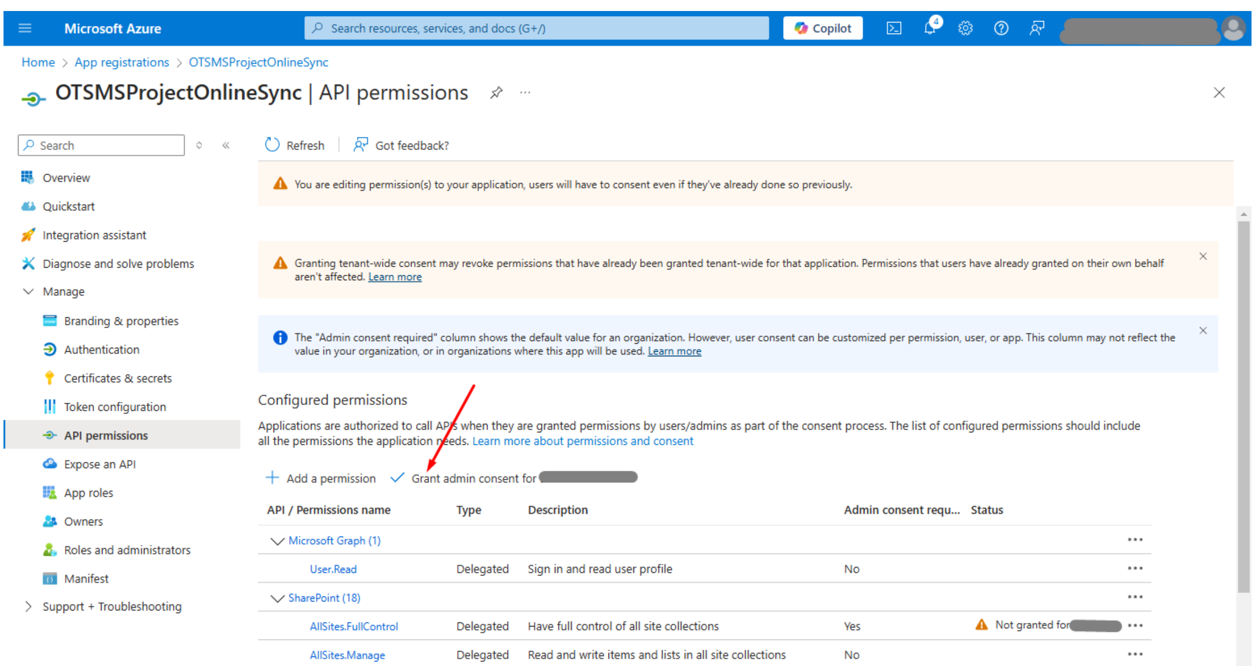
Permission can be assigned automatically upon creation of the application. However, you'll need to ensure the permissions are correct. The following permissions should be added:



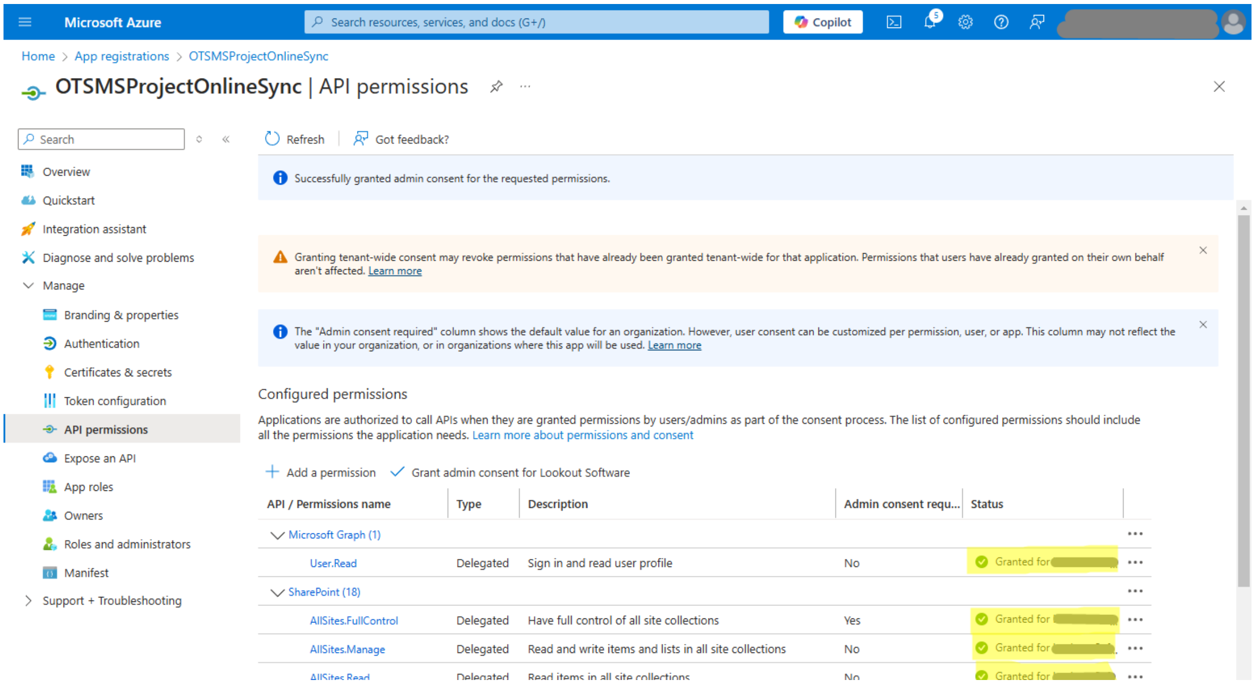
Select **“Delegated permissions”** and select all possible permissions…



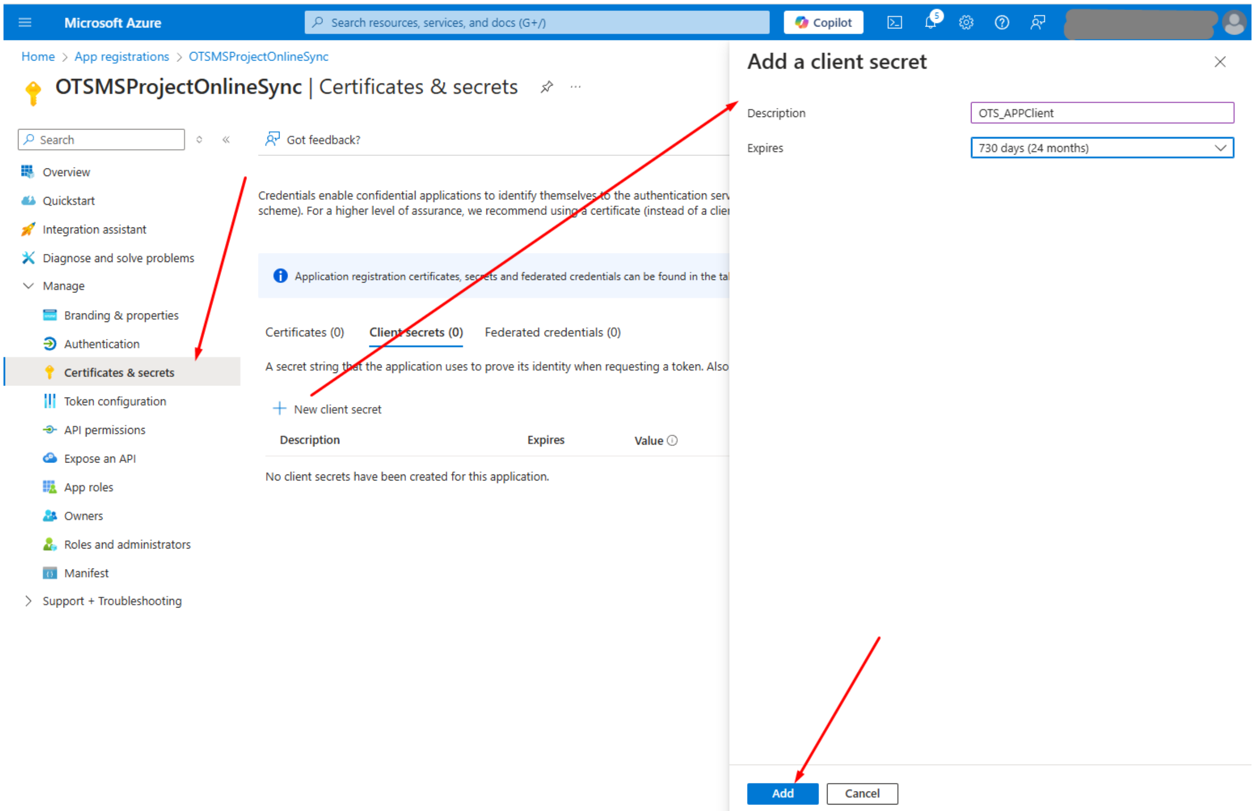
Next, **"Grant"** the permissions…



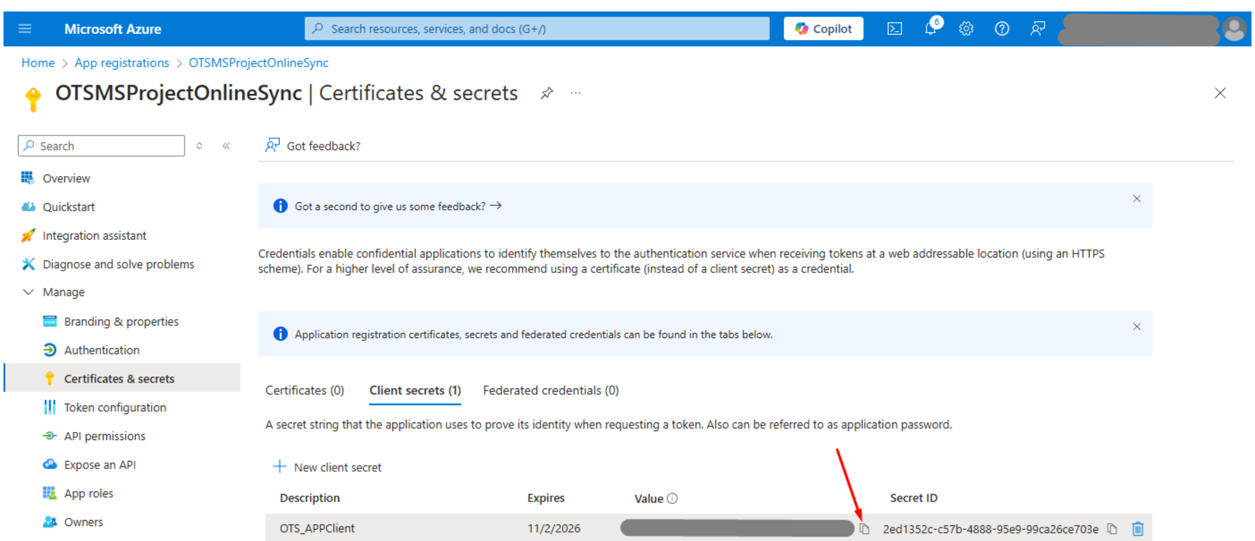
As a result, it should appear like highlighted example below:



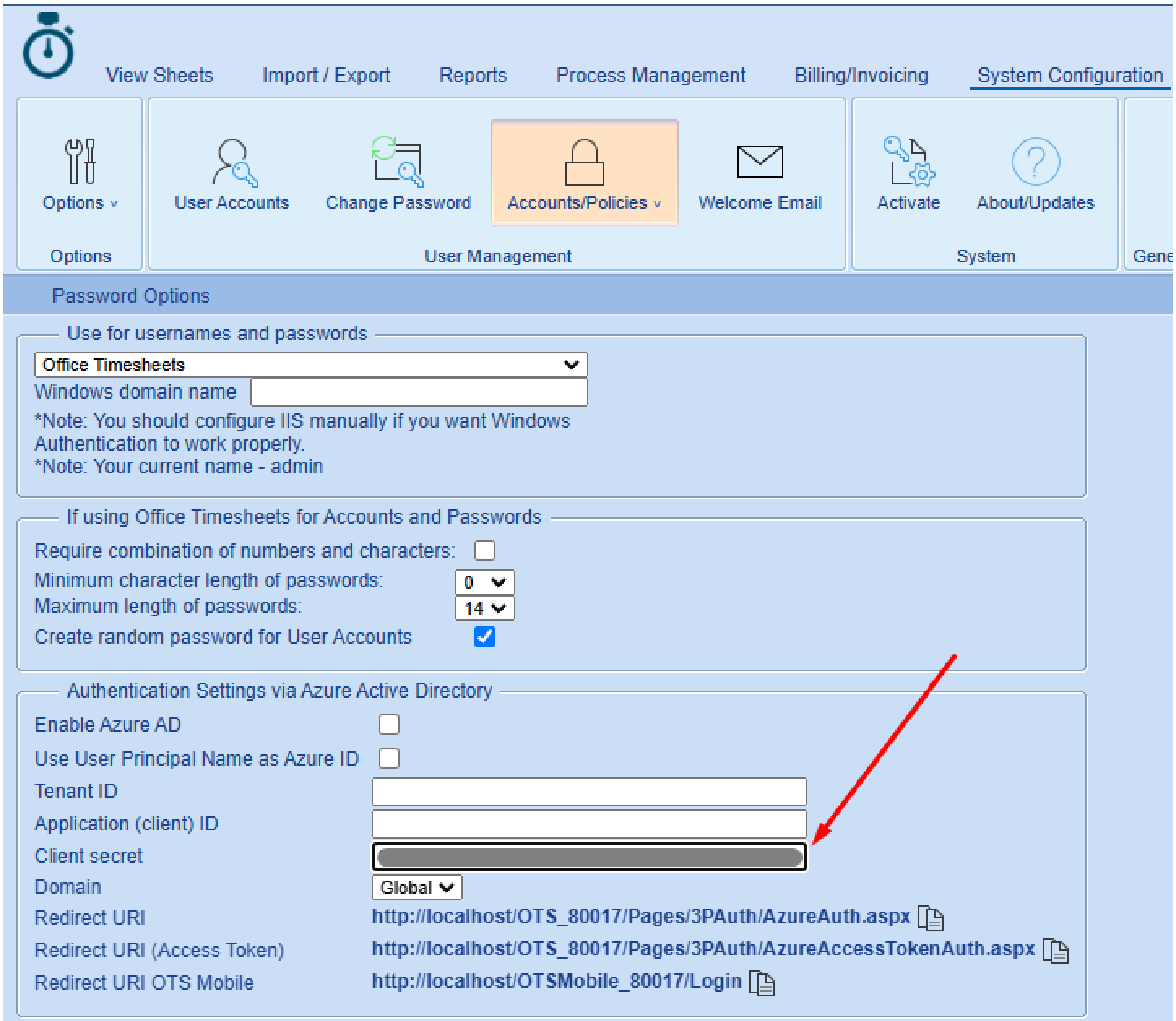
7. Create **"Client Secret"** and save the secret key to OTS.



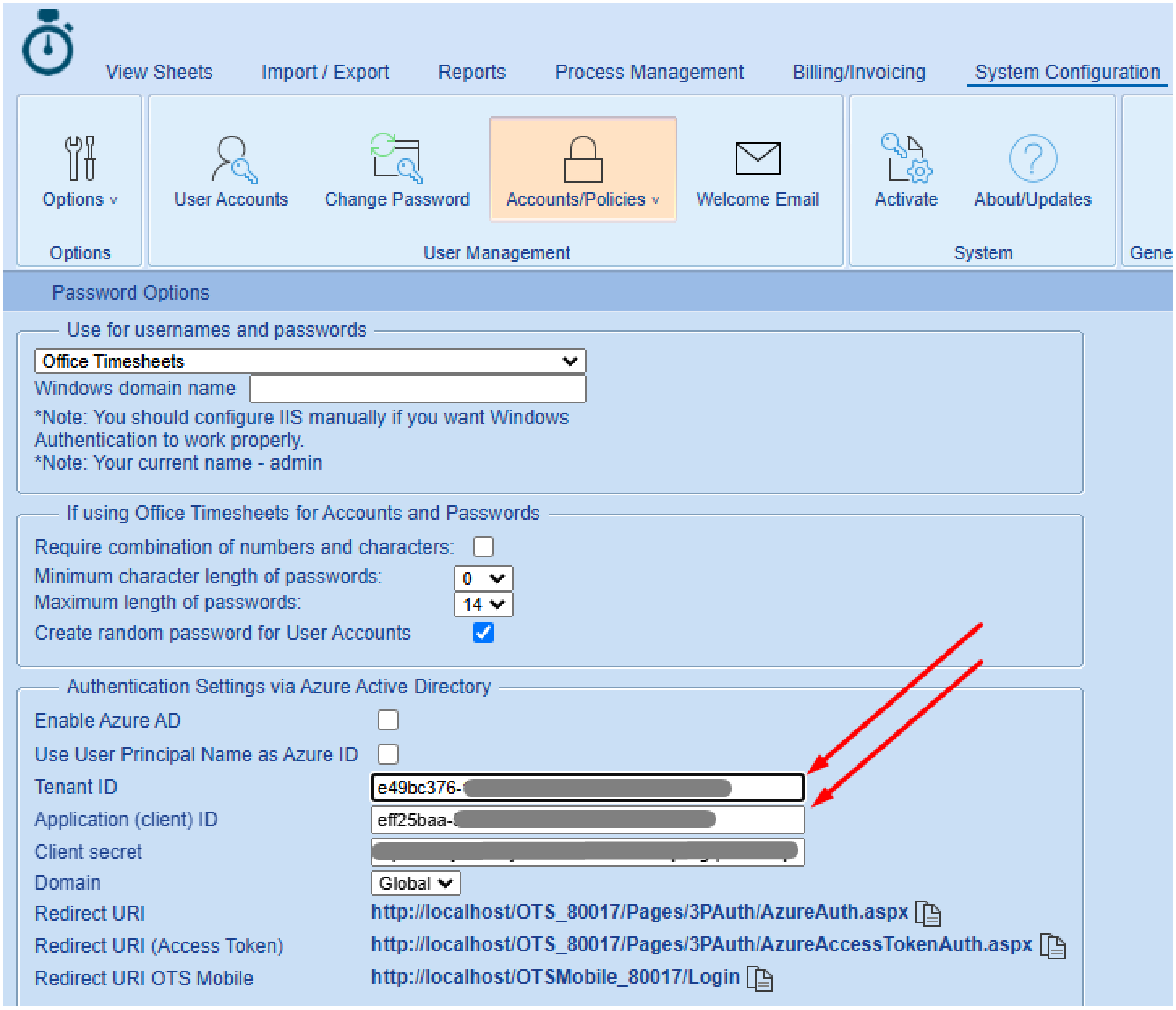
Copy Secret Key Value



To store the secret key in OTS…



8. Copy “Application ID” and “Tetant ID” and paste into the corresponding fields in OTS…

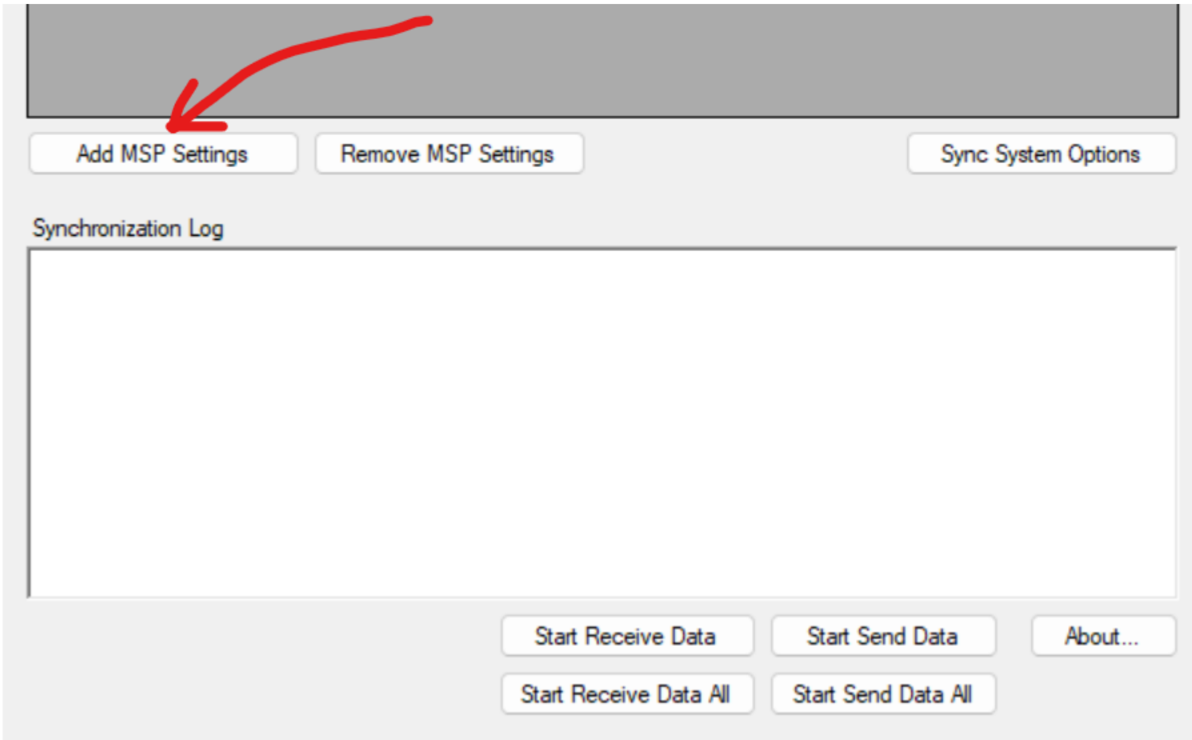


9. Check the “Enable Azure AD” checkbox
10. Check “Use User Principal Name as Azure ID” if you desire use to “User Principal Name” for mapping to OTS users (**highly recommended**), otherwise keep it unchecked if you desire use “Object ID”.
11. Click **Save** to save your settings.

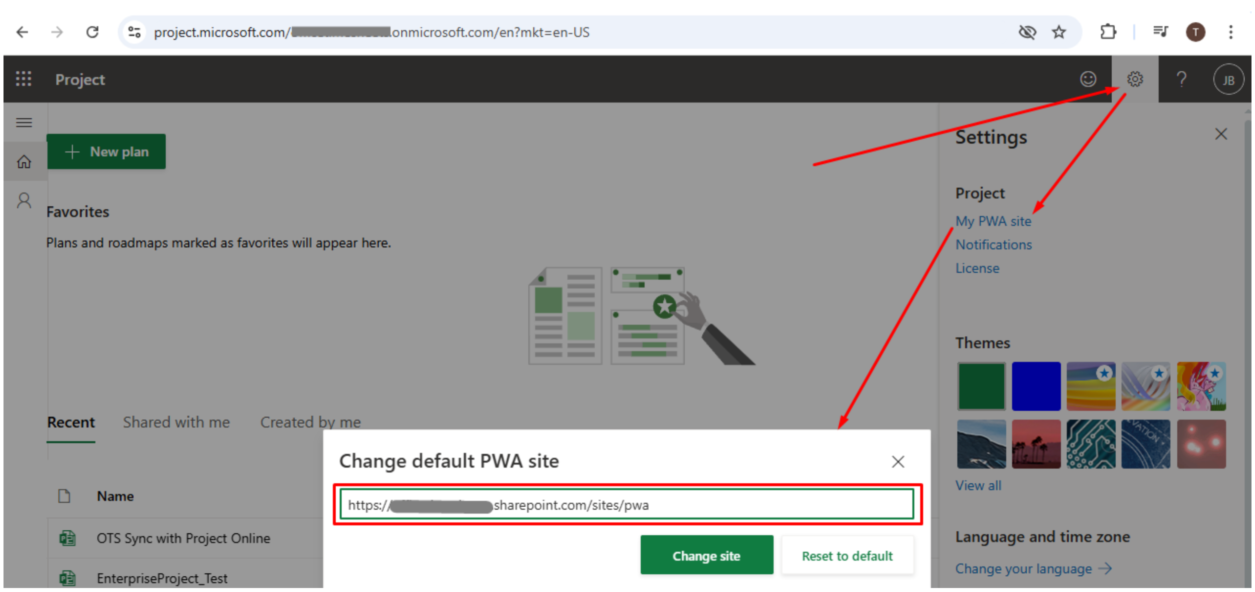
Adding Sync Settings for Each Online Project Plan

Sync Connection Settings

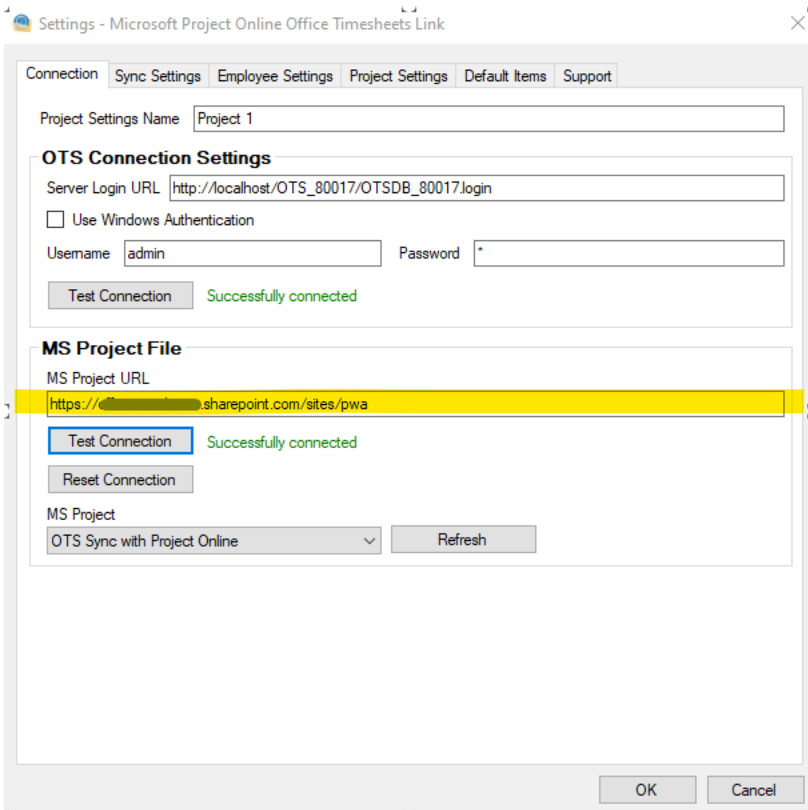
1. Open the **OTSMSProjectOnlineSync** App and click on the **Add MSP Settings** button…



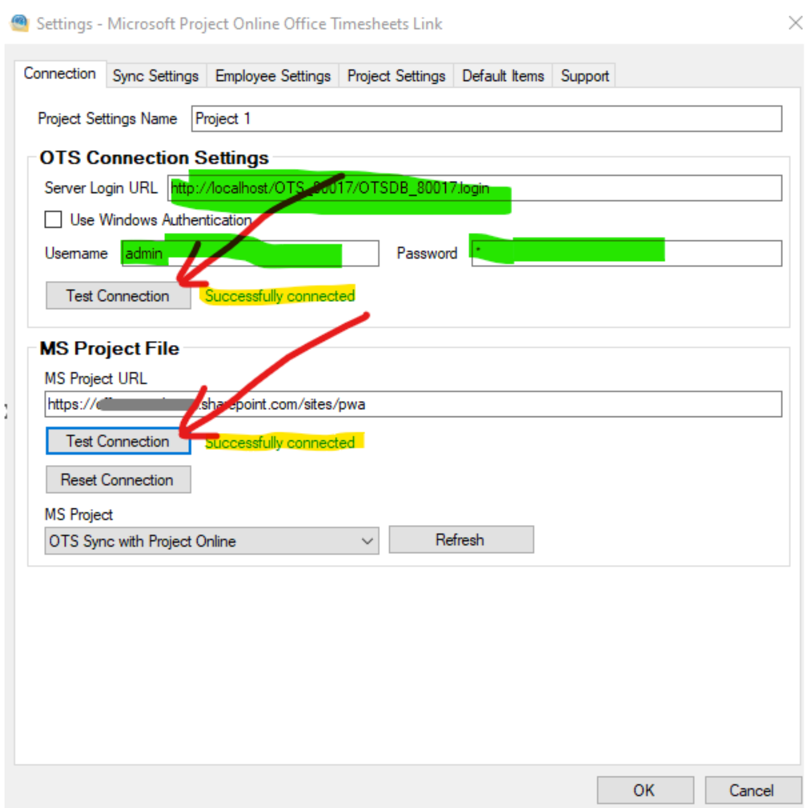
2. To configure the **OTSMSProjectOnlineSync** for connecting to **Microsoft Project Online (PWA)** you'll copy the URL for your Project Online account. To obtain the proper MS Project URL you to log into your Project Online account; and go to **Project -> Settings -> My PWA Site**…



Copy and paste this URL into the "MS Project URL" field in the **OTSMSProjectOnlineSync** app…

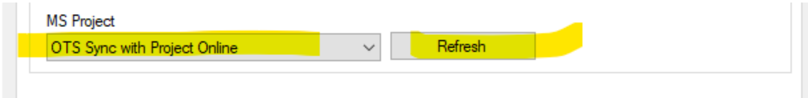


3. Fill in your Office Timesheets Url, Username and Password and test both connections….

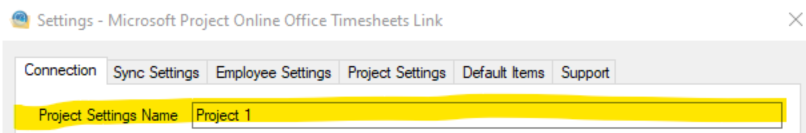


Note: The **OTSMSProjectOnlineSync app** connects to Office Timesheets, and connects to the Azure App to retrieve an Access Token; and then the **OTSMSProjectOnlineSync App uses** the access token to connection to PWA site. During test connection cycle the user may be prompted to authenticate with Microsoft.

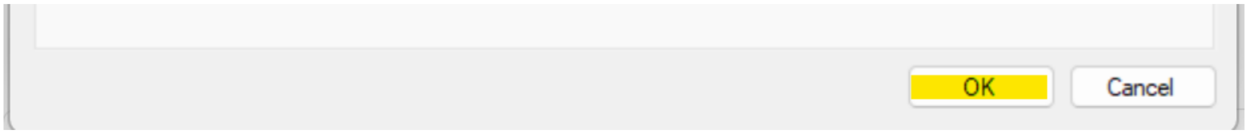
4. Next, press the **Refresh** button next the **MS Project** field dropdown list; and choose the corresponding project.



5. Enter the corresponding project name into the **Project Settings Name** field.



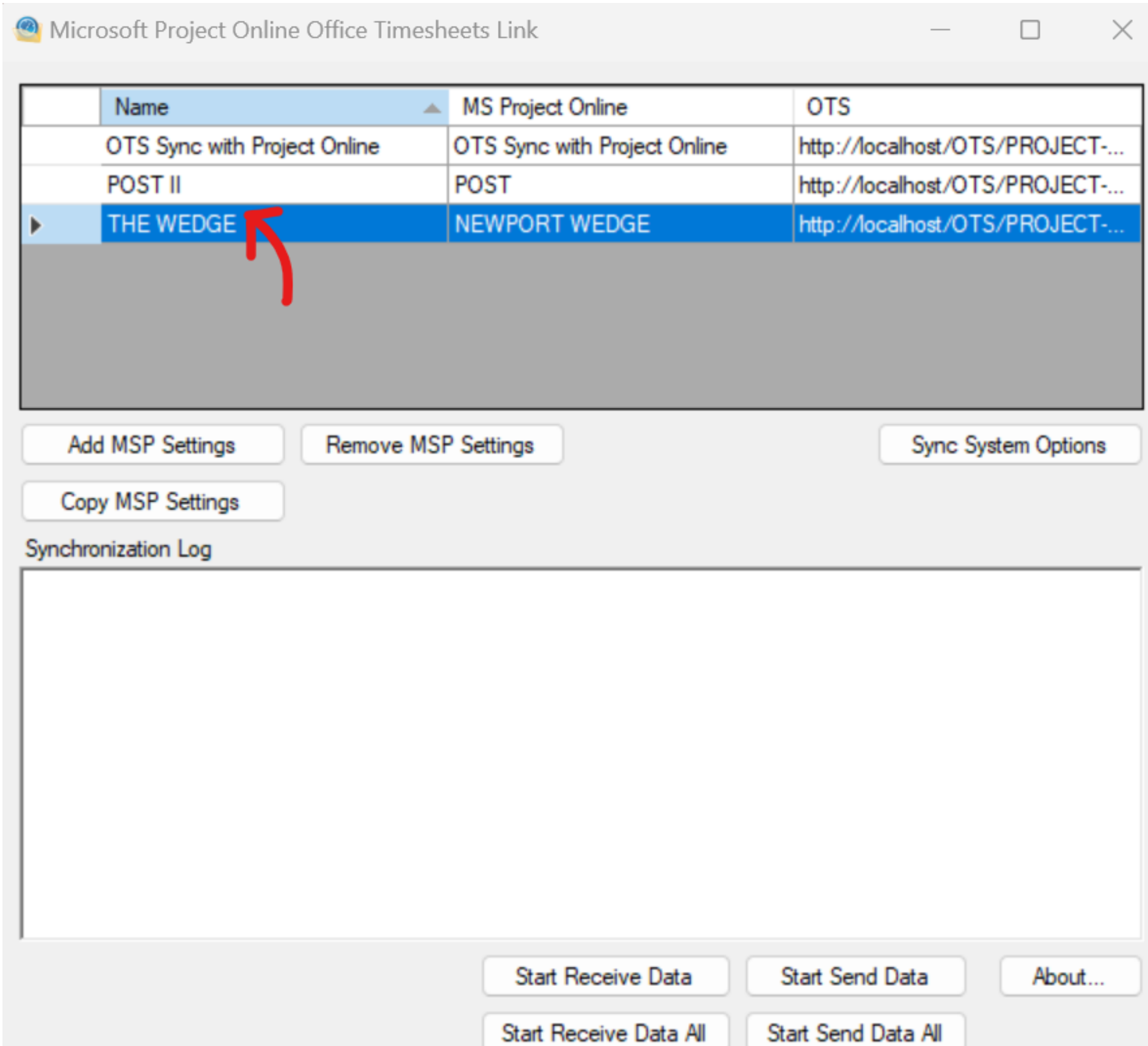
6. Click **OK** to Save your settings.



General "Sync Settings"

Each project plan you sync with Office Timesheets has its' own general sync settings.

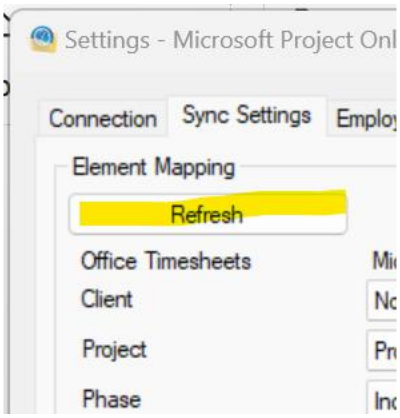
1. To configure project's sync settings, open the **OTSMSProjectOnlineSync** App and double-click on the **Name** of the project you wish to configure…



2. With the *Setting* dialog open; click on the **Sync Settings** tab…
3. Configure the *Element Mapping, Task Status Mapping, Rate Mapping and Send Data Events Mapping* (all described below); and click **OK** save your settings.

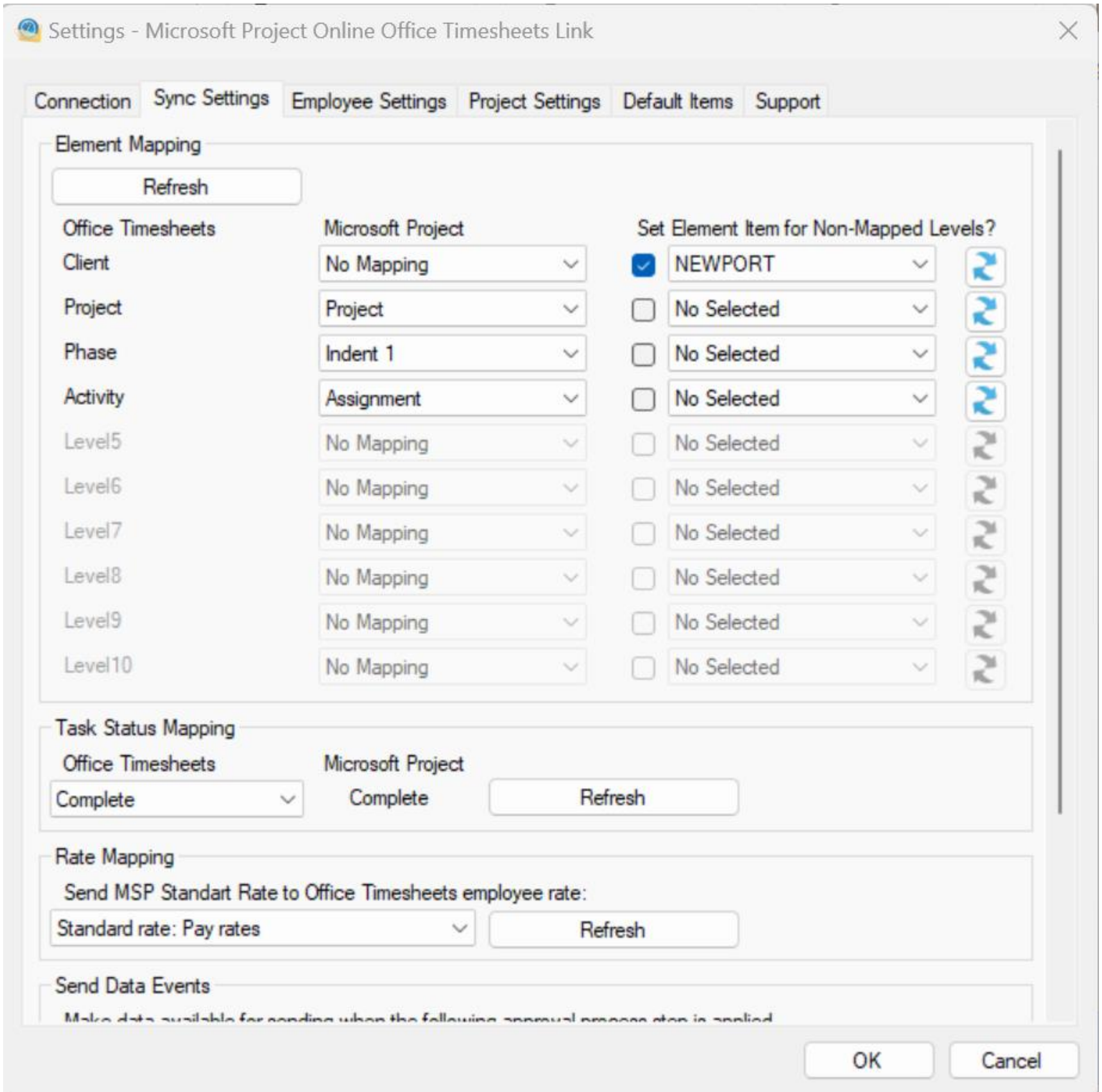
Element Mapping

The **Element Mapping** section of the *Sync Settings* tab allows you to map the structure of your Microsoft Project plan to the Element Level Structure of your Office Timesheets database. Each time you wish add/modify Element Mapping you'll need to first press the **Refresh** button in order to the load the latest Element Level Definitions from Office Timesheets…



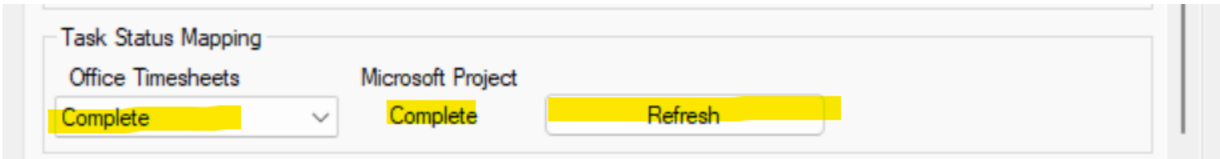
There three (3) options you can choose in the Microsoft Project column:

- **Project** – when choosing this option, the name of the project is mapped to the selected Office Timesheets Element Level. This should be mapped to Element Level in Office Timesheets that correspond to your project and/or job level.
- **Indent Levels (1-9)** – if your project plan contains consistent indentation, where specified indent levels represent a corresponding Element Tracking level in Office Timesheets, then you can map those indent levels to their corresponding Element Level in Office Timesheets. For example, if the first indent level in your project plan's task hierarchy represents Phases for your project, then you would map the "Indent 1" to the "Phase" Element Level in Office Timesheets.
- **Assignment** – regardless of the indent level in Microsoft Project, any task that contain work that is assigned to a Resource is considered an "Assignment". Those the lowest indent level of any task that contains work that is assigned to a resource will appear in the Office Timesheets Element Level in which you map to an "Assignment". Typically, the "Assignment" option is mapped to "Activity" or "Deliverable" Element Tracking level in Office Timesheets.
- **No Mapping** – "No Mapping" is the option you should choose for each Office Timesheet Element Level that doesn't correspond with the project's name, an indent level and/or assignment. When the "No Mapping" option is selected, you can also select an existing item stored at the element level in your Office Timesheets' database. Thus, when each task that is created in Office Timesheets from your project plan will contain the selected item at the corresponding Element Level in Office Timesheets. In the example below, we selected the "No Mapping" option for the Customer Element Level, and have linked it to a specified client name.



Task Status Mapping

The Task Status Mapping option allows you to update a specified Office Timesheets tasks status when the task in Microsoft Project has become 100% complete by the resource. Subsequently, if a user updates the task in Office Timesheets with this status, then the task will get updated to 100% complete on the next sync with the project plan.

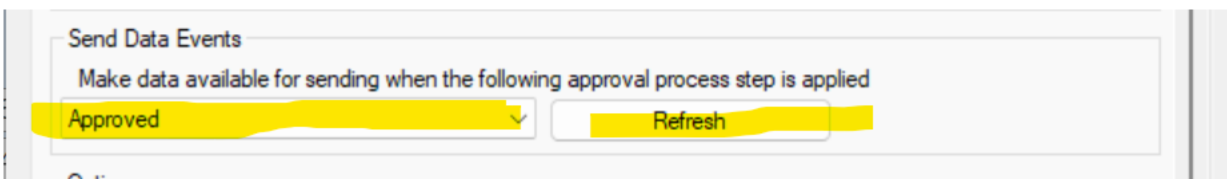


Rate Mapping

Allows you to map a resources rate in Microsoft Project to a specified Employee's Rate tab.

Send Data Events

The Send Data Events option allows the limit the sync of time entry to only those that meet a specified approval process.

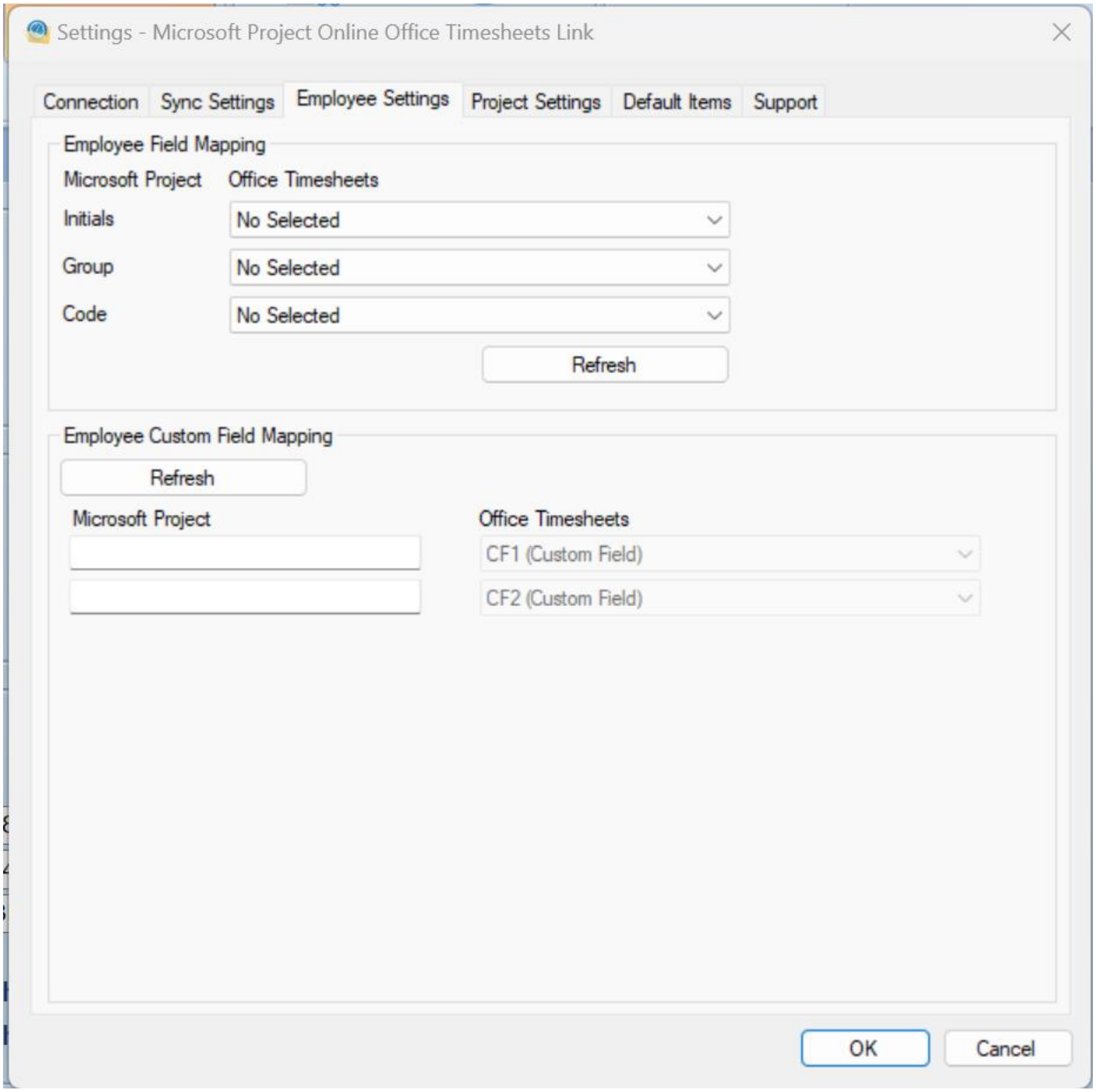


Employee Settings

Each project plan you sync with Office Timesheets has its' own Employe sync settings.

1. To configure your project's Employee Settings, open the **OTSMSProjectOnlineSync** App and double-click on the **Name** of the project you wish to configure; and then click on the **Employee Settings** tab…
2. Select the Employee Field and Employee Custom Field Mapping per your preferences.
3. Click **OK** to save your settings.

- **Employee Field Mapping** – allows you to map Microsoft Project Employee Initials, Group and Code fields to Office Timesheets' Employee Custom fields and/or Employee Custom Terms fields.
- **Employee Custom Field Mapping** – allows you to map Microsoft Project Custom Employee fields to Office Timesheets' Employee Custom fields and/or Employee Custom Terms fields.



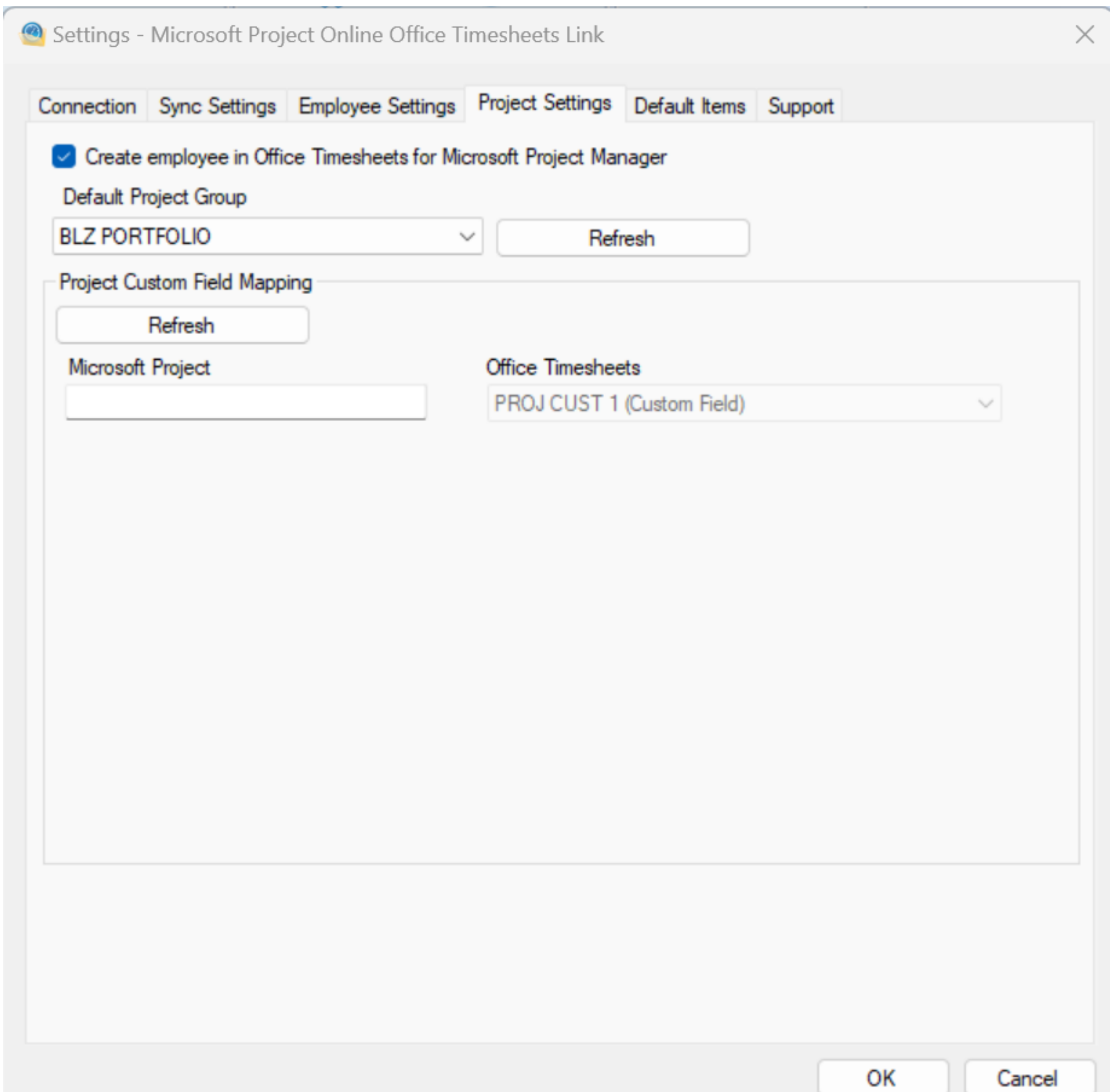
Project Settings

Each project plan you sync with Office Timesheets has its' own **Project** sync settings.

1. To configure your project's Project sync settings, open the **OTSMSProjectOnlineSync** App and double-click on the **Name** of the project you wish to configure; and then click on the **Project Settings** tab…

2. Select the **Project Settings** per your preferences.
3. Click **OK** to save your settings.

- **Create employee in Office Timesheets for Microsoft Project Manager** – if the project contains a project manager, and the project manager does not already exist as an employee in Office Timesheets, activating this setting will then add the project manager as an employee in Office Timesheets.
- **Default Project Group** – will place the specified project into the selected group.
- **Project Custom Field Mapping** – allows you to map Microsoft Project custom fields to the Office Timesheets' project element level custom fields.

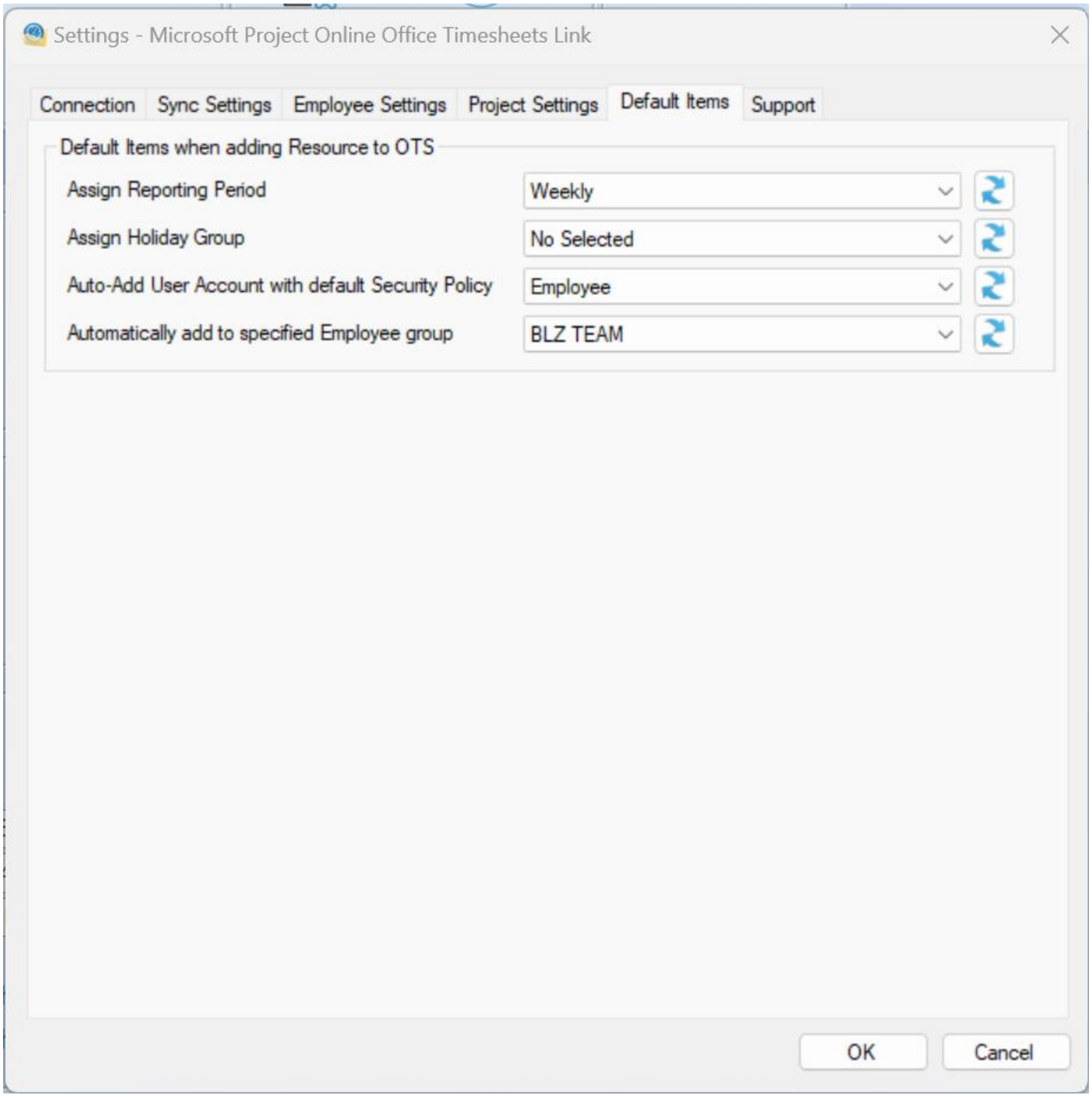


Default Items

Each project plan you sync with Office Timesheets has its' own **Default Items** sync settings.

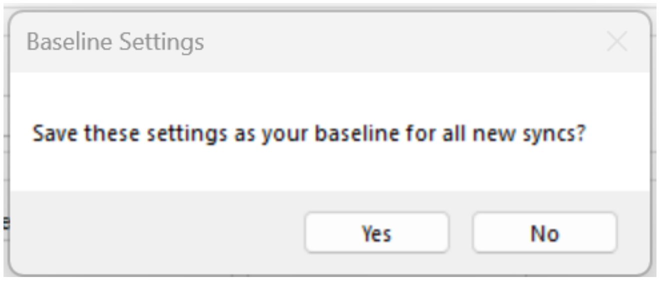
1. To configure your project's **Default Items** sync settings, open the **OTSMSProjectOnlineSync** App and double-click on the **Default Items** of the project you wish to configure; and then click on the **Default Items** tab…
2. Select the **Default Items** per your preferences.
3. Click **OK** to save your settings.

- Assign Reporting Period – with each new employee/resource added to Office Timesheets, the sync will assign the specified Reporting Period.
- Assign Holiday Group – with each new employee/resource added to Office Timesheets, the sync will assign the specified Holiday Group.
- Auto-Add user account with default Security Policy – with each new employee/resource added to Office Timesheets, the sync will assign the specified Security Policy.
- Automatically add to specified Employee group – with each new employee/resource added to Office Timesheets, the sync will assign the employee to the specified Employee Group.



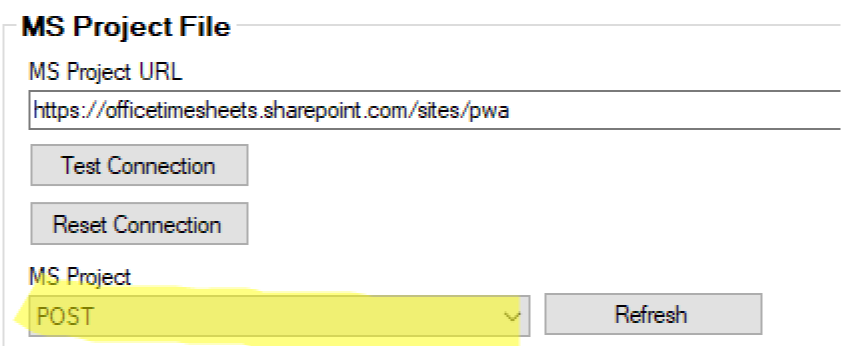
Saving Baseline Sync Settings

Each time you modify and save a project's sync settings in the Microsoft Project Online Link app for Office Timesheets you'll be prompted with the following dialog:

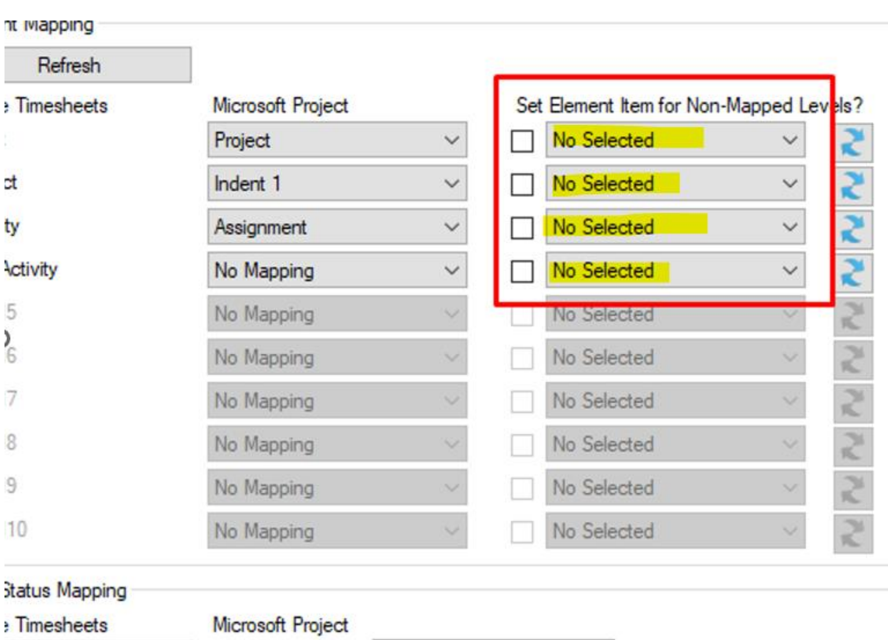


If you choose "**Yes"** then all the settings from this project's sync will be saved and automatically applied with each new project sync you created, with the exception of "MS Project" name selection in *Connection* tab (see screenshot with highlight below); and any name "Element Item Name Selections for Non-Mapped Levels" you've chosen in the *Sync Settings* tab (see screenshot with highlight below).

MS Project name selection…



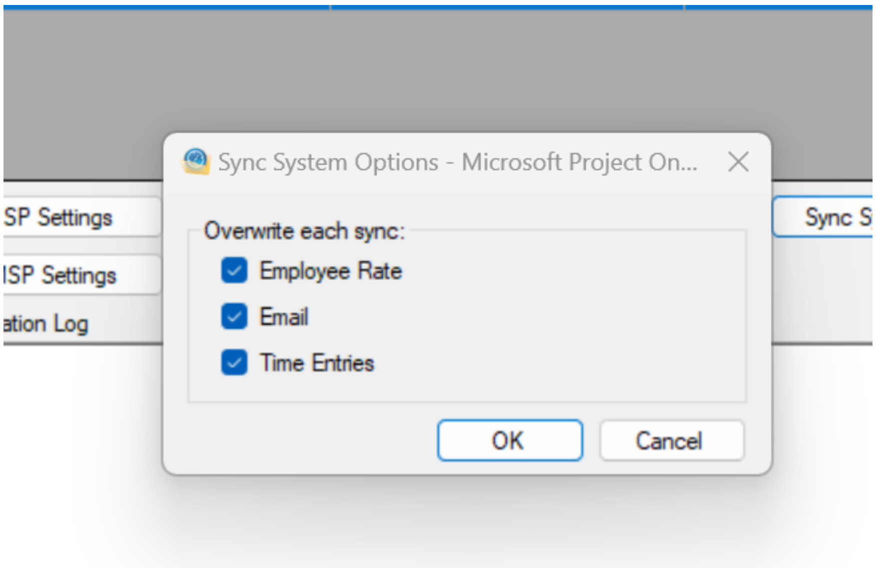
Element Item Name Selections for Non-Mapped Levels…



Sync System Options

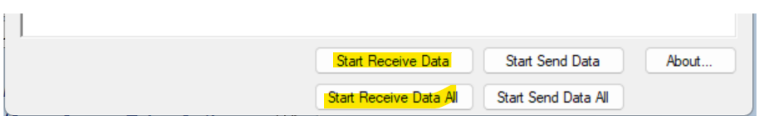
Office Timesheets can update Employee Rates, Employee Email address and/or Employee Time Entries with each sync if these corresponding items are checked in the **Sync System Options**. To the open the Sync System Options:

1. Open the **OTSMSProjectOnlineSync** App and click on the **Sync System Options** button.
2. Check/Uncheck Employee Rate, Email and Time Entry options; and click **OK**.



Receiving Data from Microsoft Project Online

Once all the configuration options for a specified project have been configured, highlight the project name in the project list, and click on the **Start Receive Data**…



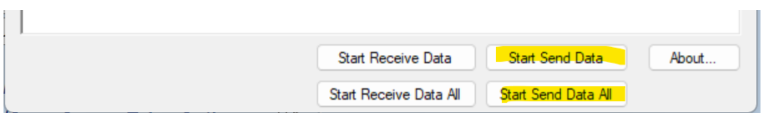
As Office Timesheet receives resource/employee data and the resource's/employee's task assignments, a real-time log will appear in the Synchronization Log window to show progress of the synchronization. You can receive data from each defined project as often as you like.

NOTE: If you have more than one project file defined in the sync app, you can click on the **Start Receive Data All** button to sync the data from all your defined projects with a single click.

Sending Time Data (Actual Hours) from Office Timesheets to Microsoft Project Online

After receiving task assignments from a specified project and employees have entered time on the project's tasks assignments in Office Timesheets, those entries can be sent back to the project plan as Actual Work.

To send entries back to a Microsoft Project Online project plan, highlight the selected project and then click on the **Start Send Data** button.



As Office Timesheet sends hours (Actual Work) entries to specified plans in Microsoft Project Online, a real-time log will appear in the Synchronization Log window to show progress of the synchronization. You can send data from each defined project as often as you like.

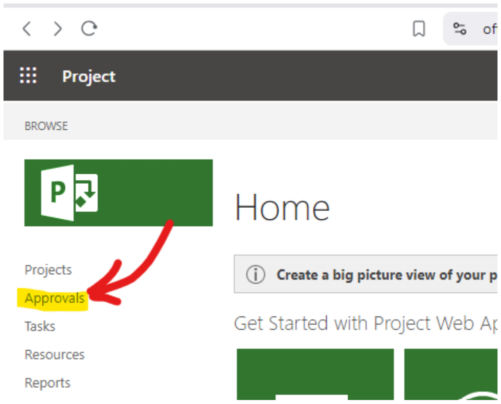
NOTE: If you have more than one project file defined in the sync app, you can click on the **Start Send Data All** button to sync the data from all your defined projects with a single click.

Approving Entries and Checking In Status Updates

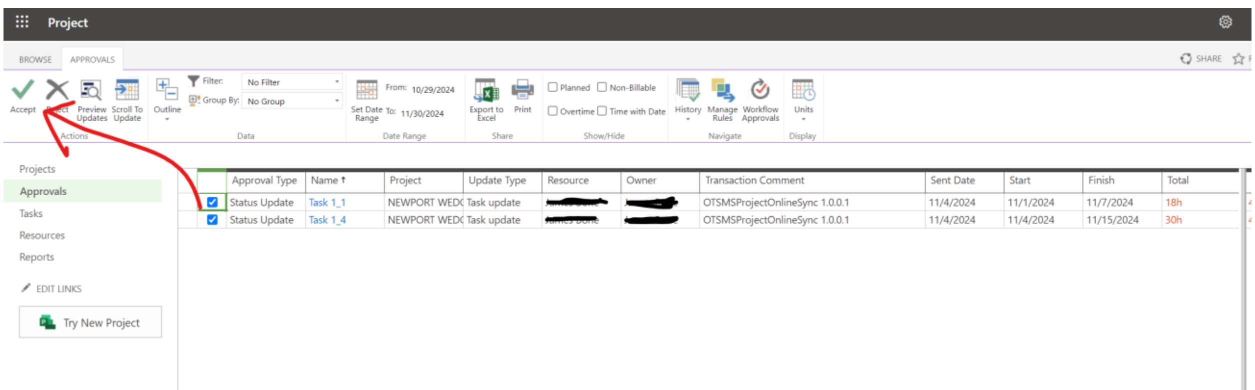
Several quick actions must be taken before project plans are updated within Microsoft Project Online after Office Timesheets sends entries. Those steps are described below:

Step One: Approve the Entries

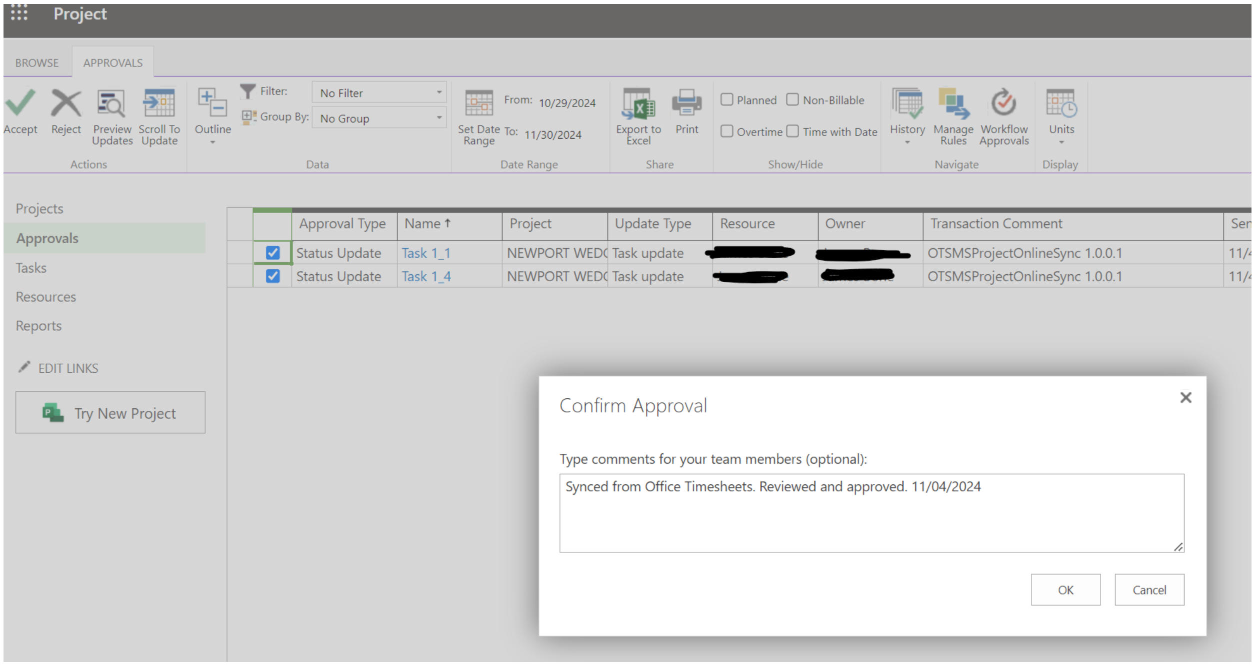
When entries are sent to Microsoft Project to update actual work, they must first be reviewed and approved. To review and approve these entries, log into Project Online; and click on **Approvals**…



Review the entries in the Approvals area; check the entries you wish to approve; and click on the **Accept** icon…

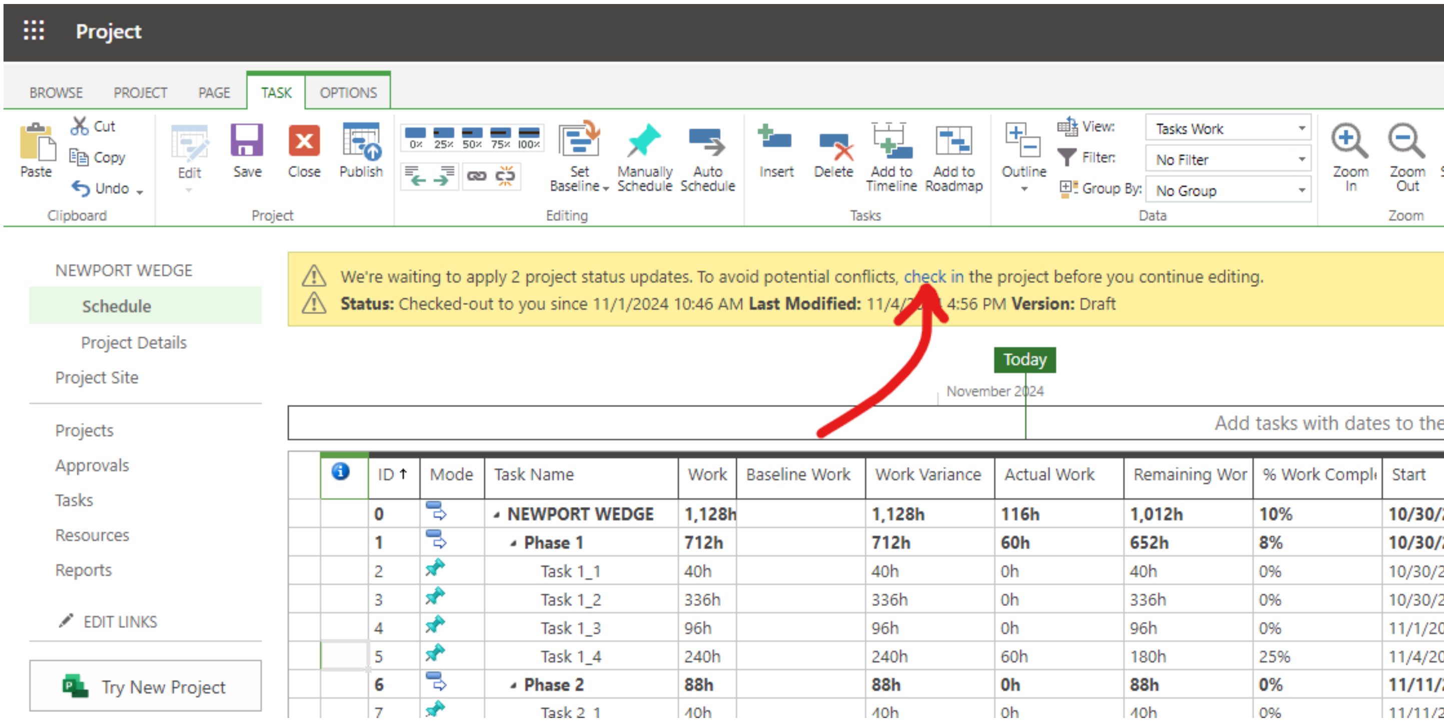


Enter comments in the *Confirm Approval* dialog; and click **OK**.



Step 2: Check in Project status updates…

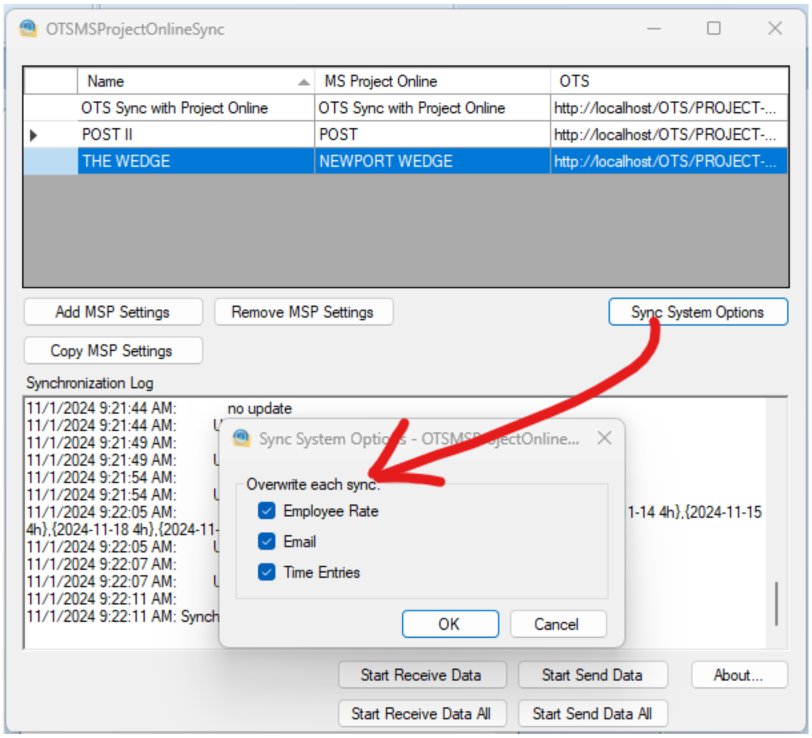
Once you've approved time entries sent from Office Timesheets to Project Online, you'll need to check in the changes so they are visible to everyone with access to the project. To check in the approved time entries navigate to the specified schedule; and click on the **check in** link the notifications area at the top of the screen…



TIME ENTRY UPDATE OPTIONS

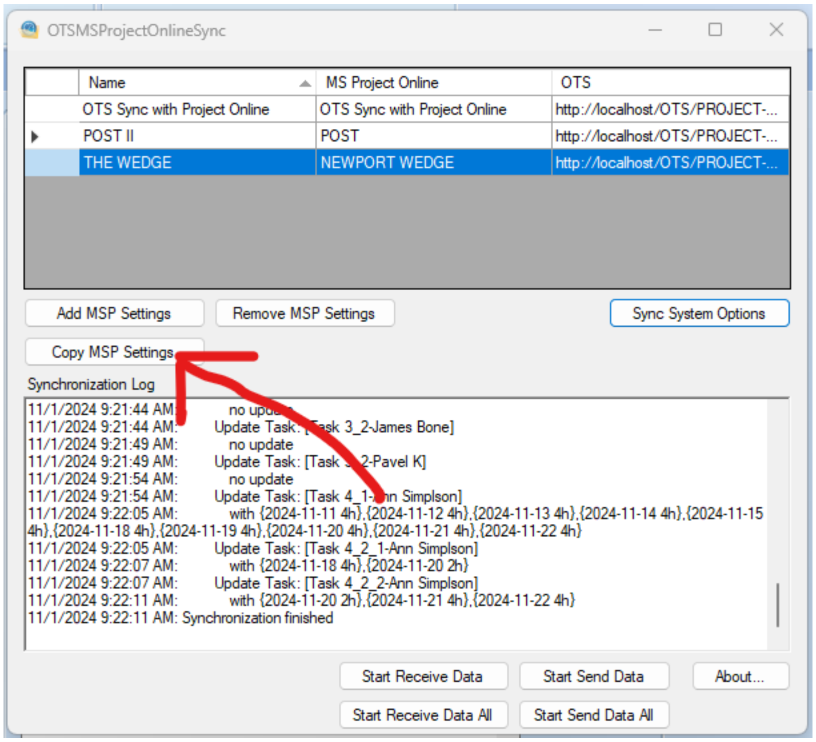
Currently, there are three system-wide sync options that let you determine if certain data elements are written only once; or if they are overwritten with each sync. Below is a description of each of those data elements:

- **Employee Rate** – when checked, each sync will overwrite the employee's mapped rate in Office Timesheets. Office Timesheets does not send rate data to Microsoft Project. If this setting is unchecked, and an employee's rate is modified in Office Timesheets, this modified rate will remain in Office Timesheets, and will no longer be modified by the Microsoft Project Online Sync.
- **Email** - when this option is checked, each sync will overwrite the employee's email address in Office Timesheets. Office Timesheets does not update the email address when syncing back to Project Online. If this setting is unchecked, and an employee's email address is modified in Office Timesheets, the modified email address will remain in Office Timesheets, and will no longer be modified by the Microsoft Project Online Sync.
- **Time Entries** – when this option is checked Office Timesheets, each sync will overwrite all time entries with the current entries in Office Timesheets.



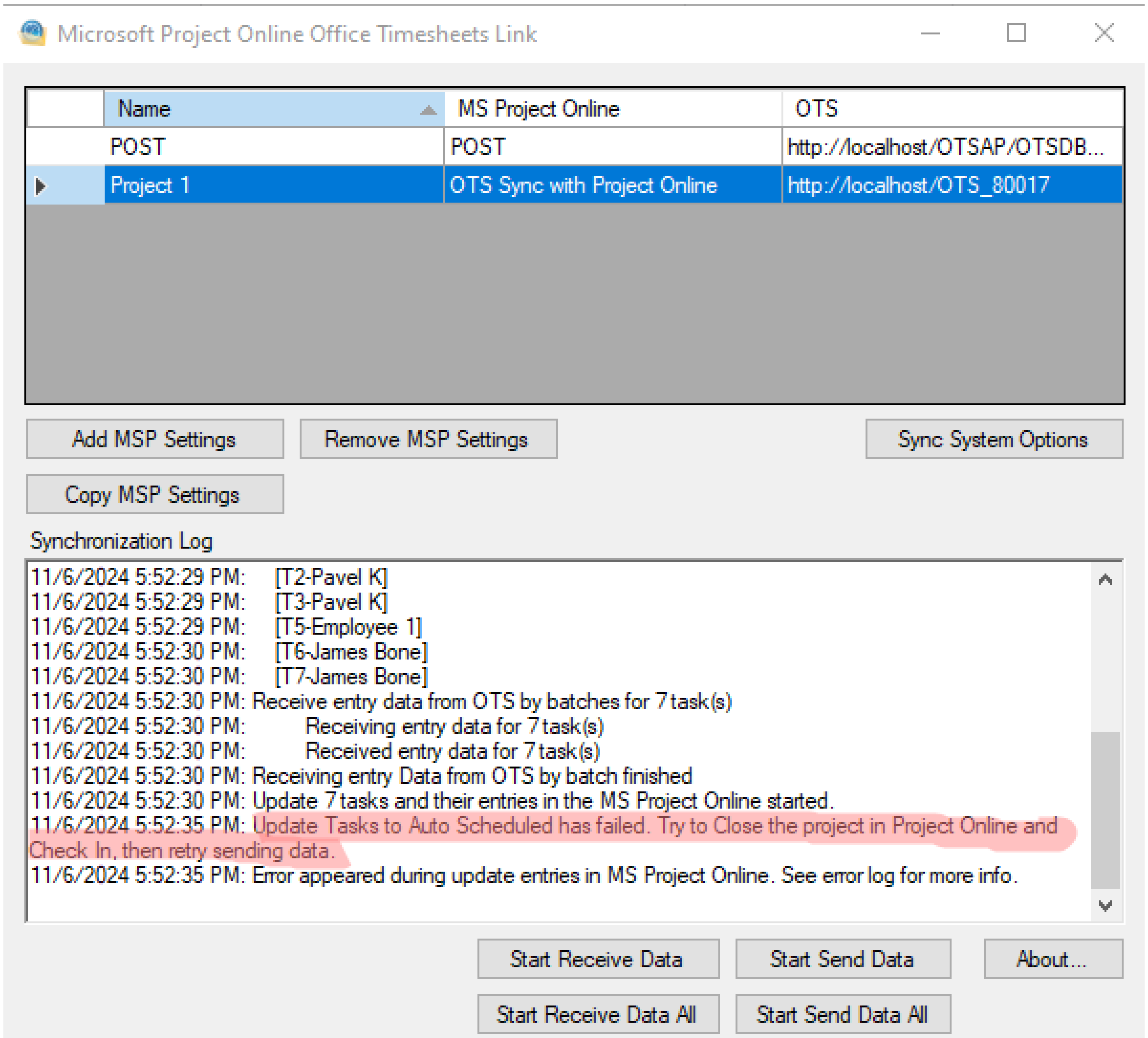
COPYING SETTINGS FROM OTHER SYNCS

Because each project defined in the Project Online Sync for Office Timesheets app can contain its' own unique sync settings, the sync app gives you the ability copy all the settings from already defined project sync to a new project sync. To copy settings from project's sync to a new project's sync simply highlight project row you wish to copy; and the click on the **Copy MSP Settings** button…

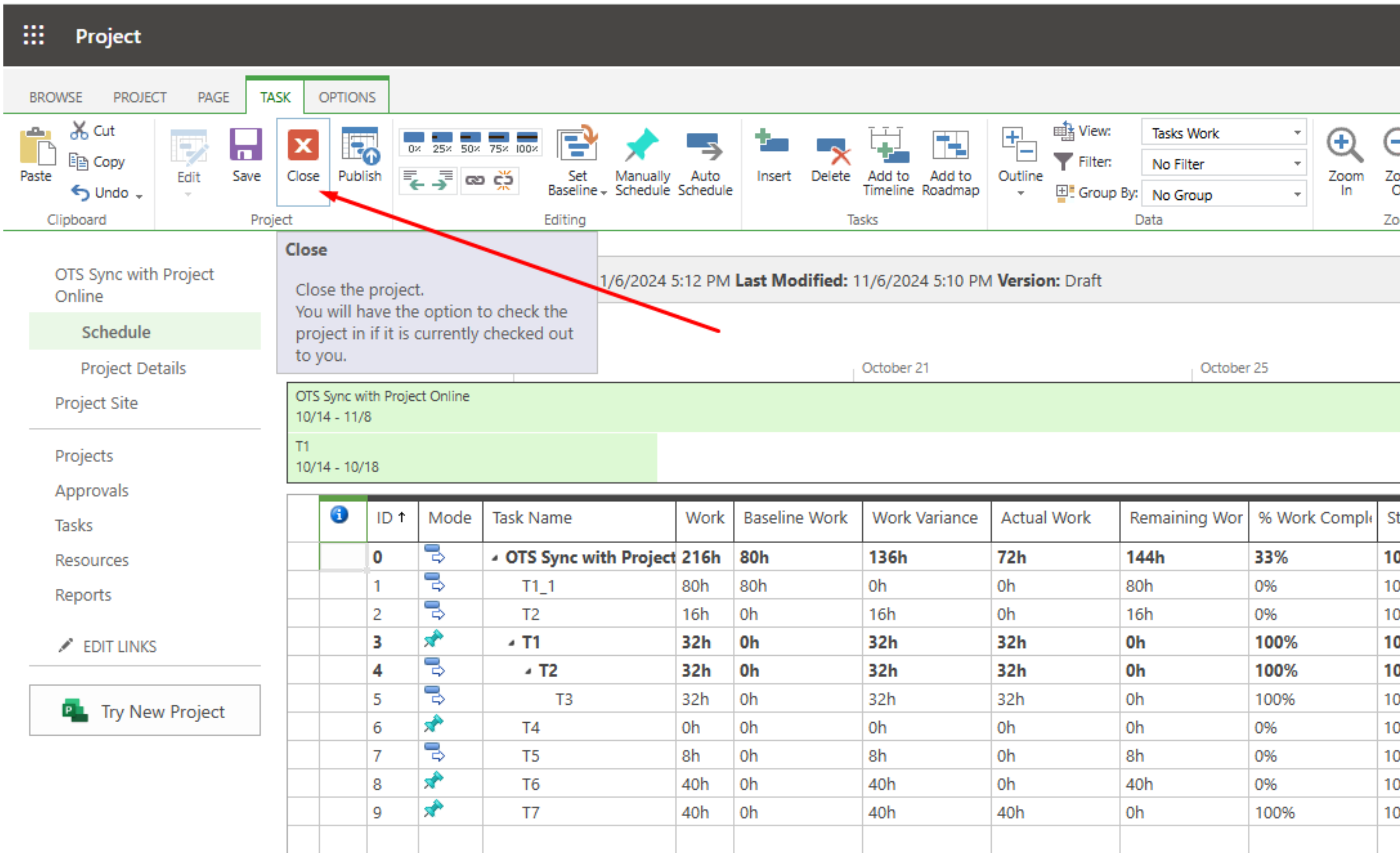


Special Notes Regarding Converting Manually Scheduled Tasks to Auto Scheduled

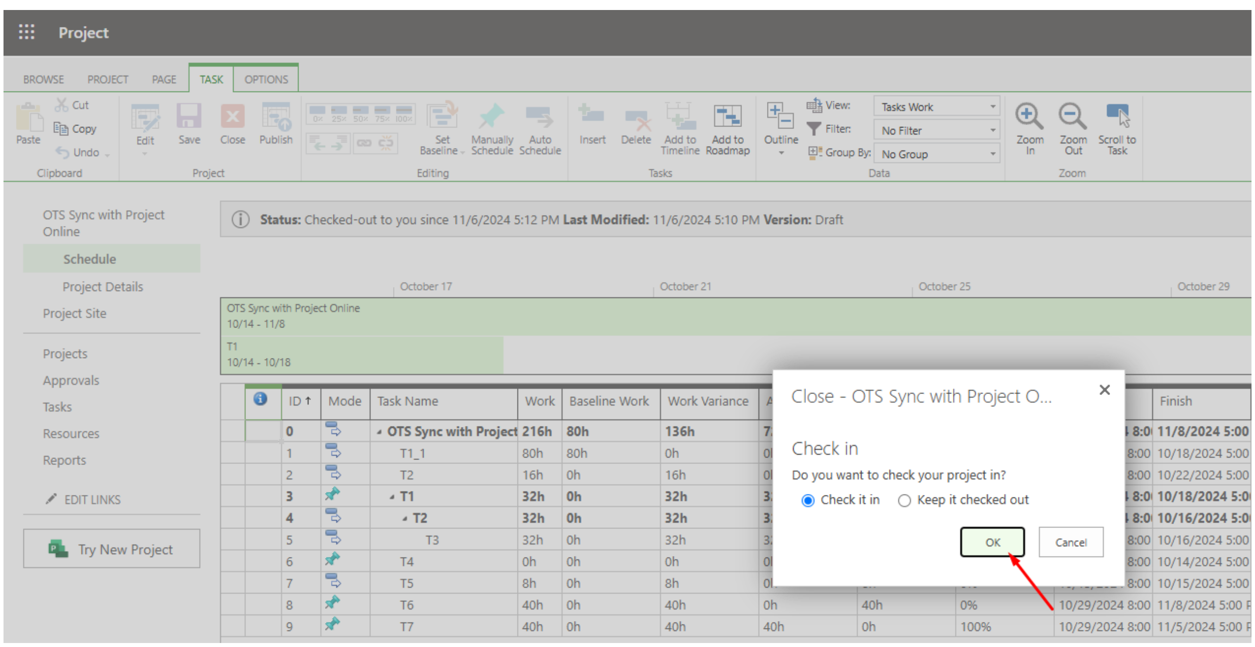
When the "Convert Manually Scheduled Tasks to Auto Scheduled" setting is checked and the selected project is in **Edit Mode** in Project online, and was not checked in, the sync tool can't do check out the project's data. If this is case, you'll the following message when using the Microsoft Project Online Sync App for Office Timesheets:



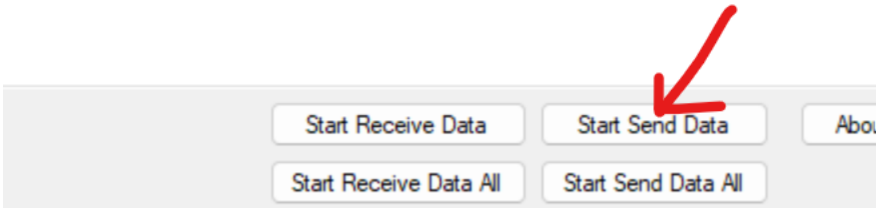
To get access to **Draft** tasks you'll first need to "Close" the project...



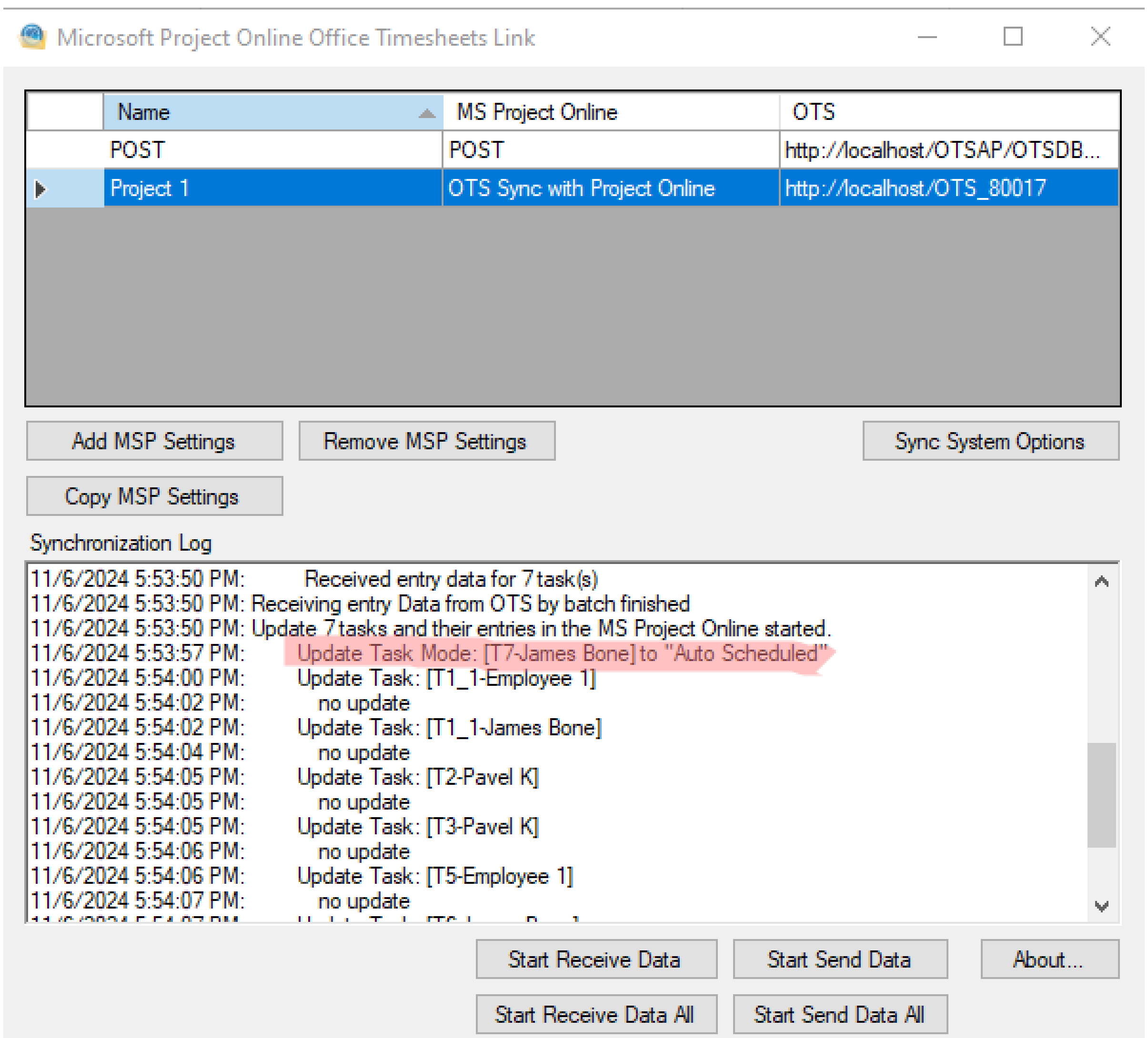
If you see this message, you'll need to **Close** and **Check-in** the project…



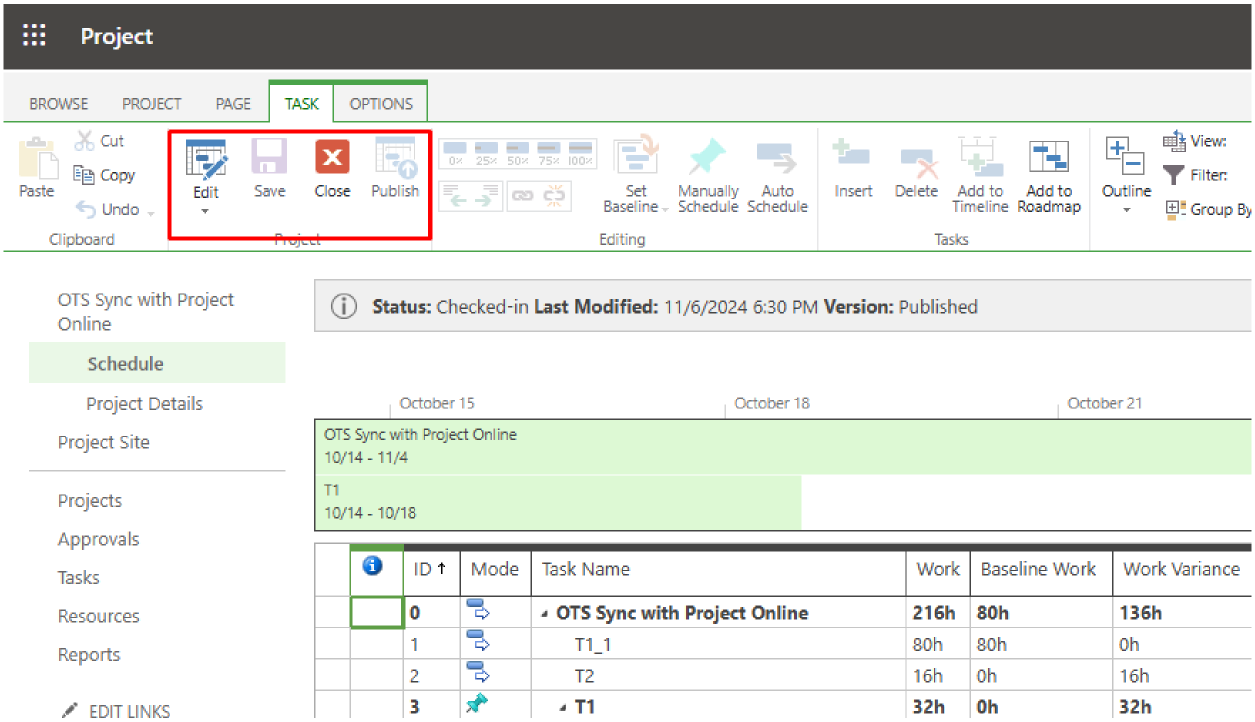
You'll then need to run the Start Data sync process again to complete the sync.



If a task in Project online is in **Manual** mode, then the task will be updated to **Auto scheduled**. You'll see this represented in the sync log as follows:



Also, one thing we have noticed, sometimes all buttons in Project Online will be inactive after the Sync app has updated specified tasks to Auto scheduled…



In this case, you will need to **Check-in** the project here…