

Git Version Control

(cPanel >> Home >> Files >> Git™ Version Control)

Overview

The *Git™ Version Control* feature allows you to easily host Git repositories on your cPanel account. You can use Git to maintain any set of files (for example, a website's files and assets, a software development project, or simple text files). For more information, read our [Guide to Git documentation](#) and [Git's documentation](#).

Notes:

- If your cPanel account includes shell access, you can also use Git from the command line.
 - **Without** shell access, you can **only** create, clone, delete, and view repositories.
 - You can use cPanel's *Terminal* interface (cPanel >> Home >> Advanced >> Terminal) to access the command line from within the cPanel interface.
 - For more information, read our [Guide to Git - Host Git Repositories on a cPanel Account](#) documentation.
- You **must** use the command line to perform the following tasks:
 - SSH configuration in order to clone private repositories. For more information, read our [Guide to Git - Set Up Access to Private Repositories](#) documentation.
 - The use of multiple remote repositories. We recommend this use for advanced Git users **only**.
- The system adds a `post-receive` hook to all cPanel-managed repositories. For more information, read Git's [githubooks](#) documentation.
- If you add or remove Git repositories via the command line, you may see an incorrect list of repositories in this interface. Currently, **only** repositories that you created in this interface will appear in the list.

In This Document

[Overview](#)
[Repositories](#)
[Create a repository](#)
[Manage repositories](#)

Related Documentation

- [Gitweb](#)
- [Git Version Control](#)

For Hosting Providers

- [Guide to Git](#)
- [Guide to Git - For System Administrators](#)

Repositories

Note:

When you clone a repository, the system may require a large amount of time to complete. The list of repositories will disable the options for the repository and will **only** display the repository name, repository path, and a message about the clone's progress.

The *Repositories* table lists the following information for all of your account's cPanel-managed Git repositories:

Column	Description
<i>Repository</i>	The repository's display name.
<i>Repository Path</i>	The repository's directory.
	You can also perform the following actions: <ul style="list-style-type: none">• <i>Manage</i> — Click to update the repository's cPanel-managed settings or pull or deploy changes.• <i>History</i> — Click to open the Gitweb interface in a new browser tab. Gitweb allows you to browse the repository and view its history and contents. For more information, read our Gitweb documentation.• <i>Delete</i> — Click to delete the repository. A confirmation message will appear. Click <i>Delete</i> again to delete the repository. <div style="border: 1px solid red; padding: 5px; margin-top: 10px;"><p>Warning: When you delete a repository, the system permanently deletes the entire contents of the repository's directory. You cannot recover this data after deletion.</p></div>

Remember:

When you clone a repository, the system may require a large amount of time to complete. The list of repositories will disable the options for the repository and will **only** display the repository name, repository path, and a message about the clone's progress.

Click the expand icon (



) for a repository to view the following additional information and actions:

Item	Description
<i>Branch Information</i>	<p>Note: If the repository does not include any commits for the current branch or is a bare repository, the system will not display this information.</p> <p>This section of the interface displays the following information about the active branch and its HEAD commit (the most recent commit to the branch):</p> <ul style="list-style-type: none">• <i>Checked-out Branch</i> — The currently checked-out remote or local branch.• <i>Commit</i> — The SHA-1 value for the HEAD commit.• <i>Author</i> — The HEAD commit's author.• <i>Date</i> — The date of the HEAD commit.• The commit message for the HEAD commit.
<i>Repository Path</i>	The repository's directory. Click <i>File Manager</i> to open the directory for the repository in cPanel's <i>File Manager</i> interface (<i>cPanel >> Home >> Files >> File Manager</i>) in a new browser tab.
<i>Clone URL</i>	The URL to use to clone the repository to another location (for example, your local computer, another cPanel account, or a GitHub account). Click <i>Copy</i> to copy this URL to your clipboard.

Create a repository

To create a new repository, perform the following steps:

1. Click *Create* in the top-right corner of the interface. A new interface will appear.
2. Select whether to clone an existing repository, create a new one, or add an existing one to the list of cPanel-managed repositories:
 - To clone an existing repository, ensure that the *Clone a Repository* toggle is enabled. Then, enter the clone URL for the repository that you wish to clone in the *Clone URL* text box.

Important:

- This URL **cannot** contain a username-and-password pair.
- This URL **must** include the `http://`, `https://`, `ssh://`, or `git://` protocols or use the `user@example.com/path` format, where `user` represents the username, `example.com` represents the domain, and `path` represents the repository path.
- You **cannot** enter a local repository path.
- The system performs additional checks for clone URLs that use the `ssh://` protocol. For more information, read the [SSH host key verification](#) section below.

- To create a new repository or add an existing repository to the list of cPanel-managed repositories, set the *Clone a Repository* toggle to disabled.
3. In the *Repository Path* text box, enter the path to the directory that will contain the repository.

Notes:

- If the specified directory does not currently exist, the system will create it.
- If the specified directory already contains a repository, the system will automatically add it to the list of cPanel-managed repositories.
- You **cannot** use the `.` or `..` directory references when you enter this path.
- This feature enforces several restrictions on repository paths. For more information, read the [Repository path restrictions](#) section below.
- Unless you're adding an existing repository to the list, the directory **must** be empty. Subdomain directories contain a `cgi-bin` directory and may also contain a `.well-known` directory. You **must** move these before you can create a repository.

4. In the *Repository Name* text box, enter the desired display name for the repository.
5. To immediately create another repository, select the *Create Another* checkbox.

6. Click *Create*, or click *Return to Repository List* to return to the list of repositories.
 - If you selected the *Create Another* checkbox, a success message will appear. Repeat these steps to create or clone additional repositories.
 - If you did **not** select the *Create Another* checkbox, a new interface will display a confirmation message and a list of helpful Git commands.

SSH host key verification

If you entered an SSH clone URL, when you click *Create*, the system will automatically check for the remote server's public SSH host key. The system stores this key in the `/home/user/.ssh/known_hosts` file, where `user` represents your username.

- If the remote host is **not** registered with the system, click *Save and Continue* to add it to the file (register it). You can click *Show Host Identification Information* to view the host's algorithm and SHA-256 and MD5 fingerprints.
- If the remote host is already registered, the system will create the repository.
- If the remote host's public key has changed, the system will display a warning.
 - For third-party remote hosts, check for announcements about public key updates. Most companies that host repositories make announcements about these changes.
 - For remote hosts that you control, consider whether recent events on your system have caused changes to the public key, or contact your system administrator.

The system also performs this check and will request verification of altered host keys when you change repository information or update the repository.

Warning:

If you cannot verify the validity of a change, exercise caution, especially if your repository includes sensitive content. An altered SSH key may indicate a [Man-in-the-Middle attack](#).

Repository path restrictions

This feature enforces several restrictions for repository paths.

The `.git` directory

Warning:

Do **not** modify or delete a repository's `.git` directory or its contents. Modifications to this data can irreparably break the repository.

The system globally denies public access to repositories' `.git` directories.

Character restrictions

You **cannot** create, delete, or view repositories with paths that include whitespace or any of the following characters:

```
\ * | " ' < > & @ ` $ { } [ ] ( ) ; ? : = % #
```

cPanel-controlled directories

You **cannot** create, delete, or view repositories in the following directories:

▼ [Click to view...](#)

- `.cpanel`
- `.trash`
- `etc`
- `mail`
- `ssl`
- `tmp`
- `logs`
- `.cphorde`
- `spamassassin`
- `.htpasswd`
- `var`

- `cgi-bin`
- `.ssh`
- `perl5`
- `access-logs`

Manage repositories

Important:

You may see a message about a changed host key when you manage your repositories. For more information, read the [SSH host key verification](#) section above.

Click *Manage* to modify or deploy repositories. Click *Basic Information* to view repository information, or click *Pull or Deploy* to pull or deploy changes.

Basic Information Pull or Deploy

This section of the interface displays the following repository information:

Item	Description
<i>Repository Path</i>	<p>The repository's directory. Click to open the directory for the repository in cPanel's <i>File Manager</i> interface (<i>cPanel >> Home >> Files >> File Manager</i>) in a new browser tab.</p> <div style="border: 1px solid red; padding: 5px; margin-top: 10px;"> <p>Important: You cannot modify the repository path for existing repositories.</p> </div>
<i>Repository Name</i>	The repository's display name. To modify this name, enter the new name and click <i>Update</i> .
<i>Checked-Out Branch</i>	<p>The currently checked-out local branch. To check out a different branch, select the desired branch and click <i>Update</i>.</p> <ul style="list-style-type: none"> • If you select a different branch, the system will automatically pull changes from the remote repository when it checks out that branch. • If the repository is a bare repository, the system will not display this information.
<i>Currently Checked-Out Branch</i>	<p>The currently checked-out local branch. Click to open the Gitweb interface in a new browser tab.</p> <ul style="list-style-type: none"> • If the repository is a bare repository, the system will not display this information. • For more information, read our Gitweb documentation.

<p><i>HEAD Commit</i></p>	<div data-bbox="358 142 1430 306" style="border: 1px solid #f0e68c; padding: 10px; margin-bottom: 10px;"> <p>Note: If the repository does not include any commits for the current branch or is a bare repository, the system will not display this information.</p> </div> <p>This section of the interface displays the following information about the active branch's HEAD commit (the most recent commit to the branch):</p> <ul style="list-style-type: none"> • <i>Commit</i> — The SHA-1 value for the HEAD commit. • <i>Author</i> — The HEAD commit's author. • <i>Date</i> — The date of the HEAD commit. • The commit message for the HEAD commit. <p>Click <i>History</i> to open the Gitweb interface in a new browser tab. For more information, read our Gitweb documentation.</p>
<p><i>Remote URL</i></p>	<p>The URL of the repository's remote repository.</p>
<p><i>Clone URL</i></p>	<p>The URL to use to clone the repository to another location (for example, your local computer, another cPanel account, or a GitHub account). Click <i>Copy</i> to copy this URL to your clipboard.</p>

This section of the interface displays the following repository information:

Item	Description
<p><i>Repository Path</i></p>	<p>The repository's directory. Click to open the directory for the repository in cPanel's File Manager interface (<i>cPanel >> Home >> Files >> File Manager</i>) in a new browser tab.</p> <div data-bbox="358 1188 1430 1314" style="border: 1px solid #f08080; padding: 10px; margin-top: 10px;"> <p>Important: You cannot modify the repository path for existing repositories.</p> </div>
<p><i>Remote URL</i></p>	<p>The URL of the repository's remote repository.</p>
<p><i>Currently Checked-Out Branch</i></p>	<p>The currently checked-out local branch. Click to open the Gitweb interface in a new browser tab.</p> <ul style="list-style-type: none"> • If the repository is a bare repository, the system will not display this information. • For more information, read our Gitweb documentation.

<p><i>HEAD Commit</i></p>	<div data-bbox="354 142 1432 306" style="border: 1px solid #f0e68c; padding: 10px; margin-bottom: 10px;"> <p>Note: If the repository does not include any commits for the current branch or is a bare repository, the system will not display this information.</p> </div> <p>This section of the interface displays the following information about the active branch's HEAD commit (the most recent commit to the branch):</p> <ul style="list-style-type: none"> • <i>Commit</i> — The SHA-1 value for the HEAD commit. • <i>Author</i> — The HEAD commit's author. • <i>Date</i> — The date of the HEAD commit. • The commit message for the HEAD commit.
<p><i>Last Deployment Information</i></p>	<div data-bbox="354 630 1432 793" style="border: 1px solid #f0e68c; padding: 10px; margin-bottom: 10px;"> <p>Note: If you have never deployed this repository, the system will not display this information.</p> </div> <p>This section of the interface displays the following information about the most recent deployment of the repository:</p> <ul style="list-style-type: none"> • <i>Last Deployed on</i> — The date of the deployment. • <i>Last Deployed SHA</i> — The SHA-1 value for the deployed commit. • <i>Author</i> — The deployed commit's author. • <i>Commit Date</i> — The date of the deployed commit. • The commit message for the deployed commit.
<p><i>Update from Remote</i></p>	<p>Click to pull changes from the remote repository and apply them to the cPanel-managed copy of the repository. The system pulls changes with the <code>--ff-only</code> option and will only succeed if the branch's HEAD commit is up-to-date or Git can fast forward it.</p>

Deploy
HEAD
Commit

Important:

We **strongly** recommend that you **only** deploy changes from a remote repository or a clone of it on your local computer. You should **not** directly change the cPanel-managed repository's contents. For more information about our suggested deployment configuration and how to set it up, read our [Guide to Git - How to Set Up Deployment](#) documentation.

Click to deploy changes from the cPanel-managed repository. Deployment **requires** a `.cpanel.yml` file and at least one local or remote branch.

- The system runs the tasks that you configure in the `.cpanel.yml` file in order to deploy the repository.
- We **strongly** recommend that you check the `.cpanel.yml` file in to your remote repository and **not** the cPanel-managed repository.
- The system **cannot** deploy changes for repositories with dirty working trees.

For more information about deployment, read our [Guide to Git - Deployment](#) and [Guide to Git - How to Set Up Deployment](#) documentation.