

Team Foundation Server (TFS) setup

Tags: Flow (<https://pluralsight.knowledgeowl.com/help/search?phrase=:Flow>)

This is a step-by-step guide to connect your TFS account to Flow.

For a successful connection:

- [Allowlist Flow's static IP addresses](https://pluralsight.knowledgeowl.com/help/using-flow-with-an-internal-server-or-behind-a-firewall) (<https://pluralsight.knowledgeowl.com/help/using-flow-with-an-internal-server-or-behind-a-firewall>) on port 443 over HTTPS.
- Have an SSL certificate that uses a public certificate authority.
- Have a public DNS record pointing to the IP address exposed for Flow analysis.

Who can use this?

<u>Core</u>	<u>Plus</u>
✓	✓

Important: Use a service account to create this Integration. Learn more about [Creating a service account](#) ().

In this article

[Permission requirements](#)

[TFS Version requirements](#)

[TFS configuration](#)

[Creating a personal access token](#)

[Finishing up](#)

[Troubleshooting](#)

Permission requirements

To use all integration services such as repos, pull requests, tickets, and webhooks, ensure the following:

- Review the personal access token scopes outlined below.
- The service account is a Project Collection Administrator at the organizational level.

To enable [webhooks](https://help.pluralsight.com/help/webhooks) (<https://help.pluralsight.com/help/webhooks>), the service account needs to be a Project Collection Administrator and have at least one repository imported from a project.

If you do not need webhooks, allow the View instance-level information permission to establish a connection and import repos. Add your service account to each project you want to import into Flow.

Permissions	Member of
Administer build resource permissions	Deny
Administer shelved changes	Deny
Administer workspaces	Deny
Alter trace settings	Deny
Create a workspace	Deny
Create new projects	Deny
Delete field from account	Deny
Delete team project	Deny
Delete team project collection	Deny
Edit instance-level information	Deny
Make requests on behalf of others	Deny
Manage build resources	Deny
Manage process template	Deny
Manage test controllers	Deny
Trigger events	Deny
Use build resources	Deny
View build resources	Deny
View instance-level information	Allow
View system synchronization information	Deny

[back to top](#)

TFS Version requirements

To integrate with Flow, your TFS version must be 2018 or higher.

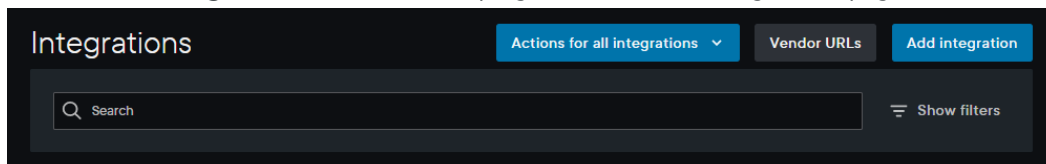
[back to top](#)

TFS configuration


To connect your TFS account, create a new integration.

To create an integration:

1. Click **Settings** in the top navigation.
2. In the left navigation under **Integrations**, click **Integrations**.
3. Click the **Add Integration** button in the top right corner of the integrations page.



4. Select **TFS** from the Integration Provider list.
5. Input your email, password, personal access token, and base URL of the service account. The base URL looks like: `https://{your_TFS_domain}/{yourorganization}`



TFS

Select an Authentication Method

In order to create an integration with TFS, please provide an authentication method. [How do I do this?](#)

Access Token

Username

Password

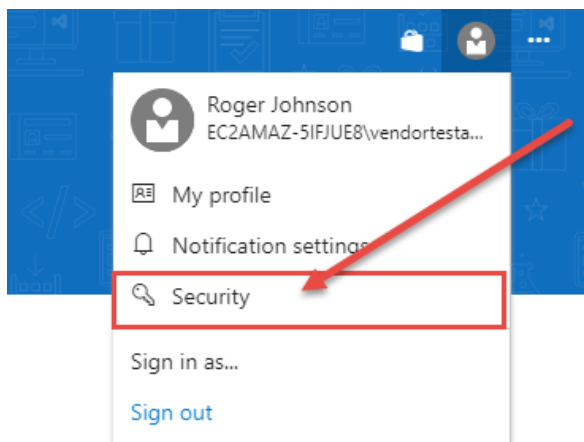
Personal Access Token

Base URL

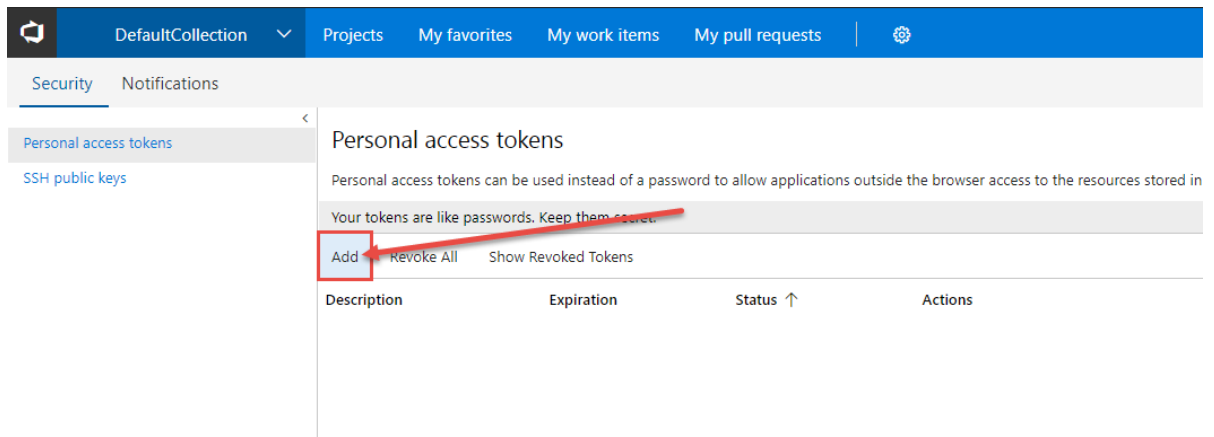
Creating a personal access token

To create a personal access token in TFS:

1. Click **Security** under your gravatar menu.



2. On the **Personal access token** page, click **Add**.



3. Fill in the following information for your new personal access token:

- Description
- Expiration date
- Select the following minimum scopes to connect your account:
 - Code (read)
 - Code (search)
 - Identity (read)
 - Project and team (read)
 - Service Endpoints (read and query)
 - User profile (read)
 - Work items search (read)
 - Work items (read)

Create a personal access token

Applications that work outside the browser may require access to your projects. Generate personal access tokens for applications that require a username and password.

Description

Expires In

Authorized Scopes

- All scopes
 Selected scopes

<input type="checkbox"/> Agent Pools (read)	<input type="checkbox"/> Agent Pools (read, manage)	<input type="checkbox"/> Build (read and execute)
<input type="checkbox"/> Build (read)	<input type="checkbox"/> Code (full)	<input type="checkbox"/> Code (read and write)
<input checked="" type="checkbox"/> Code (read)	<input type="checkbox"/> Code (read, write, and manage)	<input type="checkbox"/> Code (status)
<input checked="" type="checkbox"/> Code search (read)	<input type="checkbox"/> Connected Server	<input type="checkbox"/> Deployment group (read, manage)
<input type="checkbox"/> Entitlements (Read)	<input type="checkbox"/> Extension data (read and write)	<input type="checkbox"/> Extension data (read)
<input type="checkbox"/> Extensions (read and manage)	<input type="checkbox"/> Extensions (read)	<input type="checkbox"/> Identity (manage)
<input checked="" type="checkbox"/> Identity (read)	<input type="checkbox"/> Load test (read and write)	<input type="checkbox"/> Load test (read)
<input type="checkbox"/> Marketplace	<input type="checkbox"/> Marketplace (acquire)	<input type="checkbox"/> Marketplace (manage)
<input type="checkbox"/> Marketplace (publish)	<input type="checkbox"/> MemberEntitlement Management (read)	<input type="checkbox"/> MemberEntitlement Management (write)
<input type="checkbox"/> Notifications (diagnostics)	<input type="checkbox"/> Notifications (manage)	<input type="checkbox"/> Notifications (read)
<input type="checkbox"/> Notifications (write)	<input type="checkbox"/> Packaging (read and write)	<input type="checkbox"/> Packaging (read)
<input type="checkbox"/> Packaging (read, write, and manage)	<input type="checkbox"/> Project and team (read and write)	<input checked="" type="checkbox"/> Project and team (read)
<input type="checkbox"/> Project and team (read, write and manage)	<input type="checkbox"/> Release (read)	<input type="checkbox"/> Release (read, write and execute)
<input type="checkbox"/> Release (read, write, execute and manage)	<input type="checkbox"/> Security (manage)	<input checked="" type="checkbox"/> Service Endpoints (read and query)
<input type="checkbox"/> Service Endpoints (read)	<input type="checkbox"/> Service Endpoints (read, query and manage)	<input type="checkbox"/> Symbols (read and write)
<input type="checkbox"/> Symbols (read)	<input type="checkbox"/> Symbols (read, write and manage)	<input type="checkbox"/> Task Groups (read)
<input type="checkbox"/> Task Groups (read, create and manage)	<input type="checkbox"/> Task Groups (read, create)	<input type="checkbox"/> Team dashboards (manage)
<input type="checkbox"/> Team dashboards (read)	<input type="checkbox"/> Test management (read and write)	<input type="checkbox"/> Test management (read)
<input checked="" type="checkbox"/> User profile (read)	<input type="checkbox"/> User profile (write)	<input type="checkbox"/> Wiki (read and write)
<input type="checkbox"/> Wiki (read)	<input checked="" type="checkbox"/> Work item search (read)	<input type="checkbox"/> Work items (full)
<input type="checkbox"/> Work items (read and write)	<input checked="" type="checkbox"/> Work items (read)	

4. Click **Create**.

[back to top](#)

Finishing up

Now that you have created a personal access token you can complete your integration setup in Flow.

1. Copy your access token and paste it into Flow's **Personal Access Token** field.

Personal access tokens

Personal access tokens can be used instead of a password to allow applications outside the browser access to the resources stored in your account.

Your tokens are like passwords. Keep them secret.

Add Revoke All Show Revealed Tokens

Description	Expiration	Status	Actions
gprime	11/14/2019 8:31:40 PM	Active	X Make sure you copy the token now. We don't store it and you won't be able to see it again. <code>oJcyP43kAhjpezzhs5cv5l2j6euz2atmdxhs4p3cizp5fzwq</code>

Username: roger.johnson@mycompany.com

Password:

Personal Access Token: oJcyP43kAhjpezzhs5cv5l2j6euz2atmdxhs4p3cizp5fzwq

Base URL: https://test-fts-01.gprime-eps.com/DefaultCollection

Test connection

2. Click **Test connection**.



TFS

Select an Authentication Method

In order to create an integration with TFS, please provide an authentication method. [How do I do this?](#)

Access Token

Username

roger.johnson@mycompany.com

Password

.....

Personal Access Token

ofcyp43fukhjpezzhs5cv5l2j5eiux2atmdxlhs4p3cizp5fzwxq

Base URL

https://test-tfs-01.gitprime-ops.com/DefaultCollection

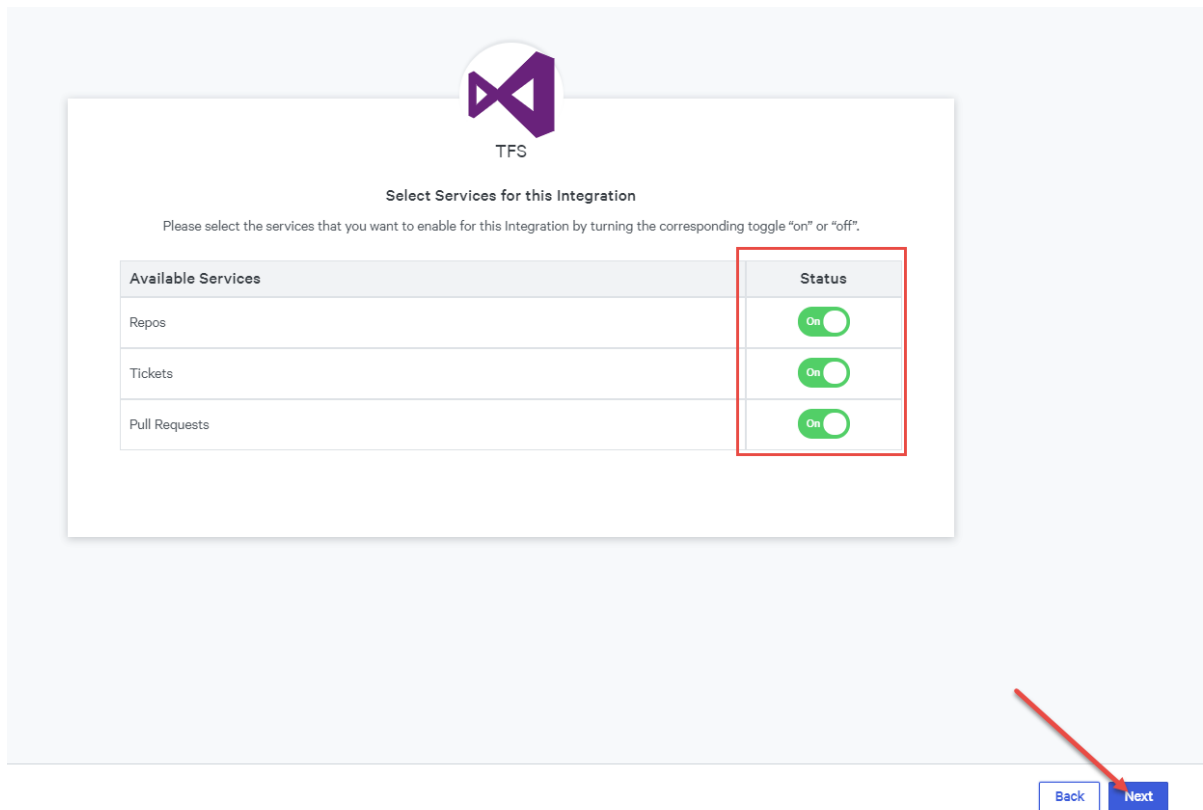
Test connection

3. If the connection was successful you will see a success message.

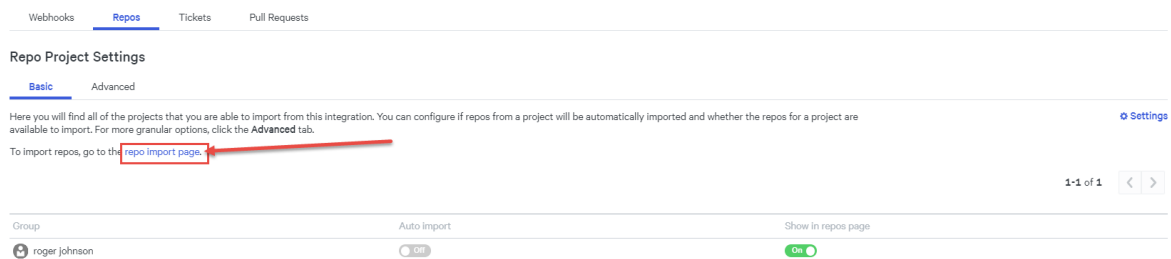
If the connection was not successful, verify your credentials and access token, then try again.

4. Once you have successfully connected to your TFS account, click **Next**.

5. Select the services you want turned on for this Integration by toggling them **on** or **off**. If you would like to import pull request and ticket data in addition to repo data, then leave all services on. You can turn services **on** and **off** at any time. Click **Next**.



6. Name your integration to identify the account you connected. Click **Create**. You have successfully created a new TFS integration.
7. To import your repos, go to your repo import page. Click the **repo import page** link. Learn more about [Managing integrations \(https://pluralsight.knowledgeowl.com/help/manage-integrations\)](https://pluralsight.knowledgeowl.com/help/manage-integrations)



[back to top](#)

Troubleshooting

If you are unable to get your integration setup, see the troubleshooting scenarios:

Could not connect to URL

Error!

Could not connect. Please double check your url and/or authentication credentials

If you receive the above error message when you test your integration:

- Check your base URL.

It should be in the following format:

`https://{your_TFS_domain}/{yourorganization}`

- If you are behind a firewall, review the initial setup of the connection - allowlist IPs, public DNS, certificate signed by a public CA.

Authorization denied

If you were unable to authenticate the connection, check your credentials and personal access scopes, then try again.

 Error!

Authorization denied. Please double check your url and/or authentication credentials

Connection tests successfully, but I can not see all my projects and repositories

If you do not see all the projects or repos you expect, double check your permissions at the organization and project level. If you are not a Project Collection Administrator you need to be added to each project you want to add to your Flow account.

[back to top](#)

If you need help, please email support@pluralsight.com () for 24/7 assistance.