

Configuring rate limits

In this article

- About rate limits for GitHub Enterprise Server
- Enabling rate limits for the GitHub Enterprise Server APIs
- Enabling secondary rate limits
- Enabling rate limits for Git
- Configuring rate limits for GitHub Actions

You can set rate limits for GitHub Enterprise Server using the Management Console.

Who can use this feature

Site administrators can configure rate limits for a GitHub Enterprise Server instance.

About rate limits for GitHub Enterprise Server

To prevent excessive use of resources on your GitHub Enterprise Server instance that could affect the instance's availability or performance for all users, you can configure rate limits. Rate limits are configurable for the GitHub Enterprise Server APIs and GitHub Actions.

Implement rate limits carefully and communicate frequently with your users as you tune the limits. To avoid interrupting your users' work, GitHub recommends that you start with permissive rate limits, and gradually tune the limits to suit your environment.



You can also configure rate limits for authentication attempts to the Management Console. For more information, see "[Managing access to the Management Console](#)."

Enabling rate limits for the GitHub Enterprise Server APIs

Excessive numbers of requests to the GitHub Enterprise Server APIs can affect the availability and performance of your instance. For more information about how rate limits for the API affect your users, see "[Resources in the REST API](#)."

You can exempt a list of users from API rate limits using the `ghe-config` utility in the administrative shell. For more information, see "[Command-line utilities](#)."

Note: The Management Console lists the time period (per minute or per hour) for each rate limit.

- 1 From an administrative account on GitHub Enterprise Server, in the upper-right corner of any page, click .
- 2 If you're not already on the "Site admin" page, in the upper-left corner, click **Site admin**.
- 3 In the " Site admin" sidebar, click **Management Console**.



- 4 Under "Rate Limiting", select **Enable HTTP API Rate Limiting**.
- 5 Type limits for authenticated and unauthenticated requests for each API, or accept the pre-filled default limits.
- 6 Under the "Settings" sidebar, click **Save settings**.

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

- 7 Wait for the configuration run to complete.

Enabling secondary rate limits [↗](#)

Setting secondary rate limits protects the overall level of service on your GitHub Enterprise Server instance.

- 1 From an administrative account on GitHub Enterprise Server, in the upper-right corner of any page, click .
- 2 If you're not already on the "Site admin" page, in the upper-left corner, click **Site admin**.
- 3 In the " Site admin" sidebar, click **Management Console**.
- 4 Under "Rate Limiting", select **Enable Secondary Rate Limiting**.
- 5 Type limits for Total Requests, CPU Limit, and CPU Limit for Searching, or accept the pre-filled default limits.
- 6 Under the "Settings" sidebar, click **Save settings**.


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

- 7 Wait for the configuration run to complete.

Enabling rate limits for Git [↗](#)

If a member of GitHub's staff has recommended it, you can apply Git rate limits per repository network or per user ID. Git rate limits are expressed in concurrent operations per minute, and are adaptive based on the current CPU load.

Warning: We encourage you to leave this setting disabled unless directly recommended by a member of GitHub's staff. Git operations are rarely the leading driver of CPU and RAM usage. Enabling this feature can make Git operations more likely to fail under high load conditions but does not address the underlying cause of those conditions.

- 1 From an administrative account on GitHub Enterprise Server, in the upper-right corner of any page, click .
- 2 If you're not already on the "Site admin" page, in the upper-left corner, click **Site admin**.

- 3 In the "🔑 Site admin" sidebar, click **Management Console**.
- 4 Under "Rate Limiting", select **Enable Git Rate Limiting**.
- 5 Under "Repository Network Limit", type a limit for each repository network.
- 6 Under "User ID Limit", type a limit for each user ID.
- 7 Under the "Settings" sidebar, click **Save settings**.

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

- 8 Wait for the configuration run to complete.

Configuring rate limits for GitHub Actions

You can apply a rate limit to GitHub Actions workflow runs. For more information about GitHub Actions, see "[About GitHub Actions for enterprises](#)."

About rate limits for GitHub Actions

Your GitHub Enterprise Server instance assigns each GitHub Actions workflow job to a runner. If your instance cannot immediately assign a job to an available runner, the job will wait in a queue until a runner is available. If GitHub Actions experiences sustained high load, the queue can back up, and the performance of your GitHub Enterprise Server instance may degrade.

To avoid this performance degradation, you can configure a rate limit for GitHub Actions. This rate limit is expressed in job runs per minute. GitHub Enterprise Server calculates and applies the rate limit for the sum total of all job runs on the instance. If runs exceed the rate limit, additional runs will fail instead of entering the queue. The following error will appear in the run's annotations.

You've exceeded the rate limit for workflow run requests. Please wait before retrying the run.

An appropriate rate limit protects your GitHub Enterprise Server instance from abnormal usage of GitHub Actions without interfering with day-to-day operations. The exact threshold depends on your instance's available resources and overall load profile. For more information about the hardware requirements for GitHub Actions, see "[Getting started with GitHub Actions for GitHub Enterprise Server](#)."

By default, the rate limit for GitHub Actions is disabled. Because GitHub Enterprise Server can handle temporary spikes in usage without performance degradation, this rate limit is intended to protect against sustained high load. We recommend leaving the rate limit disabled unless you are experiencing performance problems. In some cases, GitHub Support may recommend that you enable a rate limit for GitHub Actions.

Enabling or disabling rate limits for GitHub Actions

- 1 SSH into your GitHub Enterprise Server instance. If your instance comprises multiple nodes, for example if high availability or geo-replication are configured, SSH into the primary node. If you use a cluster, you can SSH into any node. For more information about SSH access, see "[Accessing the administrative shell \(SSH\)](#)."

```
ssh -p 122 admin@HOSTNAME
```

- 2 To enable and configure the rate limit, run the following two commands, replacing **RUNS-PER-MINUTE** with the value of your choice.

```
ghe-config actions-rate-limiting.enabled true
ghe-config actions-rate-limiting.queue-runs-per-minute RUNS-PER-MINUTE
```

- 3 To disable the rate limit after it's been enabled, run the following command.

```
ghe-config actions-rate-limiting.enabled false
```

- 4 To apply the configuration, run the following command.

```
ghe-config-apply
```

- 5 Wait for the configuration run to complete.

Legal

© 2023 GitHub, Inc. [Terms](#) [Privacy](#) [Status](#) [Pricing](#) [Expert services](#) [Blog](#)