GitHub

```
git clone https://github.com/Sumanth17-git/jenkins-demo.git

cd jenkins-demo

git checkout -b feature-branch

git add .

git commit -m "Added feature changes"

git push origin feature-branch
```

Create a Pull Request (PR)

1. Go to your repository on GitHub: GitHub Repo
2. Navigate to the **Pull Requests** tab.
3. Click **"New Pull Request"**.
4. Select feature-branch as the source and main as the target.
5. Add a description and click **"Create Pull Request"**.

6.Merge the Pull Request

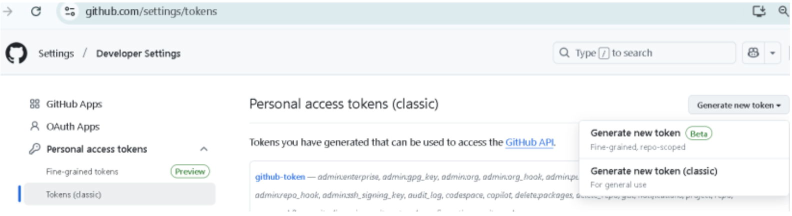
- After review, click **"Merge pull request"**.
- Then, delete the feature-branch if it's no longer needed

Step 1: Create the GitHub connection – to access github account

1.Create the GitHub Personal Access Token

Settings ➔ Developer Settings ➔ Personal access tokens ➔ Token (classic)

⇨ generate new token (classic)



github.com/settings/tokens

Settings / Developer Settings

Type / to search

Personal access tokens (classic)

Generate new token ▾

Generate new token (Beta)
Fine-grained, repo-scoped

Generate new token (classic)
For general use

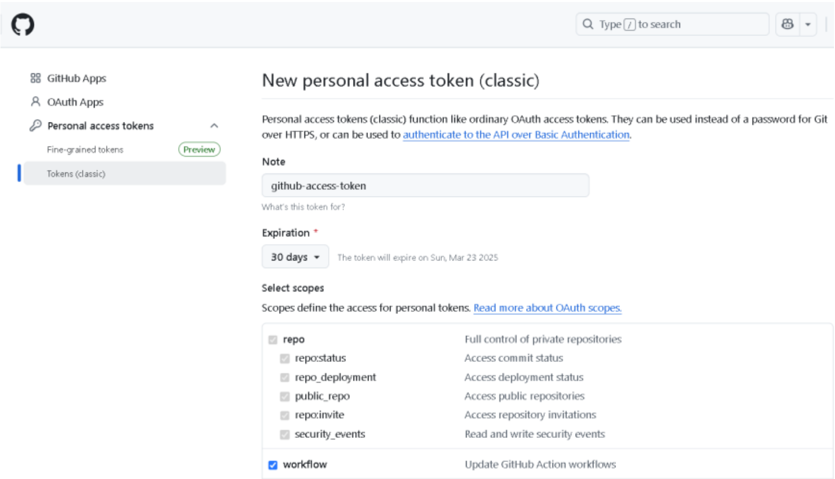
Tokens you have generated that can be used to access the GitHub API.

github-token — admin:enterprise, admin:gpg_key, admin:org, admin:org_hook, admin:pe

admin:repo_hook, admin:ssh_signing_key, audit_log, codespace, copilot, delete:packages,

Note : github-access-token

Select all the scopes



Type / to search

New personal access token (classic)

Personal access tokens (classic) function like ordinary OAuth access tokens. They can be used instead of a password for Git over HTTPS, or can be used to authenticate to the API over Basic Authentication.

Note

github-access-token

What's this token for?

Expiration *

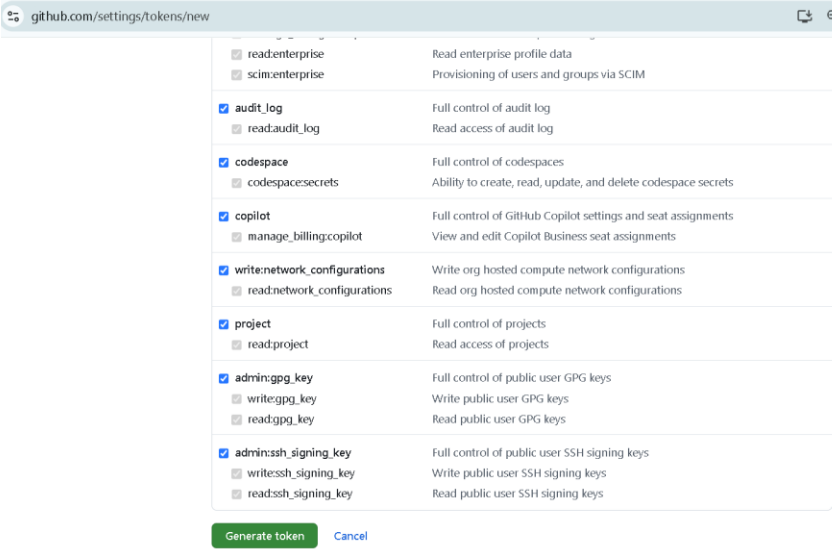
30 days ▾ The token will expire on Sun, Mar 23 2025

Select scopes

Scopes define the access for personal tokens. Read more about OAuth scopes.

☑ repo	Full control of private repositories
☑ repo:status	Access commit status
☑ repo_deployment	Access deployment status
☑ public_repo	Access public repositories
☑ repo:invite	Access repository invitations
☑ security_events	Read and write security events
☑ workflow	Update GitHub Action workflows

Click Generate Token



github.com/settings/tokens/new

☑ read:enterprise	Read enterprise profile data
☑ scim:enterprise	Provisioning of users and groups via SCIM
☑ audit_log	Full control of audit log
☑ read:audit_log	Read access of audit log
☑ codespace	Full control of codespaces
☑ codespace:secrets	Ability to create, read, update, and delete codespace secrets
☑ copilot	Full control of GitHub Copilot settings and seat assignments
☑ manage_billing:copilot	View and edit Copilot Business seat assignments
☑ write:network_configurations	Write org hosted compute network configurations
☑ read:network_configurations	Read org hosted compute network configurations
☑ project	Full control of projects
☑ read:project	Read access of projects
☑ admin:gpg_key	Full control of public user GPG keys
☑ write:gpg_key	Write public user GPG keys
☑ read:gpg_key	Read public user GPG keys
☑ admin:ssh_signing_key	Full control of public user SSH signing keys
☑ write:ssh_signing_key	Write public user SSH signing keys
☑ read:ssh_signing_key	Read public user SSH signing keys

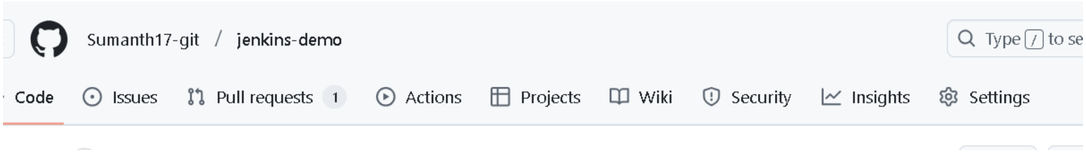
Click Generate token

Copy the token

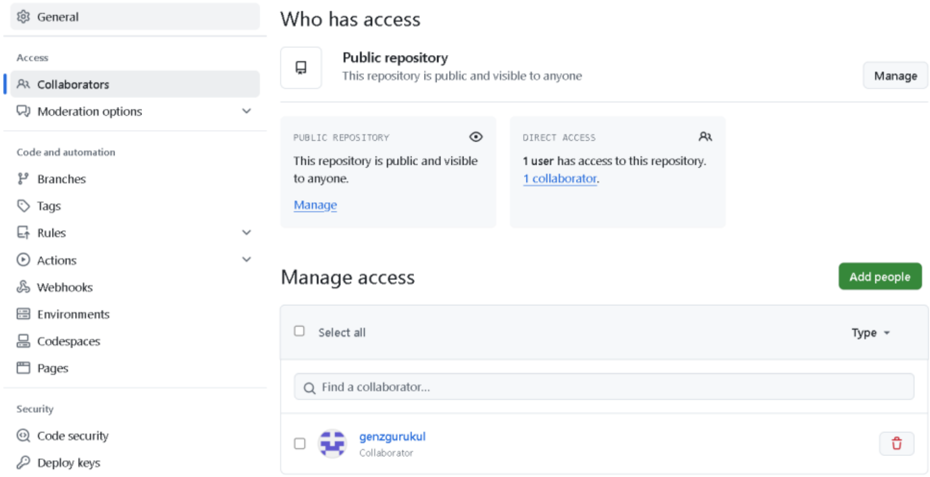
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

Step 2:

Make sure your friend/colleague GitHub account is added under collaborator section.



Click your Repo ➔ Settings ➔ Collaborators ➔ Add People (add your team-mate github id)



Who has access

Public repository
This repository is public and visible to anyone

PUBLIC REPOSITORY
This repository is public and visible to anyone.
Manage

DIRECT ACCESS
1 user has access to this repository. 1 collaborator.

Manage access

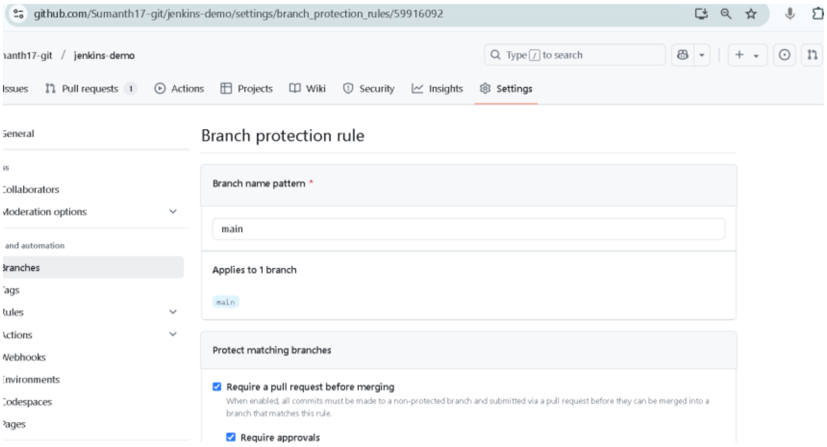
□ Select all

□ genzgurukul
Collaborator

Next Go to

Code and automation ➔ Branches ➔ Add rule ➔ Provide your main branch name “main”

Visit : **https://www.genzgurukul.com/** for advanced Dynatrace courses



Branch protection rule

Branch name pattern *

main

Applies to 1 branch

main

Protect matching branches

☑ Require a pull request before merging

When enabled, all commits must be made to a non-protected branch and submitted via a pull request before they can be merged into a branch that matches this rule.

☑ Require approvals

Choose Protect matching branches and Save changes.

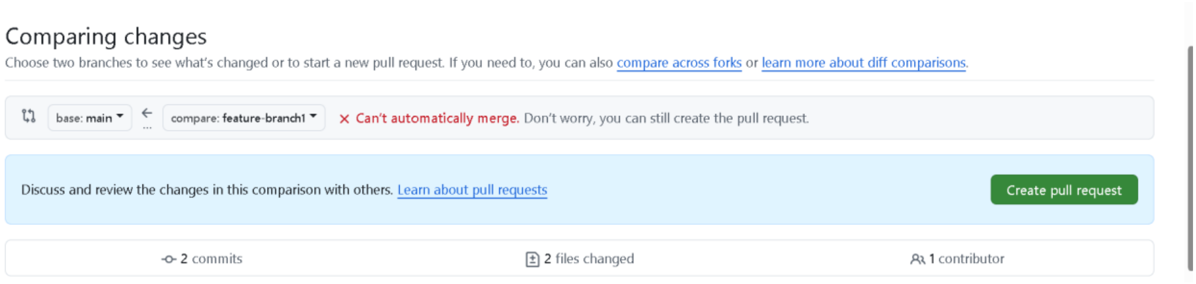
Now make some changes on feature branch

```
git checkout -b feature-branch

git add .

git commit -m "Added feature changes"

git push origin feature-branch
```

Now you can Create a Pull Request (PR) and provide assignee as your teammate github account.

Create a Pull Request (PR)

1. Go to your repository on GitHub: [GitHub Repo]
2. Navigate to the **Pull Requests** tab.
3. Click **"New Pull Request"**.
4. Select feature-branch as the source and main as the target.
5. Base - **main** and compare - **feature-branch1**
6. click **"Create Pull Request"**.
7. Add description



Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also compare across forks or learn more about diff comparisons.

base: main ← compare: feature-branch1 ✕ Can't automatically merge. Don't worry, you can still create the pull request.

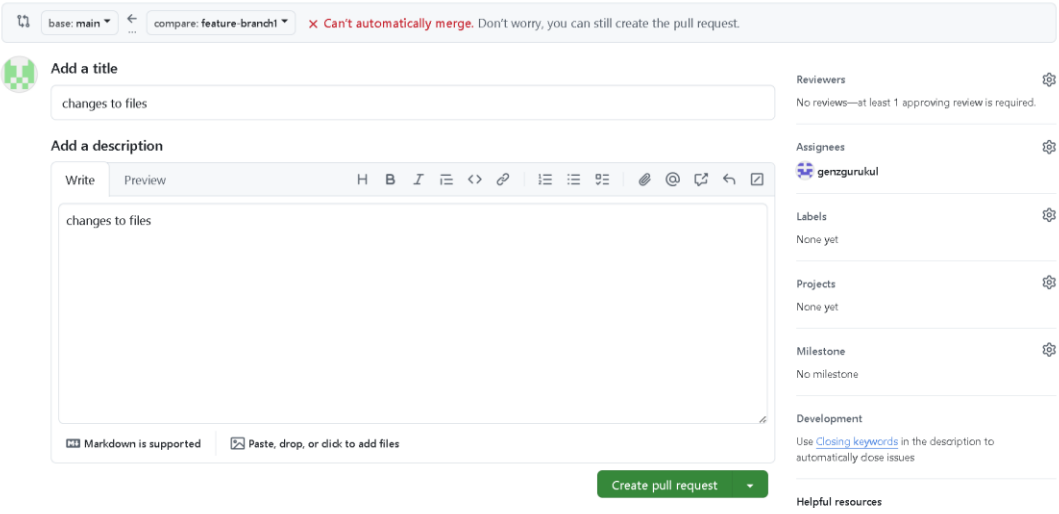
Discuss and review the changes in this comparison with others. Learn about pull requests

Visit : **https://www.genzgurukul.com/** for advanced Dynatrace courses

Choose Assignees – genzgurukul

Add a title and add description :

Create a Pull request.



base: main ← compare: feature-branch1 ✕ Can't automatically merge. Don't worry, you can still create the pull request.

Add a title

changes to files

Add a description

Write | Preview

changes to files

Markdown is supported | Paste, drop, or click to add files

Create pull request

Reviewers: No reviews—at least 1 approving review is required.

Assignees: genzgurukul

Labels: None yet

Projects: None yet

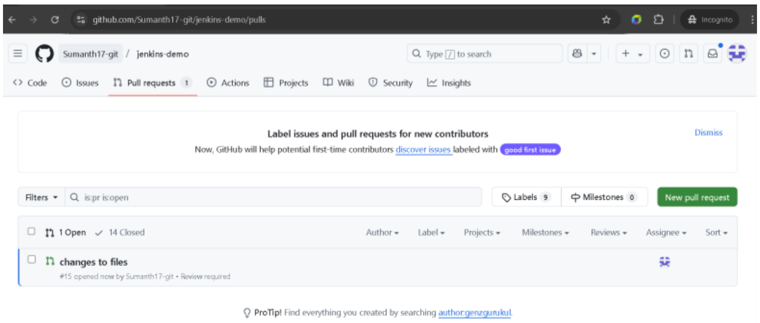
Milestone: No milestone

Development: Use Closing keywords in the description to automatically close issues

Helpful resources

Now login into github as **genzgurukul. Go to repo jenkins-demo and click pull request**

Open that pull request



github.com/Sumanth17-git/jenkins-demo/pulls

Sumanth17-git / jenkins-demo

Code | Issues | Pull requests 1 | Actions | Projects | Wiki | Security | Insights

Label issues and pull requests for new contributors

Now, GitHub will help potential first-time contributors discover issues labeled with good first issue

Filters | is:pr is:open | Labels 9 | Milestones 0 | New pull request

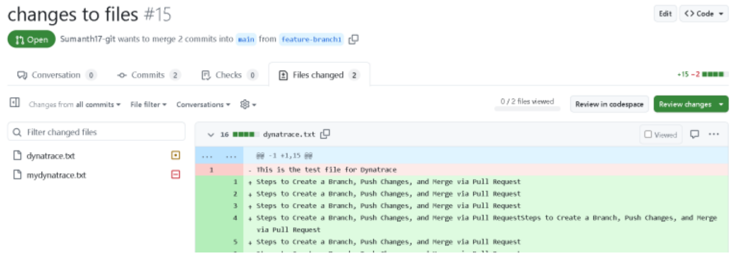
1 Open ✓ 14 Closed

changes to files

#15 opened now by Sumanth17-git • Review required

ProTip! Find everything you created by searching author:genzgurukul.

Click File Changes



changes to files #15

Open Sumanth17-git wants to merge 2 commits into main from feature-branch1

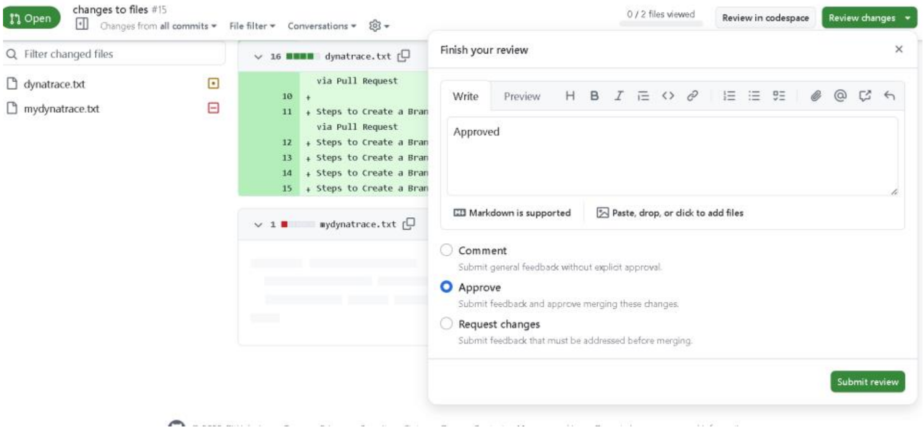
Conversation 0 | Commits 2 | Checks 0 | Files changed 2 +15 −2

0 / 2 files viewed | Review in codespace | Review changes

dynatrace.txt
mydynatrace.txt

```
16 dynatrace.txt
@@ -1 +1,15 @@
1     - This is the test file for Dynatrace
   1  + Steps to Create a Branch, Push Changes, and Merge via Pull Request
   2  + Steps to Create a Branch, Push Changes, and Merge via Pull Request
   3  + Steps to Create a Branch, Push Changes, and Merge via Pull Request
   4  + Steps to Create a Branch, Push Changes, and Merge via Pull RequestSteps to Create a Branch, Push Changes, and Merge
        via Pull Request
   5  + Steps to Create a Branch, Push Changes, and Merge via Pull Request
```

Click Review Changes



```
16 dynatrace.txt
         via Pull Request
10  +
11  + Steps to Create a Bran
         via Pull Request
12  + Steps to Create a Bran
13  + Steps to Create a Bran
14  + Steps to Create a Bran
15  + Steps to Create a Bran

1 mydynatrace.txt
```

Finish your review

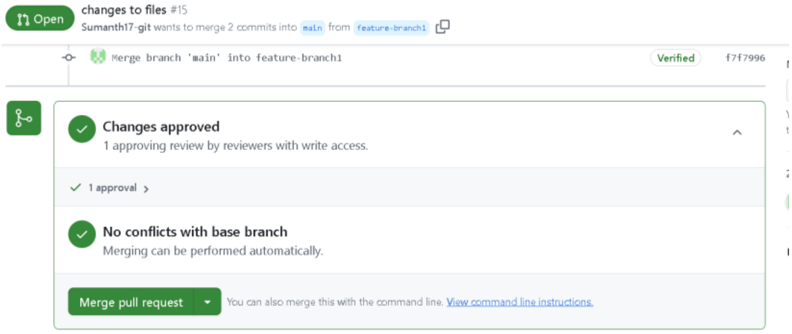
Approved

○ Comment
Submit general feedback without explicit approval.

● Approve
Submit feedback and approve merging these changes.

○ Request changes
Submit feedback that must be addressed before merging.

Click Approve and Submit review



changes to files #15
Sumanth17-git wants to merge 2 commits into main from feature-branch1

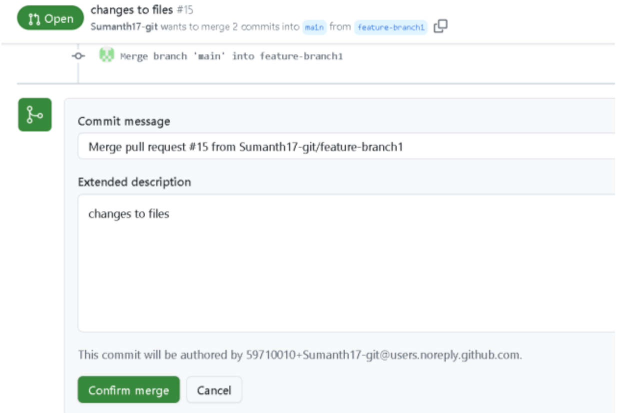
Merge branch 'main' into feature-branch1

Changes approved
1 approving review by reviewers with write access.

No conflicts with base branch
Merging can be performed automatically.

You can also merge this with the command line. View command line instructions.

Click Merge pull request.



changes to files #15
Sumanth17-git wants to merge 2 commits into main from feature-branch1

Merge branch 'main' into feature-branch1

Commit message: Merge pull request #15 from Sumanth17-git/feature-branch1

Extended description: changes to files

This commit will be authored by 59710010+Sumanth17-git@users.noreply.github.com.

Click Confirm Merge

Connect with Dynatrace -GitHub Connector

Set up GitHub Connector

Prerequisite

1. **GitHub Personal Access Token**

2.Setup and Configure Dynatrace

You need the **app-engine:apps:install** permission.

1.Install GitHub Connector

To use GitHub workflow actions, you need to install **GitHub Connector** from Dynatrace Hub.

1. In Dynatrace Hub , select **GitHub**.

2. Select **Install**.

2.Add a host to the Allow-list in Limit outbound connections

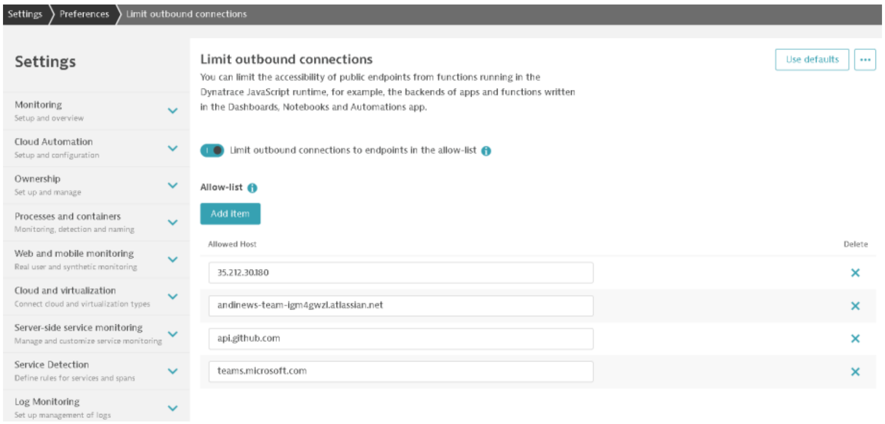
By adding the GitHub host called api.github.com to the **Allow-list** in **Limit outbound connections**, you can granularly control the web services connected to your Dynatrace environment.

To set up the connection between GitHub and your Dynatrace environment

1. Go to **Settings** and select **Connections** > **Outbound and inbound** > **Limit outbound connections**. This opens the Settings Classic page.

2. Select **Add item** and add **api.github.com**

3. Select **Save changes**.



Settings
Preferences
Limit outbound connections
Settings
Monitoring
Setup and overview
Cloud Automation
Setup and configuration
Ownership
Set up and manage
Processes and containers
Monitoring, detection and naming
Web and mobile monitoring
Real user and synthetic monitoring
Cloud and virtualization
Connect cloud and virtualization types
Server-side service monitoring
Manage and customize service monitoring
Service Detection
Define rules for services and spans
Log Monitoring
Set up management of logs
Use defaults
...
Add item

Limit outbound connections

You can limit the accessibility of public endpoints from functions running in the Dynatrace JavaScript runtime, for example, the backends of apps and functions written in the Dashboards, Notebooks and Automations app.

● Limit outbound connections to endpoints in the allow-list

Allow-list

Allowed Host	Delete
35.212.30.180	✕
andinews-team-igm4gwzl.atlassian.net	✕
api.github.com	✕
teams.microsoft.com	✕

3. **Grant permissions to Workflows**

Aside from permissions required by Workflows to run actions on your behalf, there are additional permissions required to use GitHub Connector actions.

To fine-tune permissions granted to Workflows

1. Go to **Workflows** and select **Settings** > **Authorization settings**.

2. Select the following permissions besides the general Workflows permission.

   - **app-settings:objects:read**

For security reasons, Dynatrace blocks outgoing traffic by default. Therefore, you need to add the URL to the allow-list.

4. **Authorize connection to GitHub**

You need to configure connections for each of your GitHub environments.

To configure a connection

1. Create a personal access token for your GitHub account as described in Managing your personal access tokens. We only support cloud-based GitHub plans such as GitHub Enterprise Cloud. GitHub Enterprise Server plans aren't supported.

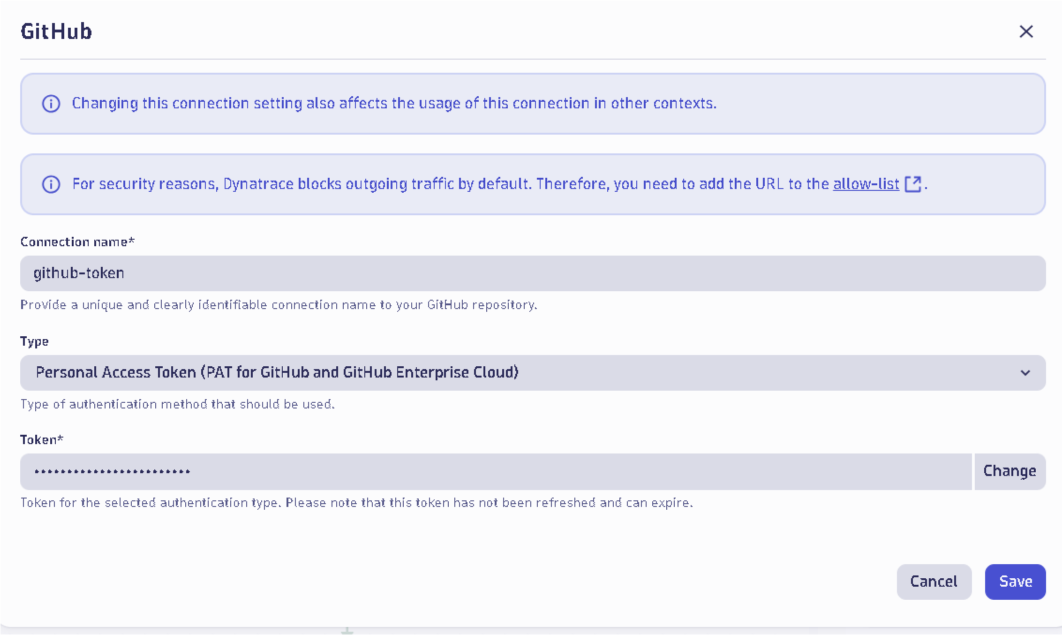
2. Go to **Settings** and select **Connections** > **Connectors** > **GitHub**.

3. Select **Connection**.

4. Define your GitHub connection.

   - **Connection name**: Provide a meaningful and unique name for your connection.
   - **GitHub Type**: Select the type of authorization mechanism.
   - **GitHub token**: Provide your GitHub API token.

5. Select **Create**.



GitHub

ⓘ Changing this connection setting also affects the usage of this connection in other contexts.

ⓘ For security reasons, Dynatrace blocks outgoing traffic by default. Therefore, you need to add the URL to the allow-list.

Connection name*: github-token

Provide a unique and clearly identifiable connection name to your GitHub repository.

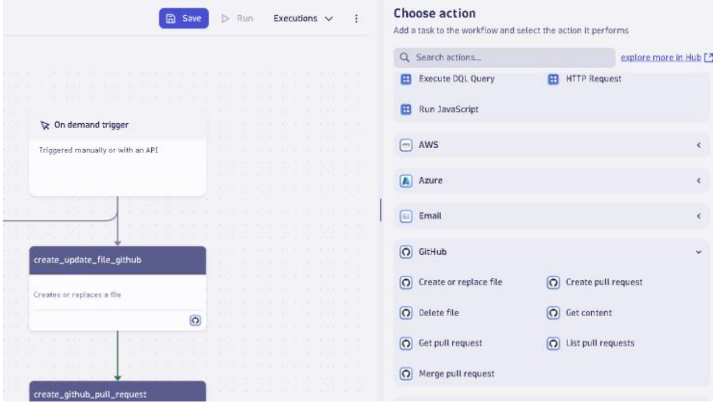
Type: Personal Access Token (PAT for GitHub and GitHub Enterprise Cloud)

Type of authentication method that should be used.

Token*: ••••••••••••••••••••••••

Token for the selected authentication type. Please note that this token has not been refreshed and can expire.

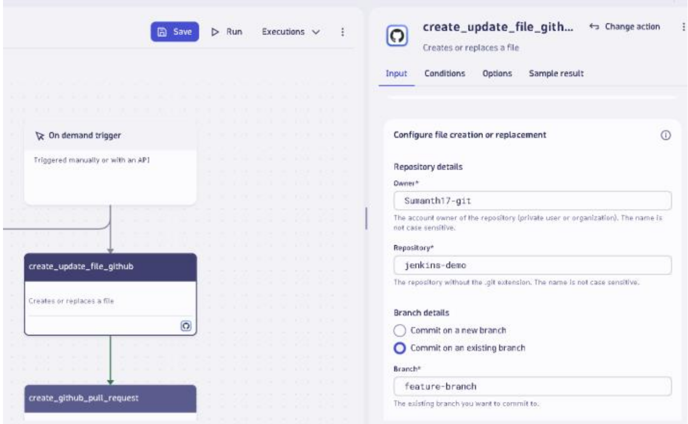
Once Connected, Lets Create the Workflow to interact with dynatrace workflow



Choose action

Add a task to the workflow and select the action it performs

1.Choose Create or replace file (Update changes to feature branch)



create_update_file_gith...

Creates or replaces a file

Configure file creation or replacement

Repository details

Owner*: Sumanth17-git

The account owner of the repository (private user or organization). The name is not case sensitive.

Repository*: jenkins-demo

The repository without the .git extension. The name is not case sensitive.

Branch details

○ Commit on a new branch

● Commit on an existing branch

Branch*: feature-branch

The existing branch you want to commit to.

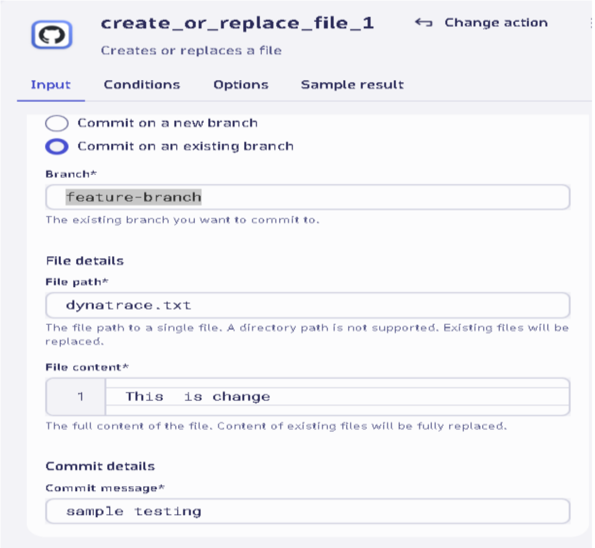
Save
Run
Executions
Change action
Input
Conditions
Options
Sample result
On demand trigger
Triggered manually or with an API
create_update_file_github
Creates or replaces a file
create_github_pull_request

Owner: **Sumanth17-git**

Repository: **jenkins-demo**

Branch Details – Commit on an existing branch (feature-branch)

Branch* : **feature-branch**



create_or_replace_file_1

Creates or replaces a file

○ Commit on a new branch

● Commit on an existing branch

Branch*

feature-branch

The existing branch you want to commit to.

File details

File path*

dynatrace.txt

The file path to a single file. A directory path is not supported. Existing files will be replaced.

File content*

```
1   This  is change
```

The full content of the file. Content of existing files will be fully replaced.

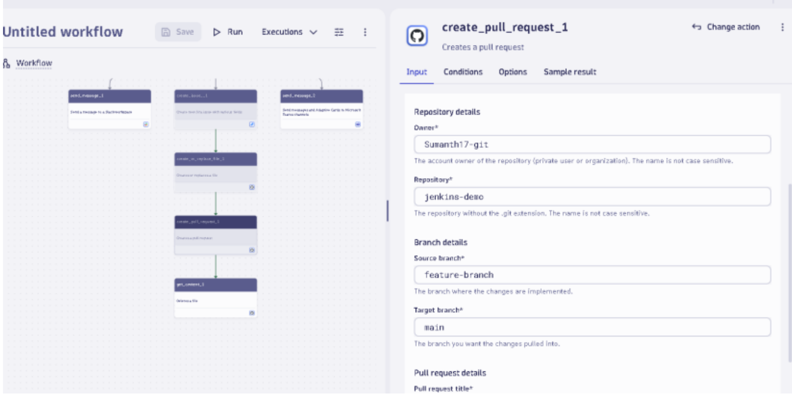
Commit details

Commit message*

sample testing

Click Save.

3. Create a Pull Request



create_pull_request_1

Creates a pull request

Repository details

Owner*

Sumanth17-git

The account owner of the repository (private user or organization). The name is not case sensitive.

Repository*

jenkins-demo

The repository without the .git extension. The name is not case sensitive.

Branch details

Source branch*

feature-branch

The branch where the changes are implemented.

Target branch*

main

The branch you want the changes pulled into.

Pull request details

Pull request title*

Owner: **Sumanth17-git**

Repository: **jenkins-demo**

Branch Details:

Source Branch : **feature-branch**

Target Branch : **main**

Pull request title : Some title name

Pull request description : Add some description