ITK Git Reference

One-time Global Setup

**SETUP USER INFORMATION**
- `git config --global user.name "Jane Doe"`  
  Use your full name.
- `git config --global user.email "jane@doe.org"`  
  Enable color output in Git (optional).
- `git config --global color.ui auto`

Create and Configure Your Repository

**CLONE REPOSITORY**
- `git clone https://github.com/InsightSoftwareConsortium/ITK`
- `cd ITK`

**CONFIGURE**
- `./Utilities/SetupForDevelopment.sh`
  Follow prompts, sets up local hooks, remotes, push URLs etc.

Topic Branch Lifecycle

**UPDATE**
- `git status`
- `git checkout master`
- `git pull --rebase upstream master`
  Review local modifications, delete, stash or commit them.

**NEW TOPIC BRANCH**
- `git checkout -b my-topic upstream/master`
  Create branch off master.

**WRITE CODE**
- `vim MyExistingFile.cxx MyNewFile.cxx`
  Use your favorite editor.

**NEW COMMIT**
- `git add MyExistingFile.cxx MyNewFile.cxx`
- `git commit`
  Stage changes to existing and new files.
  Commit changes locally.

**AMEND COMMIT**
- `vim MyExistingFile.cxx`
- `git add MyExistingFile.cxx`
- `git commit --amend`
  Edit the file.
  Stage changes.
  Amend previous commit locally.

**ADD TESTING DATA**
- `git data-upload DataFile.png`
  Upload a testing data input or baseline image to data.kitware.com.
  Reference the content link in the CMake configuration.
  Add the content link and updated CMake configuration.
- `# Add DATA{DataFile.png} to CMakeLists.txt`
- `git add -- DataFile.png.sha512 CMakeLists.txt`
- `git commit --amend`

**SUBMIT FOR REVIEW**
- `git prepush`
- `git review-push`
  Check what will be pushed to GitHub.
  Push the topic to GitHub for review.
  Enter the URL returned in your browser, and review and open the pull request.

**RESPOND TO REVIEW**
- `git rebase -i HEAD~3`
- `git prepush`
- `git review-push --force`
  Modify local commits (3 back here).
  Check what will be pushed to Gerrit.
  Push the updated topic to Gerrit.

**DELETE TOPIC**
- `git fetch upstream`
- `git branch -d my-topic`
  Fetch the latest changes from origin.
  Delete topic, fails if not merged.
**Review**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Push for Review</strong> git review-push</td>
<td>Push the current topic branch for review.</td>
</tr>
<tr>
<td><strong>Review Pull Requests</strong> git pr &lt;pull-request-number&gt;</td>
<td>Fetch and check out by number a pull request locally for review.</td>
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<tr>
<td><strong>Clean Pull Requests</strong> git pr-clean</td>
<td>Clean locally fetched pull requests.</td>
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**General Guidelines**

<table>
<thead>
<tr>
<th>Topic Naming</th>
<th>Description</th>
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<tr>
<td>Commit &lt;short-description&gt;</td>
<td>Should be less than 60 characters. Blank line after short description.</td>
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<tr>
<td>Message &lt;long description&gt; Issue #1234</td>
<td>Could be several paragraphs. GitHub issue number, if applicable.</td>
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<tr>
<td>Topic summary-of-topic</td>
<td>Lower case, separated by dashes.</td>
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For more information, see [git-scm.com](https://git-scm.com).