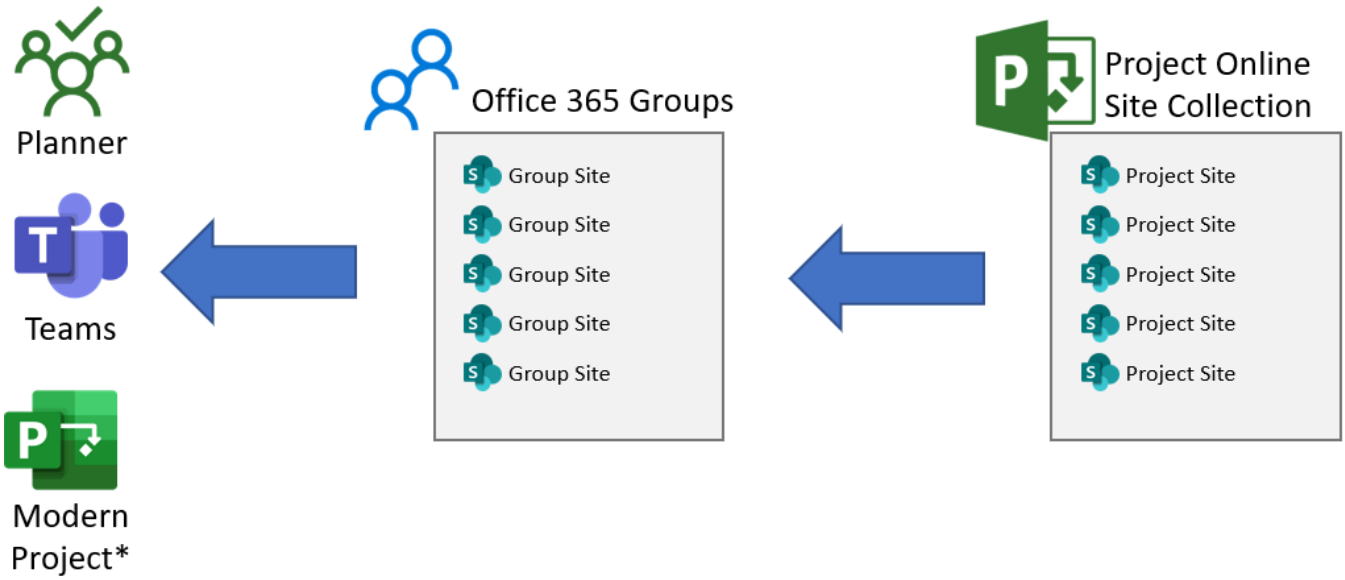
Project Groups Integration

Introduction

Sensei Project Group Integration provides customers with the ability to utilise Office 365 Group Sites in place of Project Sites that are usually provisioned as sub-webs in the Project Online Site collection.

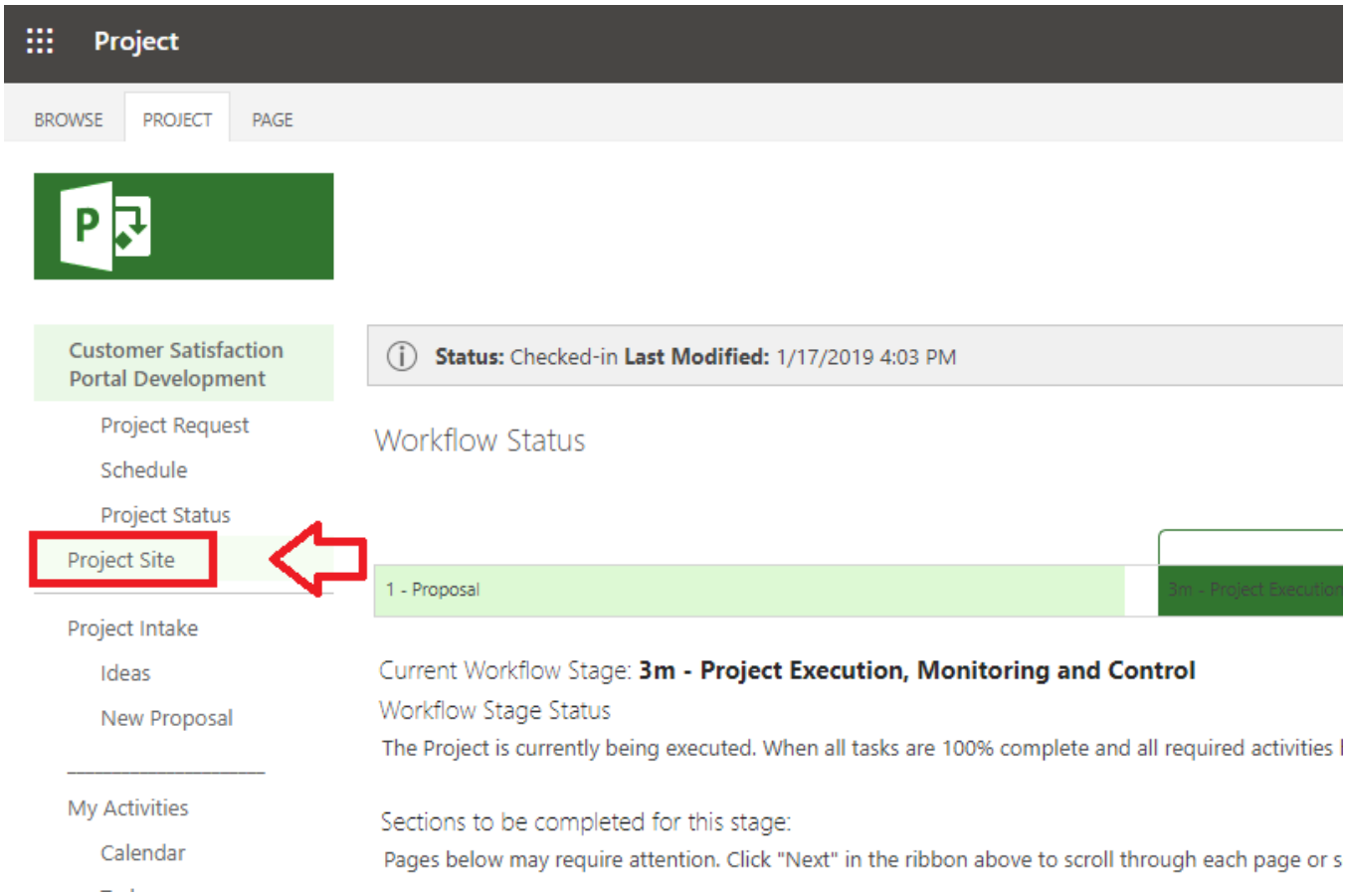


Using Office 365 Group Sites provides advantages over Project Sites:

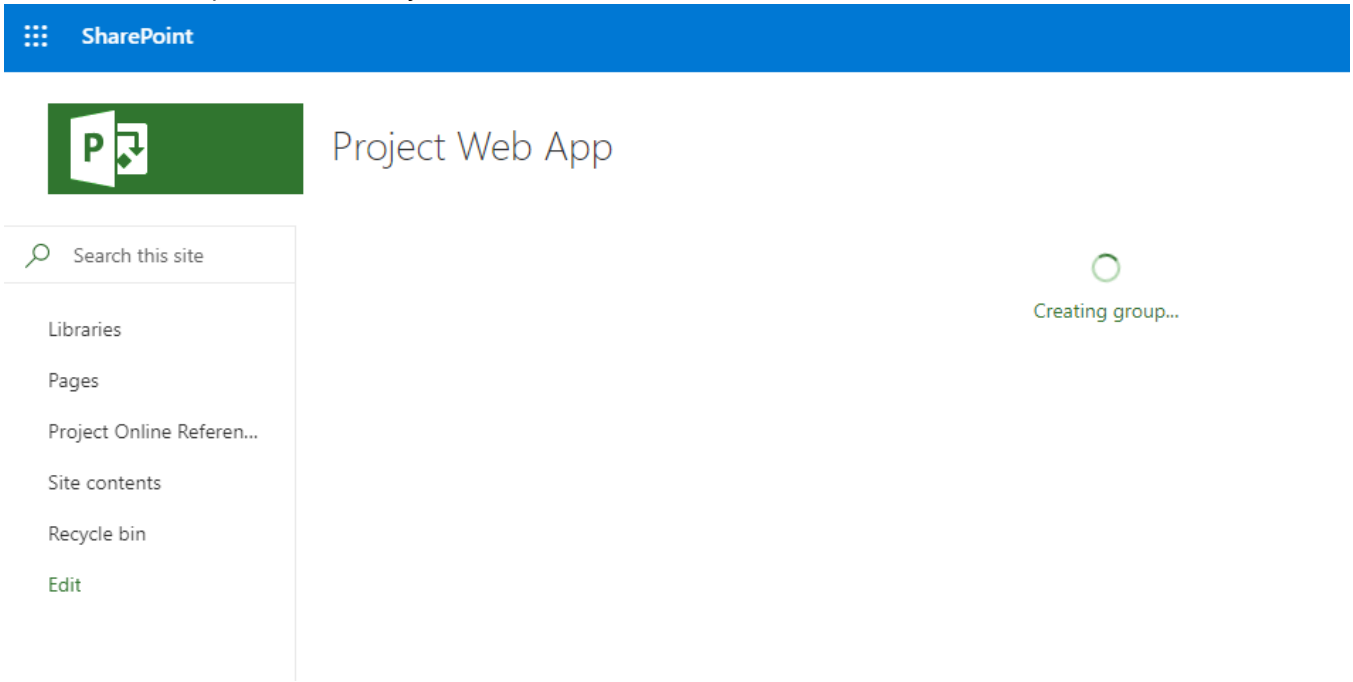
- Modern Site Experience
- Collaborate with a wider audience. Group Sites can be easily shared with other internal users and External Guests from outside your organisation.
- Avoid the SharePoint 2000 web site collection limitation (https://docs.microsoft.com/en-us/office365/servicedescriptions/sharepoint-online-service-description/sharepoint-online-limits#service-limits-for-all-plans)
- Teams integration
- Planner integration
- Future integration with Modern Project*

Use

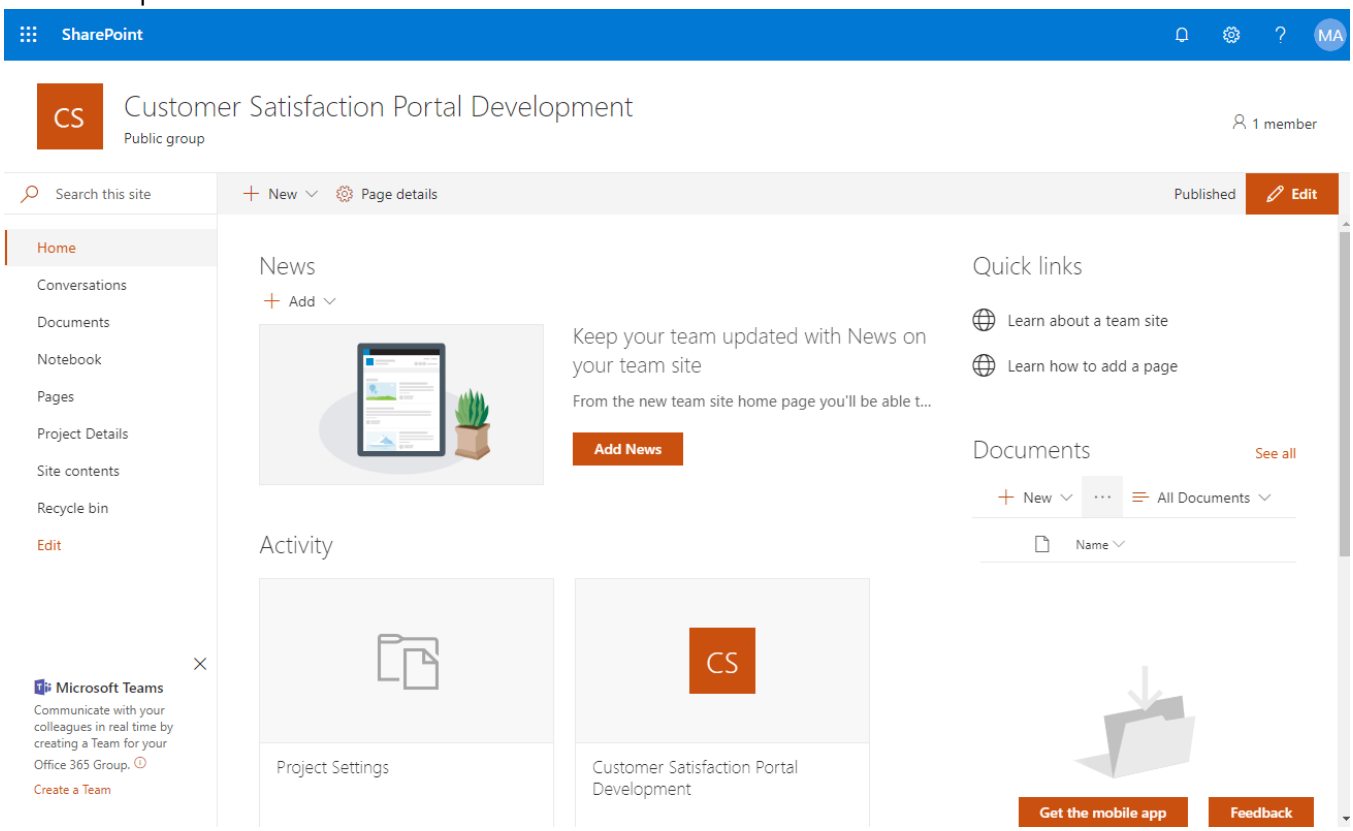
Once activated and configured, clicking on the Project Site link on a PDP will cause an O365 Group to be created:



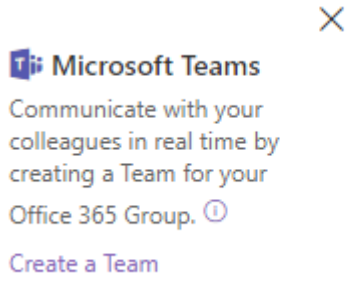
If the O365 Group Site Does not yet exist, it will be created:



When the group creation completes, or the group had been previously created, you will be navigated to the O365 Group Site:



From here is is very easy to create a Microsoft Team by selecting the link in the bottom left:



Deployment

The Sensei Project Groups Integration component is packaged as a SharePoint Framework Webpart. This package is intended to be deployed via the Tenant or Site Collection App Catalog in your O365 Tenant.

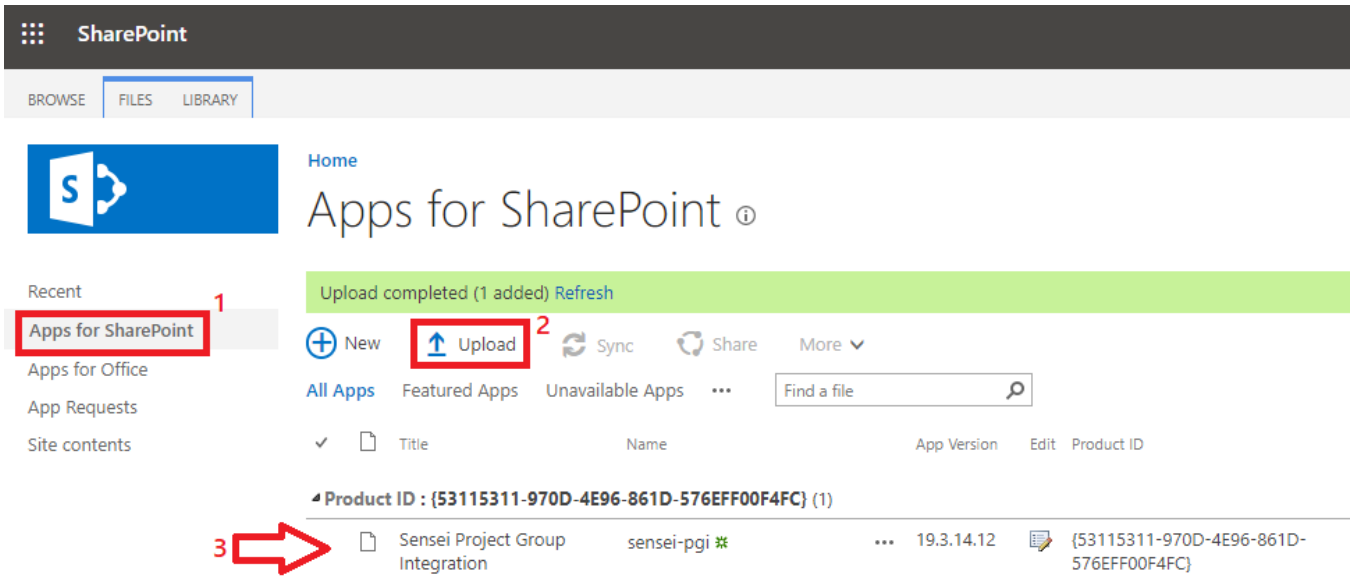
1. App Package Deployment

If you are an **Empower PPM (../EmpowerPPM/index.html)** customer and have nominated Option A (../EmpowerPPM/TechReadiness/index.html#option-a-recommended) or Option B (../EmpowerPPM/TechReadiness/index.html#option-b) in the technical readiness guide (../EmpowerPPM/TechReadiness/index.html), this App package deployment will be performed by your Sensei Consultant and you can **skip to the next step**.

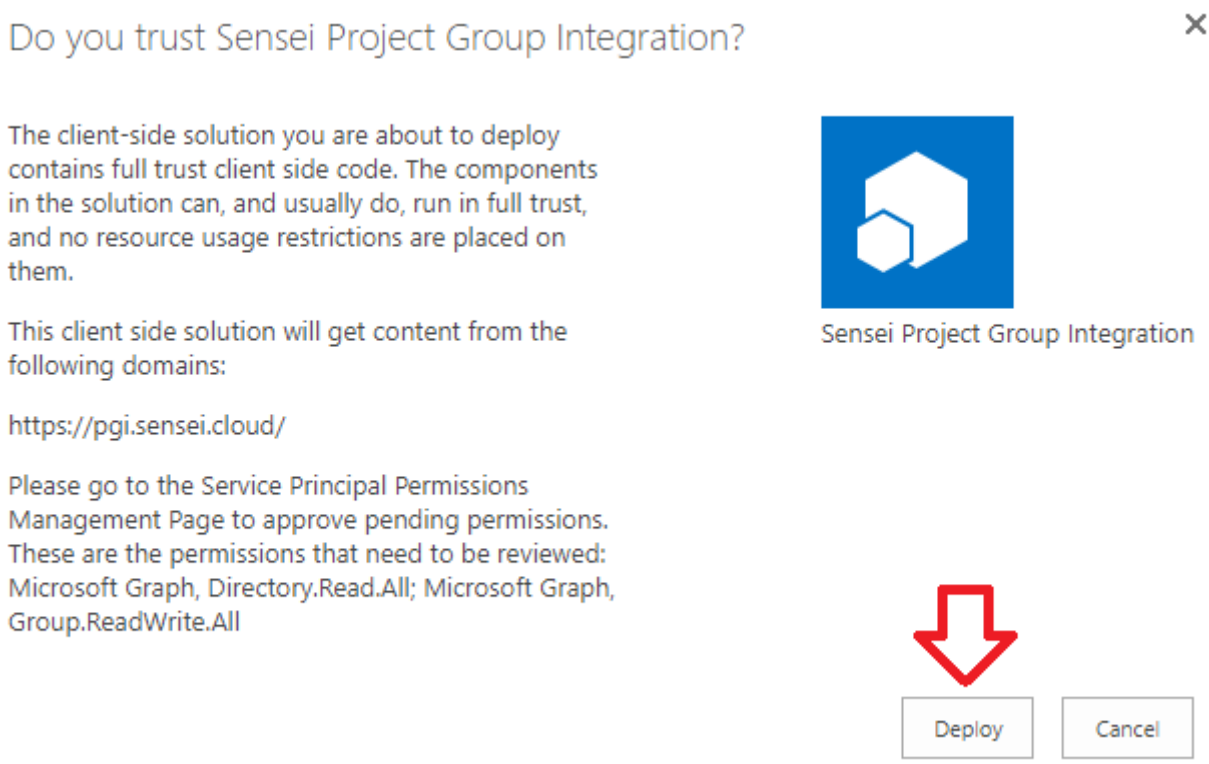
If you not are an **Empower PPM (../EmpowerPPM/index.html)** customer or you have nominated Option C (../EmpowerPPM/TechReadiness/index.html#option-c) from the technical readiness guide (../EmpowerPPM/TechReadiness/index.html), then download the following App Package file by clicking below:

sensei-pgi.sppkg (https://pgi.sensei.cloud/)

This file must be added to your Tenant or Site Collection App Catalog:



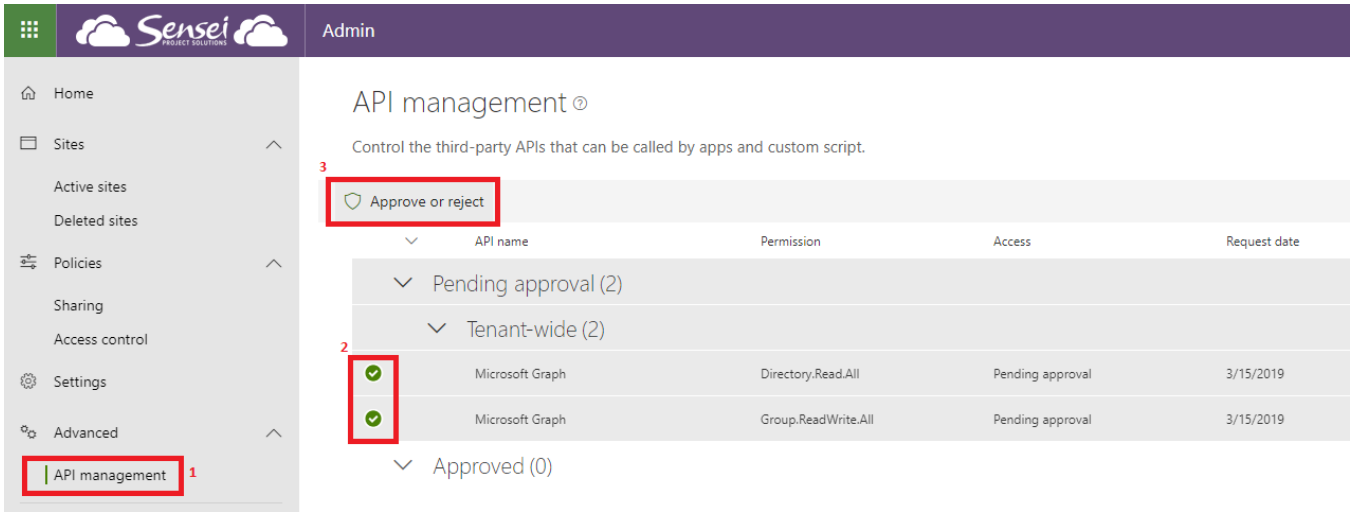
During this process a trust dialog must be accepted that allows the addin to be deployed to the PWA site:



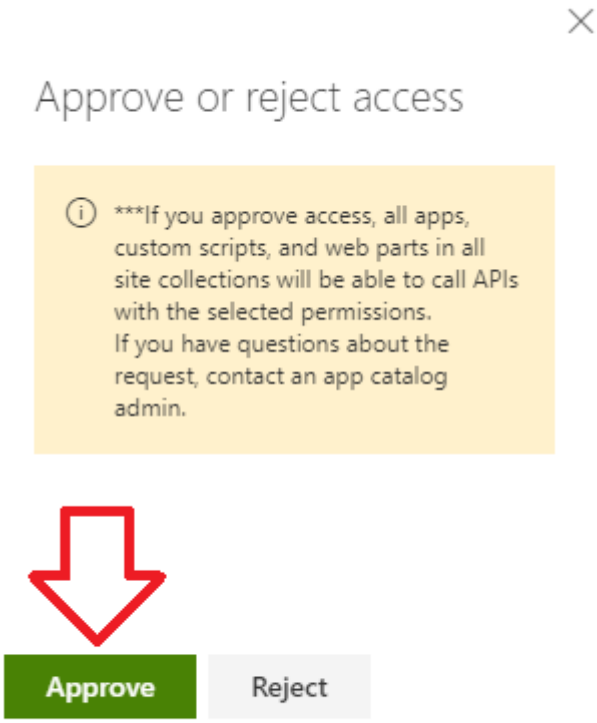
2. Accept API Permission Requests

In the modern SharePoint Admin Center click on API Management and approve the pending API requests for:

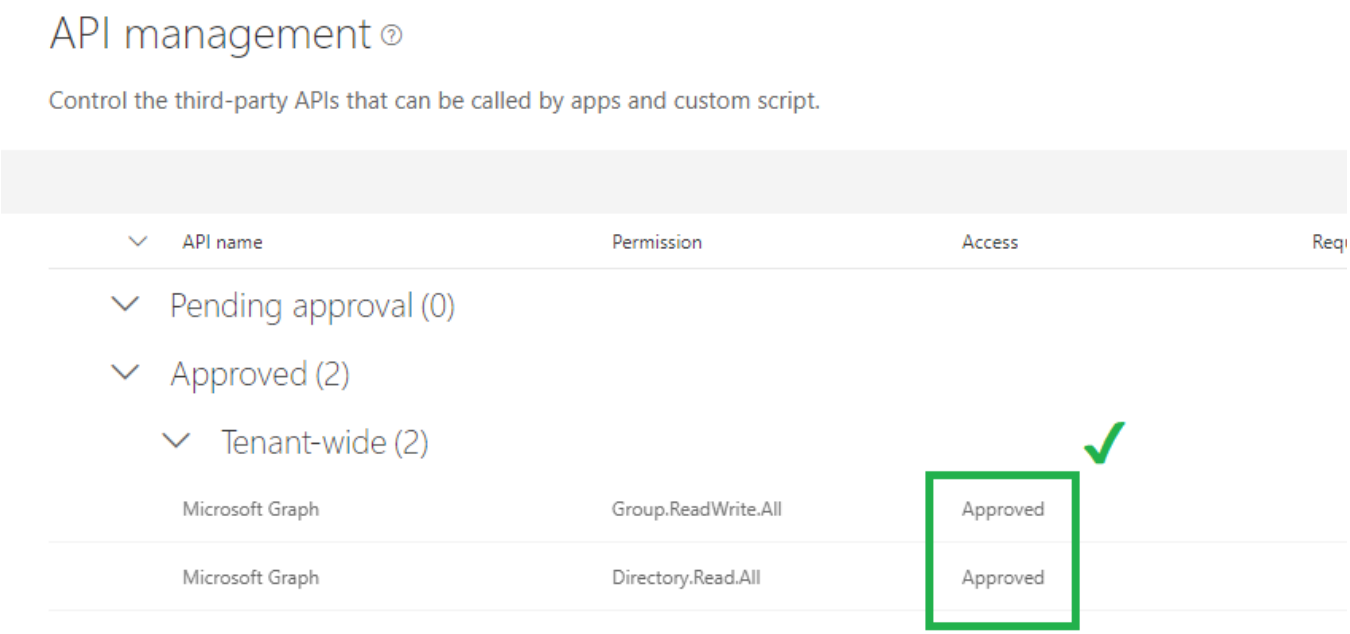
- **Directory.Read.All**: This is necessary to read user information when assigning Members and Owners of Groups.
- **Group.ReadWrite.All**: This is necessary to allow the creation of O365 groups.



During the process:



Once completed:

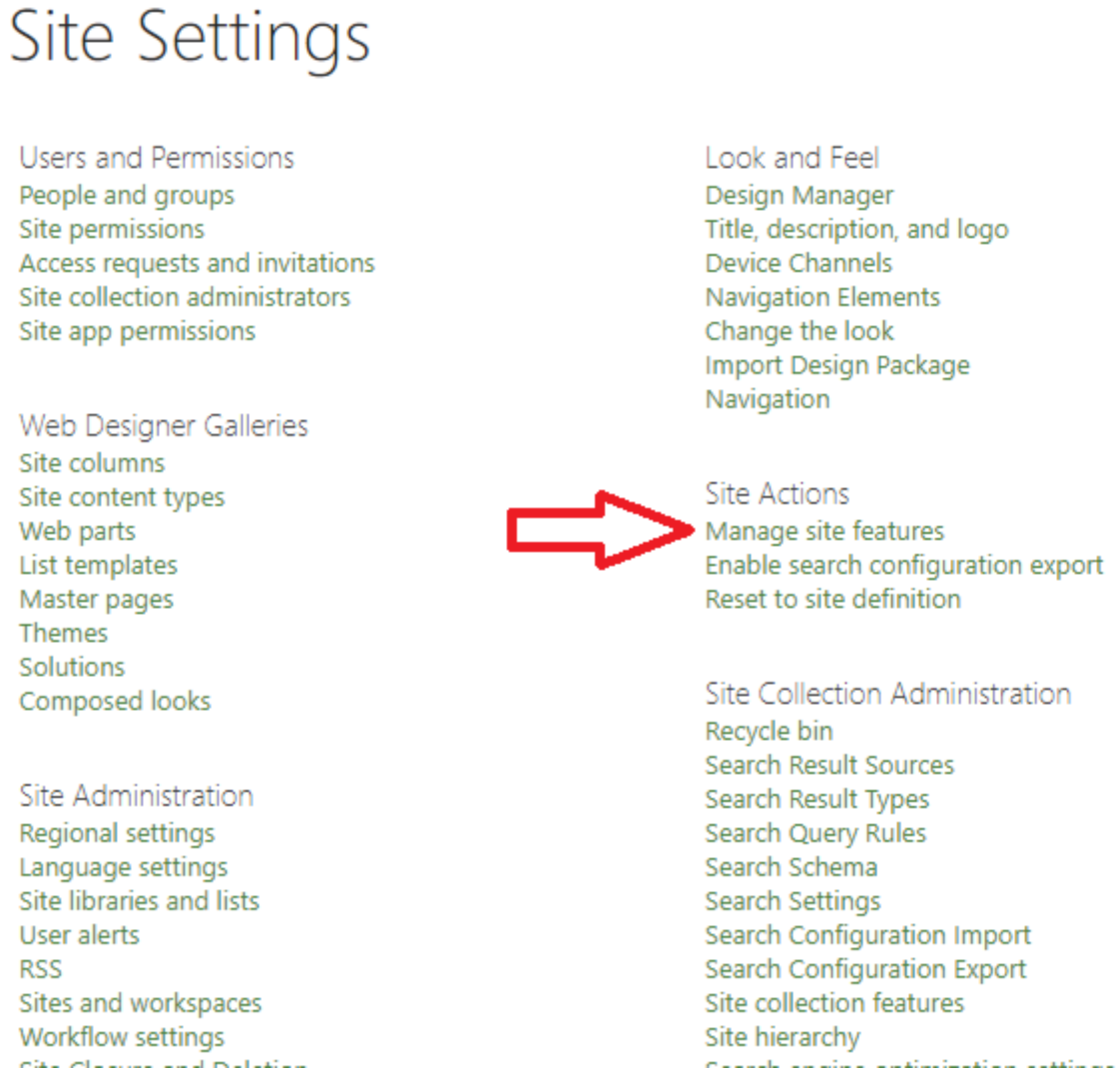


3. Activate **Site Pages** Feature

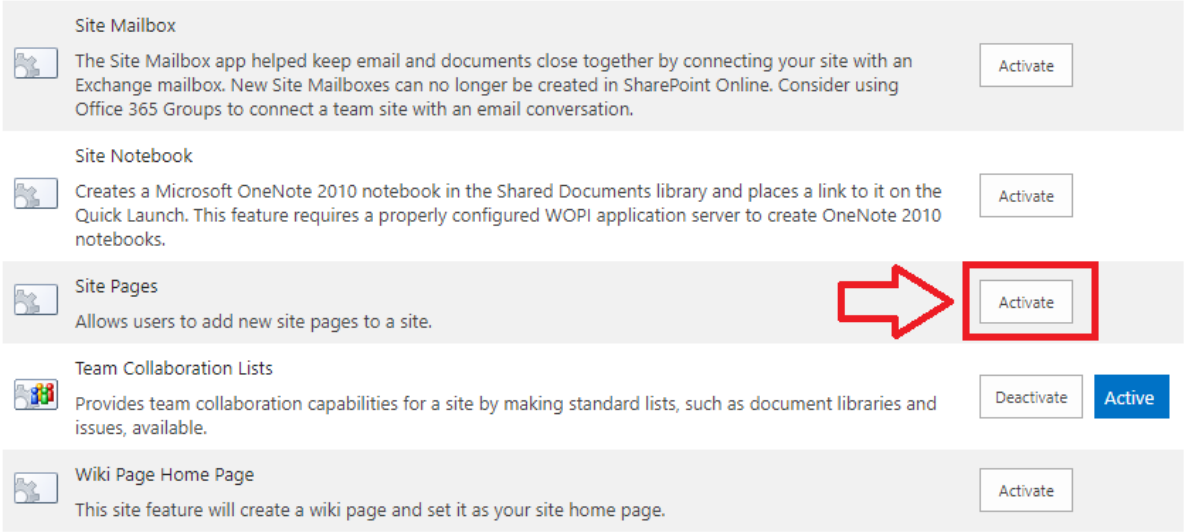
If you are an **Empower PPM (../EmpowerPPM/index.html)** customer this step will be done for you - **skip to the next step**.

> ⚠ **IMPORTANT**
> The **Site Pages** feature on the PWA Site collection must be activated prior to deployment of the Project Group Integration App. You cannot activate the feature afterward as it will produce an error. If you find yourself in this senario please contact Sensei Customer Care (mailto:support@sensei.cloud) to rectify the situation.

1. Select Site Settings -> **Manage Site Features**

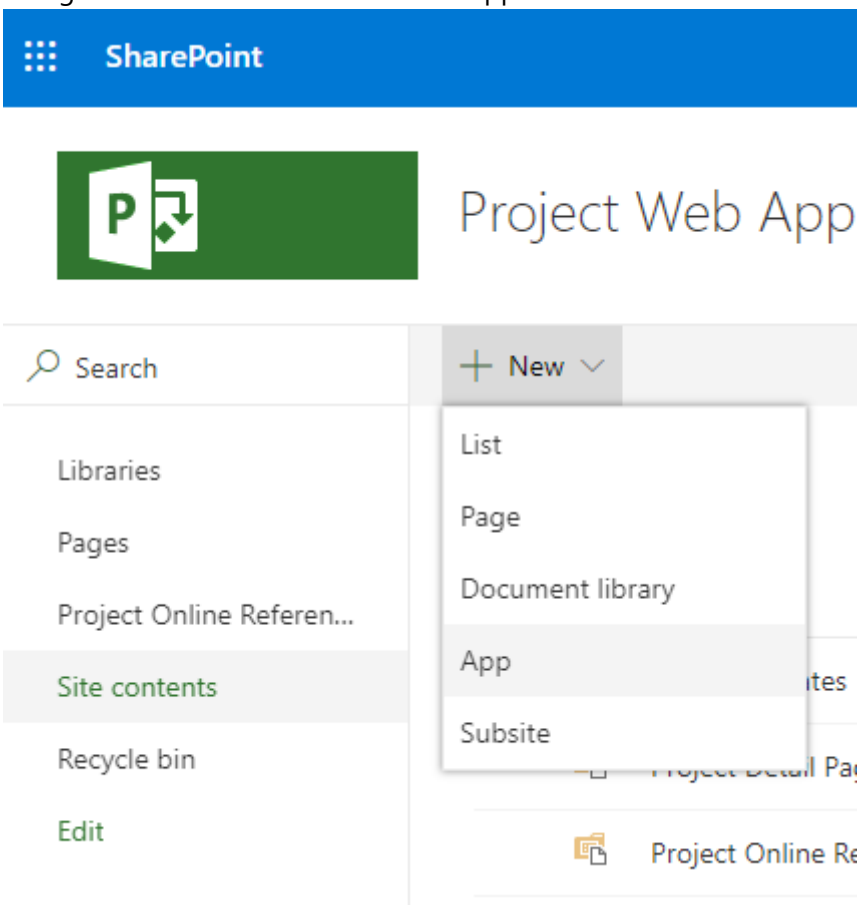


2. Activate the Site Pages Feature

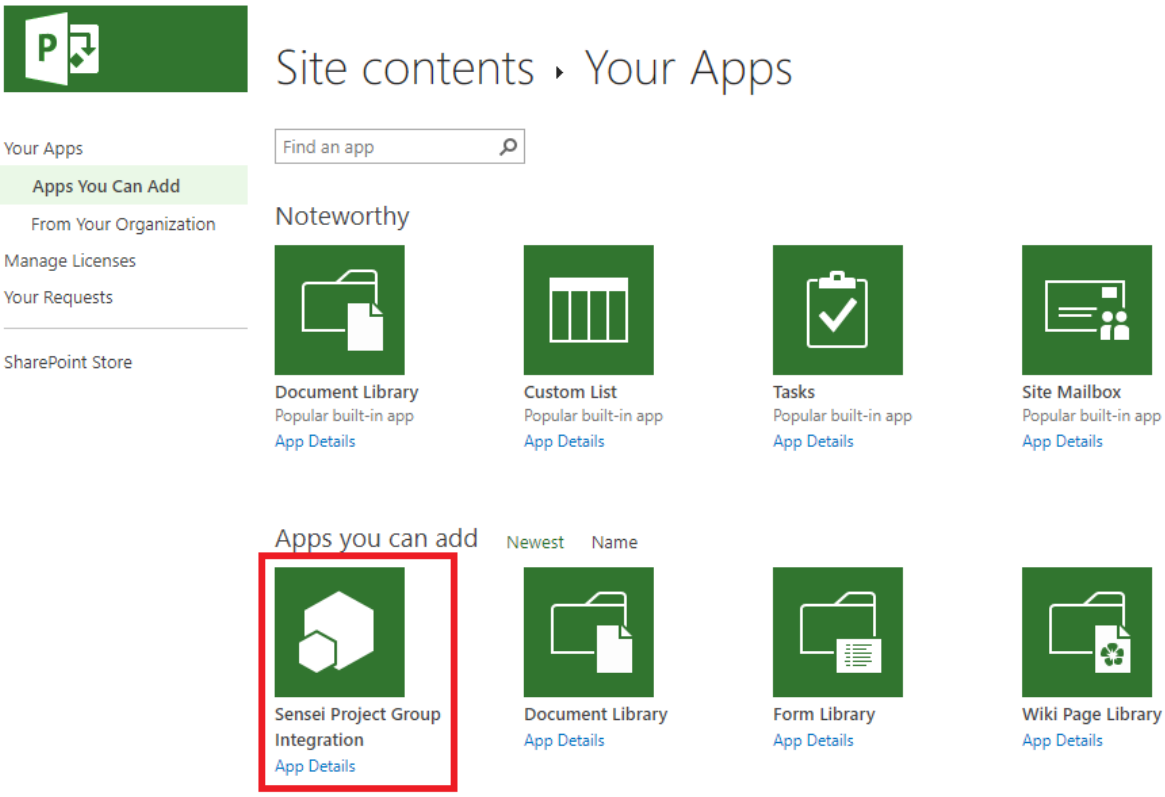


4. Add the App

1. Navigate to Site Contents -> New -> App:



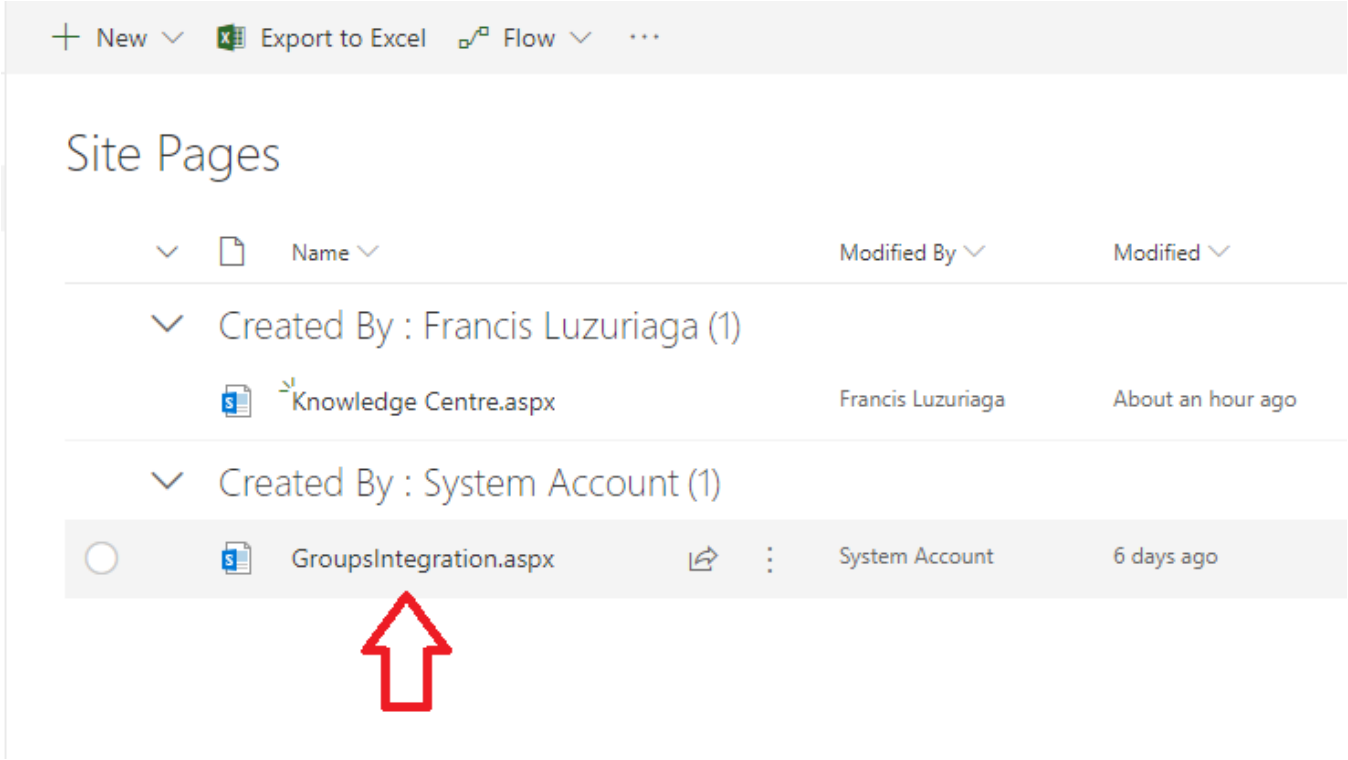
2. Select the **Sensei Project Group Integration** App



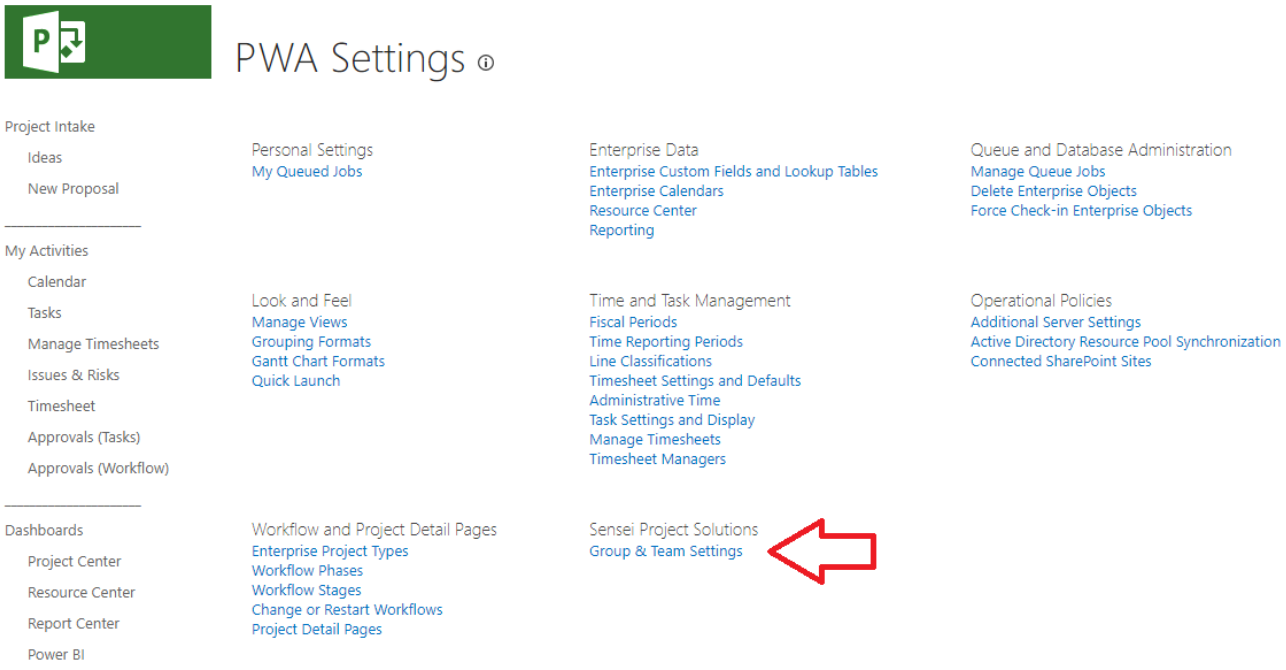
5. PWA Settings Link

If you are an **Empower PPM (../EmpowerPPM/index.html)** customer, this step will be done for you - **skip to the next step**.

Navigate to the Site Pages Library and click on the GroupIntegration.aspx page:

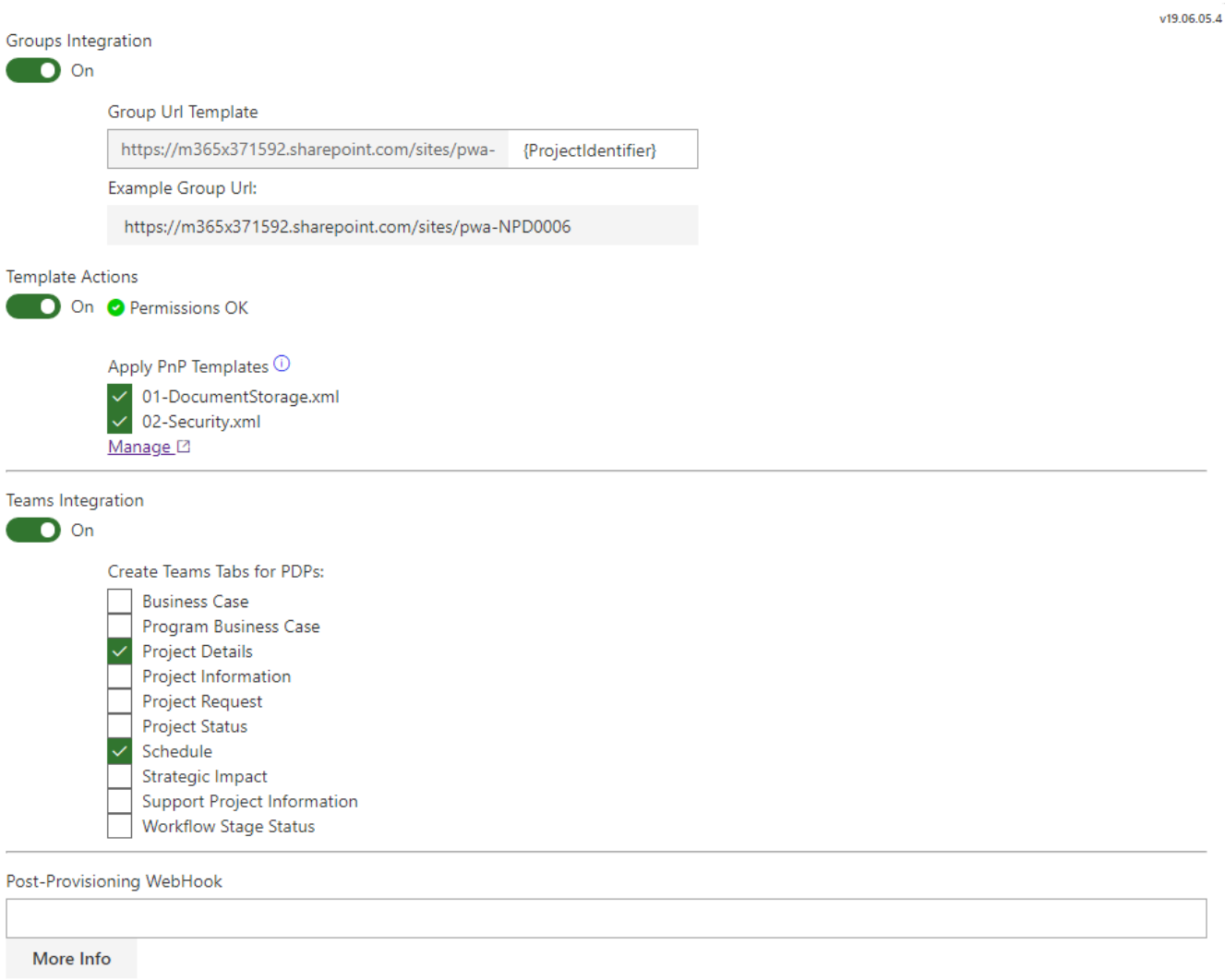


After this navigation, the **Group & Team Settings** link will be available on the **PWA Settings** page.

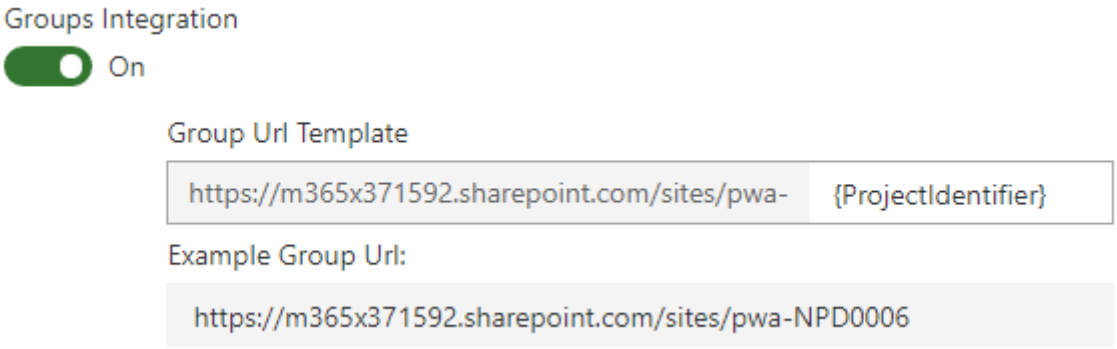


Configuration

After selecting the **Group & Team Settings** link from the PWA Settings page, the following settings are available:



Groups Integration



Enable this toggle to change the behaviour of the **Project Site** link in the PDP pages to direct users to the corresponding Group Site for the project. In the case where a corresponding O365 Group isn't registered, it will be created using the URL pattern.

> **NOTE**
> This option is required to be enabled to enable any other feature functionality.

URL Template

The URL Template pattern will be used when creating new O365 group sites. When an O365 Group doesn't exist for the current project (via the Project Group Mapping List), one will be created using the URL Template. The built-in field `ProjectIdentifier` is commonly used to suffix the URL of the resulting O365 Group Site, but any valid Project Attribute or Project-level Custom Field value can be used in the URL Template by enclosing them in braces { }. Experiment until you see the appropriate URL in the Example Group Url box.

> **⚠ CAUTION**
> The pattern must produce a unique URL for each project, otherwise group creation will fail. Inclusion of `{ProjectIdentifier}` or `{Id}` is recommended

> **NOTE**
> In order for **Project Online Sync for Word (../POSW/Guide/index.html)** to function correctly, the URL of the Group Site will always be a super-set of the PWA URL: `<PWA URL>-<Url Template>`

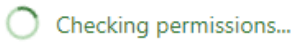
Templating Actions

The templating actions section contains actions that will be executed after the initial Office 365 group is created. The user will not be asked to wait for the Templating Actions to be completed before they can begin using the O365 Group.

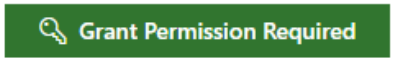
Permissions

As the templating actions are performed non-interactively a separate grant of permissions is necessary to facilitate the Sensei components taking action without the presence of a user. In addition, the Service Principal will not by default have access to the O365 Group Site to apply changes, so it needs administrative access.

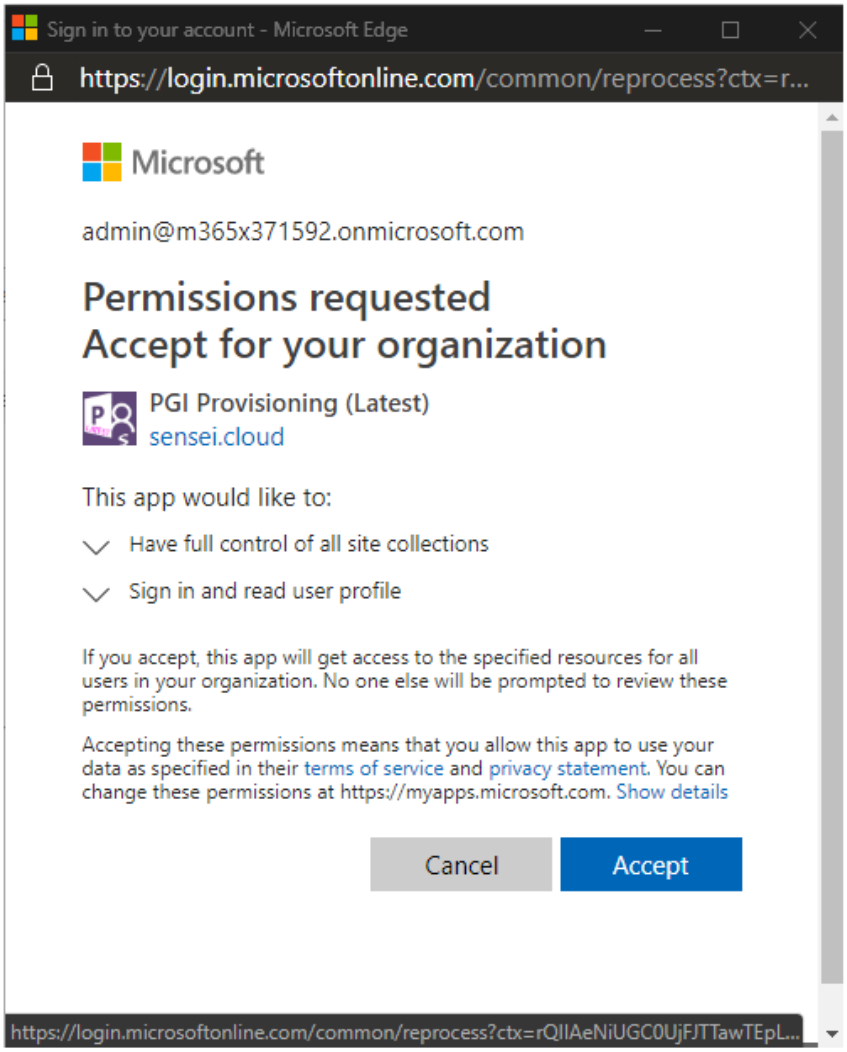
On initial enabling of the Templating Actions feature, the permissions will be checked to ascertain if granting permissions is necessary.



If it is detected that the Service Principal doesn't currently have the required permissions, the **Grant Permissions Required** button will be presented.



Pressing the **Grant Permissions Required** button will open a popup window asking for permissions to be granted.



> **NOTE**
> An Office 365 Administrator will be required to consent to the required permissions.

Once accepted, the permissions will display as OK.

Permissions OK

PnP Templates

The Patterns and Practices (PnP) community has produced a popular templating technique for provisioning consistent functionality across multiple sites. The solution utilises this templating standard to capture the custom elements (e.g. lists, libraries, branding) and apply them to new O365 Group sites.

A PnP Template can be generated using powershell commands (https://docs.microsoft.com/en-us/powershell/module/sharepoint-pnp/get-pnpprovisioningtemplate?view=sharepoint-ps) from an existing site resulting in either an XML file or a PNP file.

Apply PnP Templates
- [x] 01-DocumentStorage.xml
- [x] 02-Security.xml

Manage

Once generated and customised, use the **Manage** link to upload your template file. Check the box against the template file to have the template applied to new O365 group sites.

WARNING

Each individual PnP template file must take no longer than **10 minutes** (ideally no longer than **5 minutes**) to apply to the O365. If necessary restructure your template instructions into multiple files and they will be applied in alphabetical order.

NOTE

Remember to press save at the bottom of this page to persist your changes.

PnP Parameters

When using the PnP templating system, parameters will be passed to the template to allow the dynamic configuration of the site. The parameters can be consumed in the template file using the following syntax:

```
{parameter:ParameterName}
```

Some of these parameters are directly settable like the Hub and Site Design:

Hub Site Parameter

Hub

Site Design Parameter

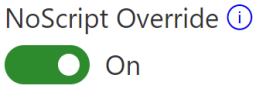
Sensei Test Design

Other parameters passed to the template are:

Parameter Name	Example Value
EnterpriseProjectTypeId	bf51a257-b447-e711-80ce-00155d3c8414
EnterpriseProjectTypeName	New Product Development
ProjectUid	614f59ae-3779-e711-80c7-aaf82c4c4dd0
ProjectName	Biothermal Ear Warming System
ProjectIdentifier	NPD-0013
ProjectType	0
SourceSiteUrl	https://contoso.sharepoint.com/sites/pwa (https://contoso.sharepoint.com/sites/pwa)
TargetSiteUrl	https://contoso.sharepoint.com/sites/pwa-NPD-0013 (https://contoso.sharepoint.com/sites/pwa-NPD-0013)
TenantId	f3eee827-1279-45ba-b071-daf8cc1f6cde
TeamId	0eefc26b-9d52-e711-80ce-00155d3cbe1c
TeamUrl	https://teams.microsoft.com/l/team (https://teams.microsoft.com/l/team) .....
SiteDesignId	5238c46c-1fac-49b7-9ba1-c472e832f49d

Parameter Name	Example Value
SiteHubId	8eeb8df2-46ea-4cd8-ab49-849c1e22df5d

NoScript Override

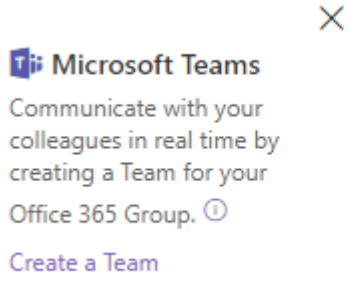


In order to perform some more advanced customisations (https://docs.microsoft.com/en-us/sharepoint/dev/solution-guidance/modern-experience-customizations-customize-sites#using-pnp-provisioning-engine-with-modern-team-sites) with the PnP Provisioning engine it will be necessary to temporarily disable the **NoScript** flag (also known as the **DenyAddAndCustomizePages** site setting).

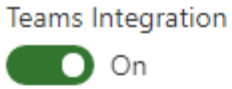
When this override flag is enable, the provisioning engine will disable the **NoScript** flag on the site collection for the duration of the templating session and then re-enable it.

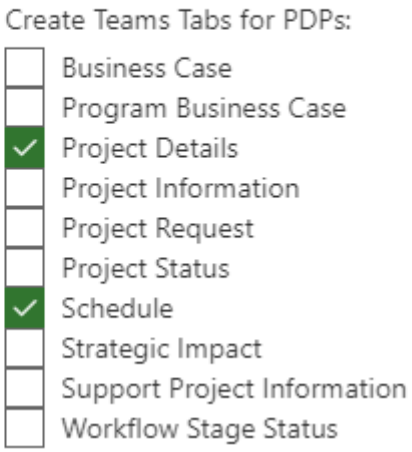
Teams Integration

A Microsoft Team is an add-on that can be aplied to an O365 Group. After the O365 Group Site has been created, the user can manually create the Team by clicking the link in the bottom left of the O365 Group Site.



To automate this task, enable the Teams Integration toggle.





In addition to having the Microsoft Team be created, additional Tabs can be added to the Team that allow access to Project Detail Pages (PDPs) for the project. Check the box nex to any additional tabs to be created for related Project PDP's.

Webhook

In some instances, the above customisation facilities may not cover every eventuality - and need for custom code may arise. The URL specified in the Webhook URL will be called at the completion of provisioning process - either from the browser of the user (if no templating actions specified) or from a Cloud service in the case where background provisioning processes are necessary.

Possible use cases:

- Connect to Flow HTTP trigger or Logic Apps trigger:
  - Send alerts
  - Add additional team members
  - Enable further teams tabs
  - Make additional EPT specific customisations.

Troubleshooting

Governance Policy Settings

Azure AD Premium allows Office 365 Administrators to disable/limit the creation of Office 365 Groups. Groups are the bedrock of many Office 365 services, and disabling them also disables features in Teams, Planner, Outlook, Project Roadmap, Power BI, Shifts and more.

The restriction is enabled by a Tenant Administrator **utilising PowerShell** (https://docs.microsoft.com/en-au/office365/admin/create-groups/manage-creation-of-groups?redirectSourcePath=%252fen-us%252farticle%252fManage-Office-365-Group-creation-4c46c8cb-17d0-44b5-9776-005fced8e618&view=o365-worldwide#step-3-run-powershell-commands) to disable Group creation except for a **Trusted Security Group** of users who are allowed to create groups.

Project Group Integration will honour these settings when in place and the following message will be displayed:

Check for an existing group	✅	OK
Get project information	✅	OK
Create group	❌	Tenant admin has not enabled Unified Group creation.
Wait for site provisioning	⏩	Skipped
Add Project Group mapping	⏩	Skipped
Configure the site	⏩	Skipped
Create the team	⏩	Skipped
Transfer to site	⏩	Skipped

Possible solutions are:

1. Ask a tenant level administrator, or member of the **Trusted Security Group** to click on the **Project Site** link for them and then make the requesting user a **Member** or **Owner** of the Group.
2. Have the Office 365 administrator add the Project User(s) to the **Trusted Security Group** so that the requesting user can create groups.

Provisioning Log

To monitor the progress of the **Templating Actions** being applied to O365 Group Sites you can view the **Provisioning Log** list that will be present after provisioning has started.

This is accessible from the PWA site via ⚙->Site Content->Provisioning Log

Provisioning Log

Timestamp	CorrelationId	ProjectUID	Level	Message	+ Add column
6/5/2019 11:03 PM	7e8a7078-0f0c-46a9-9c2f-b4f54eaa15dd	3fadfee0-cc52-e711-80d6-00155d3ccd15	Information	Templating operations complete for Blue Yonder Airline Flight Rewards System Integration	
6/5/2019 11:03 PM	ad67c22b-e9ce-45c6-8d0b-fa63ba1187e8	3fadfee0-cc52-e711-80d6-00155d3ccd15	Information	Applying 02-CoP-ConfidentialDocuments-BreakInheritance.xml to https://m365x371592.sharepoint.com/sites/pwa-ITE0004	

This log will show the activity taken by the provisioning engine, and errors or issues with applying the templates will be reported here.

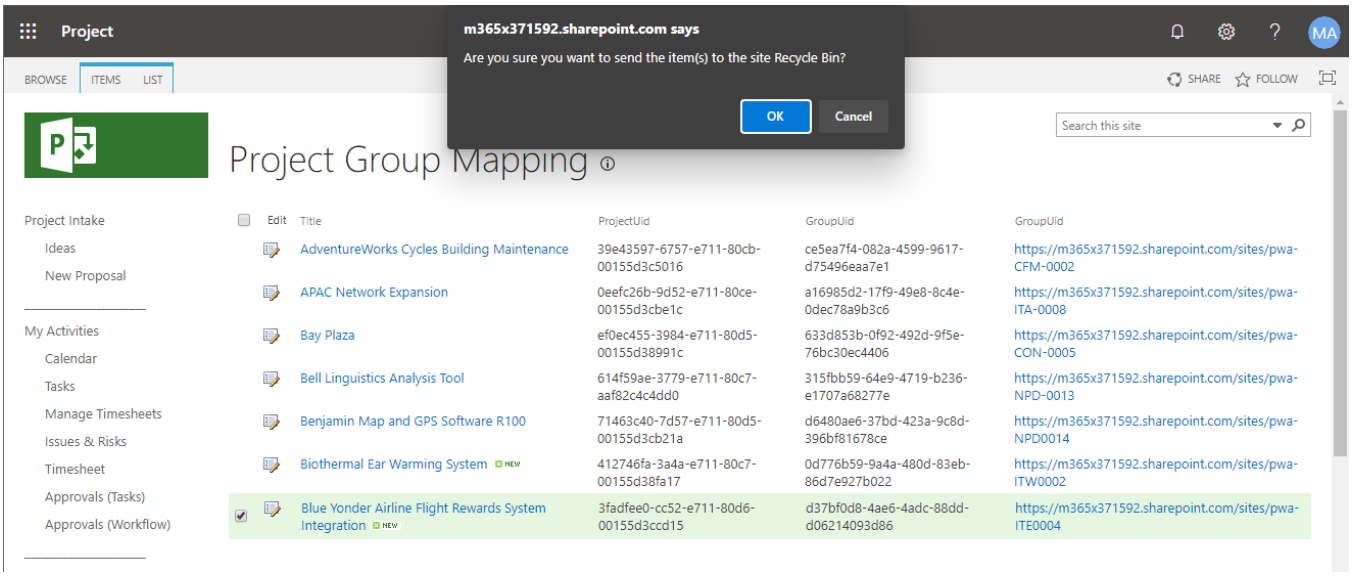
To be alerted in the case of a provisioning failure, use Flow to subscribe to this list and send an alert when the `Level` field is `Error`

Regenerating a Site

You can delete an O365 Group/Team and then re-provision the site.

> ⚠ **CAUTION**
> This process will delete all the data in the Group, Site & Team.

1. Go to the O365 Group Site homepage and ⚙ -> Site Information -> Delete Site, and accept the warning.
2. Go to the ⚙ -> Site Content -> Project Group Mapping
3. Delete the site from the Mapping List
4. Navigate to the `Project Site` link from the relevant Project PDP to re-create the Group/Site/Team.



Re-applying Templates to existing sites

The templating actions can be re-run for an existing site by using a specially formed URL. Use a URL in this format:

```
https://contoso.sharepoint.com/sites/pwa/SitePages/GroupsIntegration.aspx?projuid=<ProjectUID>&debug=Check for an existing group,Get project information,Start templating actions
```

SharePoint

Project Web App

Search this site

Libraries

Pages

Site contents

Recycle bin

Edit

Check for an existing group	OK
Get project information	OK
Create group	Skipped
Wait for site provisioning	Skipped
Add Project Group mapping	Skipped
Configure the site	Skipped
Create the team	Skipped
Start templating actions	OK
Transfer to site	Skipped