* Text

  Description automatically generated<!DOCTYPE html>
* <html lang="en">
* <hText

  Description automatically generatedead>
* Graphical user interface, application, Word

  Description automatically generated <meta charset="UTF-8">
* <meta http-equiv="X-UA-Compatible" content="IE=edge">
* <meta name="viewport" content="width=device-width, initial-scale=1.0">
* <title>Parktikum1</title>
* </head>
* <body>
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* <form method="POST" action="response2.jsp" enctype="multipart/form-data">
* <p>
* <label for="azmi">Nama</label>
* <input type="text" id="azmi" name="nama" placeholder="isi nama lengkap...">
* </p>
* <p>
* <label for="">Gender</label>
* <input type="radio" name="" id=""> Men <input type="radio" name="" id=""> Women
* </p>
* <p>
* <label>address</label>
* <input type="text" name="alamat" placeholder="alamat kamu...">
* </p>
* <p>
* <label>Country</label>
* <select name="negara" id="">
* <option value="Indonesia">Indonesia</option>
* <option value="Malaysia">Malaysia</option>
* <option value="Singapura">Singapura</option>
* <option value="Brunei">Brunei</option>
* </select>
* </p>
* <p>
* <label>Email</label>
* <input type="email" name="emailkamu" id="">
* </p>
* <p>
* <label for="isinya">Photo</label>
* <input type="file" name="" id="isinya">
* </p>
* <p>
* <label for="comment">comment</label>
* <textarea name="" id="comment" cols="15" rows=5"></textarea>
* <input type="button" value="submit">
* </p>
* </body>
* </html>[homepage](https://gitforwindows.org/)
* [faq](https://github.com/git-for-windows/git/wiki/FAQ)
* [contribute](https://gitforwindows.org/#contribute)
* [bugs](https://gitforwindows.org/#contribute)
* [questions](mailto:git@vger.kernel.org)

# Git for Windows v2.37.3 Release Notes

Latest update: August 30th 2022

Introduction

These release notes describe issues specific to the Git for Windows release. The release notes covering the history of the core git commands can be found [in the Git project](https://github.com/git/git/tree/HEAD/Documentation/RelNotes).

See <http://git-scm.com/> for further details about Git including ports to other operating systems. Git for Windows is hosted at <https://gitforwindows.org/>.

# Known issues

* On Windows 10 before 1703, or when Developer Mode is turned off, special permissions are required when cloning repositories with symbolic links, therefore support for symbolic links is disabled by default. Use git clone -c core.symlinks=true <URL> to enable it, see details [here](https://github.com/git-for-windows/git/wiki/Symbolic-Links).
* If configured to use Plink, you will have to connect with [putty](http://www.chiark.greenend.org.uk/~sgtatham/putty/) first and accept the host key.
* Some console programs, most notably non-MSYS2 Python, PHP, Node and OpenSSL, interact correctly with MinTTY only when called through winpty (e.g. the Python console needs to be started as winpty python instead of just python).
* If you specify command-line options starting with a slash, POSIX-to-Windows path conversion will kick in converting e.g. "/usr/bin/bash.exe" to "C:\Program Files\Git\usr\bin\bash.exe". When that is not desired -- e.g. "--upload-pack=/opt/git/bin/git-upload-pack" or "-L/regex/" -- you need to set the environment variable MSYS\_NO\_PATHCONV temporarily, like so:

MSYS\_NO\_PATHCONV=1 git blame -L/pathconv/ msys2\_path\_conv.cc

Alternatively, you can double the first slash to avoid POSIX-to-Windows path conversion, e.g. "//usr/bin/bash.exe".

* Windows drives are normally recognized within the POSIX path as /c/path/to/dir/ where /c/ (or appropriate drive letter) is equivalent to the C:\ Windows prefix to the \path\to\dir. If this is not recognized, revert to the C:\path\to\dir Windows style.
* Git for Windows will not allow commits containing DOS-style truncated 8.3-format filenames ending with a tilde and digit, such as mydocu~1.txt. A workaround is to call git config core.protectNTFS false, which is not advised. Instead, add a rule to .gitignore to ignore the file(s), or rename the file(s).
* Many Windows programs (including the Windows Explorer) have problems with directory trees nested so deeply that the absolute path is longer than 260 characters. Therefore, Git for Windows refuses to check out such files by default. You can overrule this default by setting core.longPaths, e.g. git clone -c core.longPaths=true ....
* Some commands are not yet supported on Windows and excluded from the installation.
* As Git for Windows is shipped without Python support, git p4 (which is backed by a Python script) is not supported.
* The Quick Launch icon will only be installed for the user running setup (typically the Administrator). This is a technical restriction and will not change.
* Older versions of the Windows Explorer do not calculate Git for Windows' on-disk size correctly, as it is unaware of hard links. Therefore, it might look like Git for Windows takes up 1.5GB when in reality it is about a third of that.
* Git command hints are designed for a POSIX shell, this can lead to issues when using them **as is** in non-POSIX shells like PowerShell, [such as this ticket](https://github.com/git-for-windows/git/issues/2785).
* When pushing via the git:// protocol, Git for Windows may hang indefinitely. The last console output in this case is typically Writing objects: 100%. Until issue [#907](https://github.com/git-for-windows/git/issues/907) is addressed, run this command once as a work-around: git config sendpack.sideband false.
* Git for Windows executables linked to msys-2.0.dll are not compatible with Mandatory ASLR and may crash if system-wide Mandatory ASLR is enabled in Windows Exploit protection. A workaround is to disable ASLR for all executables in C:\Program Files\Git\usr\bin, run in administrator powershell (replace $\_.Name with $\_ to use full path to executable instead of name):

Get-Item -Path "C:\Program Files\Git\usr\bin\\*.exe" | %{ Set-ProcessMitigation -Name $\_.Name -Disable ForceRelocateImages }

Alternatively, you can disable Mandatory ASLR completely in Windows Exploit protection.

Should you encounter other problems, please first search [the bug tracker](https://github.com/git-for-windows/git/issues) (also look at the closed issues) and [the mailing list](http://groups.google.com/group/git-for-windows), chances are that the problem was reported already. Also make sure that you use an up to date Git for Windows version (or a [current snapshot build](https://wingit.blob.core.windows.net/files/index.html)). If it has not been reported, please follow [our bug reporting guidelines](https://github.com/git-for-windows/git/wiki/Issue-reporting-guidelines) and [report the bug](https://github.com/git-for-windows/git/issues/new).

Licenses

Git is licensed under the GNU General Public License version 2.

Git for Windows also contains Embedded CAcert Root Certificates. For more information please go to <https://www.cacert.org/policy/RootDistributionLicense.php>.

This package contains software from a number of other projects including Bash, zlib, curl, tcl/tk, perl, MSYS2 and a number of libraries and utilities from the GNU project, licensed under the GNU General Public License. Likewise, it contains Perl which is dual licensed under the GNU General Public License and the Artistic License.

Changes in v2.37.3  
since v2.37.2(2) (August 11th 2022)

New Features

* Comes with [Git v2.37.3](https://github.com/git/git/blob/v2.37.3/Documentation/RelNotes/2.37.3.txt).
* Comes with [tig v2.5.7](https://github.com/jonas/tig/releases/tag/tig-2.5.7).

Bug Fixes

* Git for Windows [now correctly handles .doc files that are not Word Documents](https://github.com/git-for-windows/build-extra/pull/432).

Changes in v2.37.2(2)  
since v2.37.1 (July 12th 2022)

(Upcoming) breaking changes

We updated the included Bash to version 5.1 (previously 4.4). Please check your shell scripts for potential compatibility issues.

Also, as previously announced, Git for Windows dropped support for Windows Vista.

Around the beginning of 2023, Git for Windows will drop support for Windows 7 and for Windows 8, following [Cygwin's and MSYS2's lead](https://www.msys2.org/docs/windows_support/) (Git for Windows relies on MSYS2 for components such as Bash and Perl).

New Features

* Comes with [Git v2.37.2](https://github.com/git/git/blob/v2.37.2/Documentation/RelNotes/2.37.2.txt).
* Comes with [tig v2.5.6](https://github.com/jonas/tig/releases/tag/tig-2.5.6).
* Comes with [Bash v5.1 patchlevel 016](https://tiswww.case.edu/php/chet/bash/NEWS) .
* Comes with [Perl v5.36.0](http://search.cpan.org/dist/perl-5.36.0/pod/perldelta.pod).
* Git's executables are [now](https://github.com/git-for-windows/build-extra/pull/429) marked [Terminal Server-aware](https://github.com/git-for-windows/git/pull/3942), meaning: Git will be slightly faster when being run using Remote Desktop Services.
* git svn is now based on [subversion v1.14.2](https://svn.apache.org/repos/asf/subversion/tags/1.14.2/CHANGES).
* Comes with [GNU TLS v3.7.7](https://lists.gnupg.org/pipermail/gnutls-help/2022-July/004746.html).

Bug Fixes

* Git for Windows [now ships without the zmore and bzmore utilities](https://github.com/git-for-windows/build-extra/pull/430) (which were broken and included only inadvertently).
* A [regression in the vimdiff mode of git mergetool](https://github.com/git-for-windows/git/issues/3945) has been [fixed](https://github.com/git-for-windows/git/pull/3960).
* With certain network drives, [it was reported](https://github.com/git-for-windows/git/issues/3727) that some attributes associated with caching confused Git for Windows. This [was fixed](https://github.com/git-for-windows/git/pull/3753).

Changes in v2.37.1  
since v2.37.0 (June 27th 2022)

This release addresses [CVE-2022-31012](https://github.com/git-for-windows/git/security/advisories/GHSA-gjrj-fxvp-hjj2) and [CVE-2022-29187](https://github.com/git/git/security/advisories/GHSA-j342-m5hw-rr3v).

New Features

* Comes with [Git v2.37.1](https://github.com/git/git/blob/v2.37.1/Documentation/RelNotes/2.37.1.txt).
* Comes with [OpenSSL v1.1.1q](https://www.openssl.org/news/openssl-1.1.1-notes.html).
* Comes with [Git Credential Manager Core v2.0.785](https://github.com/GitCredentialManager/git-credential-manager/releases/tag/v2.0.785).
* Comes with [tig v2.5.5](https://github.com/jonas/tig/releases/tag/tig-2.5.5).

Bug Fixes

* Pasting large amounts of text in Git for Windows' Bash when running inside Windows Terminal [often resulted in garbled text](https://github.com/git-for-windows/git/issues/3936), which has been fixed.
* The Perl module [perl-Clone](https://metacpan.org/source/ATOOMIC/Clone-0.45/Changes) which linked to a non-existing DLL was rebuilt to fix the issue.
* The Git for Windows installer can no longer be tricked into running an untrusted git.exe in elevated mode ([CVE-2022-31012](https://github.com/git-for-windows/git/security/advisories/GHSA-gjrj-fxvp-hjj2)).
* When running Git in a world-writable directory owned by the current user (think C:\Windows\Temp, when running under the SYSTEM account), the checks for dubious ownership of the .git directory now detect this situation properly ([CVE-2022-29187](https://github.com/git/git/security/advisories/GHSA-j342-m5hw-rr3v)).

Changes in v2.37.0  
since v2.36.1 (May 9th 2022)

New Features

* Comes with [Git v2.37.0](https://github.com/git/git/blob/v2.37.0/Documentation/RelNotes/2.37.0.txt).
* Many anti-malware products seem to have problems with our MSYS2 runtime, leading to problems running e.g. git subtree. We [added a workaround](https://github.com/git-for-windows/msys2-runtime/pull/37) that hopefully helps in most of these scenarios.
* Comes with MSYS2 runtime (Git for Windows flavor) based on [Cygwin 3.3.5](https://cygwin.com/pipermail/cygwin-announce/2022-May/010565.html).
* Comes with [PCRE2 v10.40](https://raw.githubusercontent.com/PCRE2Project/pcre2/pcre2-10.40/ChangeLog).
* Comes with [Git LFS v3.2.0](https://github.com/git-lfs/git-lfs/releases/tag/v3.2.0).
* Comes with [GNU TLS v3.7.6](https://lists.gnupg.org/pipermail/gnutls-help/2022-May/004744.html).
* SSH's CBC ciphers, which were re-enabled in 2017 to better support Azure Repos [have again been disabled by default](https://github.com/git-for-windows/build-extra/pull/421) because Azure Repos does not require them any longer.
* Comes with [OpenSSL v1.1.1p](https://www.openssl.org/news/openssl-1.1.1-notes.html).
* Comes with [Git Credential Manager Core v2.0.779](https://github.com/GitCredentialManager/git-credential-manager/releases/tag/v2.0.779).
* Comes with [cURL v7.84.0](https://curl.haxx.se/changes.html#7_84_0).

Bug Fixes

* The Git for Windows-only --show-ignored-directory option of git status, which was deprecated a long time ago, [was finally removed](https://github.com/git-for-windows/git/pull/2067).
* A crash when running Git for Windows in Wine [was fixed](https://github.com/git-for-windows/git/pull/3875).
* A bug in the interaction between FSCache and parallel checkout [was fixed](https://github.com/git-for-windows/git/pull/3909).
* Cloning to network shares failed on some network file systems, which was [fixed](https://github.com/git-for-windows/git/pull/3646).
* When Git indicates an unsafe directory due to the file system (e.g. FAT32) being unable to record ownership, Git [now gives better hints](https://github.com/git-for-windows/git/pull/3887).

Changes in v2.36.1  
since v2.36.0 (April 20th 2022)

Upcoming breaking changes

We plan to update the included bash to version 5.1 (currently 4.4) soon after Git for Windows 2.36.0 is released. Please check your shell scripts for potential compatibility issues.

Git for Windows will also stop supporting Windows Vista soon after Git for Windows 2.36.0 is released. Around the beginning of 2023, Git for Windows will drop support for Windows 7 and for Windows 8, following [Cygwin's and MSYS2's lead](https://www.msys2.org/docs/windows_support/) (Git for Windows relies on MSYS2 for components such as Bash and Perl).

New Features

* Comes with [Git v2.36.1](https://github.com/git/git/blob/v2.36.1/Documentation/RelNotes/2.36.1.txt).
* On newer Windows versions, Git [now assumes a Win32 Console with full color capabilities](https://github.com/git-for-windows/git/pull/3751). This helps e.g. when NeoVIM is configured as Git's editor.
* Comes with [OpenSSH v9.0p1](https://www.openssh.com/txt/release-9.0).
* When git clean fails due to long paths, [Git now advises the user to set core.longPaths](https://github.com/git-for-windows/git/pull/3817).
* Comes with [cURL v7.83.0](https://curl.haxx.se/changes.html#7_83_0).
* Git Credential Manager's binaries [are no longer installed in the same location as core Git's own dashed programs](https://github.com/git-for-windows/build-extra/pull/406). This separates more clearly the core Git executables from the Git executables provided by third-parties.
* Comes with [Git Credential Manager Core v2.0.696](https://github.com/GitCredentialManager/git-credential-manager/releases/tag/v2.0.696).
* Comes with [OpenSSL v1.1.1o](https://www.openssl.org/news/openssl-1.1.1-notes.html).
* Comes with [patch level 4](https://github.com/git-for-windows/msys2-runtime/commit/d72d5e8aeb7df99c55bdc438fb71fdeffd2bd1e5) of the MSYS2 runtime (Git for Windows flavor) based on [Cygwin 3.3.4](https://cygwin.com/pipermail/cygwin-announce/2022-January/010438.html).

Bug Fixes

* A regression introduced in Git for Windows v2.36.0 where GPG in 32-bit versions simply would not work [was fixed](https://github.com/git-for-windows/MSYS2-packages/commit/002b641e4409ce76709419e835e1fb2a6de14e7c).
* The proxy-lookup helper [only reported the first letter of the proxy](https://github.com/git-for-windows/git/issues/3818), which was fixed.
* The installer [now verifies that .NET Framework 4.7.2 is available](https://github.com/git-for-windows/build-extra/pull/329) before offering Git Credential Manager (GCM) as an option (because it is required for GCM to work).
* A bug introduced into v2.36.0 where [shell scripts failed to run on some network shares with the error "Too many levels of symbolic links"](https://github.com/git-for-windows/git/issues/3825) was fixed.

Changes in v2.36.0  
since v2.35.3 (April 15th 2022)

This version includes Git LFS v3.1.4, addressing [CVE-2022-24826](https://github.com/git-lfs/git-lfs/security/advisories/GHSA-6rw3-3whw-jvjj) (if you use Git LFS with [MinGit](https://github.com/git-for-windows/git/wiki/MinGit), you will want to upgrade).

Upcoming breaking changes

We plan to update the included bash to version 5.1 (currently 4.4) soon after Git for Windows 2.36.0 is released. Please check your shell scripts for potential compatibility issues.

Git for Windows will also stop supporting Windows Vista soon after Git for Windows 2.36.0 is released. Around the beginning of 2023, Git for Windows will drop support for Windows 7 and for Windows 8, following [Cygwin's and MSYS2's lead](https://www.msys2.org/docs/windows_support/) (Git for Windows relies on MSYS2 for components such as Bash and Perl).

New Features

* Comes with [Git v2.36.0](https://github.com/git/git/blob/v2.36.0/Documentation/RelNotes/2.36.0.txt).
* Comes with MSYS2 runtime (Git for Windows flavor) based on [Cygwin 3.3.4](https://cygwin.com/pipermail/cygwin-announce/2022-January/010438.html).
* Comes with [OpenSSH v8.9p1](https://www.openssh.com/txt/release-8.9).
* Comes with [cURL v7.82.0](https://curl.haxx.se/changes.html#7_82_0).
* Comes with [OpenSSL v1.1.1n](https://www.openssl.org/news/openssl-1.1.1-notes.html).
* Comes with [Git Credential Manager Core v2.0.696](https://github.com/GitCredentialManager/git-credential-manager/releases/tag/v2.0.696).
* Comes with [GNU TLS v3.7.4](https://lists.gnupg.org/pipermail/gnutls-help/2022-March/004738.html).
* Comes with [Git LFS v3.1.4](https://github.com/git-lfs/git-lfs/releases/tag/v3.1.4).

Changes in v2.35.3  
since v2.35.2 (April 12th 2022)

New Features

* Comes with [Git v2.35.3](https://github.com/git/git/blob/v2.35.3/Documentation/RelNotes/2.35.3.txt).

Bug Fixes

* The advice indicating how to use the %(prefix) with a network share path [was updated](https://github.com/git-for-windows/git/pull/3790) to use the appropriate number of slashes.
* [Various fixes](https://github.com/git-for-windows/git/pull/3791) for usage of the safe.directory and %(prefix) when using Windows Subsystem for Linux (WSL).

Changes in v2.35.2  
since v2.35.1(2) (February 1st 2022)

This version addresses [CVE-2022-24765](https://github.com/git-for-windows/git/security/advisories/GHSA-vw2c-22j4-2fh2) and [CVE-2022-24767](https://github.com/git-for-windows/git/security/advisories/GHSA-gf48-x3vr-j5c3).

New Features

* Comes with [Git v2.35.2](https://github.com/git/git/blob/v2.35.2/Documentation/RelNotes/2.35.2.txt).

Bug Fixes

* The uninstaller was hardened to [avoid a vulnerability when running under the SYSTEM account](https://github.com/git-for-windows/git/security/advisories/GHSA-gf48-x3vr-j5c3), addressing CVE-2022-24767.

Changes in v2.35.1(2)  
since v2.35.1 (January 29th 2022)

Bug Fixes

* A [bug](https://github.com/git-for-windows/git/issues/3674) in FSCache that triggered by a patch that made it into Git for Windows v2.35.0 [was fixed](https://github.com/git-for-windows/git/pull/3678).

Changes in v2.35.1  
since v2.35.0 (January 24th 2022)

New Features

* Comes with [Git v2.35.1](https://github.com/git/git/blob/v2.35.1/Documentation/RelNotes/2.35.1.txt).

Changes in v2.35.0  
since v2.34.1 (November 25th 2021)

New Features

* Comes with [Git v2.35.0](https://github.com/git/git/blob/v2.35.0/Documentation/RelNotes/2.35.0.txt).
* Comes with a version of the MSYS2 runtime (Git for Windows flavor) based on [Cygwin 3.3.3](https://cygwin.com/pipermail/cygwin-announce/2021-December/010338.html).
* Comes with [OpenSSL v1.1.1m](https://www.openssl.org/news/openssl-1.1.1-notes.html).
* Comes with [Git Credential Manager Core v2.0.632.34631](https://github.com/GitCredentialManager/git-credential-manager/releases/tag/v2.0.632).
* Comes with [cURL v7.81.0](https://curl.haxx.se/changes.html#7_81_0).
* Comes with [tig v2.5.5](https://github.com/jonas/tig/releases/tag/tig-2.5.5).
* Comes with [patch level 4](https://github.com/git-for-windows/msys2-runtime/commit/b600e8ead500aef55e23810c2e630d9be46f3a4c) of the MSYS2 runtime (Git for Windows flavor) based on [Cygwin 3.3.3](https://cygwin.com/pipermail/cygwin-announce/2021-December/010338.html).

Bug Fixes

* A [bug](https://github.com/git-for-windows/git/issues/3624) which caused crashes when running git log with custom date formats in 32-bit builds was fixed.

Changes in v2.34.1  
since v2.34.0 (November 15th 2021)

New Features

* Comes with [Git v2.34.1](https://github.com/git/git/blob/v2.34.1/Documentation/RelNotes/2.34.1.txt).
* Comes with [Git Credential Manager Core v2.0.605.12951](https://github.com/microsoft/git-credential-manager-core/releases/tag/v2.0.605).
* Comes with [cURL v7.80.0](https://curl.haxx.se/changes.html#7_80_0).

Changes in v2.34.0  
since v2.33.1 (October 13th 2021)

New Features

* Comes with [Git v2.34.0](https://github.com/git/git/blob/v2.34.0/Documentation/RelNotes/2.34.0.txt).
* Config settings referring to paths relative to where Git is installed [now have to be marked via %(prefix)/ instead of the now-deprecated leading slash](https://github.com/git-for-windows/git/pull/3472).
* Comes with [Git LFS v3.0.2](https://github.com/git-lfs/git-lfs/releases/tag/v3.0.2).
* Contains [new, experimental support for core.fsyncObjectFiles=batch](https://github.com/git-for-windows/git/pull/3492).

Bug Fixes

* Configuring a system-wide VS Code as Git's editor [was broken](https://github.com/git-for-windows/git/issues/3471), which has been fixed.
* It is [now possible](https://github.com/git-for-windows/git/pull/3487) to clone files larger than 4GB as long as they are transferred via [Git LFS](https://git-lfs.github.io/).
* Git now works around [an issue with vi and incorrect line breaks in the Windows Terminal](https://github.com/microsoft/terminal/issues/9359).

Changes in v2.33.1  
since v2.33.0(2) (August 24th 2021)

New Features

* Comes with [Git v2.33.1](https://github.com/git/git/blob/v2.33.1/Documentation/RelNotes/2.33.1.txt).
* Comes with [OpenSSL v1.1.1l](https://www.openssl.org/news/openssl-1.1.1-notes.html).
* The included git svn now uses [subversion v1.14.1](https://svn.apache.org/repos/asf/subversion/tags/1.14.1/CHANGES) internally.
* [Git Credential Manager for Windows](https://github.com/microsoft/Git-Credential-Manager-for-Windows) (which was superseded by [Git Credential Manager Core](https://aka.ms/gcmcore), and was deprecated for a long time now, and no longer succeeds to authenticate with GitHub) is [no longer included in Git for Windows](https://github.com/git-for-windows/build-extra/pull/377).
* Comes with [cURL v7.79.1](https://curl.haxx.se/changes.html#7_79_1).
* Comes with [OpenSSH v8.8p1](https://www.openssh.com/txt/release-8.8).
* Comes with [Git LFS v3.0.1](https://github.com/git-lfs/git-lfs/releases/tag/v3.0.1).
* The built-in filesystem watcher ("FSMonitor") [has been updated to the latest version](https://github.com/git-for-windows/git/pull/3447).
* Comes with [Git Credential Manager Core v2.0.567.18224](https://github.com/microsoft/git-credential-manager-core/releases/tag/v2.0.567).

Bug Fixes

* Wordpad [can be configured as Git's preferred editor](https://github.com/git-for-windows/build-extra/pull/378) again.
* A bug where Git's garbage collection during a git pull failed to delete obsolete files [was fixed](https://github.com/git-for-windows/git/pull/3415).
* The git svn command, [which was broken in Git for Windows v2.33.0(2)](https://github.com/git-for-windows/git/issues/3392), has been fixed.
* The password prompt when cloning via SSH [works again](https://github.com/git-for-windows/build-extra/pull/381).
* The MSYS2 runtime [no longer complains about FAST\_CWD on Windows/ARM64](https://github.com/git-for-windows/msys2-runtime/pull/33).
* When VS Code is configured as editor, [it no longer needs the window to be closed, just the tab](https://github.com/git-for-windows/git/issues/3452).
* The 32-bit versions of Git for Windows included outdated versions of ca-certificates and less, [which has been rectified](https://github.com/git-for-windows/MSYS2-packages/pull/49).

Changes in v2.33.0(2)  
since v2.33.0 (August 17th 2021)

New Features

* Comes with [cURL v7.78.0](https://curl.haxx.se/changes.html#7_78_0).
* Comes with [OpenSSH v8.7p1](https://www.openssh.com/txt/release-8.7).

Bug Fixes

* A [bug](https://github.com/git-for-windows/git/issues/3368) affecting older Windows versions that caused the installer to show the error message "Could not call proc" [was fixed](https://github.com/git-for-windows/build-extra/pull/374).

Changes in v2.33.0  
since v2.32.0(2) (July 6th 2021)

New Features

* Comes with [Git v2.33.0](https://github.com/git/git/blob/v2.33.0/Documentation/RelNotes/2.33.0.txt).
* Comes with [Perl v5.34.0](http://search.cpan.org/dist/perl-5.34.0/pod/perldelta.pod) (and some updated Perl modules).
* It is [now possible](https://github.com/git-for-windows/build-extra/pull/367) to ask Git for Windows to use an SSH found on the PATH instead of its bundled OpenSSH executable.
* Comes with [Git Credential Manager Core v2.0.498.54650](https://github.com/microsoft/git-credential-manager-core/releases/tag/v2.0.498).
* The experimental FSMonitor patches were replaced with [a newer version](https://github.com/git-for-windows/git/pull/3350).
* Comes with [GNU Privacy Guard v2.2.29](https://lists.gnupg.org/pipermail/gnupg-announce/2021q3/000461.html).

Bug Fixes

* The installer no longer [shows an error dialog](https://github.com/git-for-windows/git/issues/3312) when upgrading while the Windows Terminal Profile option is checked.
* Interaction with [the git repo tool](https://gerrit.googlesource.com/git-repo/) was [improved](https://github.com/git-for-windows/git/pull/3328).
* The version of GNU Privacy Guard (GPG) bundled in Git for Windows [did not work in 64-bit setups](https://github.com/git-for-windows/git/issues/2888), which [was fixed](https://github.com/git-for-windows/MSYS2-packages/pull/46).

Changes in v2.32.0(2)  
since v2.32.0 (June 7th 2021)

New Features

* The Windows Terminal profile is now identified [by a GUID](https://github.com/git-for-windows/build-extra/pull/356), for more robust customization.
* Comes with [GNU Privacy Guard v2.2.28](https://lists.gnupg.org/pipermail/gnupg-announce/2021q2/000460.html).
* Comes with [Git Credential Manager Core v2.0.475.64295](https://github.com/microsoft/git-credential-manager-core/releases/tag/v2.0.475).
* Access to remote HTTPS repositories that requires client certificates [can be enabled](https://github.com/git-for-windows/git/issues/3292). This is now necessary because [cURL no longer sends client certificates by default](https://github.com/curl/curl/commit/54e747501626b81149b1b44949119d365db82004).

Bug Fixes

* The built-in file system watcher could hang in some scenarios. [This was fixed](https://github.com/git-for-windows/git/pull/3263).
* Remote HTTPS repositories [could not be accessed from within portable Git installed into a network share](https://github.com/git-for-windows/git/issues/3266). This [has been fixed](https://github.com/git-for-windows/MINGW-packages/pull/51).
* When scrolling in the pager (e.g. in the output of git log), [lines were duplicated by mistake](https://github.com/git-for-windows/git/issues/3235). This was fixed.
* The git subtree command was [completely broken in the previous release](https://github.com/git-for-windows/git/issues/3260), and was fixed.
* A bug was fixed where remote operations [appeared to hang](https://github.com/git-for-windows/git/issues/3268) (but were waiting for user feedback on a hidden Console).
* A bug was fixed where the experimental built-in file system watcher had [a problem with worktrees whose paths had non-ASCII characters](https://github.com/git-for-windows/git/issues/3262).

Changes in v2.32.0  
since v2.31.1 (March 27th 2021)

New Features

* Comes with [Git v2.32.0](https://github.com/git/git/blob/v2.32.0/Documentation/RelNotes/2.32.0.txt).
* The installer now offers to install [a Windows Terminal profile](https://github.com/git-for-windows/build-extra/pull/339).
* Comes with [cURL v7.77.0](https://curl.haxx.se/changes.html#7_77_0).
* Comes with [PCRE2 v10.37](https://pcre.org/news.txt).
* The experimental, built-in [file system monitor](https://github.com/git-for-windows/git/discussions/3251) is now [featured as an experimental option in the installer](https://github.com/git-for-windows/build-extra/pull/351).
* Comes with [Git Credential Manager Core v2.0.474.41365](https://github.com/microsoft/git-credential-manager-core/releases/tag/v2.0.474).
* Sublime Text 4 [now gets detected by the installer](https://github.com/git-for-windows/build-extra/pull/355).
* Comes with [tig v2.5.4](https://github.com/jonas/tig/releases/tag/tig-2.5.4).

Bug Fixes

* When testing a custom editor in the installer, [we now spawn it in non-elevated mode](https://github.com/git-for-windows/git/issues/3155), fixing e.g. Atom when an instance is already running.
* The meta credential-helper used by the Portable Git edition of Git for Windows [sometimes crashed](https://github.com/git-for-windows/git/issues/3196), which has been fixed.
* The auto-updater [no longer suggests to downgrade from -rc0 versions](https://github.com/git-for-windows/build-extra/pull/347).

Changes in v2.31.1  
since v2.31.0 (March 15th 2021)

New Features

* Comes with [Git v2.31.1](https://github.com/git/git/blob/v2.31.1/Documentation/RelNotes/2.31.1.txt).
* Comes with [GNU Privacy Guard v2.2.27](https://lists.gnupg.org/pipermail/gnupg-announce/2021q1/000452.html).
* Comes with [OpenSSL v1.1.1k](https://www.openssl.org/news/openssl-1.1.1-notes.html).
* Comes with [Git LFS v2.13.3](https://github.com/git-lfs/git-lfs/releases/tag/v2.13.3).

Bug Fixes

* It [is now possible](https://github.com/git-for-windows/git/issues/2675) to execute the Windows Store version of python3.exe from Git Bash.

Changes in v2.31.0  
since v2.30.2 (March 9th 2021)

New Features

* Comes with [Git v2.31.0](https://github.com/git/git/blob/v2.31.0/Documentation/RelNotes/2.31.0.txt).
* Comes with [OpenSSH v8.5p1](https://www.openssh.com/txt/release-8.5).
* Comes with [tig v2.5.3](https://github.com/jonas/tig/releases/tag/tig-2.5.3).
* Git for Windows now ships with [an experimental built-in file-system monitor](https://github.com/git-for-windows/git/pull/3082), without the need to install Watchman and setting core.fsmonitor. It can be turned on by setting both feature.manyFiles=true and feature.experimental=true (or directly, via core.useBuiltinFSMonitor=true).
* Comes with [Git Credential Manager Core v2.0.394.50751](https://github.com/microsoft/git-credential-manager-core/releases/tag/v2.0.394-beta).
* Comes with [GNU TLS v3.7.1](https://lists.gnupg.org/pipermail/gnutls-help/2021-March/004698.html).

Changes in v2.30.2  
since v2.30.1 (February 9th 2021)

This version addresses CVE-2021-21300 (a bug that allows code injection during a clone from an untrusted source).

New Features

* Comes with [Git v2.30.2](https://github.com/git/git/blob/v2.30.2/Documentation/RelNotes/2.30.2.txt).
* Comes with [PCRE2 v10.36](https://pcre.org/news.txt).
* Comes with [tig v2.5.2](https://github.com/jonas/tig/releases/tag/tig-2.5.2).
* Comes with [OpenSSL v1.1.1j](https://www.openssl.org/news/openssl-1.1.1-notes.html).

Changes in v2.30.1  
since v2.30.0(2) (January 14th 2021)

New Features

* Comes with [Git v2.30.1](https://github.com/git/git/blob/v2.30.1/Documentation/RelNotes/2.30.1.txt).
* Comes with [Perl v5.32.1](http://search.cpan.org/dist/perl-5.32.1/pod/perldelta.pod).
* Comes with [cURL v7.75.0](https://curl.haxx.se/changes.html#7_75_0).

Changes in v2.30.0(2)  
since v2.30.0 (December 28th 2020)

This version includes [Git LFS v2.13.2](https://github.com/git-lfs/git-lfs/releases/tag/v2.13.2), addressing CVE-2021-21237.

New Features

* Comes with [Git Credential Manager Core v2.0.318.44100](https://github.com/microsoft/git-credential-manager-core/releases/tag/v2.0.318-beta).
* Comes with [Git LFS v2.13.2](https://github.com/git-lfs/git-lfs/releases/tag/v2.13.2).

Changes in v2.30.0  
since v2.29.2(3) (December 8th 2020)

New Features

* Comes with [Git v2.30.0](https://github.com/git/git/blob/v2.30.0/Documentation/RelNotes/2.30.0.txt).
* Comes with [OpenSSL v1.1.1i](https://www.openssl.org/news/openssl-1.1.1-notes.html).
* Comes with [cURL v7.74.0](https://curl.haxx.se/changes.html#7_74_0).
* Comes with [Git LFS v2.13.1](https://github.com/git-lfs/git-lfs/releases/tag/v2.13.1).
* Notepad and Wordpad are [now supported](https://github.com/git-for-windows/build-extra/pull/304) as editors without manual configuration.

Bug Fixes

* The auto-updater [now shows the progress while installing](https://github.com/git-for-windows/build-extra/pull/318).
* The credential-helper selector (which is the default credential helper in the Portable version of Git for Windows) [now handles paths with spaces correctly](https://github.com/git-for-windows/build-extra/pull/319).

Changes in v2.29.2(3)  
since v2.29.2(2) (November 4th 2020)

This version updates Git Credential Manager Core to address [CVE-2020-26233](https://github.com/microsoft/Git-Credential-Manager-Core/security/advisories/GHSA-2gq7-ww4j-3m76).

New Features

* Comes with [GNU Privacy Guard v2.2.25](https://lists.gnupg.org/pipermail/gnupg-announce/2020q4/000450.html).
* Comes with [Git Credential Manager Core v2.0.289.48418](https://github.com/microsoft/git-credential-manager-core/releases/tag/v2.0.289-beta).

Bug Fixes

* Beyond Compare 4 [can be configured as difftool bc4 again](https://github.com/git-for-windows/git/issues/2893).

Changes in v2.29.2(2)  
since v2.29.2 (October 30th 2020)

This version includes a new Git LFS version to fix [CVE-2020-27955](https://github.com/git-lfs/git-lfs/security/advisories/GHSA-4g4p-42wc-9f3m).

New Features

* Comes with [Git Credential Manager Core v2.0.280.19487](https://github.com/microsoft/git-credential-manager-core/releases/tag/v2.0.280-beta).
* Comes with [Git LFS v2.12.1](https://github.com/git-lfs/git-lfs/releases/tag/v2.12.1).

Changes in v2.29.2  
since v2.29.1 (October 23rd 2020)

New Features

* Comes with [Git v2.29.2](https://github.com/git/git/blob/v2.29.2/Documentation/RelNotes/2.29.2.txt).

Bug Fixes

* The recent regression where OpenSSH's copy-ssh-id [failed to work correctly](https://github.com/git-for-windows/git/issues/2873), was [fixed](https://github.com/git-for-windows/MSYS2-packages/pull/40).
* A [regression preventing /usr/bin/update-ca-trust from working](https://github.com/git-for-windows/git/issues/2874) was fixed.

Changes in v2.29.1  
since v2.29.0 (October 19th 2020)

Important note: v2.29.0 and v2.29.1 upgrade existing users of [Git Credential Manager for Windows](https://github.com/microsoft/Git-Credential-Manager-for-Windows/) (which was just deprecated) to [Git Credential Manager Core](https://github.com/microsoft/Git-Credential-Manager-Core) ("GCM Core", which is the designated successor of the former). This is necessary because [GitHub deprecated password-based authentication](https://github.blog/changelog/2019-08-08-password-based-http-basic-authentication-deprecation-and-removal/) and intends to remove support for it soon, and GCM Core is prepared for this change.

Also, as of v2.29.0, the option to override the branch name used by git init for the initial branch is [featured prominently](https://github.com/git-for-windows/build-extra/pull/307) in the installer.

New Features

* Comes with [Git v2.29.1](https://github.com/git/git/blob/v2.29.1/Documentation/RelNotes/2.29.1.txt).
* The MSYS2 runtime [now optionally supports creating Cygwin-style symbolic links](https://github.com/msys2/msys2-runtime/pull/16) (via setting the environment variable MSYS=winsymlinks:sysfile).

Changes in v2.29.0  
since v2.28.0 (July 28th 2020)

This version upgrades existing users of [Git Credential Manager for Windows](https://github.com/microsoft/Git-Credential-Manager-for-Windows/) (which was just deprecated) to [Git Credential Manager Core](https://github.com/microsoft/Git-Credential-Manager-Core) ("GCM Core", which is the designated successor of the former). This is necessary because [GitHub deprecated password-based authentication](https://github.blog/changelog/2019-08-08-password-based-http-basic-authentication-deprecation-and-removal/) and intends to remove support for it soon, and GCM Core is prepared for this change.

Also, the option to override the branch name used by git init for the initial branch is now [featured prominently](https://github.com/git-for-windows/build-extra/pull/307) in the installer.

New Features

* Comes with [Git v2.29.0](https://github.com/git/git/blob/v2.29.0/Documentation/RelNotes/2.29.0.txt).
* Comes with MSYS2 runtime (Git for Windows flavor) based on [Cygwin 3.1.7](https://cygwin.com/pipermail/cygwin-announce/2020-August/009678.html).
* Comes with [Git LFS v2.12.0](https://github.com/git-lfs/git-lfs/releases/tag/v2.12.0).
* Comes with [GNU Privacy Guard v2.2.23](https://lists.gnupg.org/pipermail/gnupg-announce/2020q3/000448.html).
* Comes with [OpenSSL v1.1.1h](https://www.openssl.org/news/openssl-1.1.1-notes.html).
* Comes with [libcbor v0.8.0](https://github.com/PJK/libcbor/releases/tag/0.8.0).
* Comes with [libfido2 v1.5.0](https://github.com/Yubico/libfido2/releases/tag/1.5.0).
* Comes with [OpenSSH v8.4p1](https://www.openssh.com/txt/release-8.4).
* Comes with [Git Credential Manager Core v2.0.252.766](https://github.com/microsoft/git-credential-manager-core/releases/tag/v2.0.252-beta).
* Existing Git Credential Manager for Windows users are now [automatically upgraded](https://github.com/git-for-windows/build-extra/pull/305) to [Git Credential Manager Core](https://github.com/microsoft/git-credential-manager-core/).
* Git for Windows' installer learned to [let users override the default branch used by git init](https://github.com/git-for-windows/build-extra/pull/307).
* [The installer size was reduced](https://github.com/git-for-windows/build-extra/pull/309) by dropping a couple unneeded .dll files.
* Comes with [cURL v7.73.0](https://curl.haxx.se/changes.html#7_73_0).

Bug Fixes

* The credential helper selector (used as default credential helper in the Portable Git) [now persists the users choice correctly again](https://github.com/git-for-windows/git/issues/2776).
* The full command-lines of MSYS2 processes (such as cp.exe) spawned from Git's Bash [can now be seen in sysmon, wmic etc](https://github.com/git-for-windows/git/issues/2756) by default.
* A [bug](https://github.com/git-for-windows/git/issues/2738) preventing Unicode characters from being used in the window title of Git Bash was fixed.
* OpenSSH was patched to no longer [warn about an "invalid format"](https://github.com/git-for-windows/git/issues/2743) when private and public keys are stored separately.
* Non-ASCII output of paged Git commands [is now rendered correctly in Windows Terminal](https://github.com/git-for-windows/git/pull/2834).
* It is [now possible](https://github.com/git-for-windows/build-extra/pull/303) to use wordpad.exe as Git's editor of choice.
* When using Git via the "Run As..." function, [it now uses the correct home directory](https://github.com/git-for-windows/git/pull/2725).
* The Git Bash prompt [now works even after calling set -u](https://github.com/git-for-windows/git/pull/2800).
* Git for Windows [can now be installed](https://github.com/git-for-windows/build-extra/pull/312) even with stale AutoRun registry entries (e.g. left-overs from a Miniconda installation).

Changes in v2.28.0  
since v2.27.0 (June 1st 2020)

New Features

* Comes with [Git v2.28.0](https://github.com/git/git/blob/v2.28.0/Documentation/RelNotes/2.28.0.txt).
* Comes with [subversion v1.14.0](https://svn.apache.org/repos/asf/subversion/tags/1.14.0/CHANGES).
* [Comes with the designated successor](https://github.com/git-for-windows/build-extra/pull/294) of Git Credential Manager for Windows (GCM for Windows), [the cross-platform Git Credential Manager Core](https://github.com/microsoft/git-credential-manager-core). For now, this is opt-in, with the idea of eventually retiring GCM for Windows.
* Comes with [cURL v7.71.1](https://curl.haxx.se/changes.html#7_71_1).
* Comes with [Perl v5.32.0](http://search.cpan.org/dist/perl-5.32.0/pod/perldelta.pod).
* Comes with MSYS2 runtime (Git for Windows flavor) based on [Cygwin 3.1.6](https://cygwin.com/pipermail/cygwin-announce/2020-July/009605.html) (including the improvements of [Cygwin 3.1.5](https://cygwin.com/pipermail/cygwin-announce/2020-June/009561.html)).
* Comes with [GNU Privacy Guard v2.2.21](https://lists.gnupg.org/pipermail/gnupg-announce/2020q3/000446.html).

Bug Fixes

* A typo [was fixed](https://github.com/git-for-windows/build-extra/pull/291) in the installer.
* The new git pull behavior option [now records the fast-forward choice correctly](https://github.com/git-for-windows/build-extra/pull/292).
* In v2.27.0, [git svn was broken completely](https://github.com/git-for-windows/git/issues/2649), which has been fixed.
* Some Git operations [could end up with bogus modified symbolic links](https://github.com/git-for-windows/git/issues/2653) (where git status would report changes but git diff would not), which is now fixed.
* When reinstalling (or upgrading) Git for Windows, [the "Pseudo Console Support" choice is now remembered correctly](https://github.com/git-for-windows/build-extra/pull/295).
* Under certain circumstances, the Git Bash window (MinTTY) [would crash frequently](https://github.com/git-for-windows/git/issues/2687), which has been addressed.
* When pseudo console support is enabled, [the VIM editor sometimes had troubles accepting certain keystrokes](https://github.com/git-for-windows/git/issues/2689), which was fixed.
* Due to a bug, it was not possible to disable Pseudo Console support by reinstalling with the checkbox turned off, [which has been fixed](https://github.com/git-for-windows/build-extra/pull/299).
* A bug with enabled Pseudo Console support, where git add -i [would not quit the file selection mode upon an empty input](https://github.com/git-for-windows/git/issues/2729), has been fixed.
* The cleanup mode called "scissors" in git commit [now handles CR/LF line endings correctly](https://github.com/git-for-windows/git/pull/2714).
* When cloning into an existing directory, under certain circumstances, the core.worktree option was set unnecessarily. [This has been fixed](https://github.com/git-for-windows/git/pull/2731).

Changes in v2.27.0  
since v2.26.2 (April 20th 2020)

Due to [a bug when handling symbolic links that was fixed in this version](https://github.com/git-for-windows/git/pull/2637), git status will show symbolic links as modified even as git diff won't report any changes. The quickest work-around is to call git add -u which lets Git realize that nothing changed, actually.

This release comes with a Git Bash that optionally uses [Windows-native pseudo consoles](https://devblogs.microsoft.com/commandline/windows-command-line-introducing-the-windows-pseudo-console-conpty/). Meaning: finally, Git Bash can accommodate console programs like node.exe, Python or PHP, without using the winpty helper (see [Known Issues above](#known-issues)). Note that this is still a very new feature and is therefore known to have some corner-case bugs.

New Features

* Comes with [Git v2.27.0](https://github.com/git/git/blob/v2.27.0/Documentation/RelNotes/2.27.0.txt).
* Comes with [OpenSSL v1.1.1g](https://www.openssl.org/news/openssl-1.1.1-notes.html).
* Comes with [cURL v7.70.0](https://curl.haxx.se/changes.html#7_70_0).
* Comes with [subversion v1.13.0](https://svn.apache.org/repos/asf/subversion/tags/1.13.0/CHANGES).
* Comes with MSYS2 runtime (Git for Windows flavor) based on [Cygwin 3.1.4](https://cygwin.com/ml/cygwin-announce/2020-02/msg00006.html).
* The release notes [have been made a bit more readable and are now linked from the Start Menu group](https://github.com/git-for-windows/build-extra/pull/281).
* The Frequently Asked Questions (FAQ) [are now linked in a Start Menu item](https://github.com/git-for-windows/build-extra/pull/283).
* Comes with [Git LFS v2.11.0](https://github.com/git-lfs/git-lfs/releases/tag/v2.11.0).
* Comes with [OpenSSH v8.3p1](https://www.openssh.com/txt/release-8.3).

Bug Fixes

* Some Perl packages (e.g. Net::SSLeay) that [had been broken recently](https://github.com/git-for-windows/git/issues/2598) have been fixed.
* Git for Windows and WSL Git [now have the same idea of symbolic links' length](https://github.com/git-for-windows/git/pull/2637), i.e. git status will no longer mark them as modified in Git for Windows after checking them out in WSL.

Changes in v2.26.2  
since v2.26.1 (April 9th 2020)

Yet another security fix release: With a crafted URL that contains a newline or empty host, or lacks a scheme, the credential helper machinery can be fooled into providing credential information that is not appropriate for the protocol in use and host being contacted (CVE-2020-11008).

New Features

* Comes with [Git v2.26.2](https://github.com/git/git/blob/v2.26.2/Documentation/RelNotes/2.26.2.txt).
* Comes with [tig v2.5.1](https://github.com/jonas/tig/releases/tag/tig-2.5.1).
* Worktree updates (e.g. git checkout, git reset --hard) [got a performance boost in sparse checkouts](https://github.com/git-for-windows/git/pull/2589).

Bug Fixes

* A recent regression in gitk that prevented it from running in bare repositories [has been fixed](https://github.com/git-for-windows/git/pull/2549).

Changes in v2.26.1  
since v2.26.0 (March 23rd 2020)

This includes a fix for CVE-2020-5260.

New Features

* Comes with [Git v2.26.1](https://github.com/git/git/blob/v2.26.1/Documentation/RelNotes/2.26.1.txt).
* Comes with [OpenSSL v1.1.1f](https://www.openssl.org/news/openssl-1.1.1-notes.html).

Bug Fixes

* Git [now accepts more date formats](https://github.com/git-for-windows/git/pull/2574) such as %g and %V.

Changes in v2.26.0  
since v2.25.1 (February 19th 2020)

New Features

* Comes with [Git v2.26.0](https://github.com/git/git/blob/v2.26.0/Documentation/RelNotes/2.26.0.txt).
* Git for Windows' OpenSSH [now can use USB security tokens](https://github.com/git-for-windows/git/issues/2525) (e.g. Yubikeys).
* The native Windows HTTPS backend (Secure Channel) [has learned to work gracefully with Fiddler and corporate proxies](https://github.com/git-for-windows/git/pull/2535).
* Git for Windows' release notes [have been made a bit easier to read/navigate](https://github.com/git-for-windows/build-extra/commit/3b89da01f46dc03417329c3702fc233622313397).
* The Free/Libre [VSCodium](https://vscodium.com/) version of [Visual Studio Code](https://code.visualstudio.com) is now [also detected](https://github.com/git-for-windows/build-extra/pull/278) as an option for the default Git editor.
* Comes with [cURL v7.69.1](https://curl.haxx.se/changes.html#7_69_1).
* Comes with [OpenSSL v1.1.1e](https://www.openssl.org/news/openssl-1.1.1-notes.html).
* Comes with [GNU Privacy Guard v2.2.20](https://lists.gnupg.org/pipermail/gnupg-announce/2020q1/000444.html).

Bug Fixes

* Git for Windows [can now clone into directories the current user can write to, even if they lack permission to even read the parent directory](https://github.com/git-for-windows/git/pull/2533).
* When asking for a password via Git GUI, [non-ASCII characters are now handled correctly](https://github.com/git-for-windows/git/issues/2215).
* git update-git-for-windows -y [now is fully automatable](https://github.com/git-for-windows/build-extra/pull/279).

Changes in v2.25.1  
since v2.25.0 (January 13th 2020)

New Features

* Comes with [Git v2.25.1](https://github.com/git/git/blob/v2.25.1/Documentation/RelNotes/2.25.1.txt).
* The Portable version of Git for Windows [now defaults to turning on the FSCache](https://github.com/git-for-windows/git/issues/2467) just like the installer does.
* Comes with [Git LFS v2.10.0](https://github.com/git-lfs/git-lfs/releases/tag/v2.10.0).
* Portable Git [can now be run from a RAM disk](https://github.com/git-for-windows/git/issues/2493), too.
* The deprecation of Git CMD [has been reverted](https://github.com/git-for-windows/build-extra/pull/275): the security issue (git show would execute a git executable or script in the current directory instead of the intended git.exe) was fixed already in v2.20.0.
* Comes with [OpenSSH v8.2p1](https://www.openssh.com/txt/release-8.2).

Bug Fixes

* Some corner-case bugs in the built-in git add -i [were fixed](https://github.com/git-for-windows/git/issues/2466).
* The file name COM0 [is no longer mistaken for a reserved file name](https://github.com/git-for-windows/git/issues/2470).
* The curl.exe included in Git for Windows [can access SFTP/SSH hosts again](https://github.com/git-for-windows/git/issues/2491).

Changes in v2.25.0  
since v2.24.1(2) (December 10th 2019)

New Features

* Comes with [Git v2.25.0](https://github.com/git/git/blob/v2.25.0/Documentation/RelNotes/2.25.0.txt).
* Comes with [GNU Privacy Guard v2.2.19](https://lists.gnupg.org/pipermail/gnupg-announce/2019q4/000443.html).
* Comes with [Git LFS v2.9.2](https://github.com/git-lfs/git-lfs/releases/tag/v2.9.2).
* When upgrading Git for Windows, by default the installer [now only shows pages with previously-unseen options](https://github.com/git-for-windows/build-extra/pull/270).
* Comes with [cURL v7.68.0](https://curl.haxx.se/changes.html#7_68_0).

Bug Fixes

* The startup file for GNU nano, which had been included with DOS line endings (and therefore upset nano) [is now included with Unix line endings again](https://github.com/git-for-windows/git/issues/2429).
* Git for Windows now [fails as expected](https://github.com/git-for-windows/git/pull/2440) when trying to check out files with illegal characters in their file names.
* Git [now works properly](https://github.com/git-for-windows/git/pull/2449) when inside a symlinked work tree.
* Repositories with old commits containing backslashes in file names [can now be fetched/cloned again](https://github.com/git-for-windows/git/pull/2437) (but Git will still refuse to check out files with backslashes in their file names).
* Git GUI [can now deal with uninitialized submodules](https://github.com/git-for-windows/git/pull/2452) (this was a Windows-specific bug).
* It is [again possible](https://github.com/git-for-windows/git/issues/2435) to clone repositories where some past revision contained file names containing backslashes (Git will of course still refuse to check out such revisions).

Changes in v2.24.1(2)  
since v2.24.0(2) (November 6th 2019)

This is a security bug release that fixes CVE-2019-1348, CVE-2019-1349, CVE-2019-1350, CVE-2019-1351, CVE-2019-1352, CVE-2019-1353, CVE-2019-1354, CVE-2019-1387, and CVE-2019-19604.

New Features

* Comes with [Git v2.24.1](https://github.com/git/git/blob/v2.24.1/Documentation/RelNotes/2.24.1.txt).
* Comes with [tig v2.5.0](https://github.com/jonas/tig/releases/tag/tig-2.5.0).
* Comes with [patch level 4](https://github.com/git-for-windows/msys2-runtime/commit/1bfdf956dae03d59bfe44b1e5882403ab803a67b) of the MSYS2 runtime (Git for Windows flavor) based on [Cygwin 3.0.7](https://cygwin.com/ml/cygwin-announce/2019-04/msg00030.html).
* The command-line options of git-bash.exe [are now documented](https://github.com/git-for-windows/MINGW-packages/pull/36) (call git help git-bash).
* Comes with [Git LFS v2.9.1](https://github.com/git-lfs/git-lfs/releases/tag/v2.9.1).
* Comes with [cURL v7.67.0](https://curl.haxx.se/changes.html#7_67_0).
* Comes with [GNU Privacy Guard v2.2.18](https://lists.gnupg.org/pipermail/gnupg-announce/2019q4/000442.html).

Bug Fixes

* MinGit [no longer overrides an installed Git for Windows' system gitconfig](https://github.com/git-for-windows/build-extra/pull/267).
* The "Check daily for updates" feature [uses the Action Center again](https://github.com/git-for-windows/build-extra/pull/268).
* When associating .sh files with Git Bash to allow running them by double-clicking them in the Windows Explorer, shell scripts with non-ASCII characters in their file name [are now supported](https://github.com/git-for-windows/git/issues/2189).

Changes in v2.24.0(2)  
since v2.24.0 (November 4th 2019)

Bug Fixes

* Using http.extraHeader [no longer results in spurious crashes](https://github.com/gitgitgadget/git/pull/453).
* The /proc/{stdin,stdout,stderr} pseudo-symlinks [are now installed properly even with non-US locales](https://github.com/git-for-windows/build-extra/pull/265).
* A bug [was fixed](https://github.com/git-for-windows/git/pull/2391) that prevented gitk from refreshing after new changes were committed.
* A bug in cURL v7.67.0 that caused SSL\_read: No error with some servers [was fixed](https://github.com/git-for-windows/MINGW-packages/commit/7b39ea818c014bafcd7c75f6aefd614fef756164).

Changes in v2.24.0  
since v2.23.0 (August 17th 2019)

Note! As a consequence of making git config --system work as expected, the location of the system config is now C:\Program Files\Git\etc\gitconfig (no longer split between C:\Program Files\Git\mingw64\etc\gitconfig and C:\ProgramData\Git\config), and likewise the location of the system gitattributes is now C:\Program Files\Git\etc\gitattributes (no longer C:\Program Files\Git\mingw64\etc\gitattributes). Any manual modifications to C:\ProgramData\Git\config need to be ported manually.

New Features

* Comes with [Git v2.24.0](https://github.com/git/git/blob/v2.24.0/Documentation/RelNotes/2.24.0.txt).
* Comes with [cURL v7.66.0](https://curl.haxx.se/changes.html#7_66_0).
* Comes with [Git Credential Manager v1.20.0](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/1.20.0).
* Comes with [OpenSSH v8.1p1](https://www.openssh.com/txt/release-8.1).
* Comes with [OpenSSL v1.1.1d](https://www.openssl.org/news/openssl-1.1.1-notes.html).
* Comes with [Git LFS v2.9.0](https://github.com/git-lfs/git-lfs/releases/tag/v2.9.0).

Bug Fixes

* The shell construct <(<command>), which was broken in v2.23.0 (/dev/fd/<n>: no such file or directory), [was fixed](https://github.com/git-for-windows/build-extra/pull/255).
* The default config [no longer skips git-lfs downloads](https://github.com/git-for-windows/build-extra/pull/256).
* Starting with cURL v7.66.0, [$HOME/.netrc can be used](https://github.com/curl/curl/commit/f9c7ba9096ec29db2536481d8e9ebe314e007f0c) instead of $HOME/\_netrc (but it will still fall back to looking for the latter).
* The installer's "ProductVersion" [is now consistent with older Git for Windows versions'](https://github.com/git-for-windows/build-extra/pull/257).
* [Makes git config --system work like you think it should](https://github.com/git-for-windows/git/pull/2358).
* The (still experimental) built-in git add -p [no longer gets confused about incomplete lines](https://github.com/git-for-windows/git/pull/2368) (i.e. a file's l last line that does not end in a Line Feed).
* A buffer overrun in the code to determine which files need to be marked as hidden [was plugged](https://github.com/git-for-windows/git/pull/2371).
* The support for sendpack.sideband that was removed by mistake [was re-introduced](https://github.com/git-for-windows/git/pull/2375), to support git push via the git:// protocol again.
* git stash [no longer records skip-worktree files as deleted](https://github.com/git-for-windows/git/pull/2378) after resolving merge conflicts in them.
* The Git for Windows installer [no longer complains about a downgrade](https://github.com/git-for-windows/build-extra/pull/264) when upgrading from an -rc version, i.e. from a pre-release leading up to the next major version.

Changes in v2.23.0  
since v2.22.0 (June 8th 2019)

New Features

* Comes with [Git v2.23.0](https://github.com/git/git/blob/v2.23.0/Documentation/RelNotes/2.23.0.txt).
* Comes with [patch level 3](https://github.com/git-for-windows/msys2-runtime/commit/e0e7936faa74acea8cde0f89f464402515d1caad) of the MSYS2 runtime (Git for Windows flavor) based on [Cygwin 3.0.7](https://cygwin.com/ml/cygwin-announce/2019-04/msg00030.html).
* Comes with [PCRE2 v10.33](https://pcre.org/changelog.txt).
* Comes with [GNU Privacy Guard v2.2.17](https://lists.gnupg.org/pipermail/gnupg-announce/2019q3/000439.html).
* Comes with [cURL v7.65.3](https://curl.haxx.se/changes.html#7_65_3).
* Comes with [Git LFS v2.8.0](https://github.com/git-lfs/git-lfs/releases/tag/v2.8.0).
* When configuring Git for Windows to use plink, [there is now a checkbox specifically for TortoisePlink](https://github.com/git-for-windows/build-extra/pull/251).
* The FSCache feature [is now used with git checkout and git reset in sparse checkouts](https://github.com/git-for-windows/git/pull/2224).

Bug Fixes

* Git for Windows' MSYS2 runtime was [patched](https://github.com/git-for-windows/msys2-runtime/commit/c10b4185a35f494a2ff4ad2f5828540d93d56bec) to fix a bug where setting the environment variable SHELL to an empty string in a shell script would not only fail to pass that setting to non-MSYS2 processes (such as git.exe) but also completely skip all environment variables that sort after said variable.
* git clean -dfx [no longer follows NTFS junction points (also known as mount points)](https://github.com/git-for-windows/git/pull/2268).
* A [workaround](https://github.com/git-for-windows/git/pull/2253) now allows cloning to certain network drives (e.g. Isilon).
* Fixed [CVE-2019-1211](https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2019-1211) in MinGit/Portable Git by being more careful about validating the Windows-wide config.

Changes in v2.22.0  
since v2.21.0 (February 26th 2019)

New Features

* Comes with [Git v2.22.0](https://github.com/git/git/blob/v2.22.0/Documentation/RelNotes/2.22.0.txt).
* The awk included in Git for Windows [now includes extensions](https://github.com/git-for-windows/build-extra/pull/232) such as inplace.
* The file/product version stored in the installer's .exe file [now matches the version of the included git.exe file's](https://github.com/git-for-windows/build-extra/pull/235).
* Comes with [OpenSSH v8.0p1](https://www.openssh.com/txt/release-8.0).
* Comes with [Git LFS v2.7.2](https://github.com/git-lfs/git-lfs/releases/tag/v2.7.2).
* Comes with MSYS2 runtime (Git for Windows flavor) based on Cygwin v3.x (see release notes for Cygwin [3.0.0](https://cygwin.com/ml/cygwin-announce/2019-02/msg00010.html), [3.0.1](https://cygwin.com/ml/cygwin-announce/2019-02/msg00014.html), [3.0.2](https://cygwin.com/ml/cygwin-announce/2019-03/msg00002.html), [3.0.3](https://cygwin.com/ml/cygwin-announce/2019-03/msg00008.html), [3.0.4](https://cygwin.com/ml/cygwin-announce/2019-03/msg00016.html), [3.0.5](https://cygwin.com/ml/cygwin-announce/2019-03/msg00051.html), [3.0.6](https://cygwin.com/ml/cygwin-announce/2019-04/msg00012.html), and [3.0.7](https://cygwin.com/ml/cygwin-announce/2019-04/msg00030.html)).
* There are now [experimental built-in versions of git add -i and git add -p](https://github.com/git-for-windows/git/pull/2150), i.e. those modes are now a lot faster (in particular at startup). You can opt into using them on the last installer page.
* PortableGit [now comes with a meta credential helper](https://github.com/git-for-windows/git/issues/2116), i.e. a GUI that lets the user choose which of the available credential helpers to use. This should help to avoid storing credentials on other people's machines when running portable Git from a thumb drive.
* Comes with [gawk v5.0.0](http://git.savannah.gnu.org/cgit/gawk.git/plain/NEWS?h=gawk-5.0.0).
* Comes with [Git Credential Manager v1.19.0](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/1.19.0).
* Comes with [git-flow v1.12.3](https://github.com/petervanderdoes/gitflow-avh/releases/tag/1.12.3).
* Comes with [OpenSSL v1.1.1c](https://www.openssl.org/news/openssl-1.1.1-notes.html).
* Comes with [GNU Privacy Guard v2.2.16](https://lists.gnupg.org/pipermail/gnupg-announce/2019q2/000438.html), specifically [patched to handle Windows paths](https://github.com/git-for-windows/MSYS2-packages/pull/33).
* Comes with [cURL v7.65.1](https://curl.haxx.se/changes.html#7_65_1).
* Comes with [Heimdal v7.5.0](http://h5l.org/releases.html). -packages/pull/33).

Bug Fixes

* Git for Windows' updater [is now accessible](https://github.com/git-for-windows/build-extra/pull/234), i.e. it can be read by a screen reader.
* git update-git-for-windows (i.e. the auto updater of Git for Windows) now [reports correctly when it failed to access the GitHub API](https://github.com/git-for-windows/build-extra/pull/239).
* Git for Windows' updater [no longer runs into GitHub API rate limits](https://github.com/git-for-windows/build-extra/pull/242) (this used to be quite common in enterprise scenarios, where many users would share one IP as far as GitHub is concerned).
* gitk [no longer fails with "filename too long"](https://github.com/git-for-windows/git/pull/2170) when there are 1,000+ branches/tags.
* A bug which on occasion caused lengthy rebase runs to crash without error message [was fixed](https://github.com/git-for-windows/git/pull/2182).
* Two workarounds from the Git for Windows 1.x era (concerning reading credentials via GUI and fetching via git://) [were considered obsolete](https://github.com/git-for-windows/git/pull/2178).
* git difftool --no-index [can now be run outside of Git worktrees](https://github.com/git-for-windows/git/pull/2175).
* git rebase -i used to get confused when an exec command created new commits and then appended pick lines for them. This [has been fixed](https://github.com/git-for-windows/git/pull/2121).
* During a run of git rebase --rebase-merges, the output of git status [now shows label lines correctly](https://github.com/git-for-windows/git/pull/2185), i.e. with the labels' names instead of the commit hash they point to.
* We [now avoid problems updating the commit graph](https://github.com/git-for-windows/git/pull/2198) when gc.writeCommitGraph=true.

Changes in v2.21.0  
since v2.20.1 (December 15th 2018)

New Features

* Comes with [Git v2.21.0](https://github.com/git/git/blob/v2.21.0/Documentation/RelNotes/2.21.0.txt).
* The custom editor setting in the installer [has been improved substantially](https://github.com/git-for-windows/build-extra/pull/221).
* Comes with [Git Credential Manager v1.18.4.0](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/1.18.4.0).
* Comes with [cURL v7.64.0](https://curl.haxx.se/changes.html#7_64_0).
* Comes with [git-flow v1.12.0](https://github.com/petervanderdoes/gitflow-avh/releases/tag/1.12.0).
* git archive [no longer requires gzip to generate .tgz archives](https://github.com/git-for-windows/git/pull/2077) (this means in particular that it works in MinGit).
* System-wide Sublime Text installations [are now detected](https://github.com/git-for-windows/build-extra/commit/396b283cc6231589b0b034d4ca4b241b25163e9a) and offered on the editor wizard page.
* Comes with [Git LFS v2.7.1](https://github.com/git-lfs/git-lfs/releases/tag/v2.7.1).

Bug Fixes

* The Git CMD deprecation [was further clarified](https://github.com/git-for-windows/build-extra/pull/222) to mention that the Start Menu item is deprecated, not using Git from CMD.
* Certain drivers/anti-malware caused git.exe to hang, which [has been fixed](https://github.com/git-for-windows/MINGW-packages/pull/32).
* git stash [now works](https://github.com/git-for-windows/git/issues/2006) after staging files with git add -N.
* A problem with difftool and more than a handful modified files [has been fixed](https://github.com/git-for-windows/git/pull/2026).
* The regression where git-cmd <command> would not execute the command [was fixed](https://github.com/git-for-windows/git/issues/2039).
* Portable Git [can be launched via network paths again](https://github.com/git-for-windows/git/issues/2036).
* FSCache works again [on network drives](https://github.com/git-for-windows/git/issues/2022), in particular [when Windows 8.1 or older](https://github.com/git-for-windows/git/issues/1989) are involved.
* Partially hidden text in the Path options page in the installer [is no longer hidden](https://github.com/git-for-windows/git/issues/2049).
* Fixes [an obscure git svn hang](https://github.com/git-for-windows/git/issues/1993).
* The installer [now configures editors so that the built-in rebase can use them](https://github.com/git-for-windows/git/issues/2011).

Changes in v2.20.1  
since v2.20.0 (December 10th 2018)

New Features

* Comes with [Git v2.20.1](https://github.com/git/git/blob/v2.20.1/Documentation/RelNotes/2.20.1.txt).
* Comes with [cURL v7.63.0](https://curl.haxx.se/changes.html#7_63_0).

Bug Fixes

* [Fixes](https://github.com/git-for-windows/git/pull/1983) a speed regression in the built-in rebase.

Changes in v2.20.0  
since v2.19.2 (November 21st 2018)

Please note that Git for Windows v2.19.2 was offered as a full release only for about a week, and then demoted to "pre-release" status, as it had two rather big regressions: 32-bit Git Bash crashed, and git:// was broken.

New Features

* Comes with [Git v2.20.0](https://github.com/git/git/blob/v2.20.0/Documentation/RelNotes/2.20.0.txt).
* Comes with [OpenSSL v1.1.1a](https://www.openssl.org/news/openssl-1.1.1-notes.html). The OpenSSH, cURL and Heimdal packages were rebuilt to make use of OpenSSL v1.1.1a.
* The FSCache feature [was further optimized in particular for very large repositories](https://github.com/git-for-windows/git/pull/1937).
* To appease certain anti-malware, MinTTY was recompiled with a patch to avoid [GCC trampolines](https://github.com/git-for-windows/MSYS2-packages/commit/63f68558c9c6a6c7765c18dacbbcac328748eb30).
* Comes with [Git LFS v2.6.1](https://github.com/git-lfs/git-lfs/releases/tag/v2.6.1).
* Comes with [Bash v4.4 patchlevel 023](https://tiswww.case.edu/php/chet/bash/NEWS) .
* Commands to interact with CVS repositories were considered obsolete [and have been removed](https://github.com/git-for-windows/build-extra/commit/59b521a3b).
* The desired HTTP version (HTTP/2 or HTTP/1.1) [can now be configured via the http.version setting](https://github.com/git-for-windows/git/pull/1968).

Bug Fixes

* Git CMD [no longer picks up git.exe from the current directory (if any)](https://github.com/git-for-windows/git/issues/1945).
* Git Bash [works again in 32-bit Git for Windows](https://github.com/git-for-windows/MINGW-packages/commit/deb0395d031401ffe55024fb066267e2ea8d032b).
* Git can now [access git:// remotes again](https://github.com/git-for-windows/git/issues/1949).
* The confusing descriptions of the PATH options in the installer [were clarified](https://github.com/git-for-windows/build-extra/pull/216).
* A bug in the notepad support in conjunction with line wrapping [was fixed](https://github.com/git-for-windows/build-extra/pull/218).
* Comes two backported fixes to [allow NTLM/Kerberos authentication to fall back to HTTP/1.1](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/issues/812).
* It is [now possible to call cmd\git.exe via a symbolic link](https://github.com/git-for-windows/git/issues/1650).

Changes in v2.19.2  
since v2.19.1 (Oct 5th 2018)

* The Git CMD start menu shortcut is deprecated and will be dropped in future version. Note that the deprecation only affects the shortcut; git-cmd.exe will continue to be distributed and installed.

New Features

* Comes with [Git v2.19.2](https://github.com/git/git/blob/v2.19.2/Documentation/RelNotes/2.19.2.txt).
* Comes with [OpenSSH v7.9p1](https://www.openssh.com/txt/release-7.9).
* The description of the editor option to choose Vim [has been clarified](https://github.com/git-for-windows/build-extra/pull/207) to state that this unsets core.editor.
* Comes with [cURL v7.62.0](https://curl.haxx.se/changes.html#7_62_0).
* The type of symlinks to create (directory or file) [can now be specified via the .gitattributes](https://github.com/git-for-windows/git/pull/1897).
* The FSCache feature [now uses a faster method to enumerate files](https://github.com/git-for-windows/git/pull/1908), making e.g. git status faster in large repositories.
* Comes with [Git Credential Manager v1.18.3](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/1.18.3).
* Comes with [Git LFS v2.6.0](https://github.com/git-lfs/git-lfs/releases/tag/v2.6.0).
* Comes with MSYS2 runtime (Git for Windows flavor) based on [Cygwin 2.11.2](https://cygwin.com/ml/cygwin-announce/2018-11/msg00007.html).
* The FSCache feature [was optimized to become faster](https://github.com/git-for-windows/git/pull/1926).

Bug Fixes

* The 64-bit Portable Git [no longer sets pack.packSizeLimit](https://github.com/git-for-windows/build-extra/pull/212).

Changes in v2.19.1  
since v2.19.0 (September 11th 2018)

New Features

* Comes with [Git v2.19.1](https://github.com/git/git/blob/v2.19.1/Documentation/RelNotes/2.19.1.txt).
* Comes with [Git LFS v2.5.2](https://github.com/git-lfs/git-lfs/releases/tag/v2.5.2).
* When FSCache is enabled, commands such as add, commit, and reset [are now much faster](https://github.com/git-for-windows/git/pull/1827).
* Sublime Text, Atom, and even the new user-specific VS Code installations [can now be used as Git's default editor](https://github.com/git-for-windows/build-extra/pull/200).
* Comes with [Git Credential Manager v1.18.0](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.18.0).

Bug Fixes

* Several corner case bugs [were fixed](https://github.com/git-for-windows/git/pull/1852) in the built-in rebase/stash commands.
* An [occasional crash in git gc](https://github.com/git-for-windows/git/issues/1839) (which had been introduced into v2.19.0) has been fixed.

Changes in v2.19.0  
since v2.18.0 (June 22nd 2018)

New Features

* Comes with [Git v2.19.0](https://github.com/git/git/blob/v2.19.0/Documentation/RelNotes/2.19.0.txt).
* There are now fast, built-in versions of git stash and git rebase, [available as experimental options](https://github.com/git-for-windows/build-extra/pull/203).
* The included OpenSSH client [now enables modern ciphers](https://github.com/git-for-windows/build-extra/pull/192).
* The gitweb component was removed because it is highly unlikely to be used on Windows.
* The git archimport tool (which was probably used by exactly 0 users) is [no longer included in Git for Windows](https://github.com/git-for-windows/build-extra/pull/202).
* Comes with [tig v2.4.0](https://github.com/jonas/tig/releases/tag/tig-2.4.0).
* Comes with [Git LFS v2.5.1](https://github.com/git-lfs/git-lfs/releases/tag/v2.5.1).
* Comes with [Git Credential Manager v1.17.1](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.17.1).
* Comes with [OpenSSL v1.0.2p](https://www.openssl.org/news/openssl-1.0.2-notes.html).
* Comes with [cURL v7.61.1](https://curl.haxx.se/changes.html#7_61_1).
* Comes with [mingw-w64-nodejs v8.12.0](https://nodejs.org/en/blog/release/v8.12.0/).

Bug Fixes

* The http.schannel.checkRevoke setting (which never worked) [was renamed to http.schannelCheckRevoke](https://github.com/git-for-windows/git/pull/1747). In the same run, http.schannel.useSSLCAInfo (which also did not work, for the same reason) was renamed to http.schannelUseSSLCAInfo.
* [Avoids](https://github.com/git-for-windows/msys2-runtime/commit/f02cd2463d2c7e03fe97b8a1ce35ecffd0714f7e) a stack overflow with recent Windows Insider versions.
* Git GUI [now handles hooks correctly](https://github.com/git-for-windows/git/issues/1755) in worktrees other than the main one.
* When using core.autocrlf, the bogus "LF will be replaced by CRLF" warning [is now suppressed](https://github.com/git-for-windows/git/issues/1242).
* The funny [fatal error -cmalloc would have returned NULL problems](https://github.com/git-for-windows/git/issues/356) should be gone.

Changes in v2.18.0  
since v2.17.1(2) (May 29th 2018)

New Features

* Comes with [Git v2.18.0](https://github.com/git/git/blob/v2.18.0/Documentation/RelNotes/2.18.0.txt).
* Comes with [Git Credential Manager v1.16.2](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.16.2).

Bug Fixes

* The diff filter for .pdf files [was fixed](https://github.com/git-for-windows/build-extra/pull/189).
* The start-ssh-agent.cmd script [no longer overrides the HOME variable](https://github.com/git-for-windows/MINGW-packages/pull/26).
* Fixes an issue where passing an argument with a trailing slash from Git Bash to git.exe [was dropping that trailing slash](https://github.com/git-for-windows/git/issues/1695).
* The http.schannel.checkRevoke setting [now really works](https://github.com/git-for-windows/git/issues/1531).

Changes in v2.17.1(2)  
since v2.17.1 (May 29th 2018)

New Features

* Comes with [Git Credential Manager v1.16.1](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.16.1).
* Comes with [Git LFS v2.4.2](https://github.com/git-lfs/git-lfs/releases/tag/v2.4.2).

Bug Fixes

* This release really contains Git v2.17.1.

Changes in v2.17.1  
since v2.17.0 (April 3rd 2018)

New Features

* Comes with [Git v2.17.1](https://github.com/git/git/blob/v2.17.1/Documentation/RelNotes/2.17.1.txt).
* Comes with [Perl v5.26.2](http://search.cpan.org/dist/perl-5.26.2/pod/perldelta.pod).
* The installer [now offers VS Code Insiders as option for Git's default editor](https://github.com/git-for-windows/build-extra/pull/181) if it is installed.
* The vim configuration [was modernized](https://github.com/git-for-windows/build-extra/pull/186).
* Comes with [cURL v7.60.0](https://curl.haxx.se/changes.html#7_60_0).
* Certain errors, e.g. when pushing failed due to a non-fast-forwarding change, [are now colorful](https://github.com/git-for-windows/git/pull/1429).
* Comes with [Git LFS v2.4.1](https://github.com/git-lfs/git-lfs/releases/tag/v2.4.1).

Bug Fixes

* Fixed an issue with recursive clone ([CVE 2018-11235](https://aka.ms/cve-2018-11235)).
* Aliases that expand to shell commands [can now take arguments containing curly brackets](https://github.com/git-for-windows/git/pull/1637).
* Ctrl+C is now handled in Git Bash [in a sophisticated way](https://github.com/git-for-windows/msys2-runtime/commit/78e2deea8ec1db4aea1e78432ae98dac7198f6a5): it emulates the way Ctrl+C is handled in Git CMD, but in a fine-grained way.
* Based on the [the new Ctrl+C handling in Git Bash](https://github.com/git-for-windows/msys2-runtime/commit/78e2deea8ec1db4aea1e78432ae98dac7198f6a5), pressing Ctrl+C while git log is running will only stop Git from traversing the commit history, [but keep the pager running](https://github.com/git-for-windows/git/commit/df8884cbc5c39073848ddf2058bafeea1188312b).
* Git was [fixed](https://github.com/git-for-windows/git/pull/1645) to work correctly in Docker volumes inside Windows containers.
* Tab completion of git status -- <partial-path> [is now a lot faster](https://github.com/git-for-windows/git/issues/1533).
* Git for Windows [now creates directory symlinks correctly](https://github.com/git-for-windows/git/pull/1651) when asked to.
* The option to disable revocation checks with Secure Channel which was introduced in v2.16.1(2) [now really works](https://github.com/git-for-windows/git/issues/1531).
* Git [no longer enters an infinite loop](https://github.com/git-for-windows/git/issues/1496) when misspelling git status as, say, git Status.

Changes in v2.17.0  
since v2.16.3 (March 23rd 2018)

New Features

* Comes with [Git v2.17.0](https://github.com/git/git/blob/v2.17.0/Documentation/RelNotes/2.17.0.txt).
* Comes with [OpenSSL v1.0.2o](https://www.openssl.org/news/openssl-1.0.2-notes.html).
* Comes with [Git Credential Manager v1.15.2](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.15.2).
* Comes with [OpenSSH v7.7p1](https://www.openssh.com/txt/release-7.7).

Bug Fixes

* When git.exe is called with an invalid subcommand, [it no longer complains about file handles](https://github.com/git-for-windows/git/issues/1591).

Changes in v2.16.3  
since v2.16.2 (February 20th 2018)

New Features

* Comes with [Git v2.16.3](https://github.com/git/git/blob/v2.16.3/Documentation/RelNotes/2.16.3.txt).
* When choosing to "Use Git from the Windows Command Prompt" (i.e. add only the minimal set of Git executables to the PATH), and when choosing the Git LFS component, Git LFS [is now included in that minimal set](https://github.com/git-for-windows/git/issues/1503). This makes it possible to reuse Git for Windows' Git LFS, say, from Visual Studio.
* Comes with [gawk v4.2.1](http://git.savannah.gnu.org/cgit/gawk.git/plain/NEWS?h=gawk-4.2.1).
* In conjunction with the FSCache feature, git checkout [is now a lot faster when checking out a lot of files](https://github.com/git-for-windows/git/pull/1468).
* Comes with [Git LFS v2.4.0](https://github.com/git-lfs/git-lfs/releases/tag/v2.4.0).
* Comes with [Git Credential Manager v1.15.0](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.15.0).
* Comes with [cURL v7.59.0](https://curl.haxx.se/changes.html#7_59_0).
* The Git for Windows SDK [can now be "installed" via git clone --depth=1 https://github.com/git-for-windows/git-sdk-64](https://github.com/git-for-windows/git/issues/1357).
* The tar utility (included as a courtesy, not because Git needs it) [can now unpack .tar.xz archives](https://github.com/git-for-windows/build-extra/pull/177).

Bug Fixes

* When a TERM is configured that Git for Windows does not know about, [Bash no longer crashes](https://github.com/git-for-windows/git/issues/1473).
* The regression where gawk stopped treating Carriage Returns as part of the line endings [was fixed](https://github.com/git-for-windows/git/issues/1524).
* When Git asks for credentials via the terminal in a Powershell window, [it no longer fails to do so](https://github.com/git-for-windows/git/pull/1514).
* The installer [is now more robust when encountering files that are in use](https://github.com/git-for-windows/build-extra/commit/d33ee8606bfbc0e9b801df0a5257721e20f8dd4a) (and can therefore not be overwritten right away).
* The included find and rm utilities [no longer have problems with deeply nested directories on FAT drives](https://github.com/git-for-windows/git/issues/1497).
* The cygpath utility included in Git for Windows now strips trailing slashes when normalizing paths (just like the Cygwin version of the utility; this is different from how MSYS2 chooses to do things).
* The certificates of HTTPS proxies configured via http.proxy [are now validated against the ca-bundle.crt correctly](https://github.com/git-for-windows/git/issues/1493).

Changes in v2.16.2  
since v2.16.1(4) (February 7th 2018)

New Features

* Comes with [Git v2.16.2](https://github.com/git/git/blob/v2.16.2/Documentation/RelNotes/2.16.2.txt).
* For every new Git for Windows version, .zip archives containing .pdb files for some of Git for Windows' components [are now published alongside the new version](https://github.com/git-for-windows/build-extra/commit/0af1701ba3329151ae8b21fa43d4f4abca11cc26).
* Comes with MSYS2 runtime (Git for Windows flavor) based on [Cygwin 2.10.0](https://cygwin.com/ml/cygwin-announce/2018-02/msg00002.html); This required rebuilding OpenSSH, Perl (and some Perl modules) and Subversion.
* Comes with [Bash v4.4 patchlevel 019](https://tiswww.case.edu/php/chet/bash/NEWS) .

Bug Fixes

* The Perl upgrade in Git for Windows v2.16.1(4) [broke interactive authentication of git svn](https://github.com/git-for-windows/git/issues/1488), which was fixed.
* When configuring HTTPS transport to use Secure Channel, [we now refrain from configuring http.sslCAInfo](https://github.com/git-for-windows/build-extra/pull/172). This also helps Git LFS (which uses Git for Windows' private http.sslCAInfo setting) to use the same credentials as git fetch and git push.

Changes in v2.16.1(4)  
since v2.16.1(3) (February 6th 2018)

Bug Fixes

* When called from TortoiseGit, git.exe [can now spawn processes again](https://github.com/git-for-windows/git/issues/1481).

Changes in v2.16.1(3)  
since v2.16.1(2) (February 2nd 2018)

New Features

* Git for Windows' SDK packages [are now hosted on Azure Blobs](https://github.com/git-for-windows/build-extra/commit/53695c41ec95f49c191b7792eee6fc8d91846ed8), fixing part of [issue #1479](https://github.com/git-for-windows/git/issues/1479).
* Comes with [perl-Net-SSLeay v1.84](https://metacpan.org/source/MIKEM/Net-SSLeay-1.84/Changes).

Bug Fixes

* When http.sslBackend is not configured (e.g. in portable Git or MinGit), fetch/push operations [no longer crash](https://github.com/git-for-windows/git/issues/1474).
* On Windows 7 and older, Git for Windows v2.16.1(2) was no longer able to spawn any processes (e.g. during fetch/clone). This regression [has been fixed](https://github.com/git-for-windows/git/issues/1475).
* The Perl upgrade in v2.16.1(2) broke git send-email; This [has been fixed](https://github.com/git-for-windows/git/issues/1480) by updating the Net-SSLeay Perl module.

Changes in v2.16.1(2)  
since v2.16.1 (January 22nd 2018)

New Features

* Comes with [Heimdal v7.5.0](http://h5l.org/releases.html).
* Comes with [cURL v7.58.0](https://curl.haxx.se/changes.html#7_58_0).
* Comes with [Perl v5.26.1](http://search.cpan.org/dist/perl-5.26.1/pod/perldelta.pod).
* When using GNU nano as Git's default editor, [it is now colorful (shows syntax-highlighting)](https://github.com/git-for-windows/build-extra/pull/169).
* Comes with [tig v2.3.3](https://github.com/jonas/tig/releases/tag/tig-2.3.3).
* When using Secure Channel as HTTPS transport behind a proxy, it may be necessary to disable revocation checks, [which is now possible](https://github.com/git-for-windows/git/pull/1450).
* Comes with [BusyBox v1.28.0pre.16550.0b3cdd76c](https://github.com/git-for-windows/busybox-w32/commit/0b3cdd76c).

Bug Fixes

* When Git spawns processes, [now only the necessary file handles are inherited from the parent process](https://github.com/git-for-windows/git/commit/576ff26eeca22526b7ba11444da24d31daf0b369), possibly preventing file locking issues.
* The git update command [has been renamed to git update-git-for-windows](https://github.com/git-for-windows/build-extra/pull/167) to avoid confusion where users may think that git update updates their local repository or worktree.

Changes in v2.16.1  
since v2.16.0(2) (January 18th 2018)

This is a hotfix release, based on upstream Git's hotfix to address a possible segmentation fault associated with case-insensitive file systems.

Note: another hotfix might be coming the day after tomorrow, as cURL announced a new version addressing security advisories that might affect how Git talks via HTTP/HTTPS, too.

New Features

* Comes with [Git v2.16.1](https://github.com/git/git/blob/v2.16.1/Documentation/RelNotes/2.16.1.txt).

Bug Fixes

* A set of regressions introduced by patches intended to speed up reset and checkout was fixed (issues [#1437](https://github.com/git-for-windows/git/issues/1437), [#1438](https://github.com/git-for-windows/git/issues/1438), [#1440](https://github.com/git-for-windows/git/issues/1440) and [#1442](https://github.com/git-for-windows/git/issues/1442)).

Changes in v2.16.0(2)  
since v2.15.1(2) (November 30th 2017)

Git for Windows now has a new homepage: <https://gitforwindows.org/> (it is still graciously hosted by GitHub, but now much quicker to type).

New Features

* Comes with [Git v2.16.0](https://github.com/git/git/blob/v2.16.0/Documentation/RelNotes/2.16.0.txt).
* Comes with [Git Credential Manager v1.14.0](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.14.0).
* The Git for Windows installer [now offers to configure Visual Studio Code as default editor for Git](https://github.com/git-for-windows/git/issues/1356).
* Comes with [OpenSSL v1.0.2n](https://www.openssl.org/news/openssl-1.0.2-notes.html).
* git checkout [is now a lot faster when checking out a lot of files](https://github.com/git-for-windows/git/pull/1419).
* The core.excludesfile [can now reference a symbolic link](https://github.com/git-for-windows/git/issues/1392).
* Comes with [patch level 7](https://github.com/git-for-windows/msys2-runtime/commit/c967bd8e37af7fa86f8ed1ded2625071612b808a) of the MSYS2 runtime (Git for Windows flavor) based on [Cygwin 2.9.0](https://cygwin.com/ml/cygwin-announce/2017-09/msg00056.html).
* With lots of files, git reset --hard [is now a lot faster](https://github.com/git-for-windows/git/pull/1427) when the FSCache feature is in effect.

Bug Fixes

* When cloning into an existing (empty) directory fails, [Git no longer removes said directory](https://github.com/git-for-windows/git/pull/1421).
* Interrupting processes (and their children) using Control+C [is now a lot more robust](https://github.com/git-for-windows/msys2-runtime/pull/16).

Changes in v2.15.1(2)  
since v2.15.1 (November 29th 2017)

Bug Fixes

* The bug introduced into Git for Windows v2.15.1 where vim would show an ugly warning upon startup [was fixed](https://github.com/git-for-windows/git/issues/1382).

Changes in v2.15.1  
since v2.15.0 (October 30th 2017)

New Features

* Comes with [Git v2.15.1](https://github.com/git/git/blob/v2.15.1/Documentation/RelNotes/2.15.1.txt).
* Operations in massively-sparse worktrees [are now much faster if core.fscache = true](https://github.com/git-for-windows/git/pull/1344).
* It is [now possible to configure nano](https://github.com/git-for-windows/build-extra/pull/161) or [Notepad++](https://github.com/git-for-windows/git/issues/291) as Git's default editor [instead of vim](https://www.xkcd.com/378/).
* Comes with [OpenSSL v1.0.2m](https://www.openssl.org/news/cl102.txt).
* Git for Windows' updater [now uses non-intrusive toast notifications on Windows 8, 8.1 and 10](https://github.com/git-for-windows/build-extra/commit/ab2e8b1ee14223dbfdc7981e79139727d0725e7c).
* Running git fetch in a repository with lots of refs [is now considerably faster](https://github.com/git-for-windows/git/pull/1379).
* Comes with [cURL v7.57.0](https://curl.haxx.se/changes.html#7_57_0).

Bug Fixes

* The experimental --show-ignored-directory option of git status which was removed in Git for Windows v2.15.0 without warning [has been reintroduced as a deprecated option](https://github.com/git-for-windows/git/pull/1354).
* The git update command (to auto-update Git for Windows) will [now also work behind proxies](https://github.com/git-for-windows/git/issues/1363).

Changes in v2.15.0  
since v2.14.3 (October 23rd 2017)

New Features

* Comes with [Git v2.15.0](https://github.com/git/git/blob/v2.15.0/Documentation/RelNotes/2.15.0.txt).

Bug Fixes

* The auto-updater tried to run at a precise time, and did not run when the computer was switched off at that time. [Now it runs as soon after the scheduled time as possible](https://github.com/git-for-windows/build-extra/commit/459b6e85c).
* The auto-updater [no longer suggests to downgrade from Release Candidates](https://github.com/git-for-windows/build-extra/commit/1418ee7e8).
* When the auto-updater asked the user whether they want to upgrade to a certain version, and the user declined, [the auto-updater will not bother the user about said version again](https://github.com/git-for-windows/build-extra/commit/c0f7634af).
* The installer, when run with /SKIPIFINUSE=1, [now detects whether any executable in Git for Windows' installation is run](https://github.com/git-for-windows/build-extra/commit/db3521c140154b3923e304e4271176958da1f048)
* Git for Windows [no longer includes (non-working) xmlcatalog.exe and xmllint.exe](https://github.com/git-for-windows/build-extra/commit/c86d164f2c9d5c79cd95f1fda881f9e80ca9dc3a).

Changes in v2.14.3  
since v2.14.2(3) (October 12th 2017)

New Features

* Comes with [Git v2.14.3](https://github.com/git/git/blob/v2.14.3/Documentation/RelNotes/2.14.3.txt).
* Git for Windows [now ships with a diff helper for OpenOffice documents](https://github.com/git-for-windows/build-extra/pull/148).
* Comes with [Git LFS v2.3.4](https://github.com/git-lfs/git-lfs/releases/tag/v2.3.4).
* Comes with [cURL v7.56.1](https://curl.haxx.se/changes.html#7_56_1).

Bug Fixes

* Git for Windows [now handles worktrees at the top-level of a UNC share correctly](https://github.com/git-for-windows/git/issues/1320).

Changes in v2.14.2(3)  
since v2.14.2(2) (October 5th 2017)

New Features

* Comes with [Git LFS v2.3.3](https://github.com/git-lfs/git-lfs/releases/tag/v2.3.3).

Bug Fixes

* [Re-enabled some SSHv1 ciphers](https://github.com/git-for-windows/build-extra/commit/b46fba6f44b3680210b19ef5fc9ce22ca1dcda55) since some sites (e.g. Visual Studio Team Services) rely on them for the time being.

Changes in v2.14.2(2)  
since v2.14.2 (September 26th 2017)

New Features

* Comes with [BusyBox v1.28.0pre.16467.b4c390e17](https://github.com/git-for-windows/busybox-w32/commit/b4c390e17).
* Comes with [Git LFS v2.3.2](https://github.com/git-lfs/git-lfs/releases/tag/v2.3.2).
* Comes with [cURL v7.56.0](https://curl.haxx.se/changes.html#7_56_0).
* Comes with [OpenSSH v7.6p1](https://www.openssh.com/txt/release-7.6).
* Comes with [patch level 4](https://github.com/git-for-windows/MSYS2-packages/commit/f2caef90d2e6ba13dc16e38152003958f4db710b) of the MSYS2 runtime (Git for Windows flavor) based on [Cygwin 2.9.0](https://cygwin.com/ml/cygwin-announce/2017-09/msg00056.html).

Bug Fixes

* A [bug](https://github.com/git-for-windows/git/issues/1312) which caused the console window to be closed when executing certain Bash scripts [was fixed](https://github.com/git-for-windows/MSYS2-packages/commit/e9d0a2be2720007c2a734866ebbb4c15e503003c).
* A crash when calling kill <pid> for a non-existing process [was fixed](https://github.com/git-for-windows/git/issues/1316).

Changes in v2.14.2  
since v2.14.1 (August 10th 2017)

New Features

* Comes with [Git v2.14.2](https://github.com/git/git/blob/v2.14.2/Documentation/RelNotes/2.14.2.txt).
* Comes with [cURL v7.55.1](https://curl.haxx.se/changes.html#7_55_1).
* The XP-compatibility layer emulating pthreads (which is [no longer needed](https://git-for-windows.github.io/requirements.html)) [was dropped in favor of modern Windows threading APIs](https://github.com/git-for-windows/git/pull/1214); This should make threaded operations slightly faster and more robust.
* On Windows, UNC paths can [now be accessed via file://host/share/repo.git-style paths](https://github.com/git-for-windows/git/commit/a352941117bc8d00dfddd7a594adf095d084d844).
* Comes with [a new custom Git command git update](https://github.com/git-for-windows/build-extra/pull/151) to help keeping Git up-to-date on your machine.
* The Git installer now offers [an option to keep Git up-to-date](https://github.com/git-for-windows/build-extra/pull/155) by calling git update regularly.
* Comes with [BusyBox v1.28.0pre.16353.2739df917](https://github.com/git-for-windows/busybox-w32/commit/2739df917).
* As is common elsewhere, Ctrl+Left and Ctrl+Right [now move word-wise in Git Bash](https://github.com/git-for-windows/build-extra/pull/156), too.
* Comes with [patch level 2](https://github.com/git-for-windows/msys2-runtime/commit/874e2c8efeed9084cd065cf9ea5c0951f5afca02) of the MSYS2 runtime (Git for Windows flavor) based on [Cygwin 2.9.0](https://cygwin.com/ml/cygwin-announce/2017-09/msg00056.html).
* Comes with [Git LFS v2.3.0](https://github.com/git-lfs/git-lfs/releases/tag/v2.3.0).
* The vs/master branch [can now be built in Visual Studio 2017](https://github.com/git-for-windows/git/pull/1302), too
* As [requested](https://github.com/git-for-windows/git/issues/1294) by the same user who implemented [the change](https://github.com/git-for-windows/build-extra/pull/157), Git for Windows now comes with [tig](https://github.com/jonas/tig), a text-mode interface for Git.

Bug Fixes

* It is [now possible to override http.sslBackend on the command-line](https://github.com/git-for-windows/git/commit/70c1ff8b0ef66321d630fe49d61ee1a9b6be6a4c).
* The installer [now detects correctly whether symbolic links can be created by regular users](https://github.com/git-for-windows/build-extra/commit/5e438f707027eb99da1b1b381672e6d7dbc063a8).
* Git Bash [now renders non-ASCII directories nicely](https://github.com/git-for-windows/build-extra/pull/152).
* A regression that caused the fetch operation with lots of refs to be a lot slower than before [was fixed](https://github.com/git-for-windows/git/issues/1233).
* The git-gui.exe and gitk.exe wrappers intended to be used in Git CMD [now handle command-line parameters correctly](https://github.com/git-for-windows/git/issues/1284).
* The core.longPaths setting [is now heeded when packing refs](https://github.com/git-for-windows/git/issues/1218), and other previously forgotten Git commands.
* Pressing Ctrl+Z in Git Bash [no longer kills Win32 processes (e.g. git.exe) anymore](https://github.com/git-for-windows/git/issues/1083), because POSIX job control is only available with MSYS2 processes.
* Git for Windows [now sets core.fsyncObjectFiles = true by default](https://github.com/git-for-windows/git/commit/b5915c6ae881518927b9fa0b3c4df4d3edd37f23) which makes it a lot more fault-tolerant, say, when power is lost.
* A bug has been fixed where Git for Windows [could run into an infinite loop trying to rename a file](https://github.com/git-for-windows/git/issues/1299).
* Before installing Git for Windows, we already verified that no Git Bash instance is active (which would prevent files from being overwritten). We [now also verify that no git.exe processes are active, either](https://github.com/git-for-windows/build-extra/commit/1b93b50cf08c6cbd3200a66603d28fbd269c2f6a).

Changes in v2.14.1  
since v2.14.0(2) (August 7th 2017)

Note: there have been MinGit-only releases v2.12.2(3) and v2.13.1(3) with backports of the important bug fix in v2.14.1 as well as the experimental --show-ignored-directory option of git status.

New Features

* Comes with [Git v2.14.1](https://github.com/git/git/blob/v2.14.1/Documentation/RelNotes/2.14.1.txt).
* Comes with [cURL v7.55.0](https://curl.haxx.se/changes.html#7_55_0).
* The Git Bash Here context menu item [is now also available](https://github.com/git-for-windows/build-extra/pull/150) in the special [Libraries folders](https://msdn.microsoft.com/en-us/library/windows/desktop/dd758096.aspx).

Changes in v2.14.0(2)  
since v2.14.0 (August 6th 2017)

Bug Fixes

* A regression introduced in v2.14.0 that prevented fetching via SSH [was fixed](https://github.com/git-for-windows/git/issues/1258).

Changes in v2.14.0  
since v2.13.3 (July 13th 2017)

New Features

* Comes with [Git v2.14.0](https://github.com/git/git/blob/v2.14.0/Documentation/RelNotes/2.14.0.txt).
* Comes with [BusyBox v1.28.0pre.15857.9480dca7c](https://github.com/git-for-windows/busybox-w32/commit/9480dca7c).
* Comes with [Git Credential Manager v1.12.0](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.12.0).
* It is now possible to switch between Secure Channel and OpenSSL for Git's HTTPS transport by [setting the http.sslBackend config variable to "openssl" or "schannel"](https://github.com/git-for-windows/git/commit/d81216ee4dd46ae59a388044d1266d6fa9030c19); This [is now also the method used by the installer](https://github.com/git-for-windows/build-extra/commit/7c5a23970126e3cff1e1a7a763216b2a67005593) (rather than copying libcurl-4.dll files around).
* The experimental option [--show-ignored-directory was added to git status](https://github.com/git-for-windows/git/pull/1243) to show only the name of ignored directories when the option --untracked=all is used.
* Git for Windows releases now also include an experimental [BusyBox-based MinGit](https://github.com/git-for-windows/git/wiki/MinGit#experimental-busybox-based-mingit).

Bug Fixes

* Repository-local aliases [are now resolved again in worktrees](https://github.com/git-for-windows/git/commit/6ba04141d88).
* CamelCased aliases were broken in v2.13.3; This [has been fixed again](https://github.com/git-for-windows/git/commit/af0c2223da0).
* The 32-bit Git binaries are now built against the same dependencies that are shipped with Git for Windows.

Changes in v2.13.3  
since v2.13.2 (June 26th 2017)

New Features

* Comes with [Git v2.13.3](https://github.com/git/git/blob/v2.13.3/Documentation/RelNotes/2.13.3.txt).
* Comes with [Git LFS v2.2.1](https://github.com/git-lfs/git-lfs/releases/tag/v2.2.1).
* Comes with MSYS2 runtime (Git for Windows flavor) based on [Cygwin 2.8.2](https://cygwin.com/ml/cygwin-announce/2017-07/msg00044.html).

Bug Fixes

* Git Bash [no longer tries to use the getent tool](https://github.com/git-for-windows/git/issues/1226) which was never shipped with Git for Windows.

Changes in v2.13.2  
since v2.13.1(2) (June 15th 2017)

New Features

* Comes with [Git v2.13.2](https://github.com/git/git/blob/v2.13.2/Documentation/RelNotes/2.13.2.txt).
* Comes with [Git Credential Manager v1.10.1](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.10.1).
* The Git Bash prompt [can now be overridden by creating the file .config\git\git-prompt.sh](https://github.com/git-for-windows/build-extra/pull/145).
* Comes with [cURL v7.54.1](https://curl.haxx.se/changes.html#7_54_1).

Changes in v2.13.1(2)  
since v2.13.1 (June 13th 2017)

Bug Fixes

* git commit and git status [no longer randomly throw segmentation faults](https://github.com/git-for-windows/git/issues/1202).

Changes in v2.13.1  
since v2.13.0 (May 10th 2017)

New Features

* Comes with [Git v2.13.1](https://github.com/git/git/blob/v2.13.1/Documentation/RelNotes/2.13.1.txt).
* Comes with [Git Credential Manager v1.10.0](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.10.0).
* Comes with [OpenSSH 7.5p1](https://www.openssh.com/releasenotes.html#7.5p1).
* Comes with [Git Flow v1.11.0](https://github.com/petervanderdoes/gitflow-avh/releases/tag/1.11.0).
* Comes with [Git LFS v2.1.1](https://github.com/git-lfs/git-lfs/releases/tag/v2.1.1).
* Git [now uses the flag introduced with Windows 10 Creators Update to create symbolic links without requiring elevated privileges](https://github.com/git-for-windows/git/pull/1188) in Developer Mode.

Bug Fixes

* The documentation of Git for Windows' several config files [was improved](https://github.com/git-for-windows/git/pull/1165).
* When interrupting Git processes in Git Bash by pressing Ctrl+C, [Git now removes .lock files as designed](https://github.com/git-for-windows/msys2-runtime/pull/15) ([accompanying Git PR](https://github.com/git-for-windows/git/pull/1170); this should also fix [issue #338](https://github.com/git-for-windows/git/issues/338)).
* git status -uno [now treats submodules in ignored directories correctly](https://github.com/git-for-windows/git/issues/1179).
* The fscache feature [no longer slows down git commit -m <message> in large worktrees](https://github.com/git-for-windows/git/commit/bda7f0728ac55e55d79ed0786c1b5ce2ef7e6117).
* Executing git.exe in Git Bash when the current working directory is a UNC path [now works as expected](https://github.com/git-for-windows/git/issues/1181).
* Staging/unstaging multiple files in Git GUI via Ctrl+C [now works](https://github.com/git-for-windows/git/issues/1012).
* When hitting Ctrl+T in Git GUI to stage files, but the file list is empty, Git GUI [no longer shows an exception window](https://github.com/git-for-windows/git/issues/1075).

Changes in v2.13.0  
since v2.12.2(2) (April 5th 2017)

New Features

* Comes with [Git v2.13.0](https://github.com/git/git/blob/v2.13.0/Documentation/RelNotes/2.13.0.txt).
* Comes with [cURL v7.54.0](https://curl.haxx.se/changes.html).
* Comes with [Git LFS v2.1.0](https://github.com/git-lfs/git-lfs/releases/tag/v2.1.0).

Bug Fixes

* As per Git LFS' convention, [it is installed into the bin/ directory again](https://github.com/git-for-windows/build-extra/pull/141).
* Calling git add with an absolute path using different upper/lower case than recorded on disk [will now work as expected](https://github.com/git-for-windows/git/issues/735) instead of claiming that the paths are outside the repository.
* Git for Windows [no longer tries to determine the default printer](https://github.com/git-for-windows/git/issues/1150).
* When writing the Git index file, Git for Windows [no longer has the wrong idea about the file's timestamp](https://github.com/git-for-windows/git/issues/1149).
* On Windows, absolute paths can start with a backslash (implicitly referring to the same drive as the current directory), and now git clone [can use those paths, too](https://github.com/git-for-windows/git/commit/fad23e90efc).

Changes in v2.12.2(2)  
since v2.12.2 (March 27th 2017)

New Features

* Portable Git is now using [a custom-built SFX that is based directly on 7-Zip's SFX](https://github.com/git-for-windows/7-Zip).
* Git LFS was upgraded to [v2.0.2](https://github.com/git-lfs/git-lfs/releases/tag/v2.0.2).
* Updated the MSYS2 runtime to [Cygwin 2.8.0](https://cygwin.com/ml/cygwin-announce/2017-04/msg00001.html).
* Git LFS [can now be disabled in the first installer page](https://github.com/git-for-windows/build-extra/commit/16975a72fd328130ae531ce349e4a77d9d2b8fa4) (users can still enable it manually, as before, of course).
* Comes with [Git Credential Manager](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/) v1.9.1.

Bug Fixes

* A potential crash in git status with lots of files [was fixed](https://github.com/git-for-windows/git/issues/1111).
* Git LFS [now gets installed into the correct location](https://github.com/git-for-windows/build-extra/commit/5f7d44728c089694f4ef1cc3da03f15e35cd5ecc).
* Git LFS [is now configured correctly out of the box](https://github.com/git-for-windows/build-extra/commit/115b9f5b88ff60af19628262833b42cd7b6cd852) (unless disabled).
* The http.sslCAInfo config setting [is now private to the Git for Windows installation that owns the file](https://github.com/git-for-windows/git/issues/531).
* git difftool -d [no longer crashes randomly](https://github.com/git-for-windows/git/issues/1124).

Changes in v2.12.2  
since v2.12.1 (March 21st 2017)

New Features

* Comes with [Git v2.12.2](https://github.com/git/git/blob/v2.12.2/Documentation/RelNotes/2.12.2.txt).
* An earlier iteration of the changes speeding up the case-insensitive cache of file names was replaced by [a new iteration](https://github.com/git-for-windows/git/commit/212247dd6345c820deeae61fcdf2f10cea10525a).

Changes in v2.12.1  
since v2.12.0 (February 25th 2017)

A [MinGit-only v2.12.0(2)](https://github.com/git-for-windows/git/releases/tag/v2.12.0.windows.2) was released in the meantime.

New Features

* Comes with [Git v2.12.1](https://github.com/git/git/blob/v2.12.1/Documentation/RelNotes/2.12.1.txt).
* In addition to the GitForWindows NuGet package, we now also publish [MinGit as a NuGet package](https://www.nuget.org/packages/Git-Windows-Minimal/).
* Git for Windows now bundles [Git LFS](https://git-lfs.github.com/).
* Comes with Git Credential Manager [v1.9.0](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.9.0).
* Git can now be configured to use [Secure Channel](https://github.com/git-for-windows/git/issues/301) to use the Windows Credential Store when fetching/pushing via HTTPS.
* [Updates](https://github.com/git-for-windows/MSYS2-packages/pull/20) Git-Flow to [v1.10.2](https://github.com/petervanderdoes/gitflow-avh/blob/1.10.2/Changes.mdown#1102) (addressing [#1092](https://github.com/git-for-windows/git/issues/1092)).
* Git for Windows' fork of the MSYS2 runtime was [rebased](https://github.com/git-for-windows/msys2-runtime/compare/5f79e89da8...a55abf375d) to a preview of the Cygwin runtime version 2.8.0 (due soon) to fix [fork: child <n> - forked process <pid> died unexpectedly, retry 0, exit code 0xC0000142, errno 11 problems](https://cygwin.com/ml/cygwin/2017-03/msg00113.html).

Bug Fixes

* MinGit [no longer gets distracted](https://github.com/git-for-windows/git/issues/1086) by incompatible libeay32.dll versions in C:\Windows\system32.
* Long paths between 248 and 260 characters were not handled correctly since Git for Windows v2.11.1, which [is now fixed](https://github.com/git-for-windows/git/issues/1084).
* The awk.exe shipped with MinGit [now ships with a previously missing a dependency](https://github.com/git-for-windows/build-extra/commit/437b52cae9d73772f9582efbd45b63335c7a3fb8) (this fixes git mergetool).
* Git for Windows does not ship with localized messages to save on bandwidth, and the gettext initialization [can be skipped when the directory with said messages is missing](https://github.com/git-for-windows/git/commit/0a416e8f3ef5314927f687f8b2e90f68bc537d80), saving us up to 150ms on every git.exe startup.
* A possible crash when running git log --pickaxe-regex -S<regex> [was fixed](https://github.com/git-for-windows/git/commit/2c6cf4e358dd1395091e1d7f9544028e6df674a7).
* The ORIGINAL\_PATH variable, recently introduced by the MSYS2 project to allow for special "PATH modes", [is now handled in the same manner as the PATH variable](https://github.com/git-for-windows/msys2-runtime/commit/476605ced959f217b3820157b8101b4529fa6a0d) when jumping the Windows<->MSYS2 boundary, fixing issues when ORIGINAL\_PATH is converted to Windows format and back again.

Changes in v2.12.0  
since v2.11.1 (February 3rd 2017)

New Features

* Comes with [Git v2.12.0](https://github.com/git/git/blob/v2.12.0/Documentation/RelNotes/2.12.0.txt).
* The builtin difftool is no longer opt-in, as it graduated to be officially adopted by the Git project.
* Comes with v2.7.0 of the POSIX emulation layer based on the [Cygwin runtime](https://cygwin.com/ml/cygwin-announce/2017-02/msg00022.html).
* Includes [cURL 7.53.1](https://curl.haxx.se/changes.html#7_53_1).
* The Portable Git now defaults to using the included Git Credential Manager.

Bug Fixes

* The [stderr output is unbuffered again](https://github.com/git-for-windows/git/commit/87ad093f001e7146e5e521914255199e49c212a7), i.e. errors are displayed immediately (this was reported [on the Git mailing list](http://public-inbox.org/git/6bc02b0a-a463-1f0c-3fee-ba27dd2482e4@kdbg.org/) as well as issues [#1064](https://github.com/git-for-windows/git/issues/1062), [#1064](https://github.com/git-for-windows/git/issues/1064), [#1068](https://github.com/git-for-windows/git/issues/1068)).
* Git [can clone again](https://github.com/git-for-windows/git/issues/1036) from paths containing non-ASCII characters.
* We [no longer ship two different versions of curl.exe](https://github.com/git-for-windows/git/issues/1069).
* Hitting Ctrl+T in Git GUI even after all files have been (un)staged [no longer throws an exception](https://github.com/git-for-windows/git/issues/1060).
* A couple of Git GUI bugs regarding the list of recent repositories [have been fixed](https://github.com/patthoyts/git-gui/pull/10).
* The git-bash.exe helper [now waits again for the terminal to be closed before returning](https://github.com/git-for-windows/git/issues/946).
* Git for Windows [no longer attempts to send empty credentials to HTTP(S) servers that handle only Basic and/or Digest authentication](https://github.com/git-for-windows/git/issues/1034).

Changes in v2.11.1  
since v2.11.0(3) (January 14th 2017)

New Features

* Comes with [Git v2.11.1](https://github.com/git/git/blob/v2.11.1/Documentation/RelNotes/2.11.1.txt).
* Performance [was enhanced when using fscache in a massively sparse checkout](https://github.com/git-for-windows/git/pull/994).
* Git hooks [can now be .exe files](https://github.com/git-for-windows/git/commit/1c6c2420ff6683d93a61fc790842ab712f2a926b).

Bug Fixes

* Git GUI will [no longer set GIT\_DIR when calling Git Bash after visualizing the commit history](https://github.com/git-for-windows/git/pull/1032).
* When the PATH contains UNC entries, Git Bash will [no longer error out with a "Bad address" error message](https://github.com/git-for-windows/git/issues/1033).

Changes in v2.11.0(3)  
since v2.11.0(2) (January 13th 2017)

Bug Fixes

* [Fixed an off-by-two bug in the POSIX emulation layer](https://github.com/git-for-windows/msys2-runtime/commit/cfaf466391f992525a66d91ebb8e33cadbc08438) that possibly affected third-party Perl scripts that load native libraries dynamically.
* A regression in rebase -i, introduced into v2.11.0(2), which caused commit attribution to be mishandled after resolving conflicts, [was fixed](https://github.com/git-for-windows/git/commit/e11df2efb3072fe73153442589129d2eb8d9ea02).

Changes in v2.11.0(2)  
since v2.11.0 (December 1st 2016)

New Features

* Reading a large index [has been speeded up using pthreads](https://github.com/git-for-windows/git/pull/978).
* The checkout operation [was speeded up](https://github.com/git-for-windows/git/pull/988) for the common cases.
* The status operation [was made faster](https://github.com/git-for-windows/git/pull/991) in large worktrees with many changes.
* The diff operation saw [performance improvements](https://github.com/git-for-windows/git/pull/996) when working on a huge number of renamed files.
* PuTTY's plink.exe [can now be used in GIT\_SSH\_COMMAND without jumping through hoops, too](https://github.com/git-for-windows/git/pull/1006).
* The MSYS2 runtime was [synchronized with Cygwin 2.6.1](https://github.com/git-for-windows/msys2-runtime/commit/038b376b2b02ab916eabac006ac54b1d29a4be75).

Bug Fixes

* Non-ASCII characters are [now shown properly again](https://github.com/git-for-windows/git/issues/981) in Git Bash.
* Implicit NTLM authentication [works again](https://github.com/git-for-windows/git/issues/987) when accessing a remote repository via HTTP/HTTPS without having to specify empty user name and password.
* Our poll() emulation [now uses 64-bit tick counts](https://github.com/git-for-windows/git/pull/1003) to avoid the (very rare) wraparound issue where it could miscalculate time differences every 49 days.
* The --no-lock-index option of git status [is now also respected also in submodules](https://github.com/git-for-windows/git/pull/1004).
* The regression of v2.11.0 where Git could no longer push to shared folders via UNC paths [is fixed](https://github.com/git-for-windows/git/issues/979).
* A bug in the MSYS2 runtime where it performed POSIX->Windows argument conversion incorrectly [was fixed](https://github.com/git-for-windows/msys2-runtime/commit/3cf1b9c3ac4c5490bc94b00cc44682d2637d0b95).
* The MSYS2 runtime [was prepared to access the FAST\_CWD internal data structure in upcoming Windows versions](https://github.com/git-for-windows/msys2-runtime/commit/5fe6d81012e97a348608511450f6a63750c906b6).
* [Fixed a bug](https://github.com/git-for-windows/git/commit/ecb88230d10382833dc961f83cd1092b8d0a2af2) in the experimental builtin difftool where it would not handle copied/renamed files properly.

Changes in v2.11.0  
since v2.10.2 (November 2nd 2016)

New Features

* Comes with [Git v2.11.0](https://github.com/git/git/blob/v2.11.0/Documentation/RelNotes/2.11.0.txt).
* Performance of git add in large worktrees [was improved](https://github.com/git-for-windows/git/pull/971).
* A [new, experimental, builtin version of the difftool](https://github.com/git-for-windows/git/commit/5f3656e4b4b8ceeff40bc7fcf03aba3560bff17c) is available as [an opt-in feature](https://github.com/git-for-windows/build-extra/commit/74339bdd9fab9fbf890f079c9024ff4f1309bb6d).
* Support [has been added](https://github.com/git-for-windows/git/commit/056b41311688e9f433fe28e6b3aa6687fa36ca70) to generate project files for Visual Studio 2010 and later.

Bug Fixes

* The preload-index feature [now behaves much better in conjunction with sparse checkouts](https://github.com/git-for-windows/git/pull/955).
* When encountering a symbolic link, Git [now always tries to read it](https://github.com/git-for-windows/git/issues/958), not only when core.symlinks = true.
* The regression where Git would not interpret non-ASCII characters passed from a CMD window correctly [has been fixed](https://github.com/git-for-windows/git/issues/945).
* Performance of the cache of case-insensitive file names [has been improved](https://github.com/git-for-windows/git/pull/964).
* When building with MS Visual C, [release builds are now properly optimized](https://github.com/git-for-windows/git/pull/948).
* git cvsexportcommit [now also works with CVSNT](https://github.com/git-for-windows/git/pull/938).
* Git's Perl [no longer gets confused by externally-set PERL5LIB](https://github.com/git-for-windows/git/issues/963).
* The uninstaller [no longer leaves an empty Git\mingw64 folder behind](https://github.com/git-for-windows/git/issues/909).
* The installer [now actually records](https://github.com/git-for-windows/build-extra/commit/6da8414b8c75c76fa526bd75fec22eaefad88e09) whether the user chose to enable or disable the Git Credential Manager.
* A certain scenario that could cause a crash in cherry-pick [no longer causes that](https://github.com/git-for-windows/git/issues/952).

Changes in v2.10.2  
since v2.10.1(2) (October 13th 2016)

Git for windows v2.10.1(2) was a MinGit-only release (i.e. there was no Git for windows installer for that version).

New Features

* Comes with [Git v2.10.2](https://github.com/git/git/blob/v2.10.2/Documentation/RelNotes/2.10.2.txt).
* Comes with Git Credential Manager [v1.8.1](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.8.1).
* Comes with cURL [v7.51.0](https://github.com/curl/curl/releases/tag/curl-7_51_0).
* Git for Windows [can now be built easily with Visual C++ 2015](https://github.com/git-for-windows/git/pull/773).
* The installer [now logs post-install errors more verbosely](https://github.com/git-for-windows/build-extra/commit/8332900af09116544f1bee8d20bbfd77daf3186f).
* A new option asks the installer [to skip installation if Git's files are in use](https://github.com/git-for-windows/build-extra/commit/410b4b13505a8a25b199f5cbad0f4afa1a698f34).
* A new option asks the installer [to quietly skip downgrading Git for Windows](https://github.com/git-for-windows/build-extra/commit/c7bc72a157960ee9eef644141f116060c6c31c14), without indicating failure.
* There is [now an explicit option for symbolic link support](https://github.com/git-for-windows/git/issues/921), including a link to a more verbose explanation of the issue.

Bug Fixes

* when upgrading Git for Windows, SSH agent processes [are now auto-terminated](https://github.com/git-for-windows/git/issues/920).
* When trying to install/upgrade on a Windows version that is no longer supported, [we now refuse to do so](https://github.com/git-for-windows/git/issues/928).

Changes in v2.10.1(2)  
since v2.10.1 (October 4th 2016)

New Features

* The speed of the SHA-1 calculation was improved by [using OpenSSL's routines](https://github.com/git-for-windows/git/pull/915) which leverages features of current Intel hardware.
* The git reset command [learned the (still experimental) --stdin option](https://github.com/git-for-windows/git/commit/6a6c0e84720ab5a374b61341ba9ab645ffafd35f).

Changes in v2.10.1  
since v2.10.0 (September 3rd 2016)

New Features

* Comes with [Git v2.10.1](https://github.com/git/git/blob/v2.10.1/Documentation/RelNotes/2.10.1.txt).
* Comes with Git Credential Manager [v1.7.0](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.7.0).
* Comes with [Git Flow v1.10.0](https://github.com/petervanderdoes/gitflow-avh/releases/tag/1.10.0).
* We [now produce nice diffs for .docm and .dotm files](https://github.com/git-for-windows/build-extra/pull/128), just as we did for .docx files already.

Bug Fixes

* The icon in the Explorer integration ("Git Bash Here"), which was lost by mistake in v2.10.0, [is back](https://github.com/git-for-windows/git/issues/870).
* [Fixed a crash](https://github.com/git-for-windows/git/commit/c4f481a41de66d24f6f9943104600f2e4f24b152) when calling git diff -G<regex> on new-born files without configured user diff drivers.
* Interactive GPG signing of commits and tags [was fixed](https://github.com/git-for-windows/git/issues/871).
* Calling Git with --date=format:<invalid-format> [no longer results in an out-of-memory](https://github.com/git-for-windows/git/issues/863) but reports the problem and aborts instead.
* Git Bash [now opens properly even for Azure AD accounts](https://github.com/git-for-windows/git/issues/580).
* Git GUI [respects the commit.gpgsign setting again](https://github.com/git-for-windows/git/issues/850).
* Upgrades the bundled OpenSSL to [v1.0.2j](https://www.openssl.org/news/cl102.txt).

Changes in v2.10.0  
since v2.9.3(2) (August 25th 2016)

New Features

* Comes with [Git v2.10.0](https://github.com/git/git/blob/v2.10.0/Documentation/RelNotes/2.10.0.txt).
* The git rebase -i command was made faster [by reimplementing large parts in C](https://github.com/git-for-windows/git/compare/3259f1f348b8173050c269dde7dc02346db759f3%5e...3259f1f348b8173050c269dde7dc02346db759f3%5e2).
* After helping the end-users to use the new defaults for PATH and FSCache, the installer [now respects the saved settings again](https://github.com/git-for-windows/build-extra/compare/a0a8613c54c0bd651904432f07f7b2999790b097~2...a0a8613c54c0bd651904432f07f7b2999790b097).
* git version --build-options now [also reports the architecture](https://github.com/git-for-windows/git/pull/866).

Bug Fixes

* When upgrading Git for Windows, the installer [no longer opens a second window while uninstalling the previous version](https://github.com/git-for-windows/build-extra/commit/6682a86026e801d9c88c1903d5bd4dd1a0d79c4e).
* Git for Windows' SDK [can build an installer out of the box again](https://github.com/git-for-windows/build-extra/commit/955e82b25a825f005946e7e4951e29404370aa94), without requiring an extra package to be installed.

Changes in v2.9.3(2)  
since v2.9.3 (August 13th 2016)

New Features

* Comes with Git Credential Manager [v1.6.1](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.6.1).
* The feature introduced with Git for Windows v2.9.3 where cat-file can apply smudge filters [was renamed to --filters and made compatible with the --batch mode (the former option name --smudge has been deprecated and will go away in v2.10.0)](https://github.com/git-for-windows/git/compare/f080fe716%5e...f080fe716).
* Comes with OpenSSH [7.3p1](https://github.com/git-for-windows/MSYS2-packages/compare/da63f58~3...da63f58).
* Git's .exe files are now [code-signed](https://github.com/git-for-windows/build-extra/commit/3e9b83526), helping with performance when being run with [Windows File Protection](https://en.wikipedia.org/wiki/Windows_File_Protection).

Changes in v2.9.3  
since v2.9.2 (July 16th 2016)

New Features

* Comes with [Git 2.9.3](https://github.com/git/git/blob/v2.9.3/Documentation/RelNotes/2.9.3.txt).
* Updated Git Credential Manager to [version 1.6.0](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v.1.6.0).
* Includes support for git status --porcelain=v2.
* Avoids evaluating unnecessary patch IDs when determining which commits do not need to be rebased because they are already upstream.
* Sports a new --smudge option for git cat-file that lets it pass blob contents through smudge filters configured for the specified path.

Bug Fixes

* When offering to Launch Git Bash after the installation, [it now launches in the home directory](https://github.com/git-for-windows/build-extra/commit/aa0b462), consistent with the Git Bash Start Menu entry.
* When ~/.gitconfig sets core.hideDotFiles=false, git init [respects that again](https://github.com/git-for-windows/git/issues/789).

Changes in v2.9.2  
since v2.9.0 (June 14th 2016)

New Features

* Comes with [Git 2.9.2](https://github.com/git/git/blob/v2.9.2/Documentation/RelNotes/2.9.2.txt) (skipping the Windows release of [Git 2.9.1](https://github.com/git/git/blob/v2.9.1/Documentation/RelNotes/2.9.1.txt) due to a regression caught by the automated tests).
* Git Credential Manager was updated to [v1.5.0](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.5.0).
* The installer [will now refuse to downgrade Git for Windows, unless the user assures that it is intended](https://github.com/git-for-windows/build-extra/commit/82dc6284).
* MinGit, the portable, non-interactive Git intended for third-party tools, [is now also built as part of Git for Windows' official versions](https://github.com/git-for-windows/build-extra/commit/16a8cf5).

Bug Fixes

* When git bundle create is asked to create an empty bundle, it is supposed to error out and delete the corrupt bundle file. The deletion [no longer fails due to an unreleased lock file](https://github.com/git-for-windows/git/pull/797).
* When launching git help <command>, the help.browser config setting [is now respected](https://github.com/git-for-windows/git/pull/793).
* The title bar in Git for Windows' SDK [shows the correct prefix again](https://github.com/git-for-windows/build-extra/pull/122).
* We [no longer throw an assertion](https://github.com/git-for-windows/git/commit/ac008b30ec070f459450d602c55d55816aae2915) when using the git credential-store.
* When configuring notepad as commit message editor, [UTF-8 messages are now handled correctly](https://github.com/git-for-windows/build-extra/pull/123).

Changes in v2.9.0  
since v2.8.4 (June 7th 2016)

New Features

* Comes with [Git 2.9.0](https://github.com/git/git/blob/v2.9.0/Documentation/RelNotes/2.9.0.txt).

Bug Fixes

* When running git gc --aggressive or git repack -ald in the presence of multiple pack files, the command still had open handles to the pack files it wanted to remove. This [has been fixed](https://github.com/git-for-windows/git/commit/85bc5ad9a69fa120b23471d483dc8da35d771ab7).

Changes in v2.8.4  
since v2.8.3 (May 20th 2016)

New Features

* Comes with [Git 2.8.4](https://github.com/git/git/blob/v2.8.4/Documentation/RelNotes/2.8.4.txt).

Bug Fixes

* Child processes [no longer inherit handles to temporary files](https://github.com/git-for-windows/git/pull/755), which previously could prevent index.lock from being deleted.
* When configuring Git Bash with Windows' default console, it [no longer loses its icon](https://github.com/git-for-windows/build-extra/pull/118).

Changes in v2.8.3  
since v2.8.2 (May 3rd 2016)

New Features

* Comes with [Git v2.8.3](https://github.com/git/git/blob/v2.8.3/Documentation/RelNotes/2.8.3.txt).

Changes in v2.8.2  
since v2.8.1 (April 4th 2016)

New Features

* Comes with [Git v2.8.2](https://github.com/git/git/raw/v2.8.2/Documentation/RelNotes/2.8.2.txt).
* Starting with version 2.8.2, [Git for Windows is also published as a NuGet package](https://www.nuget.org/packages/GitForWindows/).
* Comes with Git Credential Manager v1.3.0.

Bug Fixes

* FSCache [is now enabled by default](https://github.com/git-for-windows/build-extra/commit/a1ae146) even when upgrading from previous Git for Windows versions.
* We now add git.exe to the PATH [by default](https://github.com/git-for-windows/build-extra/commit/1e2e00e) even when upgrading from previous Git for Windows versions.
* Git GUI [now sets author information correctly when amending](https://github.com/git-for-windows/git/pull/726).
* OpenSSL received a critical update to [version 1.0.2h](https://www.openssl.org/news/newslog.html).

Changes in v2.8.1  
since v2.8.0 (March 29th 2016)

New Features

* Comes with [Git v2.8.1](http://article.gmane.org/gmane.linux.kernel/2189878).
* The Git for Windows project updated its contributor guidelines to the [Contributor Covenant 1.4](https://github.com/git-for-windows/git/pull/661).

Bug Fixes

* Git's default editor (vim) is [no longer freezing](https://github.com/git-for-windows/msys2-runtime/commit/1ca92fa2ef89bf9d61d3911a499d8187db18427a) in CMD windows.
* GIT\_SSH (and other executable paths that Git wants to spawn) [can now contain spaces](https://github.com/git-for-windows/git/issues/692).

Changes in v2.8.0  
since v2.7.4 (March 18th 2016)

New Features

* Comes with [Git v2.8.0](http://article.gmane.org/gmane.linux.kernel/2185094).
* Comes with the [Git Credential Manager v1.2.2](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/releases/tag/v1.2.2).
* The FSCache feature (which was labeled experimental for quite some time) [is now enabled by default](https://github.com/git-for-windows/build-extra/pull/101).
* Git is now [added to the PATH by default](https://github.com/git-for-windows/build-extra/pull/102) (previously, the default was for Git to be available only from Git Bash/CMD).
* The installer [now offers to launch the Git Bash right away](https://github.com/git-for-windows/build-extra/pull/103).

Bug Fixes

* The previous workaround for the blurred link to the Git Credential Manager [was fixed](https://github.com/git-for-windows/build-extra/commit/58d978cb84096bcc887170cbfcf44af022848ae3) so that the link is neither blurry nor overlapping.
* The installer [now changes the label of the Next button to Install](https://github.com/git-for-windows/build-extra/pull/104) on the last wizard page before installing.

Changes in v2.7.4  
since v2.7.3 (March 15th 2016)

New Features

* Comes with [Git 2.7.4](http://article.gmane.org/gmane.linux.kernel/2179363).

Bug Fixes

* The Git Credential Manager hyperlink in the installer [is no longer blurred](https://github.com/git-for-windows/build-extra/commit/28bb2a330323ba1c69f278cafa81e3e4fd3bf71c).

Changes in v2.7.3  
since v2.7.2 (February 23rd 2016)

New Features

* Git for Windows [now ships with](https://github.com/git-for-windows/git/issues/466) the [Git Credential Manager for Windows](https://github.com/Microsoft/Git-Credential-Manager-for-Windows/).
* Comes with [Git v2.7.3](http://article.gmane.org/gmane.linux.kernel/2174435).

Bug Fixes

* We [now handle UTF-8 merge and squash messages correctly in Git GUI](https://github.com/git-for-windows/git/issues/665).
* When trying to modify a repository config outside of any Git worktree, [git config no longer creates a .git/ directory](https://github.com/git-for-windows/git/commit/64acc338c) but prints an appropriate error message instead.
* A new version of Git for Windows' SDK [was released](https://github.com/git-for-windows/build-extra/releases/git-sdk-1.0.3%5d%20that%20%5bworks%20around%20pacman-key%20issues%5d(https://github.com/git-for-windows/git/issues/670).
* We [no longer show asterisks when reading the username for credentials](https://github.com/git-for-windows/git/pull/677).

Changes in v2.7.2  
since v2.7.1(2) (February 12th 2016)

New Features

* Git for Windows' SDK version 1.0.2 [has been released](https://github.com/git-for-windows/build-extra/releases/tag/git-sdk-1.0.2).
* The "list references" window of gitk [is now wider by default](https://github.com/git-for-windows/git/pull/620).
* Comes with [Git 2.7.2](http://article.gmane.org/gmane.linux.kernel/2158401).

Bug Fixes

* The user is [now presented with a nice error message](https://github.com/git-for-windows/git/issues/527) when calling node while node.exe is not in the PATH (this bug also affected other interactive console programs such as python and php).
* The arrow keys [are respected again in gitk](https://github.com/git-for-windows/git/issues/495).
* When a too-long path is encountered, git clean -dfx [no longer aborts quietly](https://github.com/git-for-windows/git/issues/521).
* Git GUI learned to [stage lines appended to a single-line file](https://github.com/git-for-windows/git/issues/515).
* When launching C:\Program Files\Git\bin\bash -l -i in a cmd window and pressing Ctrl+C, [the console is no longer corrupted](https://github.com/git-for-windows/git/pull/205) (previously, the bash.exe redirector would terminate and both cmd & Bash would compete for user input).

Changes in v2.7.1(2)  
since v2.7.1 (February 6th 2016)

New Features

* The context menu items in the explorer [now show icons](https://github.com/git-for-windows/build-extra/pull/97).

Bug Fixes

* A bug [was fixed](https://github.com/git-for-windows/git/commit/4abc31070f683e555de95331da0990052f55caa5) where worktrees would forget their location e.g. after an interactive rebase.
* Thanks to Eric Lawrence and Martijn Laan, [our installer sports a better way to look for system files now](https://github.com/git-for-windows/build-extra/tree/HEAD/installer/InnoSetup).

Changes in v2.7.1  
since v2.7.0(2) (February 2nd 2016)

New Features

* Comes with [Git 2.7.1](http://article.gmane.org/gmane.comp.version-control.git/285657).

Bug Fixes

* Git GUI now [starts properly even when the working directory contains non-ASCII characters](https://github.com/git-for-windows/git/issues/410).
* We forgot to enable Address Space Layout Randomization and Data Execution Prevention on our Git wrapper, and this is [now fixed](//github.com/git-for-windows/git/issues/644).
* A bug in one of the DLLs used by Git for Windows [was fixed](https://github.com/Alexpux/MINGW-packages/pull/1051) that prevented Git from working properly in 64-bit setups where [the FLG\_LDR\_TOP\_DOWN global flag](https://technet.microsoft.com/en-us/library/cc779664%28v=ws.10%29.aspx) is set.

Changes in v2.7.0(2)  
since v2.7.0 (January 5th 2016)

New Features

* To stave off exploits, Git for Windows [now uses Address Space Layout Randomization (ASLR) and Data Execution Prevention (DEP)](https://github.com/git-for-windows/git/pull/612).
* Git for Windows' support for git pull --rebase=interactive that was dropped when the pull command was rewritten in C, [was resurrected](https://github.com/git/git/commit/f9219c0b3).
* The installers are now [dual signed](https://github.com/git-for-windows/git/issues/592) with SHA-2 and SHA-1 certificates.
* The uninstaller [is signed now, too](https://github.com/git-for-windows/git/issues/540).

Bug Fixes

* When installing as administrator, we [no longer offer the option to install quiicklaunch icons](https://github.com/git-for-windows/build-extra/commit/a13ffd7c3fa24e2ac1ef3561d7a7f09a0b924338) because quicklaunch icons can only be installed per-user.
* If a ~/.bashrc is detected without a ~/.bash\_profile, the generated file will now [also source ~/.profile if that exists](https://github.com/git-for-windows/build-extra/pull/91).
* The environment variable HOME can now be used to set the home directory [even when running with accounts that are part of a different domain than the current (non-domain-joined) machine](https://github.com/git-for-windows/msys2-runtime/commit/9660c5ffe82b921dd2193efa18e9721f47a6b22f) (in which case the MSYS2 runtime has no way to emulate POSIX-style UIDs).
* Git [can now fetch and push via HTTPS](https://github.com/Alexpux/MINGW-packages/pull/986) even when the http.sslCAInfo config variable was unset.
* Git for Windows is now [handling the case gracefully where the current user has no permission to list the parent of the current directory](https://github.com/git-for-windows/git/pull/606).
* More file locking issues ("Unlink of file ... failed. Should I try again?") [were fixed](https://github.com/git-for-windows/git/issues/500).

Changes in v2.7.0  
since v2.6.4 (December 14th 2015)

New Features

* Comes with [Git v2.7.0](http://article.gmane.org/gmane.linux.kernel/2118402).

Bug Fixes

* Non-ASCII command-lines are now [passed properly](https://github.com/git-for-windows/msys2-runtime/commit/4c362726c41102173613658) to shell scripts.

Changes in v2.6.4  
since v2.6.3 (November 10th 2015)

New Features

* Comes with [Git v2.6.4](http://article.gmane.org/gmane.linux.kernel/2103498).
* Also available as .tar.bz2 packages (you need an MSYS2/Cygwin-compatible unpacker to recreate the symbolic links correctly).

Bug Fixes

* Git for Windows v2.6.3's installer [failed](https://github.com/git-for-windows/git/issues/523) to [elevate privileges automatically](https://github.com/git-for-windows/git/issues/526) (reported [three times](https://github.com/git-for-windows/git/issues/528), making it a charm), and as a consequence Git for Windows 2.6.3 was frequently [installed per-user by mistake](https://github.com/git-for-windows/build-extra/commit/23672af723da18e5bc3c679e52106de3c2dec55a)
* The bug where [SHELL\_PATH had spaces](https://github.com/git-for-windows/git/issues/542) and that was [reported](https://github.com/git-for-windows/git/issues/498) multiple [times](https://github.com/git-for-windows/git/issues/468) has been [fixed](https://github.com/git-for-windows/msys2-runtime/commit/7f4284d245f9c736dc8ec52e12c5d67cea7e4ba9).
* An additional work-around from upstream Git for SHELL\_PATH containing spaces (fixing [problems with interactive rebase's exec command](https://github.com/git-for-windows/git/issues/542) has been applied.

Changes in v2.6.3  
since v2.6.2 (October 19th 2015)

New Features

* Comes with [Git v2.6.3](http://article.gmane.org/gmane.comp.version-control.git/280947).
* [Enables the stack smasher to protect against buffer overflows](https://github.com/git-for-windows/git/issues/501).

Bug Fixes

* Git Bash [works now even when choosing Windows' default console and installing into a short path (e.g. C:\Git)](https://github.com/git-for-windows/git/issues/509).
* Notepad [can now really be used to edit commit messages](https://github.com/git-for-windows/git/issues/517).
* Git's garbage collector [now handles stale refs/remotes/origin/HEAD gracefully](https://github.com/git-for-windows/git/issues/423).
* The regression in Git for Windows 2.6.2 that it required administrator privileges to be installed [is now fixed](https://github.com/git-for-windows/build-extra/pull/86).
* When notepad is configured as default editor, we no longer do anything specially [unless editing files inside .git/](https://github.com/git-for-windows/git/issues/488).

Changes in v2.6.2  
since v2.6.1 (October 5th 2015)

New Features

* Comes with Git v2.6.2
* Users who are part of a Windows domain [now have sensible default values](https://github.com/git-for-windows/git/pull/487) for user.name and user.email.

Bug Fixes

* We [no longer run out of page file space](https://github.com/git-for-windows/git/pull/486) when git fetching large repositories.
* The description of Windows' default console is accurate now (the console became more powerful in Windows 10).
* Git GUI now respects the [terminal emulation chosen at install time](https://github.com/git-for-windows/git/issues/490) when [running the Git Bash](https://github.com/git-for-windows/git/pull/492).

Changes in v2.6.1  
since 2.6.0 (September 29th 2015)

New Features

* Comes with Git 2.6.1
* The installer [now writes the file /etc/install-options.txt](https://github.com/git-for-windows/git/issues/454) to record which options were chosen at install time.
* Replaces git flow with [the AVH edition](https://github.com/petervanderdoes/gitflow-avh) which is maintained actively, in surprising and disappointing contrast to Vincent Driessen's very own project.

Bug Fixes

* The PATH variable [is now really left alone](https://github.com/git-for-windows/git/issues/438) when choosing the "Use Git from Git Bash only" option in the installer. Note that upgrading Git for Windows will call the previous version's uninstaller, which might still have that bug.
* Git GUI's Registry>Create Desktop Icon [now generates correct shortcuts](https://github.com/git-for-windows/git/issues/448).
* The antiword utility to render Word documents for use in git diff [now works correctly](https://github.com/git-for-windows/git/issues/453).
* In 64-bit installations, we [no longer set a pack size limit by default](https://github.com/git-for-windows/git/issues/288).
* When installing Git for Windows as regular user, [the installer no longer tries to create privileged registry keys](https://github.com/git-for-windows/git/issues/455).

Changes in v2.6.0  
since 2.5.3 (September 18th 2015)

New Features

* Comes with Git 2.6.0
* The WhoUses.exe tool to determine which process holds a lock on a given file (which was shipped with Git for Windows 1.x) [gets installed alongside Git for Windows again](https://github.com/git-for-windows/git/issues/408).
* The values CurrentVersion, InstallPath and LibexecPath are [added to the HKEY\_LOCAL\_MACHINE\Software\GitForWindows registry key](https://github.com/git-for-windows/git/issues/427) to help third-party add-ons to find us.
* When fetching or pushing with Git without a console, we now [fall back to Git GUI's askpass helper](https://github.com/git-for-windows/git/issues/428) to ask for pass phrases.
* When run through <INSTALL\_PATH>\cmd\git.exe, Git [will find tools in $HOME/bin](https://github.com/git-for-windows/git/issues/429) now.

Bug Fixes

* The portable version avoids DLL search path problems [even when installed into a FAT filesystem](https://github.com/git-for-windows/git/issues/390).
* Configuring notepad as editor without configuring a width for commit messages [no longer triggers an error message](https://github.com/git-for-windows/git/issues/430).
* When using Windows' default console for Git Bash, [the .sh file associations work again](https://github.com/git-for-windows/git/issues/396).
* Portable Git's README [is now clearer about the need to run post-install.bat when unpacking manually](https://github.com/git-for-windows/build-extra/pull/83).
* [We use the winpty trick now](https://github.com/git-for-windows/git/issues/436) to run ipython interactively, too.
* When the environment variable HOME is not set, we [now](https://github.com/git-for-windows/git/issues/414) fall back [correctly](https://github.com/git-for-windows/git/issues/434) to use HOMEDRIVE and HOMEPATH.
* The home directory is now [set correctly](https://github.com/git-for-windows/git/issues/435) when running as the SYSTEM user.
* The environment variable GIT\_WORK\_TREE [may now differ in lower/upper case with the Git's idea of the current working directory](https://github.com/git-for-windows/git/issues/402).
* Running git clone --dissociate ... [no longer locks the pack files during the repacking phase](https://github.com/git-for-windows/git/issues/446).
* Upstream cURL fixes for NTLM proxy issues ("Unknown SSL error") [were backported](https://github.com/git-for-windows/git/issues/373).
* The 64-bit version [now includes](https://github.com/git-for-windows/git/issues/449) the astextplain script it lacked by mistake.

Changes in v2.5.3  
since 2.5.2(2) (September 13th 2015)

New Features

* Comes with Git 2.5.3.
* Includes [git flow](http://nvie.com/posts/a-successful-git-branching-model/).
* By configuring git config core.editor notepad, users [can now use notepad.exe as their default editor](https://github.com/git-for-windows/git/issues/381). Configuring git config format.commitMessageColumns 72 will be picked up by the notepad wrapper and line-wrap the commit message after the user edited it.
* The Subversion bindings for use with git svn [were upgraded to version 1.9.1](https://github.com/git-for-windows/git/issues/374).
* Some interactive console programs, e.g. psql.exe, [now work in mintty thanks to pre-configured aliases](https://github.com/git-for-windows/git/issues/399).
* The mechanism to diff .pdf, .doc and .docx files known from Git for Windows 1.x [has been ported to Git for Windows 2.x](https://github.com/git-for-windows/git/issues/355).
* Git can now [access IPv6-only hosts via HTTP/HTTPS](https://github.com/git-for-windows/git/issues/370).

Bug Fixes

* The .vimrc in the home directory [is now allowed to have DOS line endings](https://github.com/git-for-windows/git/issues/364).
* The README.portable file of the portable Git [mentions the need to run post-install.bat](https://github.com/git-for-windows/git/issues/394) when the archive was extracted manually.
* Home directories for user names [with non-ASCII characters](https://github.com/git-for-windows/git/issues/331) are [handled](https://github.com/git-for-windows/git/issues/336) correctly [now](https://github.com/git-for-windows/git/issues/383).
* The documentation [no longer shows plain-text linkgit:... "links"](https://github.com/git-for-windows/git/issues/404) but proper hyperlinks instead.
* The mtab link [is written to /etc/mtab again, as it should](https://github.com/git-for-windows/git/issues/405).
* When run inside the PowerShell, Git no longer gets confused when the current directory's path and what is recorded in the file system differs in case (e.g. "GIT/" vs "Git/").

Changes in v2.5.2(2)  
since 2.5.2 (September 10th 2015)

Bug Fixes

* The Git GUI [can be launched from the Start menu again](https://github.com/git-for-windows/git/issues/376).
* It [now works](https://github.com/git-for-windows/git/pull/305) to call git add -p -- . when there is a large number of files.
* The Arrow keys can be used in the Bash history again [when run in the Windows console](https://github.com/git-for-windows/git/issues/353).
* Tab completion in the context of a large Active Directory [is no longer slow](https://github.com/git-for-windows/git/issues/377).

Changes in v2.5.2  
since 2.5.1 (August 31th 2015)

New Features

* Comes with Git 2.5.2
* Alternates [can now point to UNC paths](https://github.com/git-for-windows/git/pull/286), i.e. network drives.

Bug Fixes

* The MSYS2 runtime was taught [not to look hard for groups](https://github.com/git-for-windows/git/issues/193), speeding up Git Bash's startup time.
* A [work around](https://github.com/git-for-windows/git/issues/361) was added for [issues](https://github.com/git-for-windows/git/wiki/32-bit-issues) when installing 32-bit Git for Windows on 64-bit Windows 10.
* The installer [no longer freezes](https://github.com/git-for-windows/git/issues/351) when there are interactive commands in the user's .profile.
* git rebase --skip [was speeded up again](https://github.com/git-for-windows/git/issues/365).
* The redirector in /bin/bash.exe now adjusts the PATH environment variable correctly (i.e. so that Git's executables are found) before launching the real Bash, even when called without --login.
* When installing Git for Windows to a location whose path is longer than usual, Git commands [no longer trigger occasional Bad address errors](https://github.com/git-for-windows/git/issues/303).
* Git [no longer asks for a DVD to be inserted again](https://github.com/git-for-windows/git/issues/329) when one has been ejected from the D: drive.

Changes in v2.5.1  
since 2.5.0 (August 18th 2015)

New Features

* Comes with Git 2.5.1

Bug Fixes

* Backspace [works now](https://github.com/git-for-windows/git/issues/282) with ConHost-based (cmd.exe) terminal.
* When there is a ~/.bashrc but no ~/.bash\_profile, [the latter will be created automatically](https://github.com/git-for-windows/build-extra/pull/71).
* When calling a non-login shell, [the prompt now works](https://github.com/git-for-windows/build-extra/pull/72).
* The text in the installer describing the terminal emulator options [is no longer cut off](https://github.com/git-for-windows/build-extra/pull/69).
* The connect.exe tool to allow SSH connections via HTTP/HTTPS/SOCKS proxies [is included in Git for Windows again](https://github.com/git-for-windows/build-extra/pull/73), as it was in Git for Windows 1.x.
* The LANG variable is [no longer left unset](https://github.com/git-for-windows/git/issues/298) (which caused troubles with vim).
* call start-ssh-agent [no longer spits out bogus lines](https://github.com/git-for-windows/git/issues/314).
* It is now possible [even behind NTLM-authenticated proxies](https://github.com/git-for-windows/git/issues/309) to install [Git for Windows' SDK](https://git-for-windows.github.io/#download-sdk).
* We [can handle the situation now](https://github.com/git-for-windows/git/issues/318) when the first $PATH elements point outside of Git for Windows' bin/ directories and contain .dll files that interfere with our own (e.g. PostgreSQL's libintl-8.dll).
* The patch tool [is now included again](https://github.com/git-for-windows/build-extra/pull/74) as it was in Git for Windows 1.x.

Changes in v2.5.0  
since 2.4.6 (July 18th 2015)

New Features

* Comes with Git 2.5.0
* On Windows 7 and later, [the Git Bash can now correctly be pinned to the task bar](https://github.com/git-for-windows/git/issues/263).

Bug Fixes

* The size of the installers [was reduced again](https://github.com/git-for-windows/git/issues/262), almost to the levels of Git for Windows 1.x.
* Under certain circumstances, when the Windows machine is part of a Windows domain with lots of users, the startup of the Git Bash [is now faster](https://github.com/git-for-windows/git/issues/193).
* Git [no longer warns about being unable to read bogus Git attributes](https://github.com/git-for-windows/git/issues/255).

Changes in v2.4.6  
since 2.4.5 (June 29th 2015)

New Features

* Comes with Git 2.4.6

Bug Fixes

* Git for Windows handles symlinks now, [even if core.symlinks does not tell Git to generate symlinks itself](https://github.com/git-for-windows/git/pull/220).
* git svn learned [not to reuse incompatible on-disk caches left over from previous Git for Windows versions](https://github.com/git-for-windows/git/pull/246).

Changes in v2.4.5  
since 2.4.4 (June 20th 2015)

New Features

* Comes with Git 2.4.5

Bug Fixes

* Git Bash [no longer crashes when called with TERM=msys](https://github.com/git-for-windows/git/issues/222). This reinstates compatibility with GitHub for Windows.

Changes in v2.4.4  
since 2.4.3 (June 12th 2015)

New Features

* Comes with Git 2.4.4
* The POSIX-to-Windows path mangling [can now be turned off](https://github.com/git-for-windows/msys2-runtime/pull/11) by setting the MSYS\_NO\_PATHCONV environment variable. This even works for individual command lines: MSYS\_NO\_PATHCONV=1 cmd /c dir /x will list the files in the current directory along with their 8.3 versions.

Bug Fixes

* git-bash.exe [no longer changes the working directory to the user's home directory](https://github.com/git-for-windows/git/issues/130).
* Git [can now clone into a drive root](https://github.com/msysgit/git/issues/359), e.g. C:\.
* For backwards-compatibility, redirectors are installed into /bin/bash.exe and /bin/git.exe, e.g. [to support SourceTree and TortoiseGit better](https://github.com/git-for-windows/git/issues/208).
* When using core.symlinks = true while cloning repositories with symbolic links pointing to directories, [git status no longer shows bogus modifications](https://github.com/git-for-windows/git/issues/210).

Changes in v2.4.3  
since 2.4.2 (May 27th 2015)

New Features

* Comes with Git 2.4.3

Bug Fixes

* [We include diff.exe](https://github.com/git-for-windows/git/issues/163) just as it was the case in Git for Windows 1.x
* The certificates for accessing remote repositories via HTTPS [are found on XP again](https://github.com/git-for-windows/git/issues/168).
* clear.exe and the cursor keys in vi [work again](https://github.com/git-for-windows/git/issues/169) when Git Bash is run in Windows' default console window ("ConHost").
* The ACLs of the user's temporary directory are no longer modified when mounting /tmp/ (https://github.com/git-for-windows/git/issues/190).
* Git Bash Here works even from the context menu of the empty area in Windows Explorer's view of C:\, D:\, etc (https://github.com/git-for-windows/git/issues/176).

Changes in v2.4.2  
since 2.4.1 (May 14th 2015)

New Features

* On Windows Vista and later, [NTFS junctions can be used to emulate symlinks now](https://github.com/git-for-windows/git/pull/156); To enable this emulation, the MSYS environment variable needs to be set to winsymlinks:nativestrict.
* The Git Bash learned to support [several options to support running the Bash in arbitrary terminal emulators](https://github.com/git-for-windows/git/commit/ac6b03cb4).

Bug Fixes

* Just like Git for Windows 1.x, [pressing Shift+Tab in the Git Bash triggers tab completion](https://github.com/git-for-windows/build-extra/pull/59).
* [Auto-mount the temporary directory of the current user to /tmp/ again](https://github.com/git-for-windows/msys2-runtime/pull/9), just like Git for Windows 1.x did (thanks to MSys1's hard-coded mount point).

Changes in v2.4.1  
since 2.4.0(2) (May 7th 2015)

New Features

* Comes with Git 2.4.1

Bug Fixes

* When selecting the standard Windows console window for Git Bash, a regression was fixed that triggered [an extra console window](https://github.com/git-for-windows/git/issues/148) to be opened.
* The password [can be entered interactively again](https://github.com/git-for-windows/git/issues/124) when git pushing to a HTTPS remote.

Changes in v2.4.0(2)  
since 2.4.0 (May 5th 2015)

Bug Fixes

* The .sh file association was fixed
* The installer will now remove files from a previous Git for Windows versions, particularly important for 32-bit -> 64-bit upgrades

New Features

* The installer now offers the choice between opening the Git Bash in a MinTTY (default) or a regular Windows console window (Git for Windows 1.x' setting).

Changes in v2.4.0  
since 2.3.7-preview20150429

New Features

* Comes with Git 2.4.0
* Git for Windows now installs its configuration into a Windows-wide location: %PROGRAMDATA%\Git\config (which will be shared by libgit2-based applications with the next libgit2 version)

Bug Fixes

* Fixed a regression where Git Bash would not start properly on Windows XP
* Tab completion works like on Linux and MacOSX (double-Tab required to show ambiguous completions)
* In 32-bit setups, all the MSYS2 .dll's address ranges are adjusted ("auto-rebased") as part of the installation process
* The post-install scripts of MSYS2 are now executed as part of the installation process, too
* All files that are part of the installation will now be registered so they are deleted upon uninstall

Changes in v2.3.7-preview20150429  
since 2.3.6-preview20150425

New Features

* Comes with Git 2.3.7

Bug Fix

* A flawed "fix" that ignores submodules during rebases was dropped
* The home directory can be overridden using the $HOME environment variable again

Changes in v2.3.6-preview20150425  
since 2.3.5-preview20150402

New Features

* Comes with Git 2.3.6

Bug Fixes

* Fixed encoding issues in Git Bash and keept the TMP environment variable intact.
* Downgraded the nettle packages due to an [MSYS2 issue](https://github.com/Alexpux/MINGW-packages/issues/549)
* A couple of fixes to the Windows-specific Git wrapper
* Git wrapper now refuses to use $HOMEDRIVE$HOMEPATH if it points to a non-existing directory (this can happen if it points to a network drive that just so happens to be Disconnected Right Now).
* Much smoother interaction with the mintty terminal emulator
* Respects the newly introduced Windows-wide %PROGRAMDATA%\Git\config configuration

Changes in v2.3.5-preview20150402  
since 1.9.5-preview20150402

New Features

* Comes with Git 2.3.5 plus Windows-specific patches.
* First release based on [MSYS2](https://msys2.github.io/).
* Support for 64-bit!

Backwards-incompatible changes

* The development environment changed completely from the previous version (maybe introducing some regressions).
* No longer ships with Git Cheetah (because there are better-maintained Explorer extensions out there).

Changes in v1.9.5-preview20150402  
since 1.9.5-preview20141217

New Features

* Comes with Git 1.9.5 plus Windows-specific patches.
* Make vimdiff usable with git mergetool.

Security Updates

* Mingw-openssl to 0.9.8zf and msys-openssl to 1.0.1m
* Bash to 3.1.23(6)
* Curl to 7.41.0

Bugfixes

* ssh-agent: only ask for password if not already loaded
* Reenable perl debugging ("perl -de 1" possible again)
* Set icon background color for Windows 8 tiles
* poll: honor the timeout on Win32
* For git.exe alone, use the same HOME directory fallback mechanism as /etc/profile

Changes in v1.9.5-preview20141217  
since 1.9.4-preview20140929

New Features

* Comes with Git 1.9.5 plus Windows-specific patches.

Bugfixes

* Safeguards against bogus file names on NTFS (CVE-2014-9390).

Changes in v1.9.4-preview20140929  
since 1.9.4-preview20140815

New Features

* Comes with Git 1.9.4 plus Windows-specific patches.

Bugfixes

* Update bash to patchlevel 3.1.20(4) (msysgit PR#254, msysgit issue #253).
* Fixes CVE-2014-6271, CVE-2014-7169, CVE-2014-7186 and CVE-2014-7187.
* gitk.cmd now works when paths contain the ampersand (&) symbol (msysgit PR #252)
* Default to automatically close and restart applications in silent mode installation type
* git svn is now usable again (regression in previous update, msysgit PR#245)

Changes in v1.9.4-preview20140815  
since 1.9.4-preview20140611

New Features

* Comes with Git 1.9.4 plus Windows-specific patches
* Add vimtutor (msysgit PR #220)
* Update OpenSSH to 6.6.1p1 and its OpenSSL to 1.0.1i (msysgit PR #221, #223, #224, #226, #229, #234, #236)
* Update mingw OpenSSL to 0.9.8zb (msysgit PR #241, #242)

Bugfixes

* Checkout problem with directories exceeding MAX\_PATH (PR #212, msysgit #227)
* Backport a webdav fix from junio/maint (d9037e http-push.c: make CURLOPT\_IOCTLDATA a usable pointer, PR #230)

Regressions

* git svn is/might be broken. Fixes welcome.

Changes in v1.9.4-preview20140611  
since 1.9.2-preview20140411

New Features

* Comes with Git 1.9.4 plus Windows-specific patches.

Bugfixes

* Upgrade openssl to 0.9.8za (msysgit PR #212)
* Config option to disable side-band-64k for transport (#101)
* Make git-http-backend, git-http-push, git-http-fetch available again (#174)

Changes in v1.9.2-preview20140411  
since 1.9.0-preview20140217

New Features

* Comes with Git 1.9.2 plus Windows-specific patches.
* Custom installer settings can be saved and loaded, for unsupervised installation on batches of machines (msysGit PR #168).
* Comes with VIM 7.4 (msysGit PR #170).
* Comes with ZLib 1.2.8.
* Comes with xargs 4.4.2.

Bugfixes

* Work around stack limitations when listing an insane number of tags (PR #154).
* Assorted test fixes (PRs #156, #158).
* Compile warning fix in config.c (PR #159).
* Ships with actual dos2unix and unix2dos.
* The installer no longer recommends mixing with Cygwin.
* Fixes a regression in Git-Cheetah which froze the Explorer upon calling Git Bash from the context menu (Git-Cheetah PRs #14 and #15).

Changes in v1.9.0-preview20140217  
since 1.8.5.2-preview20131230

New Features

* Comes with Git 1.9.0 plus Windows-specific patches.
* Better work-arounds for Windows-specific path length limitations (pull request #122)
* Uses optimized TortoiseGitPLink when detected (msysGit pull request #154)
* Allow Windows users to use Linux Git on their files, using [Vagrant](http://www.vagrantup.com/) (msysGit pull request #159)
* InnoSetup 5.5.4 is now used to generate the installer (msysGit pull request #167)

Bugfixes

* Fixed regression with interactive password prompt for remotes using the HTTPS protocol (issue #111)
* We now work around Subversion servers printing non-ISO-8601-compliant time stamps (pull request #126)
* The installer no longer sets the HOME environment variable (msysGit pull request #166)
* Perl no longer creates empty sys$command files when no stdin is connected (msysGit pull request #152)

Changes in v1.8.5.2-preview20131230  
since 1.8.4-preview20130916

New Features

* Comes with Git 1.8.5.2 plus Windows-specific patches.
* Windows-specific patches are now grouped into pseudo-branches which should make future development robust despite slow uptake of the Windows-specific patches by upstream git.git.
* Works around more path length limitations (pull request #86)
* Has an optional stat() cache toggled via core.fscache (pull request #107)

Bugfixes

* Lots of installer fixes
* git-cmd: Handle home directory on a different drive correctly (pull request #146)
* git-cmd: add a helper to work with the ssh agent (pull request #135)
* Git-Cheetah: prevent duplicate menu entries (pull request #7)
* No longer replaces dos2unix with hd2u (a more powerful, but slightly incompatible version of dos2unix)

Changes in v1.8.4-preview20130916  
since 1.8.3-preview20130601

New Features

* Comes with Git 1.8.4 plus Windows specific patches.
* Enabled unicode support in bash (#42 and #79)
* Included iconv.exe to assist in writing encoding filters
* Updated openssl to 0.9.8y

Bugfixes

* Avoid emitting non-printing chars to set console title.
* Various encoding fixes for the git test suite
* Ensure wincred handles empty username/password.

Changes in v1.8.3-preview20130601  
since 1.8.1.2-preview20130201

New Features

* Comes with Git 1.8.3 plus Windows specific patches.
* Updated curl to 7.30.0 with IPv6 support enabled.
* Updated gnupg to 1.4.13
* Installer improvements for update or reinstall options.

Bugfixes

* Avoid emitting color coded ls output to pipes.
* ccache binary updated to work on XP.
* Fixed association of .sh files setup by the installer.
* Fixed registry-based explorer menu items for XP (#95)

Changes in v1.8.1.2-preview20130201  
since 1.8.0-preview20121022

New Features

* Comes with Git 1.8.1.2 plus Windows specific patches.
* Includes support for using the Windows Credential API to store access credentials securely and provide access via the control panel tool to manage git credentials.
* Rebase autosquash support is now enabled by default. See <http://goo.gl/2kwKJ> for some suggestions on using this.
* All msysGit development is now done on 'master' and the devel branches are deleted.
* Tcl/Tk upgraded to 8.5.13.
* InnoSetup updated to 5.5.3 (Unicode)

Bugfixes

* Some changes to avoid clashing with cygwin quite so often.
* The installer will attempt to handle files mirrored in the virtualstore.

Changes in v1.8.0-preview20121022  
since 1.7.11-preview20120710

New Features

* Comes with Git 1.8.0 plus Windows specific patches.
* InnoSetup updated to 5.5.2

Bugfixes

* Fixed icon backgrounds on low color systems
* Avoid installer warnings during writability testing.
* Fix bash prompt handling due to upstream changes.

Changes in v1.7.11-preview20120710  
since 1.7.11-preview20120704

Bugfixes

* Propagate error codes from git wrapper (issue #43, #45)
* Include CAcert root certificates in SSL bundle (issue #37)

Changes in v1.7.11-preview20120704  
since 1.7.11-preview20120620

New Features

* Comes with the beautiful Git logo from <http://git-scm.com/downloads/logos>
* The installer no longer asks for the directory and program group when updating
* The installer now also auto-detects TortoisePlink that comes with TortoiseGit

Bugfixes

* Git::SVN is correctly installed again
* The default format for git help is HTML again
* Replaced the git.cmd script with an exe wrapper to fix issue #36
* Fixed executable detection to speed up help -a display.

Changes in v1.7.11-preview20120620  
since 1.7.10-preview20120409

New Features

* Comes with Git 1.7.11 plus Windows specific patches.
* Updated curl to 7.26.0
* Updated zlib to 1.2.7
* Updated Inno Setup to 5.5.0 and avoid creating symbolic links (issue #16)
* Updated openssl to 0.9.8x and support reading certificate files from Unicode paths (issue #24)
* Version resource built into git executables.
* Support the Large Address Aware feature to reduce chance out-of-memory on 64 bit windows when repacking large repositories.

Bugfixes

* Please refer to the release notes for official Git 1.7.11.
* Fix backspace/delete key handling in rxvt terminals.
* Fixed TERM setting to avoid a warning from less.
* Various fixes for handling unicode paths.

Changes in v1.7.10-preview20120409  
since 1.7.9-preview20120201

New Features

* Comes with Git 1.7.10 plus Windows specific patches.
* UTF-8 file name support.

Bugfixes

* Please refer to the release notes for official Git 1.7.10.
* Clarifications in the installer.
* Console output is now even thread-safer.
* Better support for foreign remotes (Mercurial remotes are disabled for now, due to lack of a Python version that can be compiled within the development environment).
* Git Cheetah no longer writes big log files directly to C:\.
* Development environment: enhancements in the script to make a 64-bit setup.
* Development environment: enhancements to the 64-bit Cheetah build.

Changes in v1.7.9-preview20120201  
since 1.7.8-preview20111206

New Features

* Comes with Git 1.7.9 plus Windows specific patches.
* Improvements to the installer running application detection.

Bugfixes

* Please refer to the release notes for official Git 1.7.9
* Fixed initialization of the git-cheetah submodule in net-installer.
* Fixed duplicated context menu items with git-cheetah on Windows 7.
* Patched gitk to display filenames when run on a subdirectory.
* Tabbed gitk preferences dialog to allow use on smaller screens.

Changes in v1.7.8-preview20111206  
since 1.7.7.1-preview20111027

New Features

* Comes with Git 1.7.8 plus Windows specific patches.
* Updated Tcl/Tk to 8.5.11 and libiconv to 1.14
* Some changes to support building with MSVC compiler.

Bugfixes

* Please refer to the release notes for official Git 1.7.8
* Git documentation submodule location fixed.

Changes in v1.7.7.1-preview20111027  
since 1.7.7-preview20111014

New Features

* Comes with Git 1.7.7.1 plus patches.

Bugfixes

* Please refer to the release notes for official Git 1.7.7.1
* Includes an important upstream fix for a bug that sometimes corrupts the git index file.

Changes in v1.7.7-preview20111014  
since 1.7.6-preview20110708

New Features

* Comes with Git 1.7.7 plus patches.
* Updated gzip/gunzip and include unzip and gvim
* Primary repositories moved to [GitHub](http://github.com/msysgit/)

Bugfixes

* Please refer to the release notes for official Git 1.7.7
* Re-enable vim highlighting
* Fixed issue with libiconv/libiconv-2 location
* Fixed regressions in Git Bash script
* Fixed installation of mergetools for difftool and mergetool use and launching of beyond compare on windows.
* Fixed warning about mising hostname during git fetch

Changes in v1.7.6-preview20110708  
since 1.7.4-preview20110211

New Features

* Comes with Git 1.7.6 plus patches.
* Updates to various supporting tools (openssl, iconv, InnoSetup)

Bugfixes

* Please refer to the release notes for official Git 1.7.6
* Fixes to msys compat layer for directory entry handling and command line globbing.

Changes in v1.7.4-preview20110211  
since 1.7.3.2-preview20101025

New Features

* Comes with Git 1.7.4 plus patches.
* Includes antiword to enable viewing diffs of .doc files
* Includes poppler to enable viewing diffs of .pdf files
* Removes cygwin paths from the bash shell PATH

Bugfixes

* Please refer to the release notes for official Git 1.7.4

Changes in v1.7.3.2-preview20101025  
since 1.7.3.1-preview20101002

New Features

* Comes with Git 1.7.3.2 plus patches.

Changes in v1.7.3.1-preview20101002  
since 1.7.2.3-preview20100911

New Features

* Comes with Git 1.7.3.1 plus patches.
* Updated to Vim 7.3, file-5.04 and InnoSetup 5.3.11

Bugfixes

* Issue 528 (remove uninstaller from Start Menu) was fixed
* Issue 527 (failing to find the certificate authority bundle) was fixed
* Issue 524 (remove broken and unused sdl-config file) was fixed
* Issue 523 (crash pushing to WebDAV remote) was fixed

Changes in v1.7.2.3-preview20100911  
since 1.7.1-preview20100612

New Features

* Comes with Git 1.7.2.3 plus patches.

Bugfixes

* Issue 519 (build problem with compat/regex/regexec.c) was fixed
* Issue 430 (size of panes not preserved in git-gui) was fixed
* Issue 411 (git init failing to work with CIFS paths) was fixed
* Issue 501 (failing to clone repo from root dir using relative path) was fixed

Changes in v1.7.1-preview20100612  
since 1.7.0.2-preview20100309

New Features

* Comes with Git 1.7.1 plus patches.

Bugfixes

* Issue 27 (git-send-mail not working properly) was fixed again
* Issue 433 (error while running git svn fetch) was fixed
* Issue 427 (Gitk reports error: "couldn't compile regular expression pattern: invalid repetition count(s)") was fixed
* Issue 192 (output truncated) was fixed again
* Issue 365 (Out of memory? mmap failed) was fixed
* Issue 387 (gitk reports "error: couldn't execute "git:" file name too long") was fixed
* Issue 409 (checkout of large files to network drive fails on XP) was fixed
* Issue 428 (The return value of git.cmd is not the same as git.exe) was fixed
* Issue 444 (Git Bash Here returns a "File not found error" in Windows 7 Professional - 64 bits) was fixed
* Issue 445 (git help does nothing) was fixed
* Issue 450 (git --bare init shouldn't set the directory to hidden.) was fixed
* Issue 456 (git script fails with error code 1) was fixed
* Issue 469 (error launch wordpad in last netinstall) was fixed
* Issue 474 (git update-index --index-info silently does nothing) was fixed
* Issue 482 (Add documentation to avoid "fatal: $HOME not set" error) was fixed
* Issue 489 (git.cmd issues warning if %COMSPEC% has spaces in it) was fixed
* Issue 436 (mkdir : No such file or directory error while using git-svn to fetch or rebase) was fixed
* Issue 440 (Uninstall does not remove cheetah.) was fixed
* Issue 441 (Git-1.7.0.2-preview20100309.exe installer fails with unwritable msys-1.0.dll when ssh-agent is running) was fixed

Changes in v1.7.0.2-preview20100309  
since 1.6.5.1-preview20091022

New Features

* Comes with official Git 1.7.0.2.
* Comes with Git-Cheetah (on 32-bit Windows only, for now).
* Comes with connect.exe, a SOCKS proxy.
* Tons of improvements in the installer, thanks to Sebastian Schuberth.
* On Vista, if possible, symlinks are used for the built-ins.
* Features Hany's dos2unix tool, thanks to Sebastian Schuberth.
* Updated Tcl/Tk to version 8.5.8 (thanks Pat Thoyts!).
* By default, only .git/ is hidden, to work around a bug in Eclipse (thanks to Erik Faye-Lund).

Bugfixes

* Fixed threaded grep (thanks to Heiko Voigt).
* git gui was fixed for all kinds of worktree-related failures (thanks Pat Thoyts).
* git gui now fully supports themed widgets (thanks Pat Thoyts and Heiko Voigt).
* Git no longer complains about an unset RUNTIME\_PREFIX (thanks Johannes Sixt).
* git gui can Explore Working Copy on Windows again (thanks Markus Heidelberg).
* git gui can create shortcuts again (fixes issue 425, thanks Heiko Voigt).
* When git checkout cannot overwrite files because they are in use, it will offer to try again, giving the user a chance to release the file (thanks Heiko Voigt).
* Ctrl+W will close gitk (thanks Jens Lehmann).
* git gui no longer binds Ctrl+C, which caused problems when trying to use said shortcut for the clipboard operation "Copy" (fixes issue 423, thanks Pat Thoyts).
* gitk does not give up when the command line length limit is reached (issue 387).
* The exit code is fixed when Git.cmd is called from cmd.exe (thanks Alexey Borzenkov).
* When launched via the (non-Cheetah) shell extension, the window icon is now correct (thanks Sebastian Schuberth).
* Uses a TrueType font for the console, to be able to render UTF-8 correctly.
* Clarified the installer's line ending options (issue 370).
* Substantially speeded up startup time from cmd unless NO\_FSTAB\_THREAD is set (thanks Johannes Sixt).
* Update msys-1.0.dll yet again, to handle quoted parameters better (thanks Heiko Voigt).
* Updated cURL to a version that supports SSPI.
* Updated tar to handle the pax headers generated by git archive.
* Updated sed to a version that can handle the filter-branch examples.
* .git\* files can be associated with the default text editor (issue 397).

Changes in v1.6.5.1-preview20091022  
since 1.6.4-preview20090729

New Features

* Comes with official git 1.6.5.1.
* Thanks to Johan 't Hart, files and directories starting with a single dot (such as .git) will now be marked hidden (you can disable this setting with core.hideDotFiles=false in your config) (Issue 288).
* Thanks to Thorvald Natvig, Git on Windows can simulate symbolic links by using reparse points when available. For technical reasons, this only works for symbolic links pointing to files, not directories.
* A lot of work has been put into making it possible to compile Git's source code (the part written in C, of course, not the scripts) with Microsoft Visual Studio. This work is ongoing.
* Thanks to Sebastian Schuberth, we only offer the (Tortoise)Plink option in the installer if the presence of Plink was detected and at least one Putty session was found..
* Thanks to Sebastian Schuberth, the installer has a nicer icon now.
* Some more work by Sebastian Schuberth was done on better integration of Plink (Issues 305 & 319).

Bugfixes

* Thanks to Sebastian Schuberth, git svn picks up the SSH setting specified with the installer (Issue 305).

Changes in v1.6.4-preview20090729  
since 1.6.3.2-preview20090608

New Features

* Comes with official git 1.6.4.
* Supports https:// URLs, thanks to Erik Faye-Lund.
* Supports send-email, thanks to Erik Faye-Lund (Issue 27).
* Updated Tcl/Tk to version 8.5.7, thanks to Pat Thoyts.

Bugfixes

* The home directory is now discovered properly (Issues 108 & 259).
* IPv6 is supported now, thanks to Martin Martin Storsjö (Issue 182).

Changes in v1.6.3.2-preview20090608  
since 1.6.3-preview20090507

New Features

* Comes with official git 1.6.3.2.
* Uses TortoisePlink instead of Plink if available.

Bugfixes

* Plink errors out rather than hanging when the user needs to accept a host key first (Issue 96).
* The user home directory is inferred from $HOMEDRIVE\$HOMEPATH instead of $HOME (Issue 108).
* The environment setting $CYGWIN=tty is ignored (Issues 138, 248 and 251).
* The ls command shows non-ASCII filenames correctly now (Issue 188).
* Adds more syntax files for vi (Issue 250).
* $HOME/.bashrc is included last from /etc/profile, allowing .bashrc to override all settings in /etc/profile (Issue 255).
* Completion is case-insensitive again (Issue 256).
* The start command can handle arguments with spaces now (Issue 258).
* For some Git commands (such as git commit), vi no longer "restores" the cursor position.

Changes in v1.6.3-preview20090507  
since 1.6.2.2-preview20090408

New Features

* Comes with official git 1.6.3.
* Thanks to Marius Storm-Olsen, Git has a substantially faster readdir() implementation now.
* Marius Storm-Olsen also contributed a patch to include nedmalloc, again speeding up Git noticably.
* Compiled with GCC 4.4.0

Bugfixes

* Portable Git contains a README.portable.
* Portable Git now actually includes the builtins.
* Portable Git includes git-cmd.bat and git-bash.bat.
* Portable Git is now shipped as a .7z; it still is a self-extracting archive if you rename it to .exe.
* Git includes the Perl Encode module now.
* Git now includes the filter-branch tool.
* There is a workaround for a Windows 7 regression triggering a crash in the progress reporting (e.g. during a clone). This fixes issues 236 and 247.
* gitk tries not to crash when it is closed while reading references (Issue 125, thanks Pat Thoyts).
* In some setups, hard-linking is not as reliable as it should be, so we have a workaround which avoids hard links in some situations (Issues 222 and 229).
* git-svn sets core.autocrlf to false now, hopefully shutting up most of the git-svn reports.

Changes in v1.6.2.2-preview20090408  
since 1.6.2.1-preview20090322

New Features

* Comes with official git 1.6.2.2.
* Upgraded Tcl/Tk to 8.5.5.
* TortoiseMerge is supported by mergetool now.
* Uses pthreads (faster garbage collection on multi-core machines).
* The test suite passes!

Bugfixes

* Renaming was made more robust (due to Explorer or some virus scanners, files could not be renamed at the first try, so we have to try multiple times).
* Johannes Sixt made lots of changes to the test-suite to identify properly which tests should pass, and which ones cannot pass due to limitations of the platform.
* Support PAGERs with spaces in their filename.
* Quite a few changes were undone which we needed in the olden days of msysGit.
* Fall back to / when HOME cannot be set to the real home directory due to locale issues (works around Issue 108 for the moment).

Changes in v1.6.2.1-preview20090322  
since 1.6.2-preview20090308

New Features

* Comes with official git 1.6.2.1.
* A portable application is shipped in addition to the installer (Issue 195).
* Comes with a Windows-specific mmap() implementation (Issue 198).

Bugfixes

* ANSI control characters are no longer shown verbatim (Issue 124).
* Temporary files are created respecting core.autocrlf (Issue 177).
* The Git Bash prompt is colorful again (Issue 199).
* Fixed crash when hardlinking during a clone failed (Issue 204).
* An infinite loop was fixed in git-gui (Issue 205).
* The ssh protocol is always used with plink.exe (Issue 209).
* More vim files are shipped now, so that syntax highlighting works.

Changes in v1.6.2-preview20090308  
since 1.6.1-preview20081225

New Features

* Comes with official git 1.6.2.
* Comes with upgraded vim 7.2.
* Compiled with GCC 4.3.3.
* The user can choose the preferred CR/LF behavior in the installer now.
* Peter Kodl contributed support for hardlinks on Windows.
* The bash prompt shows information about the current repository.

Bugfixes

* If supported by the file system, pack files can grow larger than 2gb.
* Comes with updated msys-1.0.dll (should fix some Vista issues).
* Assorted fixes to support the new libexec/git-core/ layout better.
* Read-only files can be properly replaced now.
* git-svn is included again (original caveats still apply).
* Obsolete programs from previous installations are cleaned up.

Changes in v1.6.1-preview20081225  
since 1.6.0.2-preview20080923

New Features

* Comes with official git 1.6.1.
* Avoid useless console windows.
* Installer remembers how to handle PATH.

Changes in v1.6.0.2-preview20080923  
since 1.6.0.2-preview20080921

Bugfixes

* ssh works again.
* git add -p works again.
* Various programs that aborted with Assertion failed: argv0\_path are fixed.

Changes in v1.6.0.2-preview20080921  
since 1.5.6.1-preview20080701

* Removed Features
* git svn is excluded from the end-user installer (see Known Issues).

New Features

* Comes with official git 1.6.0.2.

Bugfixes

* No Windows-specific bugfixes.

Changes in v1.5.6.1-preview20080701  
since 1.5.6-preview20080622

New Features

* Comes with official git 1.5.6.1.

Bugfixes

* Includes fixed msys-1.0.dll that supports Vista and Windows Server 2008 (Issue 122).
* cmd wrappers do no longer switch off echo.

Changes in v1.5.6-preview20080622  
since 1.5.5-preview20080413

New Features

* Comes with official git 1.5.6.
* Installer supports configuring a user provided Plink (PuTTY).

Bugfixes

* Comes with tweaked msys-1.0.dll to solve some command line mangling issues.
* cmd wrapper does no longer close the command window.
* Programs in the system PATH, for example editors, can be launched from Git without specifying their full path.
* git stash apply stash@{1} works.
* Comes with basic ANSI control code emulation for the Windows console to avoid wrapping of pull/merge's diffstats.
* Git correctly passes port numbers to PuTTY's Plink

Changes in v1.5.5-preview20080413  
since 1.5.4-preview20080202

New Features

* Comes with official git 1.5.5.
* core.autocrlf is enabled (true) by default. This means git converts to Windows line endings (CRLF) during checkout and converts to Unix line endings (LF) during commit. This is the right choice for cross-platform projects. If the conversion is not reversible, git warns the user. The installer warns about the new default before the installation starts.
* The user does no longer have to "accept" the GPL but only needs to press "continue".
* Installer deletes shell scripts that have been replaced by builtins. Upgrading should be safer.
* Supports git svn. Note that the performance might be below your expectation.

Bugfixes

* Newer ssh fixes connection failures (issue 74).
* Comes with MSys-1.0.11-20071204. This should solve some "fork: resource unavailable" issues.
* All DLLs are rebased to avoid problems with "fork" on Vista.

Changes in v1.5.4-preview20080202  
since 1.5.3.6-preview20071126

New Features

* Comes with official git 1.5.4.
* Some commands that are not yet suppoted on Windows are no longer included (see Known Issues above).
* Release notes are displayed in separate window.
* Includes qsort replacement to improve performance on Windows 2000.

Bugfixes

* Fixes invalid error message that setup.ini cannot be deleted on uninstall.
* Setup tries harder to finish the installation and reports more detailed errors.
* Vim's syntax highlighting is suitable for dark background.

Changes in v1.5.3.6-preview20071126  
since 1.5.3.5-preview20071114

New Features

* Git is included in version 1.5.3.6.
* Setup displays release notes.

Bugfixes

* pull/fetch/push in git-gui works. Note, there is no way for ssh to ask for a passphrase or for confirmation if you connect to an unknown host. So, you must have ssh set up to work without passphrase. Either you have a key without passphrase, or you started ssh-agent. You may also consider using PuTTY by pointing GIT\_SSH to plink.exe and handle your ssh keys with Pageant. In this case you should include your login name in urls. You must also connect to an unknown host once from the command line and confirm the host key, before you can use it from git-gui.

Changes in v1.5.3.5-preview20071114  
since 1.5.3-preview20071027

New Features

* Git is included in version 1.5.3.5.
* Setup can be installed as normal user.
* When installing as Administrator, all icons except the Quick Launch icon will be created for all users.
* git help user-manual displays the user manual.

Bugfixes

* Git Bash works on Windows XP 64.

Changes in v1.5.3-preview20071027  
since 1.5.3-preview20071019

Bugfixes

* The templates for a new repository are found.
* The global configuration /etc/gitconfig is found.
* Git Gui localization works. It falls back to English if a translation has errors.

Changes since WinGit-0.2-alpha

* The history of the release notes stops here. Various new features and bugfixes are available since WinGit-0.2-alpha. Please check the git history of the msysgit project for details.