

Multiple Teams Walkthrough, using Team Foundation Server 2013

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In this article we focus on the “how” rather than the “why” to create multiple teams. To learn more about planning your team strategy please review the [TFS Planning and Disaster Avoidance and Recovery Guide](#)¹ from the [ALM Rangers](#)² and [Agile Portfolio Management: Using TFS to support backlogs across multiple teams](#)³ on MSDN. In this walkthrough we are setting up a multiple team strategy within Team Foundation Server (TFS) 2013. This means we will be using a single Team Project with multiple teams. These teams need to be setup and configured in such a way so that each individual team cannot go into another team and view/edit code or work items.

We also need to setup the team project in a way so that our master Product Owner can go into TFS and review the entire backlog across all of the teams. The Product Owner needs to be able to move work items between the teams as needed.

Getting Started

This document assumes you have a basic understand of the TFS administrative features. In order to keep this document to a reasonable size we will skip over many of the the common administrative tasks. Before we get started make sure you have a team project created and ready to be configured. The team project should be new and not contain any content or have been modified.

Also note that our example team project name is “Office of Finance and Administration”.

Teams

Teams are the backbone on providing the ability to manage several projects under a TFS Team Project. In this exercise we will create several teams.

Administration Team

First we need to create a high level administrative type team. Members of this team typically can read and contribute to all of the other teams. In this example we will create an “Administration Team” as our higher power team.

Team Name	Members	Description
 Administration Team	1 member	The default project team.

NOTE

When you create a new team project, TFS will automatically generate a default team. We find that it is easiest to just rename that team and then add a group accordingly.

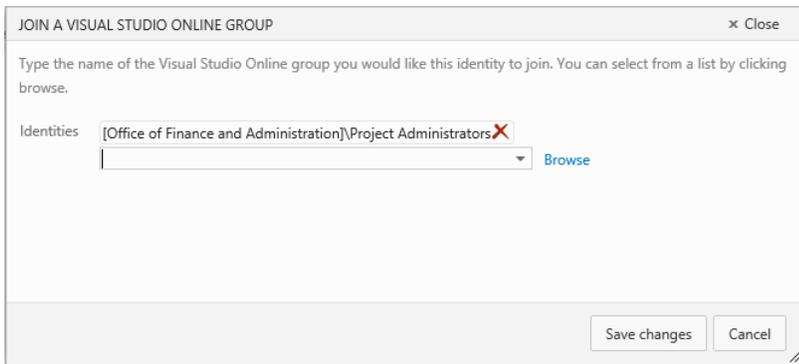
Make sure the team has the “Project Administrators” group included. This can be done on the Create New Team dialog or you can add the group after the team is created.

¹ <http://aka.ms/treasure5>

² <http://aka.ms/vsarunderstand>

³ <http://msdn.microsoft.com/en-us/library/dn306083.aspx>

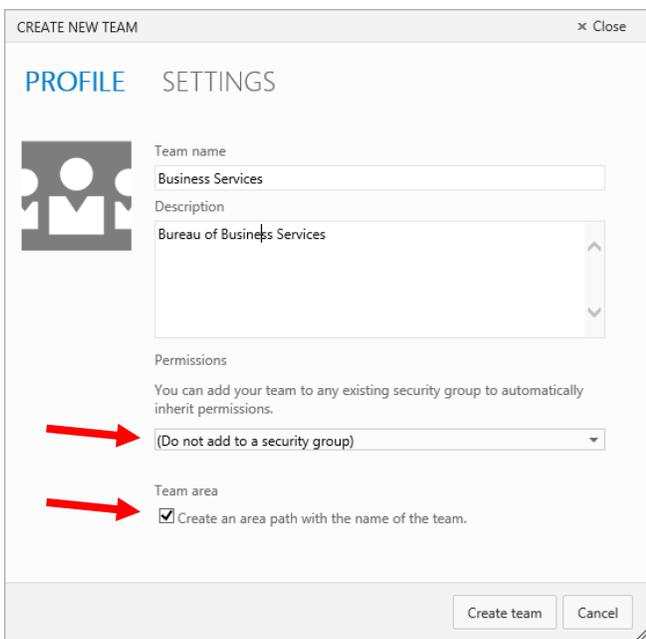
Multiple Team Project - Walkthrough



Everyone on the Administration Team should be Part of the Project Administrators group.

Add Additional Teams

Now let's add more teams to the project. On the Create New Team dialog, make sure you select "(Do not add to a security group)" from the drop down list and the "Create an area path with the name of the team" item is checked.



NOTE

If you want all teams to have read access across the entire project then you can select the Readers security group. If you want to manage security so that a user from one team cannot access content in another team then select **(Do not add to a security group)**. You can then manage security later. In this example, we are going to manage the security later.

Repeat this step to create four new additional teams of:

- Budget and Fiscal Management
- Business Services
- Information Processing
- Personnel Management

The list of teams should look like this:

Teams

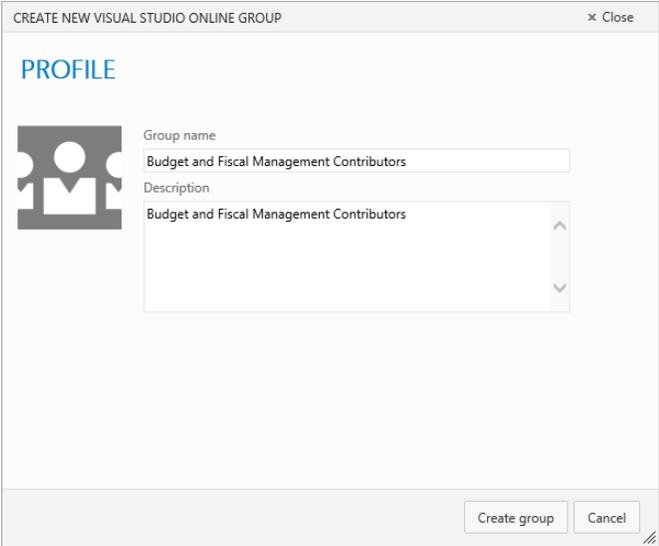
Team Name	Members	Description
 Administration Team	1 member	The default project team.
 Budget and Fiscal Mana...	1 member	Bureau of Budget and Fiscal Management
 Business Services	1 member	Bureau of Business Services
 Information Processing	1 member	Bureau of Information Processing
 Personnel Management	1 member	Bureau of Personnel Management

Create Security Groups

We now need to setup security groups and permissions to dictate user access. One of the easiest ways is to create one or many Groups for each team.

Contributor and Readers Group

First let's create all the groups. In this example I am going to create a contributors and readers group for each team.



CREATE NEW VISUAL STUDIO ONLINE GROUP x Close

PROFILE

 Group name
Budget and Fiscal Management Contributors

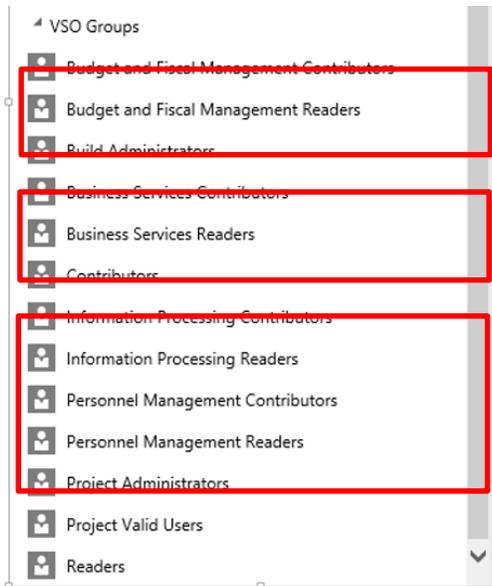
Description
Budget and Fiscal Management Contributors

Create group Cancel

NOTE

If you want all your users to view all of the work items for all the different teams, then you would not need a separate Readers group per team. Instead you would add all your users to the existing Readers group.

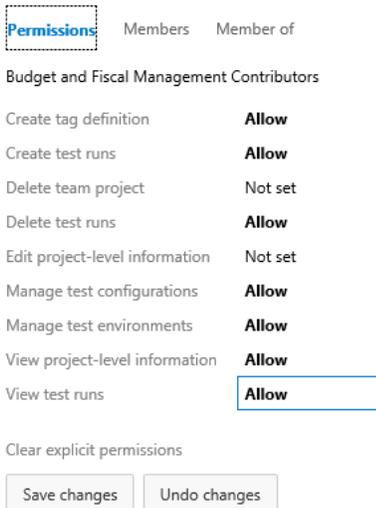
You should now have a list of groups that look like this:



Set Permissions on Groups

Now that all of the groups have been created we can go ahead and set permissions on each of those. We recommend using the default permissions for a Contributor and Reader as it is easier to maintain and provides less administrative overhead.

For the **Contributors** groups we will use the Contributor default permissions.



For the **Reader** groups we will use the Readers default permissions

Multiple Team Project - Walkthrough

Permissions Members Member of

Budget and Fiscal Management Readers

Create tag definition	Not set
Create test runs	Not set
Delete team project	Not set
Delete test runs	Not set
Edit project-level information	Not set
Manage test configurations	Not set
Manage test environments	Not set
View project-level information	Allow
View test runs	Allow

Clear explicit permissions

Save changes Undo changes

Make sure you set permissions on each group before proceeding with adding group members.

Add Members to Group

Now you can add members to each of your security groups.

Create VSO group

Search

Teams

- Administration Team
- Budget and Fiscal Management
- Business Services
- Information Processing
- Personnel Management

VSO Groups

- Budget and Fiscal Management Contributors**
- Budget and Fiscal Management Readers
- Build Administrators
- Business Services Contributors
- Business Services Readers
- Contributors
- Information Processing Contributors
- Information Processing Readers
- Personnel Management Contributors
- Personnel Management Readers
- Project Administrators
- Project Valid Users
- Readers

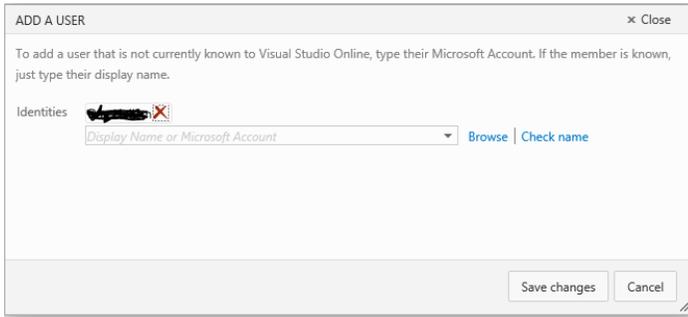
Permissions **Members** Member of

Add... | Search

Display Name Username Or Scope

No identities found in current scope.

Save changes once the users are added.

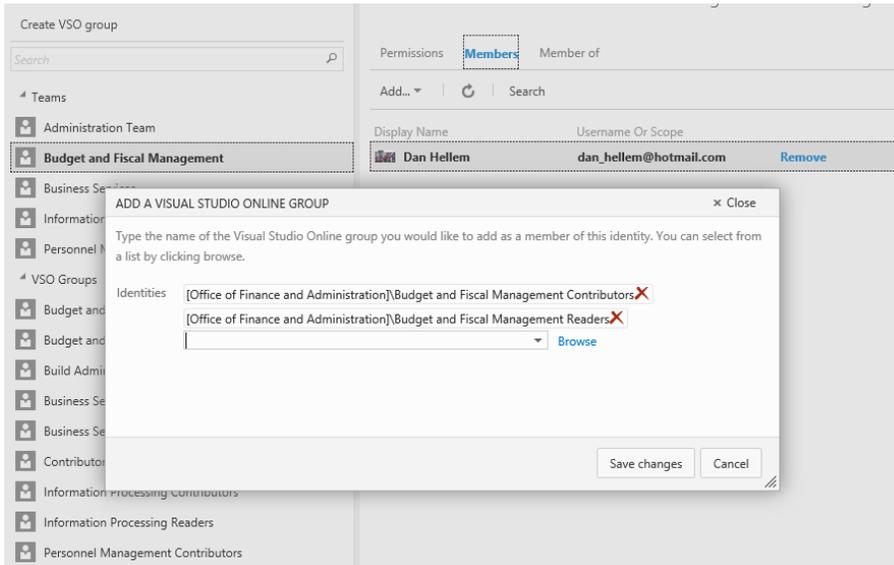


Manage Team Membership

Add Members

Now that our groups are created and have members, we need to add them to the appropriate teams.

On the same screen, click on the team you want to manage, here we select the Budget and Fiscal Management team. Then click the members tab in the right pane. Finally click Add > Groups. Search and choose the correlating contributor and reader groups (again, in this example: Budget and Fiscal Management Contributors, Budget and Fiscal Management Readers) and Save changes.



You will want to do the same for each of the teams you have established.

NOTE

In this scenario the users in the Project Administrators group will have access to all of the teams. So we will add the Project Administrator group to each team.

Team Iterations

Create Team Iterations

In this scenario we are going to create an iteration for each team. Then each team can manage their own individual iterations.

WARNING

It should be noted that we recommend that all of your teams follow the same iteration cadence as it is easier to plan, scale, and deliver as your teams and projects grow.

Multiple Team Project - Walkthrough

In Administration console go to Control Panel > DefaultCollection > Project Name. Click on the Iterations tab.

Iterations	Start Date	End Date
Office of Finance and Administration		
<input checked="" type="checkbox"/> Iteration 1		Set dates
<input checked="" type="checkbox"/> Iteration 2		
<input checked="" type="checkbox"/> Iteration 3		Set dates

Modify the list so it appears as follows.

Iterations	Start Date	End Date
<input checked="" type="checkbox"/> Office of Finance and Administration		Set dates
<input type="checkbox"/> Budget and Fiscal Management		Set dates
<input type="checkbox"/> Business Services		
<input type="checkbox"/> Information Processing		
<input type="checkbox"/> Personnel Management		

Default Team Backlog Iteration

We now need to set the default iteration for each team. From the overview tab we see a list of teams. Click on the “Budget and Fiscal Management” team.

Overview | Iterations | Areas | Security | Alerts | Version Control | Services

Project profile

Teams

Team Name	Members	Description
Administration Team	2 members	The default project team.
Budget and Fiscal Mana...	4 members	Bureau of Budget and Fiscal Management
Business Services	4 members	Bureau of Business Services
Information Processing	4 members	Bureau of Information Processing
Personnel Management	4 members	Bureau of Personnel Management

Click on the Iterations tab. Right click on the “Budget and Fiscal Management” row and then select “Set as team’s backlog iteration”.

Iterations | Start Date

Office of Finance and Administration

Budget and Fiscal Management [Set dates](#)

- New
- New child
- Open
- Delete
- Security
- Set as team's backlog iteration

The default iteration is now set for the selected team.

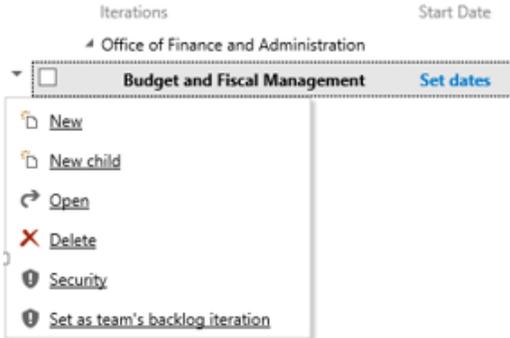
Security

We need to set some security on the team’s backlog iteration to allow some team members to create sub iterations. Depending on how you want to setup your security will depend on what individual or group you select.

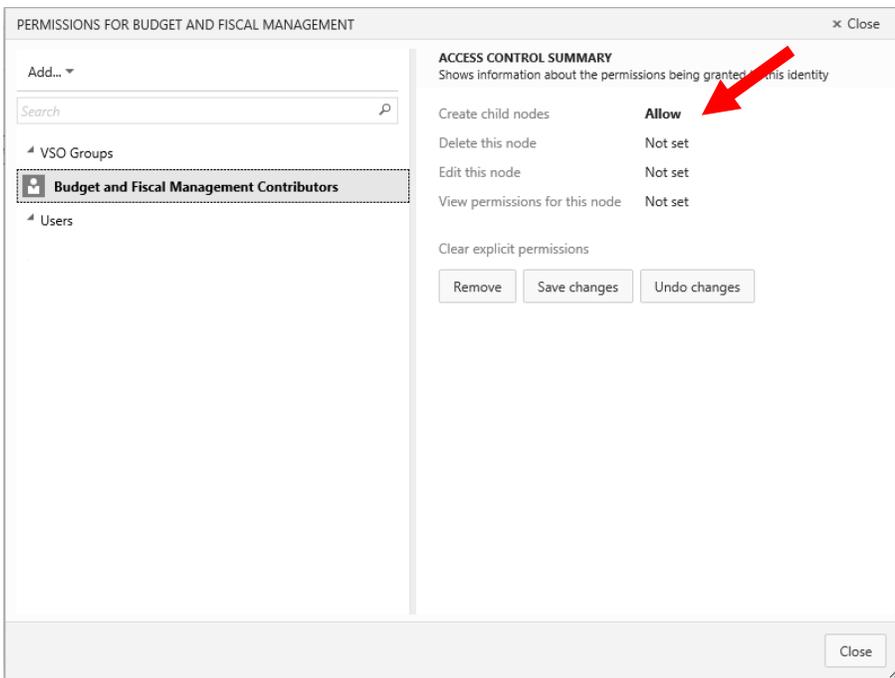
NOTE

In this example we are going to let the team contributors add new iterations for their team.

On the same screen right click on the “Budget and Fiscal Management” iteration (the one you just set as default iteration) and select the “Security” option.



Select the person or group that you want to allow to create iterations for the team. Then set the security to “Allow” for the “Create child nodes” permission. The rest of the items can remain at “Not set”. Click “Save changes” to apply your modifications.



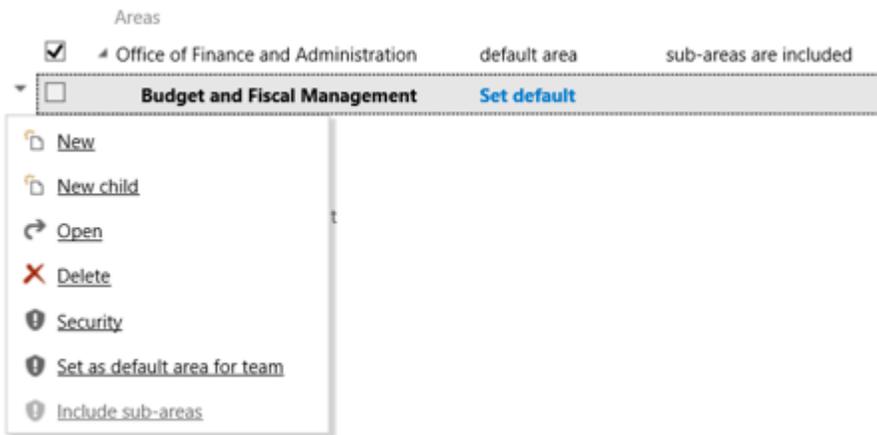
Complete the [same steps](#) for each of the team iterations.

Area Path Security

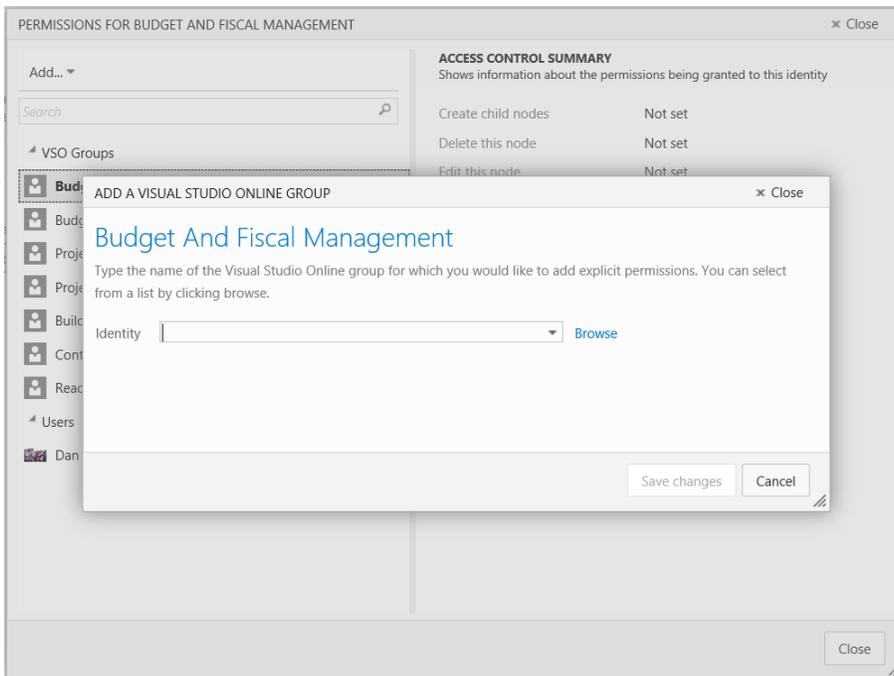
The corresponding area path for each team was created when you created the team name. However, the security is not yet setup for each area path (remember we elected to [not include it](#)). We will want to setup security for the area path so that 1) our readers are only able to have read access and 2) setup security and access across the team groups. For example we may not want team members from one group editing or creating work items for another team.

While in the Administration screen select the “Area” tab. You will see a list of the existing area paths. Right click on the first one (Budge and Fiscal Management for example) and select the Security item.

Multiple Team Project - Walkthrough



Click on Add to select a group.



We now want to add the corresponding readers and contributors groups. In this instance we are going to add the “Budget and Fiscal Management Contributors” and the “Budget and Fiscal Management Readers” groups.

After you add the contributor and reader group, highlight the Contributors group to add specific security and access rights. For **Contributors** you can add allow access to “Edit work items in this node”, “Manage test plans”, and “View work items in this node”.

ACCESS CONTROL SUMMARY

Shows information about the permissions being granted to this identity

Create child nodes	Not set
Delete this node	Not set
Edit this node	Not set
Edit work items in this node	Allow
Manage test plans	Allow
View permissions for this node	Not set
View work items in this node	Allow

Clear explicit permissions

Remove

Save changes

Undo changes

For **Readers** you may just want to add Allow access to the “View work items in this node”.

ACCESS CONTROL SUMMARY

Shows information about the permissions being granted to this identity

Create child nodes	Not set
Delete this node	Not set
Edit this node	Not set
Edit work items in this node	Not set
Manage test plans	Not set
View permissions for this node	Allow
View work items in this node	Not set

Clear explicit permissions

Remove

Save changes

Undo changes

Complete [setting up security](#) for each area path.

NOTE

If you want to share data across teams and areas then you will need to add those specific groups as well so they can gain access to the work items.

If you have a lot of Teams and Areas and you are trying to restrict access across those teams, managing security at this level can be tedious process. Consider having a smaller number of team and paths or easing on the security restrictions.

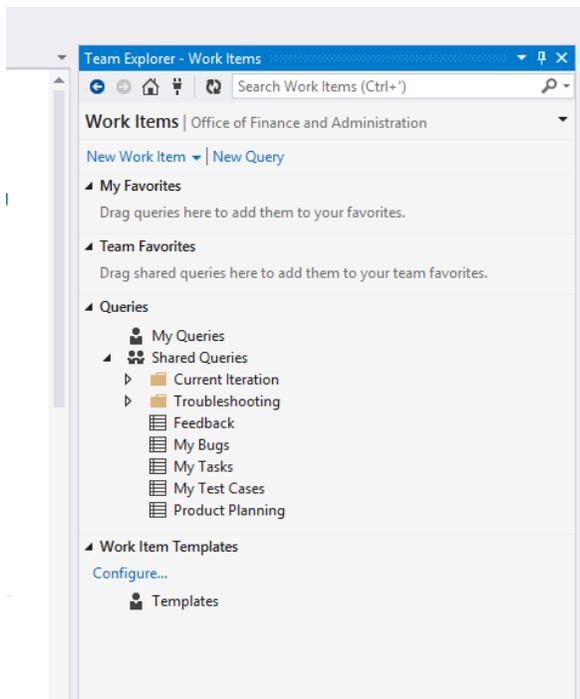
Queries

Baseline All Existing Queries

We need setup a structure and security so that each team can manage their own queries without effecting the other teams. To do this we need to create a master copy of all of our shared queries and then create a folder for each team to manage on their own.

Multiple Team Project - Walkthrough

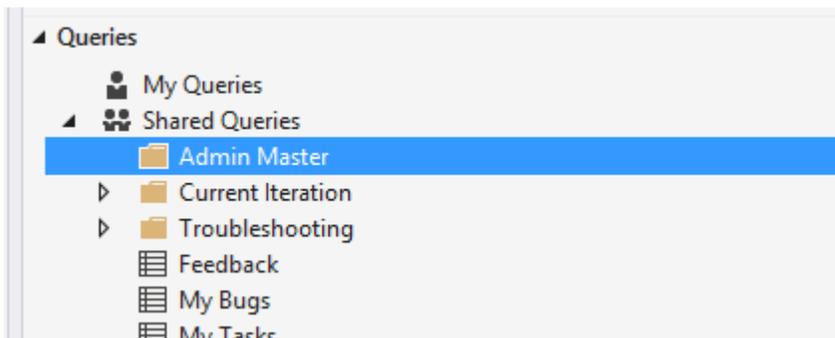
Open Visual Studio 2013 and connect to the Team Project. From team explorer click on Work Items to see and manage all of the queries.



NOTE

We need to use Visual Studio because the ability to copy and edit queries does not exist yet in the web access.

Right click on Shared Queries and create new folder. Name the folder to something so that you know it is the master list of queries. In this example we will use "Admin Master".



Open each and every query in the Current Iteration folder and modify it so it no longer has reference to Iteration 1. Make sure you modify and save all of the queries.

NOTE

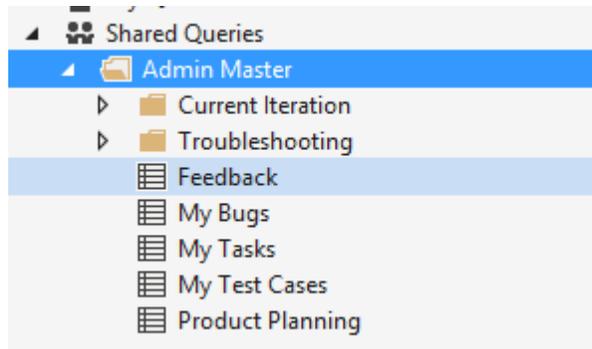
You may get several errors when trying to open and edit the queries that are in the Current Iteration folder. This is to be expected. Because we changed the iteration names, the queries are trying to reference an iteration path that does not exist.

WARNING

If you don't remove the reference to Iteration 1 you will receive an error when trying to move the queries into another folder.

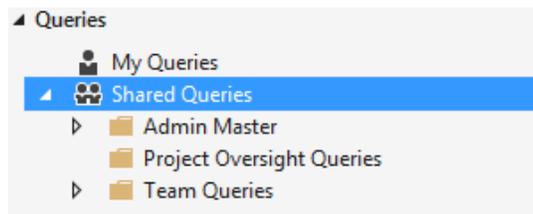
TF51011: The specified iteration path does not exist. The error is caused by «'Office of Finance and Administration\Iteration 1'».

Move all the queries into the “Admin Master” folder. Your folder structure should look like this:



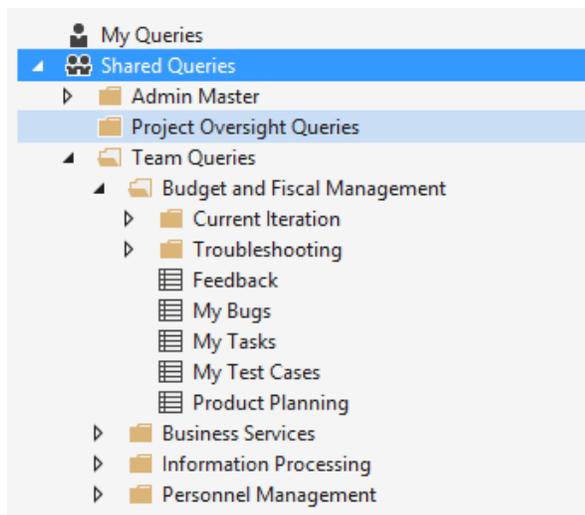
Team Query Folders & Security

Create a new folder for your Project Oversight Queries and another new folder for your Team Queries.



Project Oversight Queries will be used by those team members that are tracking the entire portfolio ([Administration Team](#)). Typically only high level stakeholders will need access to these queries and the rest of the team members will be accessing queries only within their active team. In this example we are not going to create specific oversight queries.

Now create individual team folders inside the Team Queries folder. Then copy the contents from the Admin Master folder into each team folder.



Now that all of the queries are in each of the team folders, we should lock down the admin master folder so that those queries do not get modified or deleted.

Setting Security for Admin Master Folder

Go back into the web browser and click on Work. Right click on the Admin Master folder and select Security.

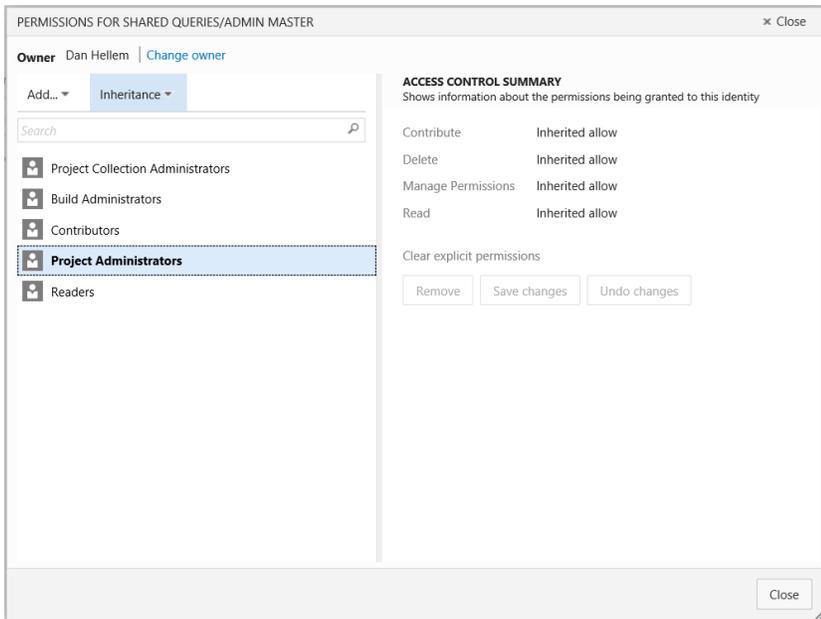
NOTE

If you are using IE you may receive the below warning when opening the security options from Visual Studio. It should not cause any errors but does not provide an optimal experience. If you load the same screen from web access you will not receive the error.

Owner: ~~XXXXXXXXXX~~ [Change owner](#)
Visual Studio Online does not support your browser. Please upgrade to a supported browser to ensure a fantastic experience! [Learn more.](#)

ACCESS CONTROL SUMMARY

Make sure that your Project Administrator and Project Collection Administrator are the only groups that have full access to the Admin Master folder.



Set Security on Other Query Folders

Right click on another folder (Example: Budget and Fiscal Management) and select Security. Add security for the respective Contributors and Readers. Below is an example of the security settings you can apply.

Contributors (Example: Budget and Fiscal Management Contributors)

ACCESS CONTROL SUMMARY

Shows information about the permissions being granted to this identity

Contribute	Allow
Delete	Not set
Manage Permissions	Not set
Read	Allow

Clear explicit permissions

[Remove](#) [Save changes](#) [Undo changes](#)

Readers (Example: Budget and Fiscal Management Readers)

ACCESS CONTROL SUMMARY

Shows information about the permissions being granted to this identity

Contribute	Not set
Delete	Not set
Manage Permissions	Not set
Read	Allow

[Clear explicit permissions](#)

Remove

Save changes

Undo changes

Complete [these steps](#) for the other query folders.

Now the contributors for each team can modify the current iteration queries to match their current iteration settings.

NOTE

As your team progresses thru the iterations, you will need to update the queries in the Current Iteration folder accordingly.

Source Control

You may need to setup security on the individual team projects or sub projects. In this scenario we are going to setup security so only the users (Contributors and Readers) on the team can view or modify code.

Create Folder Structure

An admin user will need to open the team project in Visual Studio and go into Source Control Explorer. Now create the individual team folders and check-in to source control. In this example we will be creating the following folders.

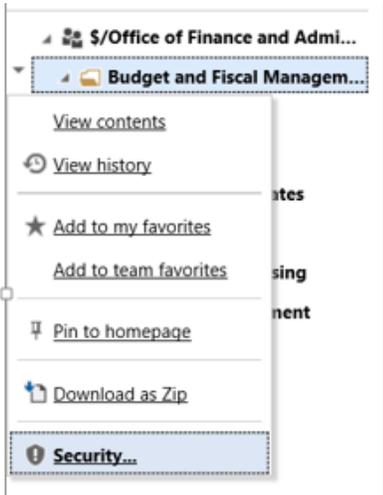
- Office of Finance and Administration
 - Budget and Fiscal Management
 - BuildProcessTemplates
 - Business Services
 - Information Processing
 - Personnel Management

NOTE

Creating and mapping your local workspace is not in the scope of this document. If you need assistance with this please see the [MSDN](#) or [ALM Ranger](#) resources <http://msdn.microsoft.com/en-us/library/ms181383.aspx>.

Security

For consistency let's open the project again in web access and click on the Code tab. Right click on a folder (Budget and Fiscal Management) and select Security.



Add security for the respective Contributors and Readers. Below is an example of the security settings you can apply.

Contributors (Example: Budget and Fiscal Management Contributors)

ACCESS CONTROL SUMMARY

Shows information about the permissions being granted to this identity

Administer labels	Not set
Check in	Allow
Check in other users' changes	Not set
Check out	Allow
Label	Allow
Lock	Allow
Manage branch	Allow
Manage permissions	Not set
Merge	Allow
Read	Allow
Revise other users' changes	Not set
Undo other users' changes	Not set
Unlock other users' changes	Not set

Clear explicit permissions

Readers (Example: Budget and Fiscal Management Readers)

ACCESS CONTROL SUMMARY

Shows information about the permissions being granted to this identity

Administer labels	Not set
Check in	Not set
Check in other users' changes	Not set
Check out	Not set
Label	Not set
Lock	Not set
Manage branch	Not set
Manage permissions	Not set
Merge	Not set
Read	Allow
Revise other users' changes	Not set
Undo other users' changes	Not set
Unlock other users' changes	Not set

Clear explicit permissions

Remove

Save changes

Undo changes

Complete [these same steps](#) for the other folders.

NOTE

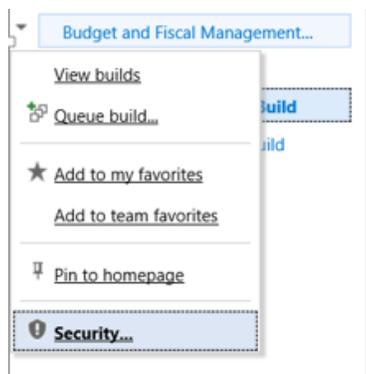
It is a good idea to give at least one high-end user full access for all of the permissions. It will be needed if you need to undo/unlock other user's changes.

Build Definitions

If you are in an organization where you need to restrict code access between your teams then you most likely want to restrict access with the build definitions as well. Once the build definitions are created you can setup security accordingly.

Securing Build Definitions

Open the team project from web access and click on the Builds tab. Select a build definition you want to manage security on, right click, and select Security. In this example we are going to manage the Budget and Fiscal Management Build.



You are now displayed a list of all the available groups for the team project. By default, inheritance is enabled and your security is setup for you. However, in this case I don't want contributors or readers on other teams to view, edit, or

Multiple Team Project - Walkthrough

execute build definitions on my team. I will then go into each corresponding team contributor and reader group and Deny their ability to view the selected build definition.

You will need modify each group like this that you do **not** want to give access to the build definition.

The screenshot shows a dialog box titled "PERMISSIONS FOR BUDGET AND FISCAL MANAGEMENT BUILD". On the left, a list of groups is shown, with "Personnel Management Contributors" selected. On the right, the "ACCESS CONTROL SUMMARY" table lists various permissions and their current status. A red arrow points to the "View build definition" row, which is set to "Deny".

Permission	Status
Administer build permissions	Not set
Delete build definition	Not set
Delete builds	Not set
Destroy builds	Not set
Edit build definition	Not set
Edit build quality	Not set
Manage build qualities	Not set
Manage build queue	Not set
Override check-in validation by build	Not set
Queue builds	Not set
Retain indefinitely	Not set
Stop builds	Not set
Update build information	Not set
View build definition	Deny
View builds	Inherited allow

Complete [these steps](#) for the each build definition.

Summary

Managing multiple teams as defined in this document has many advantages. It allows an oversight team to easily view and manage the product backlog as a whole by allowing them to move stories between teams. However, this flexibility comes at the cost of increased administration. You should discuss within your team of the advantages and disadvantages of both strategies and determine what is appropriate for your organizations.

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