Enabling GitHub Actions with Amazon S3 storage

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You can enable GitHub Actions on GitHub Enterprise Server and use Amazon S3 storage to store data generated by workflow runs.

> **Who can use this feature**
> Site administrators can enable GitHub Actions and configure enterprise settings.

About external storage for GitHub Actions 🔗

GitHub Actions uses external blob storage to store data generated by workflow runs, such as workflow logs and user-uploaded build artifacts. For more information, see "Getting started with GitHub Actions for GitHub Enterprise Server."

Prerequisites 🔗

> **Note:** The only GitHub-supported S3 storage providers are Amazon S3 and MinIO Gateway for NAS.
>
> There are other S3 API-compatible storage products that GitHub partners have self-validated as working with GitHub Actions on GitHub Enterprise Server. For more information, see the GHES Storage Partners repository.
>
> For storage products validated through the GitHub Technology Partnership program, the storage provider is responsible for support and documentation for using the storage product with GitHub Actions.

Before enabling GitHub Actions, make sure you have completed the following steps:

- Create your Amazon S3 bucket for storing data generated by workflow runs.

- Review the hardware requirements for GitHub Actions. For more information, see "Getting started with GitHub Actions for GitHub Enterprise Server."

- TLS must be configured for your GitHub Enterprise Server instance's domain. For

more information, see "Configuring TLS."

> **Note:** We strongly recommend that you configure TLS on GitHub Enterprise Server with a certificate signed by a trusted authority. Although a self-signed certificate can work, extra configuration is required for your self-hosted runners, and it is not recommended for production environments.

- If you have an **HTTP Proxy Server** configured on your GitHub Enterprise Server instance:

- You must add `localhost` and `127.0.0.1` to the **HTTP Proxy Exclusion** list.

- If your external storage location is not routable, then you must also add your external storage URL to the exclusion list.

For more information on changing your proxy settings, see "Configuring an outbound web proxy server."

Enabling GitHub Actions with Amazon S3 storage 🔗

1. Using the AWS Console or CLI, create an access key for your storage bucket. GitHub Actions requires the following permissions for the access key that will access the bucket:

   - `s3:PutObject`
   - `s3:GetObject`
   - `s3:ListBucketMultipartUploads`
   - `s3:ListMultipartUploadParts`
   - `s3:AbortMultipartUpload`
   - `s3:DeleteObject`
   - `s3:ListBucket`
   - `kms:GenerateDataKey` (if Key Management Service (KMS) encryption has been enabled)

   For more information on managing AWS access keys, see the "AWS Identity and Access Management Documentation."

2. From an administrative account on GitHub Enterprise Server, in the upper-right corner of any page, click 🚀.

3. If you're not already on the "Site admin" page, in the upper-left corner, click **Site admin**.

4. In the "🚀 Site admin" sidebar, click **Management Console**.

5. In the "Settings"" sidebar, click **Actions**.

6. Under "GitHub Actions", select **Enable GitHub Actions**.

7. Under "Artifact & Log Storage", select **Amazon S3**, then enter your storage bucket's details:

   - **AWS Service URL**: The service URL for your bucket. For example, if your S3 bucket was created in the `us-west-2` region, this value should be `https://s3.us-west-2.amazonaws.com`.

     For more information, see "AWS service endpoints" in the AWS documentation.
   - **AWS S3 Bucket**: The name of your S3 bucket.
   - **AWS S3 Access Key** and **AWS S3 Secret Key**: The AWS access key ID and

secret key for your bucket.

8. Click the **Test storage settings** button to validate your storage settings.

   If there are any errors validating the storage settings, check the settings with your storage provider and try again.

9. Under the "Settings" sidebar, click **Save settings**.

> **Note:** Saving settings in the Management Console restarts system services, which could result in user-visible downtime.

10. Wait for the configuration run to complete.

Next steps 🔗

After the configuration run has successfully completed, GitHub Actions will be enabled on your GitHub Enterprise Server instance. For your next steps, such as managing GitHub Actions access permissions and adding self-hosted runners, return to "Getting started with GitHub Actions for GitHub Enterprise Server."