


Drive Git development from a work item

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One of the ways your team can drive their development and stay in sync is to link your work items to the objects created during development, such as branches, commits, pull requests, and builds. You can begin that linking by creating a branch from one or more work items. Later, you can create pull requests, quickly open commits, and maintain a record of development operations performed to complete specific work.

Importante

This article addresses creating new branches and adding links to commits and pull requests to a Git repository hosted on Azure DevOps. To link to GitHub commits and pull requests, see [Link GitHub commits and pull requests to work items](#).

The Development section records all Git development processes that support completion of the work item. This section can show your team information needed to take the next development step and minimize navigational steps to accomplish common development tasks. It also supports traceability, providing visibility into all the branches, commits, pull requests, and builds related to the work item.

The screenshot shows a work item in the Azure DevOps interface. At the top, it's titled '398 Cancel order form' and is assigned to 'Jamal Hartnett'. There are 5 comments and a 'Save & Close' button. Below the header, the work item is categorized as 'Active' with the area 'Fabrikam Fiber' and reason 'Implementa...'. It was updated 18 hours ago. The description field contains a screenshot of a 'Cancel' button on a web form. The right-hand pane shows the 'Development' section with a list of linked items, including a file 'features/cancel-order-form' and a pull request, all created or updated within the last 35 minutes. The 'Related Work' section at the bottom also has an 'Add link' button.

From it, you can quickly access branches, pull requests, and commits which are linked to the work item. Also, you can initiate a pull request for a branch you've created or linked to from the work item.

Prerequisites

- You must connect to a project. If you don't have a project yet, [create one](#).
- You must be added to a project as a member of the **Contributors** or **Project Administrators** security group. To get added, [Add users to a project or team](#).
- To add or modify work items, you must be granted **Stakeholder** access or higher. For details, see [About access levels](#).
- To view or modify work items, you must have your **View work items in this node** and **Edit work items in this node** permissions set to **Allow**. By default, the **Contributors** group has this permission set. To learn more, see [Set permissions and access for work tracking](#).
- To create new tags to add to work items, you must have **Basic** access or higher and have the project-level **Create new tag definition** permissions set to **Allow**. By default, the **Contributors** group has this permission set. Even if the permission is explicitly set for a **Stakeholder**, they won't have permission to add new tags, as they are prohibited through their access level.

Workflow process to create a branch and pull request

Consider creating a new branch when there are no linked code artifacts. If there is a branch but no pull requests, consider creating a pull request. Here's a typical workflow sequence when working with a Git repository.

1. Start work on the work item by creating a branch. You can add a new Git branch from within the Development section...

The screenshot shows a work item in the Azure DevOps interface. At the top, it's titled '513 Cancel order form' by user 'Jamal Hartnett'. The 'State' is 'New' and the 'Area' is 'Fabrikam Fiber'. The 'Reason' is also 'New' and the 'Iteration' is 'Fabrikam Fiber\Sprint 3'. The 'Description' section contains a text box with the instruction: 'Provide a **cancellation order form** similar to the screen shown. See the attached storyboard for details.' Below this is a storyboard image of a form with a header 'Order details here', a large green input area, and an orange 'Cancel' button. The 'Development' section on the right has a '+ Add link' button and a message 'Development hasn't started on this item.' with a link 'Create a new branch' circled in orange. There are also sections for 'Planning' (Story Points, Priority 2, Risk) and 'Classification'.

USER STORY 513

513 Cancel order form

Jamal Hartnett 0 Add tag Save & Close Follow

State **New** Area Fabrikam Fiber Updated 14 minutes ago

Reason New Iteration Fabrikam Fiber\Sprint 3

Details (2)

Description

Provide a **cancellation order form** similar to the screen shown. See the attached storyboard for details.

Order details here

Cancel

Development

+ Add link

Development hasn't started on this item.

[Create a new branch](#)

Related Work

+ Add link

There are no links in this group.

Planning

Story Points

Priority 2

Risk

Classification

... or, from the form's **...** Actions menu.

USER STORY 513

513 Cancel order form

Jamal Hartnett 0 Add tag Save & Close Follow

State: **New** Area: **Fabrikam Fiber** Reason: **New** Iteration: **Fabrikam Fiber\Sprint 3**

Description

Provide a **cancellation order form** similar to the screen shown. See the attached storyboard for details.

Order details here

Cancel

Planning

Story Points

Priority: 2

Risk

Classification

Refresh
Revert changes
New linked work item
Change type...
Move to team project
Create copy of work item...
Email work item
Delete
Templates
Start storyboarding
Request feedback
New branch...
Customize
Visualize

Name the branch and select the repository on which it's based.

Create a branch

Name

features/cancel-order-form

Based on

Fabrikam Fiber master

Work items to link

Add work items

10 Cancel order form
Updated 13 minutes ago, New

Create branch Cancel

Branches you create are automatically linked to the work item.

Observação

You can only create a branch once you've added files to the main branch, which is always named `master`. The system automatically adds a README file to the initial repo created with each new project.

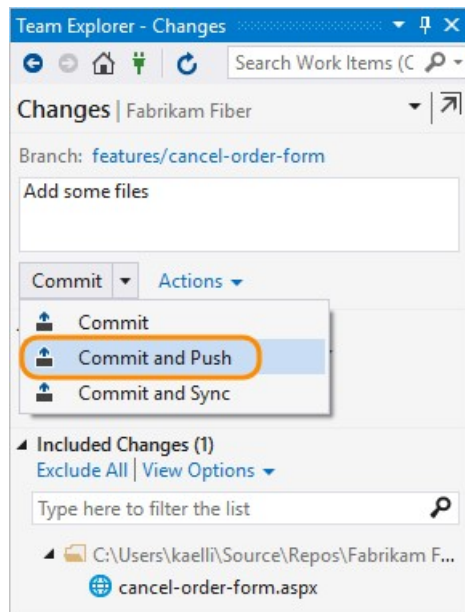
2. The system will open to the repository and branch that you just created.

You can edit a file within the web portal.

Or, if you have extensive file edits or need to add files, then you'll need to work from Visual Studio or other supported IDE. You'll want to add a new local branch from the branch you just created. For details, see [Update code with fetch and pull](#), [Download changes with fetch](#). (While any code editing and committing process will work, we work best with an edition of Visual Studio.)

3. Add or modify files in the branch that you created.

From Visual Studio or other supported IDE, commit and push changes from your local branch to the repository.




If this is the first time pushing changes from a new branch, you'll need to publish the branch before pushing your changes. For more details, see [Share code with push](#).

4. Create a [pull request](#) from the work item form.

You create a pull request to merge the changes you made to a master branch and get your changes reviewed by other members of your team.

USER STORY 513

513 Cancel order form

 Jamal Hartnett

0

Add tag

Save & Close

Follow

...

State **New**

Area Fabrikam Fiber

Updated 14 minutes ago

Reason New

Iteration Fabrikam Fiber\Sprint 3








Details

🕒

🔗 (2)

📎

Description

B **I** **U**       

Provide a **cancellation order form** similar to the screen shown. See the attached storyboard for details.

Order details here

Cancel

Planning

Story Points


Priority 2

Risk

Classification

Development

+ Add link

 Updated README.md

Created an hour ago, ✓ Completed

Create a pull request

Related Work

+ Add link

There are no links in this group.

5. Your view will switch to **Code**, Pull Requests page. Complete creating the pull request as shown.

Fabrikam Fiber

Files

History

Branches

Pull Requests

New pull request





features/cancel-order-form

into

master



Title *
Updated README.md

Description
Updated README.md
Markdown supported.

Aa **B** **I**     @ #


Updated README.md

Reviewers

 [Fabrikam Fiber A]\Fabrikam Fiber A Team  Search users and groups to add as reviewers

Work Items

Search work items by ID or title

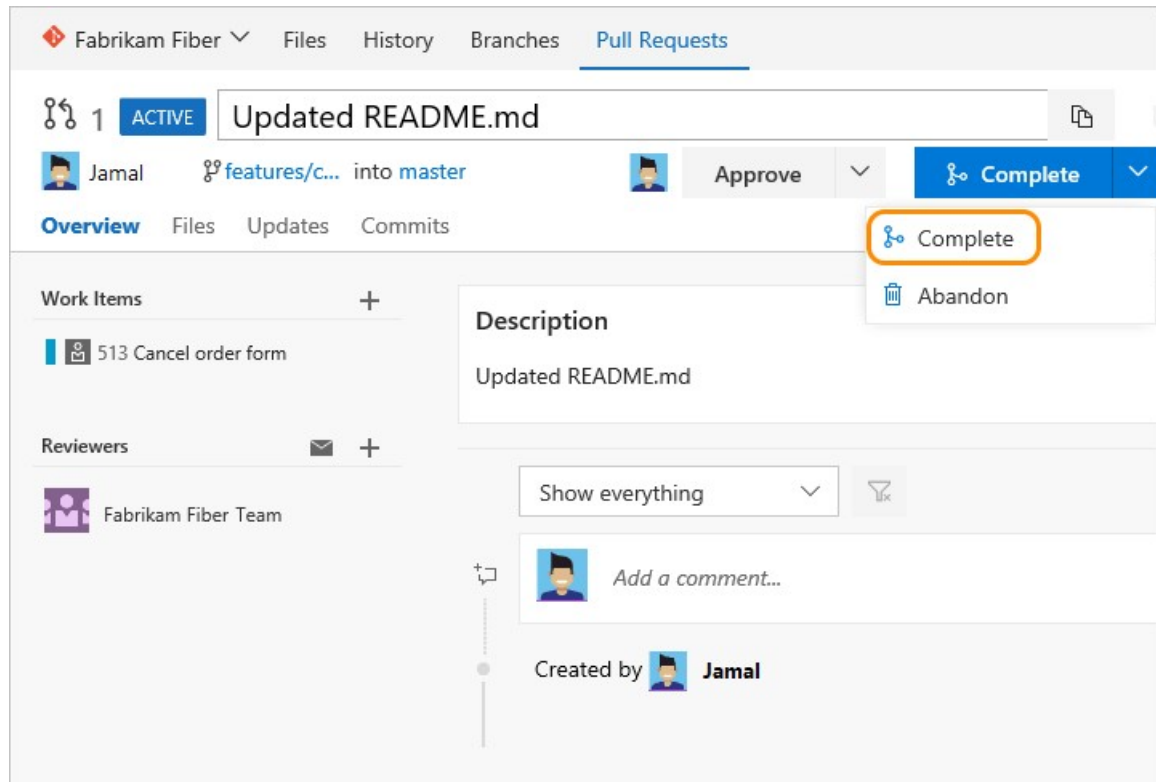
 513 Cancel order form

Updated 10 minutes ago, ● New

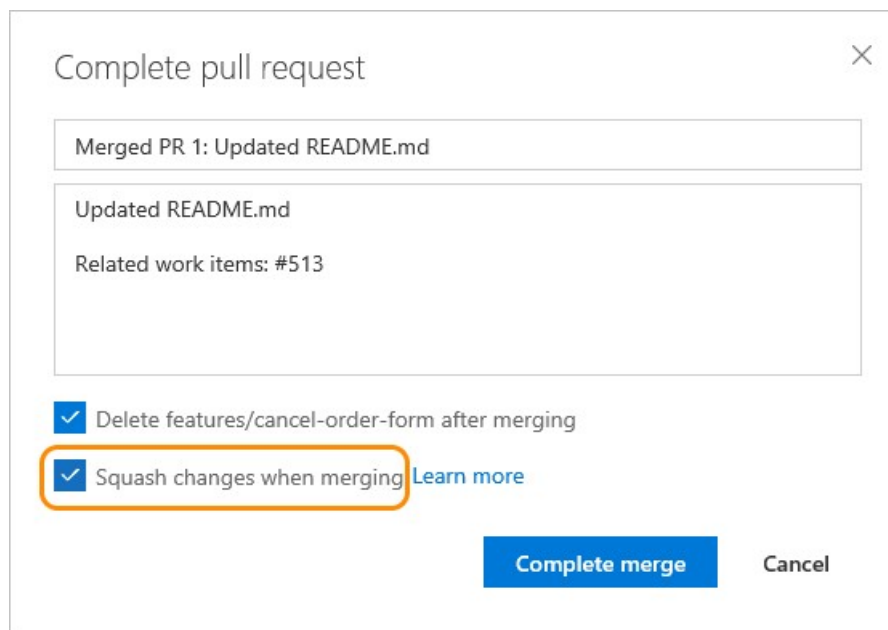
Create

📌 Observação

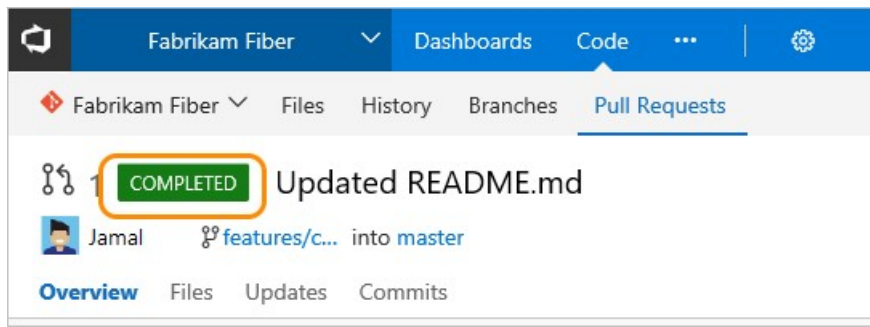
Once you've created a pull request, you can't create a new pull request for the same branch until you complete the previous pull request.




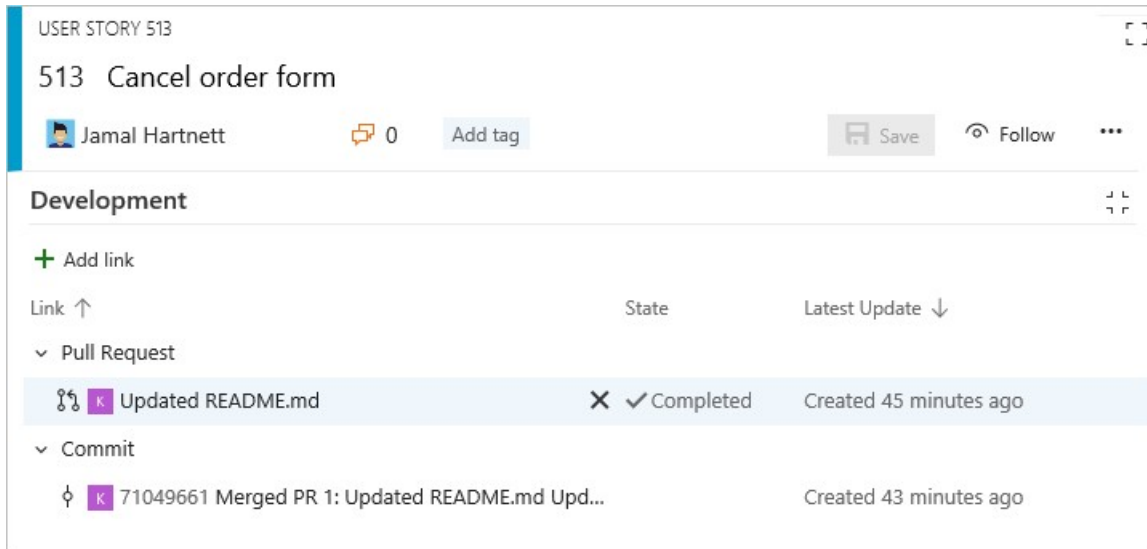
Check the box for **Squash changes when merging** and then complete the merge.



6. Upon completion, you should see a similar screen as follows.



- Open the work item form or refresh the form, expand the Development section (click the  icon), and you'll see the links that have been added to support the operations you just completed.



Create a branch for several work items

You can also add a new branch from the work item listed on the backlog or Kanban board without having to open the work item. Using [multi-select](#), you can select several work items and create a new branch where they're all linked to the branch.

For example, here we select the first five items to link to a new branch.

Stories

Backlog

Board

Forecast OffParents HideIn progress items ShowMapping On

New

+

□

Create queryColumn options

Filter

	Order	State	Effort	Title	Tags	Node Name
+	1	● Approved	3	■ Hello World Web Site		Web
	2	● New	8	> ■ Slow response on information form		
	3	● New	5	■ Change initial view		
	4	● New	5	> ■ Secure sign-in		
	5	● New	8	■ Interim save on long form		
	6	● New	3	> ■ Welcome back page		
	7	● New	2	■ Canadian addresses don't display correctly		
	8	● Committed	13	■ Cancel order form		
	9	● New	3	■ Resume		
	10	● New	8	■ GSP locator interface		
	11	● New	5	■ Research architecture changes		
	12	● New	5	■ Switch context issues		
	13	● Approved	8	■ Request support		
	14	● Approved	8	■ Phone sign in		
	15	● New	8	■ Check service status		
	16	● New	3	■ Pause		

...

Web

✎ Edit...

👤 Assign to >

📄 Copy to clipboard

✖ Delete

Add link >

Move to iteration >

Change parent...

Change position...

↔ Change type...

📁 Move to team project...

✉ Email...

🌿 New branch...

🔬 Do exploratory testing

And, we specify the name of the branch.

×

Create a branch

Name

Initial-perf-tests

Based on

Fabrikam Fiber

89

master

Work items to link

Add work items

32

Secure sign-in

Updated less than a minute ago, New

31

Slow response on form

Updated 3 minutes ago, New

28

Change initial title

Updated 2 minutes ago, New

27

Hello World Web Site

Updated less than a minute ago, New

33



Interim save on long forms

Updated less than a minute ago, New

Create branch

Cancel

Link to existing development and build objects

All items listed under the Development section also appear under the  Links tab. All development actions initiated from the Development section are also logged under the  History tab.

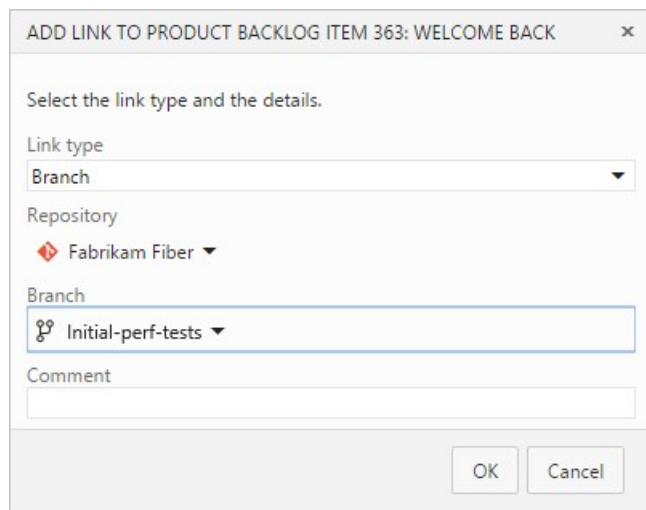
Add Tag

Details

Links


Title	ID	Work Item Type	Assigned To	State	Comment
Branch (1)					
features/cancel-order-form					
Commit (1)					
Commit 4ba415...					
Pull Request (1)					
2					

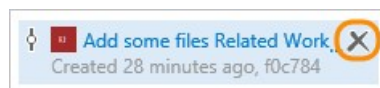
To link a work item to an existing object, click the  Add links icon and then choose the link type.





[Linking, traceability, and managing dependencies.](#)

Remove a link

If you want to remove a link, you can do so from the Development section by highlighting it first and then click the  delete icon.



Or, you can select it from the  Links tab and click the  remove link icon.

Related articles

Learn more about tracking work with work items and developing with Git from these resources:


- [Add work items](#)
- [Git overview](#)
- [Link GitHub commits and pull requests to work items](#)
- [TFVC overview](#)
- [Create your backlog](#)

Keep in mind that the Development section only appears within the web portal work item form. The work item tracking experience and forms that appear in Visual Studio or other supported clients will be missing several of the features that the web portal makes available.

Associated work items in build

With Git commits, any work items that have been linked to a commit will be listed under the Associated work items in the build summary page.

Build succeeded



Build VSO.PR_20170331.222 ¶
 Ran for 21.4 minutes (TfsAgentPool), completed 8.7 minutes ago

[Summary](#) [Timeline](#) [Code coverage*](#) [Tests](#) [WhiteSource Bolt Build Report](#)

Build details

Definition	VSO.PR (edit)
Source	201339
Source version	Commit b8775481
Requested by	Microsoft.VisualStudio.Services.TFS on behalf of [User Name]
Queued	Friday, March 31, 2017 10:56 AM
Started	Friday, March 31, 2017 10:56 AM
Finished	Friday, March 31, 2017 11:17 AM

Issues

Build

- ⚠ Machine Groups will be removed in future updates. Refer here - <https://go.microsoft.com/fwlink/?LinkID=799742&clcid=0x409> for more details
- ⚠ Machine Groups will be removed in future updates. Refer here - <https://go.microsoft.com/fwlink/?LinkID=799742&clcid=0x409> for more details

Associated work items

[User Story 959273](#) Kill off dead VS tests
 Current state is In Progress. Currently assigned to [User Name].

Associated changes


[dbcd41e](#) Authored by [User Name]
 Removed VS tests for VC area as well

[4fc335d](#) Authored by [User Name]
 Added missing references back

[38bd2ee](#) Authored by [User Name]
 Removed VS Tests for WIT

Link types showing in the Development section

Links shown in this section appear as a result of these actions:

- Creating a branch, commit, or pull request from the work item
- Specifying the work item ID during a commit, pull request, or other supported Git or TFVC operation
- Specifically linking the work item from the Development section or  Links tab to a source code branch, build, or other supported Git or TFVC operation.

Hovering over any entry listed under the Development section activates the hyperlink to the associated object.

The link types you can add within the development section are Branch, Build, Changeset, Commit, Found in build, Integrated in build, Pull Request, and Versioned Item.

