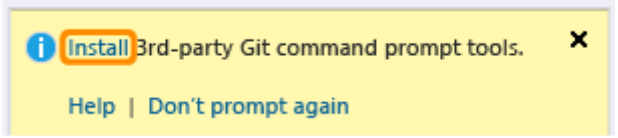
Work from the Git command prompt

Visual Studio provides most of the fundamental capabilities to develop an app in a Git version-controlled codebase. You might have to use the command prompt for some manual tasks or to automate work using a script.



Work from the command prompt

Caution: If you are not an experienced Git user, use the command prompt carefully. Make sure to research the command thoroughly before you use it.

I want to...	Can I do it in Visual Studio?	How do I do it from the command prompt?
Amend my last commit. Some typical cases: • Add a file you wanted to include in the commit. See Undoing Things. • Modify a comment. For example, maybe you want to change "Fix a bug" to "Fix bug #32" in order to associate the commit with a work item when you push you changes to TFS. See How do I edit an incorrect commit message in Git?	Yes	git-commit
Apply a tag to a commit	Yes	You can use the command prompt to push, edit tags (see Git-scm: Git Basics - Tagging) from a re if you have sufficient permissions.
Branch and merge	Yes (but some conflicts can be resolved only at command prompt).	git-branch, git-merge
Commit my changes	Yes	git-commit **Tip:** You can associate a work item with a comm the ID in your comment. For example, you apply #35 Catch null exception to your commit. When commit into TFS, the commit will be associated v #35.
Copy (clone) a remote repository to my dev machine	Yes	git-clone
Create (initialize) a local repository	Yes	git-init
Create or edit a note	No	You can use the command prompt to push, edit notes (see Git-scm: Note to Self) from a reposito

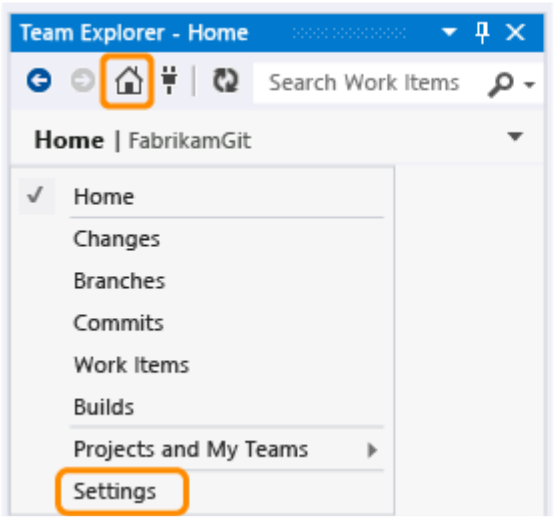
		have sufficient permissions.
Get information about my local repository (such as the remotes I am tracking)	Yes	git-remote
Preview (fetch) and then download (pull) changes from a remote repository	Yes (but some conflicts can be resolved only at the command prompt)	git-fetch, git-pull
Push changes to a remote repository	Yes	Git-scm: git-push
Replay commits from one branch onto another	Yes	Git-scm: Git Branching - Rebasing Git-scm: Rewriting History git-rebase
Re-order history, combine (squash) commits.	No	Git-scm: Git Branching - Rebasing Git-scm: Rewriting History git-rebase
Revert a committed change by applying the inverse of the commit. See rolling back changes with revert.	Yes	git-revert(1) Manual Page
Stash changes	No	Git-scm: Git Tools - Stashing
Undo committed changes by returning my local repo to a prior commit and de-referencing the later commit. **Caution:** According to Undoing Things, "...this is a dangerous command: Any changes you made to that file are gone - you just copied another file over it. Don't ever use this command unless you absolutely know that you don't want the file."	No	git-reset
View and manage my changes since the last commit	Yes	Git-scm: Git Basics - Recording Changes to the R Git-scm: Git Basics - Undoing Things
View history	Yes	Git-scm: Git Basics - Viewing the Commit History

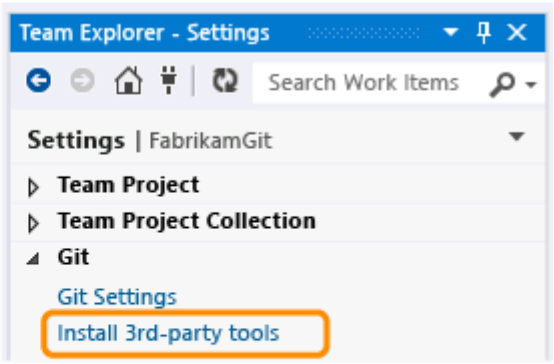
Get set up to use the command prompt tools

If you already have Git installed and on your PATH, then you only need to create a personal access token or alternate authentication credentials for authentication.
If you do not have Git, you can install it from here or follow the instructions below to install Git and command prompt tools.

Install the command prompt tools

If you have not already installed some command prompt tools, you can get some quickly from Visual Studio. (One way you can tell that you don't have the tools is if you try to enter a git command and get the `'git' is not recognized as an internal or external command...` message.)



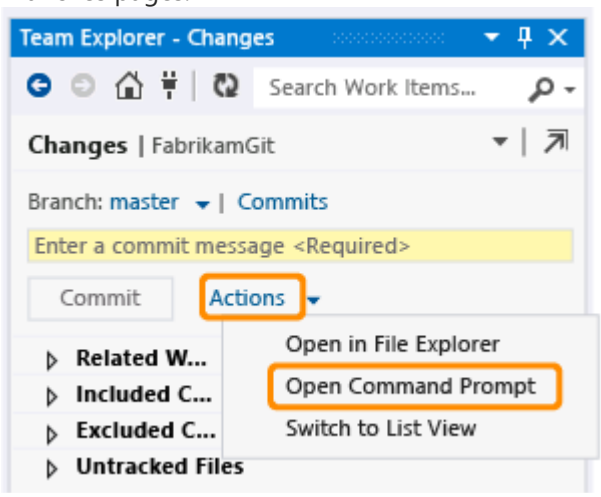


Tips:

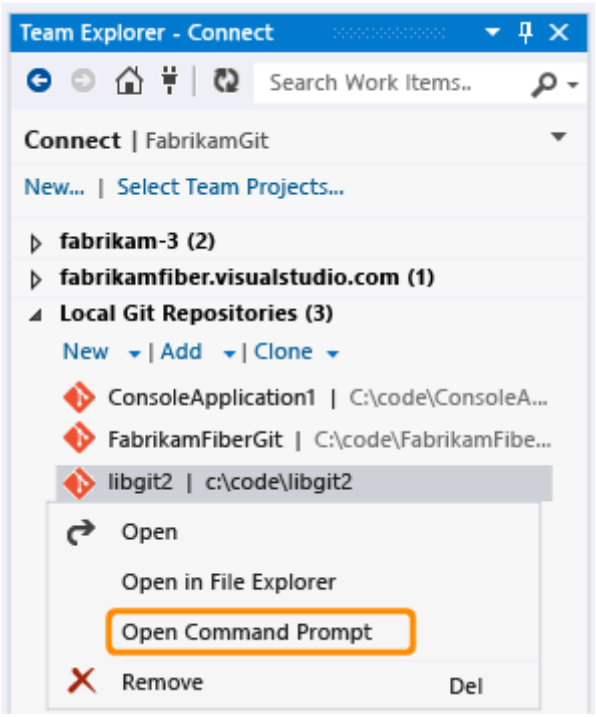
- The install process drops a Git Bash icon on your desktop. We recommend you delete this icon because we don't believe this entry point leads to the best experience. If for some reason you want to run Git Bash later, you can do so from Windows Start.
- To make using the command prompt less tedious (for example, to avoid having to enter your credentials every time you push), you might want to also install Windows Credential Store for Git.
- If you want to run Git commands from PowerShell, install Posh-Git (a PowerShell environment for Git).

Launch the Git command prompt

You can launch the Git command prompt from the Actions menu on the Changes (Keyboard: Ctrl + 0, G), Commits, and Branches pages.



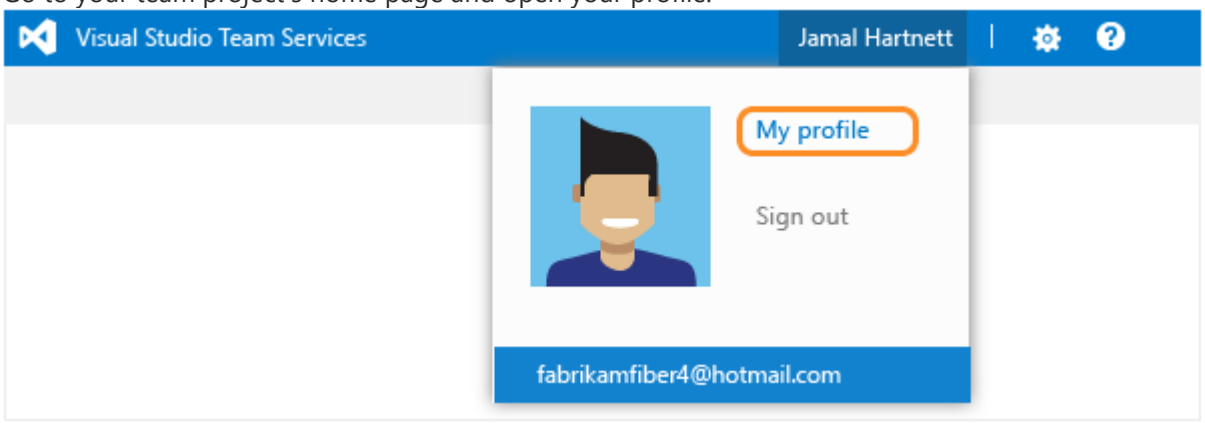
You can also launch the Git command prompt from repositories on the Connect (Keyboard: Ctrl + 0, C) page.



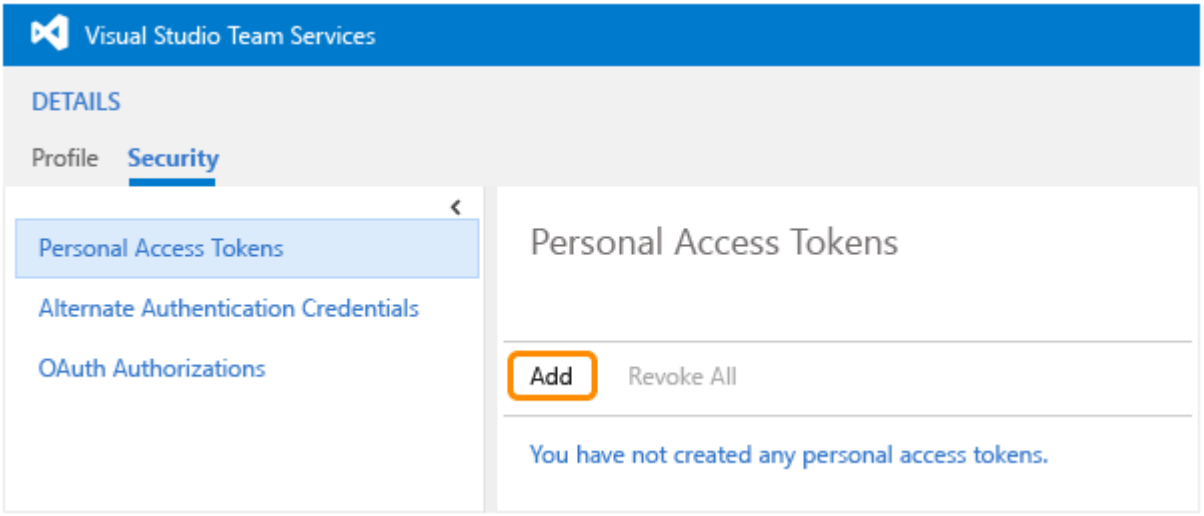
Create a personal access token for your Visual Studio Team Services account

If your repository is hosted on Visual Studio Team Services, you must authenticate access to your account before you can use the command prompt to perform Git tasks. To authenticate access, create a personal access token.

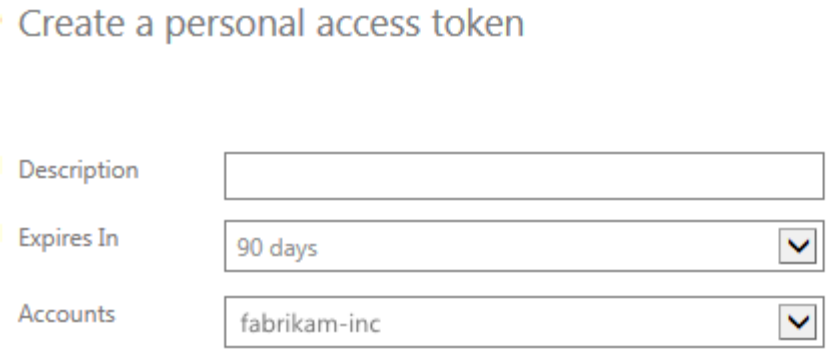
1. Sign in to your Visual Studio Team Services account (`http://[youraccount].visualstudio.com`).
2. Go to your team project's home page and open your profile.



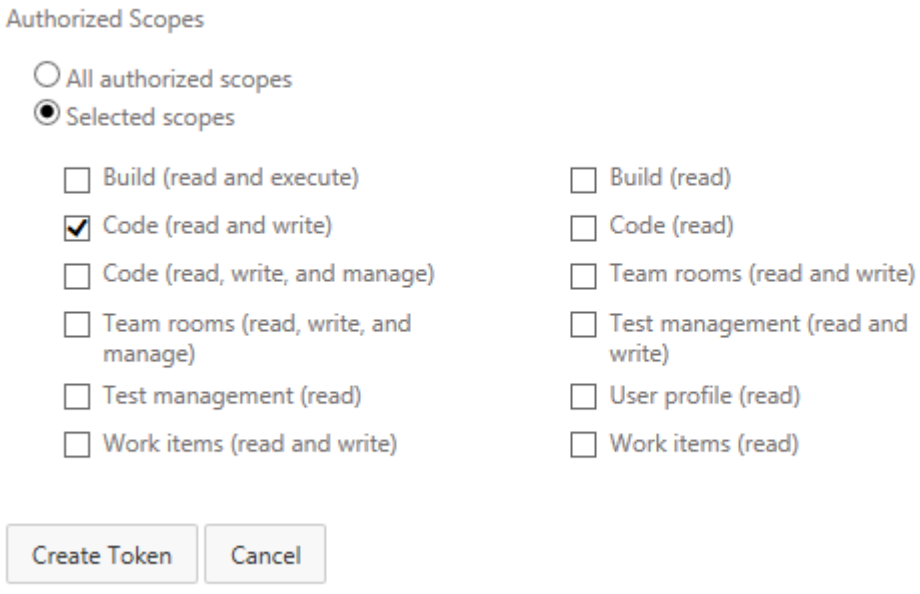
3. Create a new personal access token for this account.



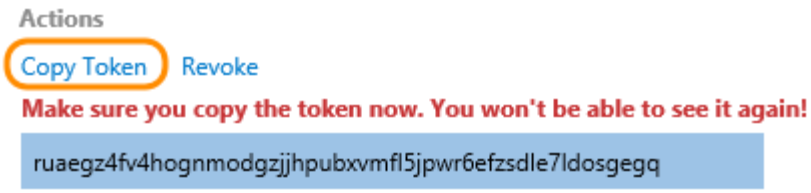
4. Enter the details for this token.



5. Select the scopes that this token authorizes.



6. After you finish creating the token, make sure to copy the token. You'll use this token as your password for your Git tools or application.



Note: Remember that these tokens are your identity. When used, the token is acting as you. Keep your tokens secret and treat them like your password. To help keep your token more secure, consider using the Windows Credential Store for Git so that you don't have to enter your credentials every time you push.
For example, if you use the Git command prompt to run a Git command, you'll be prompted for a username and password.

```
git clone https://[account].visualstudio.com/DefaultCollection/_git/[team project]
```

Enter a username that does not contain an @ character (for example, Jamal, not fabrikamfiber4@hotmail.com). Use the token that you created as your password.

```
Username for 'https://fabrikam-inc.visualstudio.com': Jamal


Password for 'https://fabrikam-inc.visualstudio.com': [COPY THE TOKEN HERE]
```

7. When you don't need your token anymore, just revoke the token to remove its access from this account.

Q & A

Q: Where can I learn more commands?

A: http://git-scm.com/docs

Q: Why should I use personal access tokens?

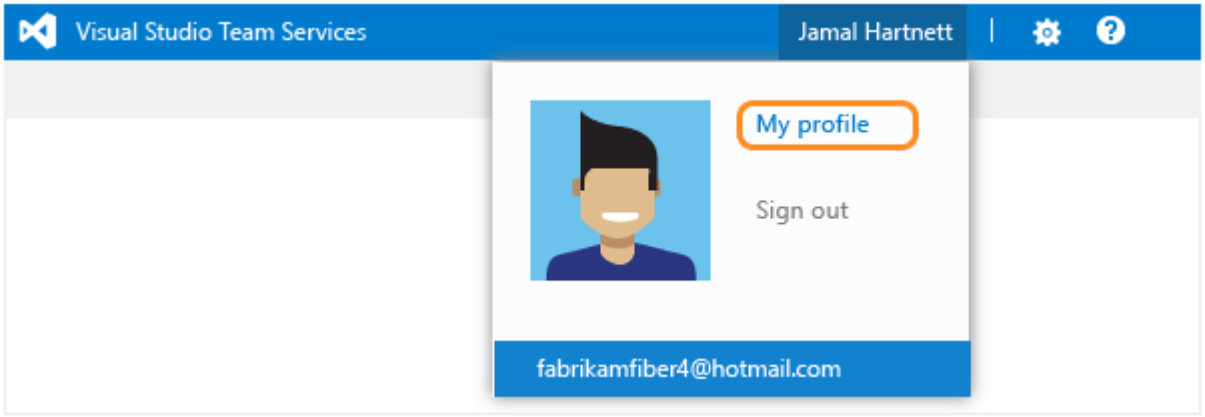
A: Personal access tokens are a more convenient and secure replacement for alternate authentication credentials. You can create a token and limit its use to:

- The token's lifetime
- A Visual Studio Team Services account
- Scopes of activities that this token authorizes

Q: Can I still use alternate authentication credentials?

A: Yes.

1. Sign in to your Visual Studio Team Services account (`http://[youraccount].visualstudio.com`).
2. Go to your team project's home page and open your profile.



3. Enable alternate authentication credentials for this account. Then provide a secondary username and password.