

Configuring SimDiff for use with Mercurial

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General Instructions for Mercurial

To configure SimDiff for use with Mercurial, the Mercurial configuration file must be edited. The configuration file location depends on the operating system. On Windows, it is %USERPROFILE%/Mercurial.ini, and on Linux, it is \$HOME/.hgrc

Use SimDiff as an External Diff Tool

The best way to use an external diff tool with Mercurial is to use the `extdiff` extension that is distributed with it.

SimDiff requires specified left and right model path input arguments to be prefixed with `-leftModel` (or `-l`) and `-rightModel` (or `-r`) arguments respectively. The Mercurial `extdiff` extension allows specifying 2 options:

- `cmd.xxx`: which defines the name of an executable program that will be run
- `opts.xxx`: which defines the set of command-line options which will be inserted to the command between the program name and the files to diff

Here are the steps to configure SimDiff as an external diff tool:

1. Create a new batch script file in a location you have write access to, such as `"C:\Users\\hg-simdiff.bat"`
2. Add this single line to the batch file (this assumes SimDiff is installed in the default location):
`"C:\Program Files\EnSoft\SimDiff\simdiff4.exe" -l "%1" -r "%2"`
3. Next, modify the `mercurial.ini` configuration file to have the `simdiff` command point to the batch file:

```
[extdiff]
cmd.simdiff = C:\Users\\hg-simdiff.bat
opts.simdiff =
```

The commands can then be used similarly to the `hg diff` command:

```
> hg simdiff model.mdl
```

Please note that the custom commands will only work for comparing revisions for a single model file - the command will fail if a directory is specified.

Use SimDiff as a Merge Tool for Simulink Model Files

There are two sections to modify: [merge-patterns] and [merge-tools].

```
[merge-patterns]
**.mdl = simdiff

[merge-tools]
simdiff.executable = C:\ProgramFiles\EnSoft\SimDiff\simdiff4.exe
simdiff.args = -b $base -l $local -r $other -o $output
simdiff.binary = true
simdiff.gui = true
```

SimDiff will then be launched to merge files with extension .mdl, but *only if there is a conflict at the file level*. For example, when a model file is only modified in one branch, SimDiff is not launched.

Reference Documentation

<https://www.selenic.com/mercurial/hgrc.5.html - merge-patterns>

<https://wiki.mercurial-scm.org/ExtdiffExtension>

Additional Instructions for TortoiseHg

By default, TortoiseHg will use the first specified external diff tool in the config file for the “*Visual Diff*”. SimDiff is a Simulink model file diff tool, not a text diff tool. Therefore, when diffing text-based files, it is recommended to either configure another external diff tool above it in the preferences, or modify the TortoiseHg global settings to explicitly specify a different tool:

1. Right-click an empty space in a Windows Explorer window and select *TortoiseHg* > *Global Settings*.
2. Select the *TortoiseHg* preference group on the left.
3. For the *Visual Diff Tool* drop-down, choose a tool other than SimDiff, such as *kdif3*.

Note: TortoiseHg will properly use SimDiff as the merge tool if it is specified in the configuration file, because the external merge tools are organized by file extension.