## Git Reference: The Fundamentals Important (Frequent) Commands

Read more about the operation command  git init	Command	Effect
git init  Create a Git repository in the current directory (if one isn't already present)  git clone source [destination]  git remote add name location  git config [global]  user.name "name"  git config [global]  user.email "email"  git status  Display the status of the repository (modified, unmodified, and staged files)  Add file (or a list of files separated by spaces) to the staging area  git clean -i  Remove file from the repository; add -cached to remove only from staging area  git commit -m "message"  Create a commit with description message (if -m is omitted, a text editor will open to accept a message)  git pull remote branch  git push remote branch  git branch  Display available branchs, if it does not exist, include -b to create it; this will discard changes that have not been committed  git merge branch  Merge commits in branch into the current branch  git merge branch  Display available branch of the last commit; can be used to compare objects  Display the changes to files since the last commit; can be used to compare objects  Greate a tag version -m  "message" [commit]  Create a tag version (e.g., v1.2) with associated text message; optionally apply to a specific commit checksum; omit arguments to view all tags	module load git	Load a recent version of Git on CHPC resources
Create a Git repository with the contents of source in the directory destination; will inherit directory name if unspecified git remote add name location git config [global] Change your name to name; omit -global to change only in the current repository user.name "name" git config [global] Change your email address to email; omit -global to change only in the current repository user.email "email" repository; this is visible to all who can view the repository git status Display the status of the repository (modified, unmodified, and staged files) Add file (or a list of files separated by spaces) to the staging area git rfile Remove file from the repository; add -cached to remove only from staging area git clean -i Remove (delete) untracked files; -i does this interactively; be careful git commit -m "message" Create a commit with description message (if -m is omitted, a text editor will open to accept a message) git pull remote branch Pull branch from remote into the current branch git push remote branch Push the current branch to branch of remote git checkout [-b] branch Switch to branch; if it does not exist, include -b to create it; this will discard changes that have not been committed git branch Display available branches, marking the current branch git merge branch Merge commits in branch into the current branch git diff Display available branches, marking the current branch git diff Display the changes to files since the last commit; can be used to compare objects git tag -a version -m Create a tag version (e.g. v1.2) with associated text message; optionally apply to a specific commit checksum; omit arguments to view all tags	git help command	Read more about the operation command
destination   will inherit directory name if unspecified   git remote add name   Add a remote name that points to (the URL) location   git config [global]   Change your name to name; omitglobal to change only in the current repository user.name "name"   git config [global]   Change your email address to email; omitglobal to change only in the current repository user.email "email"   repository; this is visible to all who can view the repository git status   Display the status of the repository (modified, unmodified, and staged files)   git add file   Add file (or a list of files separated by spaces) to the staging area   git rm file   Remove file from the repository; addcached to remove only from staging area   git clean -i   Remove (delete) untracked files; -i does this interactively; be careful   git commit -m "message"   Create a commit with description message (if -m is omitted, a text editor will open to accept a message) git pull remote branch   Pull branch from remote into the current branch   git push remote branch   Push the current branch to branch of remote   git checkout [-b] branch   Switch to branch; if it does not exist, include -b to create it; this will discard changes that have not been committed   git branch   Display available branches, marking the current branch   git branch   Delete branch   git merge branch   Merge commits in branch into the current branch   git diff   Display the changes to files since the last commit; can be used to compare objects   git log [stat]   Display an overview of the project history: commit messages and authors   [summary]   Display information about object (a commit, tag, or tree, for instance)   git tag -a version -m   Create a tag version (e.g. v1.2) with associated text message; optionally apply to a specific commit checksum; omit arguments to view all tags	git init	Create a Git repository in the current directory (if one isn't already present)
Change your name to name; omit -global to change only in the current repository user.name "name"  git config [global] Change your email address to email; omit -global to change only in the current repository user.email "email" repository; this is visible to all who can view the repository of the current repository; this is visible to all who can view the repository.  git status Display the status of the repository (modified, unmodified, and staged files)  add file Add file (or a list of files separated by spaces) to the staging area  git rm file Remove file from the repository; add -cached to remove only from staging area  git clean -i Remove (delete) untracked files; -i does this interactively; be careful  git commit -m "message" Create a commit with description message (if -m is omitted, a text editor will open to accept a message)  git pull remote branch Pull branch from remote into the current branch  git push remote branch Push the current branch to branch of remote  git checkout [-b] branch Switch to branch; if it does not exist, include -b to create it; this will discard changes that have not been committed  git branch Display available branches, marking the current branch  git branch Display available branches, marking the current branch  git merge branch Merge commits in branch into the current branch  git diff Display the changes to files since the last commit; can be used to compare objects  git log [stat] Display an overview of the project history: commit messages and authors  [summary]  git show object Display information about object (a commit, tag, or tree, for instance)  Create a tag version (e.g. v1.2) with associated text message; optionally apply to a specific commit checksum; omit arguments to view all tags	•	
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git pull remote branch git push remote branch git checkout [-b] branch git merge branch git merge branch git diff git diff git push remote branch git diff git branch git object git log [stat] [summary] git show object git tag -a version -m "message" [commit]  To a version -m  To a version	git clean -i	Remove (delete) untracked files; $-i$ does this interactively; be careful
git push remote branch  git checkout [-b] branch  git checkout [-b] branch  Switch to branch; if it does not exist, include -b to create it; this will discard changes that have not been committed  git branch  Display available branches, marking the current branch  git merge branch  Merge commits in branch into the current branch  git diff  Display the changes to files since the last commit; can be used to compare objects  git log [stat]  [summary]  git show object  Display information about object (a commit, tag, or tree, for instance)  Greate a tag version (e.g. v1.2) with associated text message; optionally apply to a specific commit checksum; omit arguments to view all tags	git commit -m "message"	Create a commit with description $message$ (if $-m$ is omitted, a text editor will open to accept a message)
git checkout [-b] branch  Switch to branch; if it does not exist, include -b to create it; this will discard changes that have not been committed  git branch  Display available branches, marking the current branch  Delete branch  Merge commits in branch into the current branch  git diff  Display the changes to files since the last commit; can be used to compare objects  git log [stat]  Display an overview of the project history: commit messages and authors  Display information about object (a commit, tag, or tree, for instance)  git tag -a version -m  "message" [commit]  Create a tag version (e.g. v1.2) with associated text message; optionally apply to a specific commit checksum; omit arguments to view all tags	git pull remote branch	Pull branch from remote into the current branch
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git revert commit Revert to commit by creating a new commit		
	git revert commit	Revert to <i>commit</i> by creating a new commit

## **Important Files**

File	Purpose
.gitignore	Selectively ignore files (with patterns)
README	Explain the project and provide high-level documentation
LICENSE	Provide information about the license of the repository's contents
CITATION	Provide information about citing the project

Center for High Performance Computing  $\, \cdot \,$  University of Utah  $\, \cdot \,$  Updated May 2018