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MobaXterm Home Edition

Download MobaXterm Home Edition (current version):

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If you use MobaXterm inside your company, you should consider subscribing to [MobaXterm Professional Edition](#): your subscription will give you access to professional support and to the "Customizer" software. This customizer will allow you to generate personalized versions of MobaXterm including your own logo, your default settings and your welcome message.

Please [contact us](#) for more information.

Changelog

Version 26.3 (2026-04-10)

- **Improvement:** the paste confirmation dialog can be accepted directly by pressing "Return"
- **Improvement:** the paste content is checked only once when pasting to multiple terminals

- **Improvement:** added the paste confirmation dialog to the popup console
- **Bugfix:** the paste confirmation dialog was frozen in "MultiExec" mode
- **Bugfix:** the paste confirmation dialog was not properly restored when switching from another application to a MobaXterm detached tab
- **Bugfix:** the popup console is no longer moved to the top of the screen after changing its font
- **Bugfix:** the value for the "terminal log folder" field was not properly saved
- **Bugfix:** the value for the "force log folder" field was not properly saved in the Customizer program

Version 26.2 (2026-04-03)

- **New feature:** added a warning prompt before pasting content identified as malicious by MobaXterm
- **Improvement:** added detection of potential homograph attacks in pasted content (when a Unicode character visually impersonates a Latin character)
- **Improvement:** added detection of potential "pipe to shell" risks in pasted content (when a downloaded script is directly piped to a shell)
- **Improvement:** added detection of potential "redirect to profile" risks in pasted content (when a command or script is redirected to a profile script)
- **Improvement:** added detection of potential "unpack to root" risks in pasted content (when an archive is extracted to the root folder to replace system files)
- **Improvement:** added detection of zero-width or non-breakable spaces in pasted content (when the command contains unusual space characters)
- **Improvement:** you can now modify, copy, or paste the paste confirmation content itself
- **Improvement:** reduced the main executable size by removing unused resources and changing the main icon format
- **Improvement:** improved detection of new lines in text copied from web browsers
- **Improvement:** removed the left margin for SSH browser elements to gain space
- **Improvement:** reduced SSH agent startup time, making local terminal sessions start faster
- **Improvement:** suppressed the /etc/passwd and /etc/groups files that are no longer needed in the local terminal
- **Improvement:** added a new "Duplicate tunnel" button in the "MobaSSHTunnel" port forwarding tool
- **Improvement:** improved the font selection control when the dark theme is enabled
- **Improvement:** improved the background color of pasted text in the 64-bit local terminal
- **Improvement:** improved Windows XP and Wine for Mac/Linux compatibility by using replacement system calls when recent ones are not available
- **Improvement:** prevented the terminal from freezing when pasting very large text
- **Improvement:** increased the number of lines taken into account when printing terminal content
- **Improvement:** improved startup speed by removing unnecessary file checks
- **Improvement:** the contextual macro menu triggered with Alt+Space now appears in detached windows, even if they do not correspond to the current tab
- **Improvement:** added a new right-click menu option in the sessions tree to collapse all open session folders
- **Bugfix:** fixed delayed closing of SSH sessions with the error message "SCP transfer in progress, please wait"
- **Bugfix:** fixed glitches when switching to the dark theme with an FTP or SFTP session open
- **Bugfix:** in the Professional Edition, "%" characters in the "force log folder" field could break the "Terminal type" value
- **Bugfix:** in the Professional Edition, the Customizer did not remember the dark theme when it was previously selected
- **Bugfix:** fixed refresh issues with the "private key" field in SSH sessions when selecting part of it in dark mode

- **Bugfix:** fixed an issue causing the MobaXterm desktop shortcut to request administrator privileges on first launch on some Windows versions
- **Bugfix:** removed the "msimg32.dll" library dependency (fixes CVE-2026-6421 reported by haehanse)

Version 26.1 (2026-03-06)

- **New feature:** small dots in the session tree now indicate which sessions are already open
- **New feature:** clicking the green dots in the session tree now jumps to the corresponding tabs
- **New feature:** you can now assign a dedicated icon to each session via the Customizer or in shared sessions
- **Improvement:** improved session tree rendering performance
- **Improvement:** custom icons are now stored with sessions when exporting or sharing them
- **Improvement:** it is now possible to assign a specific custom icon per session even when more than 64 custom icons are used
- **Improvement:** updated the embedded X server to the latest Xorg version
- **Improvement:** improved X server startup speed
- **Improvement:** updated several other embedded command-line tools to their latest versions
- **Improvement:** improved autocompletion for the "livesession" and "createsession" commands
- **Improvement:** optimized code executed during tab switches to improve tab switching performance
- **Improvement:** reorganized the icon chooser window to display more icons per row
- **Improvement:** improved custom icon loading speed from the INI file at startup
- **Improvement:** improved detection of default Linux and macOS shell locations under Wine
- **Improvement:** disabled the Edge browser on legacy Windows versions (XP, Vista) to prevent potential crashes in MobaTextEditor
- **Improvement:** improved icon rendering in tabs with better anti-aliasing
- **Improvement:** added a new button in MobaTextDiff to swap left and right files
- **Improvement:** improved detection of non-Latin characters in MobaTextEditor for word boundary detection
- **Improvement:** updated MobaSwInfo and MobaHwInfo to support the latest Windows releases
- **Improvement:** some agents such as SK-SSH-Agent now work even when MobAgent is disabled
- **Improvement:** SSH sessions now support logins containing square brackets
- **Improvement:** updated the command-line SSH client and the OpenSSL library to their latest versions
- **Bugfix:** prevented an error when upgrading from an older MobaXterm version using an obsolete Xorg release
- **Bugfix:** fixed an issue where tab text remained red after selecting and unselecting an inactive tab
- **Bugfix:** fixed a brief black rectangle flash when clicking the "Quick Search" field
- **Bugfix:** fixed a high memory usage issue after multiple successive pastes of very long texts in the terminal
- **Bugfix:** fixed potential graphical glitches when starting MobaXterm with a theme and then switching to the Windows dark theme
- **Bugfix:** fixed an issue with the 64-bit command-line OpenSSH client when requesting keys from MobAgent or the PuTTY SSH agent
- **Bugfix:** fixed a high memory usage issue after leaving the terminal window detached for many hours
- **Bugfix:** fixed an issue where MobaTextDiff would not start in portable mode when it was launched from the SSH browser
- **Bugfix:** fixed an issue where copying an IP address from Google Chat inserted a newline character into the host field
- **Bugfix:** fixed a search path issue when choosing a custom text editor in the global settings window (fixes CVE-2026-25866 reported by Spektion Research Team)

Version 26.0 (2026-02-06)

- **New feature:** the "livesession" command allows you to launch a session from the local terminal or from a script
- **New feature:** the "createsession" command allows you to create and save a session from the local terminal or from a script
- **New feature:** you can launch a live session directly from the "Quick connect" bar (e.g. you can type "ssh user@server")
- **Improvement:** added a way to import RDM sessions by right-clicking on the "User sessions" folder and choosing "Import sessions from third-party programs"
- **Improvement:** added a way to import sessions from generic CSV files by right-clicking on the "User sessions" folder and choosing "Import sessions from a CSV file"
- **Improvement:** you can now automate MobaXterm by using the "-exec" command line parameter with a live session
- **Improvement:** the network scanner now shows a new entry for MAC addresses that you can click to look up the MAC vendor
- **Improvement:** you can type "Help" in the "Quick connect" bar for complete documentation with all the available options listed
- **Improvement:** removed the "Specify username" checkbox in the SSH session definition
- **Improvement:** increased the session creation and session launch speed
- **Improvement:** added some contextual hints on many graphical interface elements
- **Improvement:** added a contextual completion menu in the "Quick connect" bar
- **Improvement:** in the SSH-browser, the size of the file to download is calculated immediately before the download begins
- **Improvement:** in SFTP sessions, the size of the file to download is calculated immediately before the download begins
- **Improvement:** added a new "DirectDraw" option in the X11 global settings, to enable/disable DirectDraw rendering of X11 windows
- **Improvement:** increased the speed of SSH tunnels list creation and SSH tunnels list display
- **Improvement:** you can now change the SSH tunnels sequence order by dragging the "grip" button on the right of each tunnel entry
- **Improvement:** if the "Follow SSH path" is activated, the SSH-browser follows the path even if it has been changed via a macro
- **Improvement:** improved the SSH-browser directory listing speed for folders containing many files
- **Improvement:** log events sent after having closed SSH gateways are still written into the MobaXterm log file
- **Improvement:** the terminal block cursor becomes an empty box when the terminal loses focus
- **Improvement:** improved Windows version and CPU identification in "MobaHwInfo"
- **Improvement:** activated the "bracketed paste" feature by default in the local terminal
- **Improvement:** added an option in the advanced terminal settings to disable the "bracketed paste" feature
- **Improvement:** adapted dark mode colors when the SSH-browser is not activated
- **Improvement:** eliminated some flickering effects on the sessions tree in dark mode under Windows 11
- **Improvement:** increased the speed of the ZIP creation in the "apt plugin" command
- **Improvement:** adapted the color of the "Reattach tab" button to the current tab color
- **Improvement:** you can now scroll horizontally in MobaTextEditor and MobaDiff using "Shift + MouseWheel"
- **Improvement:** you can now select a line by using the triple click shortcut in MobaTextEditor and MobaDiff
- **Improvement:** the embedded X server can now use fonts installed using the "apt install" or "apt plugin" commands
- **Bugfix:** fixed an issue in the Customizer program when creating a macro attached to a custom session
- **Bugfix:** corrected the "lscolors" script that was not properly printing the color bar
- **Bugfix:** downloading symlinks in the SSH-browser or in SFTP sessions sometimes resulted in truncated files
- **Bugfix:** the SSH-browser folder was empty when the directory listing and "Follow SSH path" features were triggered at the same time

- **Bugfix:** when using the same gateway for different sessions, after exiting some sessions, the remaining ones were sometimes disconnected
- **Bugfix:** corrected a bug with tab icons on old Windows versions (XP and Seven)
- **Bugfix:** fixed a bracketed paste issue when pasting a password to OpenSSH in the local terminal
- **Bugfix:** fixed an issue with the "apt" command when the name of the package was too long for Windows
- **Bugfix:** removed Windows sounds when you press "Escape" or "Return" in the search fields, the Quick connect fields, or when you launch a session or a macro
- **Bugfix:** the home tab now restarts properly when checking the "Do not exit MobaXterm when last tab is closed" option
- **Bugfix:** some texts were not properly centered on High DPI monitors in MobaTextEditor settings window

Version 25.4 (2025-11-28)

- **New feature:** you can now use the Windows SSH agent to authenticate to your SSH sessions
- **Improvement:** added a new option in macros to include another macro
- **Improvement:** added milliseconds in terminal logs timestamps
- **Improvement:** improved the default syntax highlighting in MobaTextEditor
- **Improvement:** added Ctrl+Backspace keyboard shortcut to delete the last word in text fields
- **Improvement:** improved startup speed and MobaXterm closing speed
- **Improvement:** several new external PuTTY-based SSH agents are now supported in SSH/SFTP sessions
- **Improvement:** better detection of long URLs when ctrl+clicking into the terminal
- **Improvement:** you can now toggle between relative and absolute paths for root and home folders in the Customizer
- **Improvement:** improved the paste and search feature in MobaTextEditor and MobaTextDiff
- **Improvement:** enhanced the MobaXterm debug file, especially the event viewer section
- **Improvement:** user identity can now be confirmed by using the "Windows Hello" mechanism (fingerprint or face recognition)
- **Improvement:** better detection of the current explorer path for the "Popup Console" in the latest Windows 11 updates
- **Improvement:** added a new "floating window" setting for the Popup Console spawned using Ctrl+Alt+M
- **Improvement:** better detection of text files format (UTF-8 or ANSI) in MobaTextEditor and MobaTextDiff
- **Improvement:** added a button to toggle between dark and bright theme in MobaFoldersDiff
- **Improvement:** auto-detection of SSH sessions to Cisco devices that need a filtered KEX list to work properly
- **Improvement:** added a new expert SSH setting "Chokes on full KEXINIT" for SSH servers that have a KexInit list limit
- **Improvement:** better identification of old SSH servers that need some SSH tweaks to work properly
- **Improvement:** improved the SSH-browser transfer speed, either in SFTP or in SCP mode
- **Bugfix:** when the "Use external PuTTY agent" setting was unchecked, MobaXterm was still requesting keys from Pageant
- **Bugfix:** some browsing windows could freeze MobaXterm, because they were trying to open archive files as folders
- **Bugfix:** when setting a dark theme in the Customizer program, some pop-up windows were not properly themed
- **Bugfix:** some search terms were not highlighted in MobaTextEditor when very long text lines were used in the text file

Version 25.3 (2025-10-03)

- **New feature:** you can now search for words in all files contained in a folder and its sub-folders using MobaTextEditor or the "MobaFind" command
- **Improvement:** huge ergonomics improvements in the search feature of MobaTextEditor and MobaTextDiff (instant results highlight, contextual lines, number of results, ...)
- **Improvement:** added a new feature to move or copy blocks of lines up/down/left/right in MobaTextEditor (Alt+arrows by default)
- **Improvement:** added a new option in MobaTextEditor and MobaDiff to automatically highlight the same words as the one under the cursor
- **Improvement:** added a new option in MobaTextEditor and MobaDiff to display indent guides
- **Improvement:** added a new "Toggle comments" feature in MobaTextEditor
- **Improvement:** the colors in HTML format are now identified by MobaTextEditor and highlighted using the corresponding color
- **Improvement:** improved syntax highlighting color schemes in MobaTextEditor and MobaDiff
- **Improvement:** improved UTF-8 character recognition in MobaTextEditor and MobaDiff especially for 4-bytes UTF-8 characters
- **Improvement:** added an extended character mapping table to MobaTextEditor
- **Improvement:** you can now export your code to HTML with syntax highlighting from MobaTextEditor
- **Improvement:** improved the parent bracket highlighting feature in MobaTextEditor
- **Improvement:** added an indicator and some information in the MobaTextEditor status bar when the file is edited on a remote server
- **Improvement:** you can now zoom in/out the text in MobaTextEditor using Ctrl-MouseWheel or Ctrl+/-
- **Improvement:** added a new feature to autocomplete code in MobaTextEditor (Ctrl+Space by default)
- **Improvement:** changed the text engine and the memory manager used in MobaTextEditor and MobaDiff
- **Improvement:** added a new status bar in MobaTextEditor to display useful details about the edited file
- **Improvement:** added a new option in MobaTextEditor and MobaDiff to toggle dark/bright theme that is independent of MobaXterm
- **Improvement:** added a new graphical hexadecimal color picker in MobaTextEditor
- **Improvement:** organized the MobaTextEditor and MobaDiff settings window and added several new options
- **Improvement:** improved the Unix Shell Script syntax highlighting in MobaTextEditor and MobaDiff
- **Improvement:** improved the PHP syntax highlighting in MobaTextEditor and MobaDiff
- **Improvement:** added a new Html/Javascript/Css/Php syntax that autodetects multi-format HTML pages in MobaTextEditor and MobaTextDiff
- **Improvement:** improved detection and opening speed of binary files in MobaTextEditor
- **Improvement:** improved MobaTextEditor and MobaDiff speed when opening files with very long lines
- **Improvement:** improved rendering of font ligatures in MobaTextEditor and MobaDiff
- **Improvement:** the syntax highlighting is preserved in text selections in MobaTextEditor and MobaDiff
- **Improvement:** improved selection color with a dark theme in MobaTextEditor and MobaDiff
- **Improvement:** improved the visibility of the MobaTextEditor caret, especially in dark mode
- **Improvement:** added a new keyboard shortcut to cycle through tabs in MobaTextEditor (Ctrl-Tab by default)
- **Improvement:** added a new keyboard shortcut to select a whole line in MobaTextEditor (Ctrl+L by default)
- **Improvement:** added the "Select to Match Bracket" keyboard shortcut in MobaTextEditor
- **Improvement:** added right-click menus on the MobaTextEditor status bar to quickly modify some of the text file settings
- **Improvement:** added quick access to recently opened files in MobaTextEditor
- **Improvement:** when switching MobaTextEditor or MobaTextDiff from a first monitor to a second monitor in High DPI mode, the application switches to High DPI mode
- **Improvement:** if MobaTextEditor fonts are blocked by a Windows policy, use "Consolas" by default instead
- **Improvement:** if the embedded MobaXterm terminal font is blocked by a Windows policy, try to use the "MobaFont" if it is installed or use "Consolas" if there is no other choice

- **Improvement:** in the Customizer program, if you choose a shared sessions file, its path will use common variables like "_MyDocuments_" to adapt to other computers
- **Bugfix:** the password request and save password prompt windows were overlapping each other when connecting to FreeBSD with SSH
- **Bugfix:** in browser sessions, the "script URL" field was too large for the container
- **Bugfix:** paste using Ctrl+V was disabled in the user syntax highlighting edition
- **Bugfix:** on some Windows versions, MobaXterm log identified Windows 11 as Windows 10
- **Bugfix:** fixed some windows title bars that were white when the MobaXterm theme was set to dark
- **Bugfix:** fixed a typo in an SSH connection warning prompt
- **Bugfix:** modified the "smart tabs" feature in MobaTextEditor and MobaDiff to automatically adapt to mixed tabs and spaces indentations
- **Bugfix:** the highlighted search results were not reset when switching from one tab to another in MobaTextEditor
- **Bugfix:** the "indent/unindent block" feature was not properly taken into account in the "Undo" action of MobaTextEditor
- **Bugfix:** the extended characters are no longer treated as separators in MobaTextEditor and MobaDiff
- **Bugfix:** the highlighted searched patterns were still highlighted after switching to another tab in MobaTextEditor
- **Bugfix:** fixed the MobaTextEditor tabs placements
- **Bugfix:** only the first line was copied in MobaDiff when multiple lines were selected
- **Bugfix:** removed the "snap to monitor" feature in MobaTextEditor

Version 25.2 (2025-05-03)

- **Improvement:** increased the maximum number of custom icons from 32 to 64
- **Improvement:** decreased icons decompression speed and improved icons loading at startup
- **Improvement:** updated the terminal to the latest version of the PuTTY engine
- **Improvement:** support for ML-KEM, the NIST-standardised post-quantum key exchange mechanism
- **Improvement:** increased folders comparison speed in "MobaTextDiff" tool
- **Improvement:** added a new "Use Redirection Server Name" setting for RDP sessions
- **Improvement:** you can now select only some specific drives to redirect for RDP sessions
- **Improvement:** improved the loading speed of the Home tab and the overall startup speed
- **Improvement:** better detection of available WSL distributions and available WSL desktop environments
- **Improvement:** adapted the old Crystal icons theme to high DPI monitors
- **Improvement:** added the "New session" button to the home page when MobaXterm is started for the first time
- **Improvement:** when reconnecting an RDP session, if an SSH tunnel is used, the tunnel is also reconnected
- **Improvement:** prioritized the CygUtils plugin over third-party plugins when extracting a shell application
- **Improvement:** removed the "Experimental" flag on several settings that are no longer experimental
- **Improvement:** added a dialog box to warn you if you are switching from Professional to Personal Edition
- **Improvement:** added an option to use a specific password when you export your configuration to a file
- **Improvement:** added a confirmation prompt when you choose to encrypt your configuration file with your master password
- **Improvement:** the "Try to follow SSH path in the browser" setting is now enabled by default in SSH sessions
- **Improvement:** the "Remote monitoring" setting is now enabled by default in the global settings
- **Bugfix:** the "replace" window was not centered in the Text Editor and in the "TextDiff" tools

Version 25.1 (2025-03-15)

- **New feature:** added a new setting in SSH sessions to use an SSH proxy with netcat/socat command or port forwarding
- **Improvement:** updated the embedded X server to version 21.1.15
- **Improvement:** fixed an error when starting the X server on Windows versions older than Windows Vista
- **Improvement:** updated OpenSSH, OpenSSL, Curl, Git and Rsync in the 32-bit and 64-bit local terminal
- **Improvement:** updated the Cygwin library in the 64-bit local terminal
- **Improvement:** updated man pages and adapted the "man" command to read external man pages
- **Improvement:** removed the "SSH engine new/legacy" setting and always use the new SSH engine instead
- **Improvement:** decreased the CPU consumption of the SSH-browser in SFTP mode
- **Improvement:** allowed password saving for SSH proxy connections
- **Improvement:** added a "proxy" prefix to each log line corresponding to a proxy connection
- **Improvement:** forced the SSH browser type to "SCP" for connections through CyberArk jump hosts
- **Improvement:** updated the packages provided by "MobApt" to their latest version in the 64-bit local terminal
- **Improvement:** switched the terminal banner format to UTF-8, to properly display international characters
- **Improvement:** updated the Customizer program with a new setting to disable the deprecated 32-bit local terminal
- **Improvement:** added a new option in the SSH session expert settings to set an optional certificate to use with the SSH private key
- **Improvement:** added a new option in the SSH session expert settings to set an optional host CA public key
- **Improvement:** when importing PuTTY sessions, the proxy settings are now also imported
- **Improvement:** when importing PuTTY sessions, the certificate to use with the SSH private key and the host CA public key are also imported
- **Improvement:** added a new right-click menu entry in the macros section to create a new empty macro (without recording)
- **Improvement:** prevented VNC sessions from freezing when the remote server was unreachable
- **Improvement:** you can now import PuTTY sessions used for Teleport jump hosts
- **Bugfix:** fixed the SSH "legacy" message displayed when the server only supports some old algorithms
- **Bugfix:** when dark mode was set in the Customizer, it was not possible to modify the banners colors
- **Bugfix:** after having disabled the "Save Passwords" feature in the Customizer, it was not possible to change the Master Password
- **Bugfix:** fixed importing PuTTY sessions containing a "percent" sign in the username field
- **Bugfix:** removed an "ioctl" error message when using Rsync or Git over SSH
- **Bugfix:** if the DISPLAY variable was not set in the local terminal, the SSH command could fail when X11-forwarding was activated
- **Bugfix:** after having started "TCPCapture" from the "Tools" menu, the local terminal "TCPCapture" command could not start

Version 25.0 (2025-01-18)

- **Improvement:** updated the terminal to the latest version of the PuTTY engine
- **Improvement:** updated the terminal character analysis to Unicode 16.0.0.
- **Improvement:** the terminal configuration window is now dark when the MobaXterm theme is set to "Dark Mode"
- **Improvement:** the right-click menu, paste confirmation, event viewer and host key prompt messages now properly handle Windows "Dark Mode"
- **Improvement:** improved IP address lookup for servers when Windows call to "GetHostByName" fails
- **Improvement:** better detection of SFTP failures in SSH-browser to properly trigger SCP protocol switch
- **Improvement:** added some more debugging information to DNS lookup functions

- **Bugfix:** after launching a session with some specific expert terminal options, the same options were applied to default sessions
- **Bugfix:** corrected zero padding when sending SHA2-based RSA signatures
- **Bugfix:** you can now launch a macro containing a backslash in its title from the terminal "Ctrl+Space" shortcut
- **Bugfix:** you can now launch a macro containing a backslash in its title from the sessions macros list
- **Bugfix:** terminal wrap mishandling caused occasional incorrect redraws in curses-based applications
- **Bugfix:** updated initialization vector for AES CFB (fixes CVE-2025-0714)

Version 24.4 (2024-12-08)

- **Improvement:** better detection of drag and drop operations in the sessions menu
- **Improvement:** updated the SFTP sessions and the graphical SFTP browser for better compatibility with new algorithms
- **Improvement:** rekeying process has been improved in order to prevent SFTP issues with some SSH servers
- **Improvement:** verify at each startup if we have switched to the "AdmSlash" mode and unpack utilities again if necessary
- **Improvement:** added support for multi-block uploads and downloads in the SFTP browser
- **Improvement:** increased SFTP transfer speed with some specific SSH servers
- **Improvement:** added better detection of text file formats when using SFTP in ASCII mode
- **Improvement:** added support for semi-transparent PNG logos in the Professional Customizer
- **Improvement:** increased MobaXterm startup speed, especially when the company logo file size was very big
- **Improvement:** added a keyboard shortcut for the "Rename tab" function
- **Improvement:** added "Close all tabs to the left" and "Close all tabs to the right" features to the tabs right-click menu
- **Improvement:** added a new "Force X11 local access control" security setting to the Professional Customizer program
- **Bugfix:** when the sidebar was set to the right, the new macros menu was not displayed properly
- **Bugfix:** macros containing a backslash character in their title were not stored properly
- **Bugfix:** fixed SSH-browser connections through SSH gateways when IPv6 was enabled but IPv6 loopback was unreachable
- **Bugfix:** fixed SFTP sessions to localhost or through SSH gateways when IPv6 was enabled but IPv6 loopback was unreachable

Version 24.3 (2024-10-30)

- **New feature:** added "graphical macros" that can record your mouse and keyboard inputs and replay them later
- **Improvement:** you can now put your macros into folders and organize them using drag-and-drop
- **Improvement:** added IPv6 support to VNC sessions (using the new VNC engine)
- **Improvement:** added a new security setting in the Professional Customizer to disable the "list open network ports" tool
- **Improvement:** added a new security setting in the Professional Customizer to disable the "admin command prompt" tool
- **Improvement:** when the "Disable X11 autostart" security setting is set in the Professional Customizer, the option is disabled in the global settings window

- **Improvement:** when the "Disable X11 remote access" security setting is set in the Professional Customizer, the option is disabled in the global settings window
- **Improvement:** macros that are embedded into sessions are now encrypted by default
- **Improvement:** delayed some checks at startup to improve overall performances
- **Improvement:** improved macro recording by catching more keyboard events than before
- **Improvement:** added a right-click option on tabs that allows to close all inactive tabs
- **Improvement:** focus is sent to the terminal just after running a macro
- **Improvement:** switched the date format in the Bash prompt from "(day)/(month)/(year)" to "(year)-(month)-(day)" by default
- **Improvement:** improved the tooltip shown when the mouse cursor is over the sessions tree
- **Improvement:** added some more debugging information during startup, especially for the Slash folder identification
- **Improvement:** switched local terminal to 64-bit by default for new MobaXterm users
- **Bugfix:** after disabling the "reconnect RDP" feature in the Professional Customizer, a "Reconnect" button was still available in the RDP top bar
- **Bugfix:** the "WaitFor" condition in macros now properly handles spaces at the beginning and at the end of the expected pattern
- **Bugfix:** suppressed a popup console window flashing during the installation process (fixes CVE-2024-48200 reported by Ahmed Sherif)
- **Bugfix:** the macro list in the sidebar was not refreshed after changing the master password

Version 24.2 (2024-07-02)

- **New feature:** added a new "Expert RDP settings" window where you can set advanced settings for your RDP connection
- **Improvement:** moved the RDP CredSSP and RDP gateway settings to the "Expert RDP settings" window
- **Improvement:** you can now specify a different login for the RDP gateway and the session itself
- **Improvement:** you can set the RDP gateway authentication to use a smartcard
- **Improvement:** added the "Restricted Admin" feature to RDP sessions
- **Improvement:** added an option for using the local Windows credentials in "Restricted Admin" mode
- **Improvement:** added the "Remote Credentials Guard" feature to RDP sessions
- **Improvement:** the new "Multi-monitors" setting in RDP sessions allows you to expand the remote desktop to all your local monitors
- **Improvement:** you can now auto-detect RDP bandwidth to adapt the remote graphics level accordingly
- **Improvement:** added an option that allows you to put any tab in fullscreen across all available monitors
- **Improvement:** you can now use a web account to connect to RDP sessions (useful for Azure Virtual Desktop)
- **Improvement:** you can now set the "automatic reconnection" RDP feature
- **Improvement:** you can now tune the graphics settings for each RDP session
- **Improvement:** removed the "High DPI adaptation for legacy servers" feature, and replaced it with the "Zoom" feature in RDP sessions
- **Improvement:** you can force magic cookies for X11 localhost connections by turning on the new "X11MCAuth" experimental setting in the "Misc" section of the INI file
- **Improvement:** better detection of the current monitor when launching the "Find" window from MobaTextEditor
- **Improvement:** added a new right-click option in "MultiExec" mode that allows to synchronize mouse scrolling
- **Improvement:** added a new set of right-click options in "MultiExec" mode that allow to activate or deactivate all terminals
- **Improvement:** you can now have SSH logins composed of a fixed part and a credential in square brackets

- **Improvement:** reset the current path and other environment variables before restarting MobaXterm after changing the terminal type
- **Improvement:** if the SCP browser fails to connect, try to restart it in multiplex mode by using the terminal session channel
- **Bugfix:** fixed a graphic glitch when switching a browser session from a high DPI monitor to a low DPI monitor
- **Bugfix:** fixed the position of the "Find" dialog after 2 consecutive searches in MobaTextDiff
- **Bugfix:** prevent MobaXterm Professional Customizer from adding an extra line at the end of the profile script

Version 24.1 (2024-04-26)

- **Improvement:** the embedded Xorg server has been updated to version 21.1.12
- **Improvement:** the X11 "on-demand" setting from the Customizer cannot be superseded with the "xhost" command anymore
- **Improvement:** the embedded terminal and X server no longer use the Windows UAC virtualization technology
- **Improvement:** the Ed25519 SSH keys in PuTTY format are now properly managed by the command-line SSH client
- **Improvement:** added a new "PingCmd" ini setting under the "Misc" section to modify the ping command available from the session context menu
- **Improvement:** added a minor RSA-SHA2 key workaround for not-entirely-compliant servers in SFTP sessions
- **Improvement:** improved the embedded X server decompression at MobaXterm startup
- **Security fix:** 521-bit ECDSA keys (ecdsa-sha2-nistp521) are not signed using a deterministic nonce anymore (fixes CVE-2024-31497)

Version 24.0 (2024-03-08)

- **New feature:** a new "Expert terminal settings" button has been added to the global settings
- **New feature:** a new "Expert terminal settings" button has been added in each session settings
- **Improvement:** the keyboard shortcuts used in the terminal disconnection message are now configurable
- **Improvement:** the delimiters that are used when selecting a word in the terminal using double-click are now configurable
- **Improvement:** you can now define the maximum number of scrollbar lines for each terminal
- **Improvement:** you can now enable or disable the terminal alternate screen
- **Improvement:** the local echo feature can be forced on or off for each terminal
- **Improvement:** application cursors and application keypad features can be forced on or off and can also be activated by default for each terminal
- **Improvement:** you can now decide whether "Ctrl+Alt" keys act as "AltGr" key
- **Improvement:** the "Answerback" string is now configurable for each terminal
- **Improvement:** you can now disable the "Auto-copy selected text" feature
- **Improvement:** each terminal can now add a "CR" or "LF" at each new line if necessary
- **Improvement:** tuned TLS settings for better support of AWS S3 servers
- **Improvement:** removed some unnecessary checks during MobaXterm startup
- **Improvement:** updated MobaXterm embedded help with the latest features additions
- **Improvement:** the DNS query for the SFTP browser has been improved for better performances
- **Improvement:** modified the MSI installer to ensure that the installation folder contains a "MobaXterm" subdirectory

- **Improvement:** added many more items in the default syntax, especially for network equipment and shell scripts
- **Improvement:** a new prompt allows you to accept a new server host key if the SFTP browser fails to connect because of an invalid stored host key
- **Bugfix:** adjusted the macro title length when it was too long to be displayed
- **Bugfix:** adjusted the width of some checkboxes in the global settings window to fit monitors using 175% DPI
- **Bugfix:** fixed an issue with credentials used in jump hosts when no session was configured with these credentials
- **Bugfix:** the "edit session presets" setting was not working when launched from the "Compact Mode" menu
- **Bugfix:** fixed a graphical SFTP browser connection issue when using server names without their FQDN

Version 23.6 (2023-12-30)

- **Improvement:** updated the SSH and terminal emulator engine with the latest improvements from the PuTTY project to address Terrapin issue
- **Improvement:** updated the command-line SSH client based on OpenSSH to the latest version to address Terrapin issue
- **Improvement:** updated OpenSSL in the 64-bit local terminal environment
- **Improvement:** the "Publisher name" field is not empty anymore in the embedded X11 server
- **Improvement:** after having modified a remote file, the confirmation popup now contains buttons with borders
- **Improvement:** updated some packages available through the "apt" command in the 64-bit local terminal environment

Version 23.5 (2023-12-01)

- **Improvement:** updated the SSH and terminal emulator engine with the latest improvements from the PuTTY project
- **Improvement:** added support for SSH MAC algorithm "hmac-sha2-512"
- **Improvement:** updated Toybox to the latest version in the 64-bit terminal environment
- **Improvement:** added some new embedded commands in the 64-bit local terminal: file, getopt, hexdump, iconv, sha256sum, sha512sum
- **Improvement:** upgraded OpenSSL to version 3.0 in the 64-bit local terminal environment
- **Improvement:** improved the speed of the "apt" command in the 64-bit local terminal environment
- **Improvement:** updated all the packages available through the "apt" command in the 64-bit local terminal environment
- **Improvement:** the MobApt package manager displays a prompt to allow the local terminal to be switched to 64-bit
- **Improvement:** better detection of small changes in "MobaTextDiff" graphical diff and merge tool
- **Improvement:** added a check for empty file names in the SSH browser, before removing color sequences
- **Improvement:** improved completion of plugin names in the new "apt plugin" command
- **Improvement:** many new packages are now available in the "apt plugin" command
- **Improvement:** improved conversion of Unix to Dos files paths for "ldd" and "open" commands
- **Improvement:** better detection of the proper monitor for terminal popup messages placement
- **Improvement:** updated the embedded X11 server based on Xorg to version 21.1.8
- **Improvement:** added a way to disable SSH, Serial, Browser, Shell, and WSL sessions in the Professional Customizer
- **Improvement:** added syntax highlighting for Cmake files in the MobaTextEditor and MobaTextDiff

- **Improvement:** modified the mechanism used for 64-bit binaries located in a read-only folder
- **Bugfix:** prevented the command line SSH client from breaking the tty when exiting on error
- **Bugfix:** the basic telnet server used to freeze a few seconds during client disconnection

Version 23.4 (2023-11-01)

- **Improvement:** improved the overall speed of the new "apt plugin" command
- **Improvement:** better detection of escape color codes in the graphical SSH browser
- **Improvement:** better compatibility with specific GSSAPI implementations in the graphical SSH browser
- **Improvement:** added a new "TFTP buffer size" setting in the embedded TFTP server configuration
- **Improvement:** added a time delay when entering wrong master passwords several times
- **Improvement:** the tabs bar can now be scrolled using the mouse wheel
- **Improvement:** all tabs can now be pinned to the left of the tabs bar
- **Improvement:** prevent MobaXterm from doubling the path backslashes in tab titles
- **Improvement:** 2 sessions to the same server with the same login can now use different credentials
- **Improvement:** increased the speed of authentication using credentials
- **Improvement:** the popup terminal now uses the global default shell, even if this default shell is WSL, CMD, Powershell, Git-Bash, Msys, or Cygwin
- **Security fix:** updated Curl to the latest version (fixes CVE-2023-38545)

Version 23.3 (2023-09-29)

- **New feature:** you can now create your own plugins for MobaXterm local terminal by using the "createplugin" command
- **Improvement:** added many new fonts in the embedded X server
- **Improvement:** you can now disable the "Wake On Lan" feature from the Professional Customizer program
- **Improvement:** added some specific patterns for log parsing in the syntax highlighting feature
- **Improvement:** implemented a workaround in order to prevent Caffeine from writing unwanted characters onto the terminal
- **Improvement:** when clicking on the "Stay on top" button in a detached tab, the window now stays in the same position
- **Improvement:** the XWin executable is removed after disabling the X11 server from the Professional Customizer program
- **Improvement:** the SSH engine has been set to "New" by default in the Professional Customizer program
- **Improvement:** some basic telnet options are now available in the Live terminal configuration settings
- **Improvement:** updated the embedded OpenSSH to version 9.4p1
- **Improvement:** added some more Windows commands to the 64-bit terminal (nslookup, ...)
- **Improvement:** you can now force Telnet to send "control-M" instead of "new line" when pressing the "Return" key
- **Improvement:** added a way to force Telnet negotiation to "Passive" mode if the server needs it
- **Improvement:** improved the Unix to Windows path conversion functions
- **Improvement:** added a new Telnet "KeepAlive" setting that allows to regularly send data through idle connections
- **Improvement:** implemented a better detection of IPv6 hosts for SFTP browser and SFTP sessions
- **Improvement:** the remote monitoring bar is now able to display more than 16 network interfaces
- **Bugfix:** fixed a potential race condition when browsing for a folder in the TFTP service settings
- **Bugfix:** removed multiple error messages when transferring files through SFTP to folders without proper permissions

- **Bugfix:** removed the "Terminal settings" section from VNC sessions

Version 23.2 (2023-06-25)

- **Improvement:** added support for NTRU Prime post-quantum key exchange in the expert SSH settings
- **Improvement:** added support for AES-GCM cipher in the expert SSH settings
- **Improvement:** you can now set the minimum master password complexity in the Customizer to "standard" (8 characters minimum) or "strong" (12 characters minimum)
- **Improvement:** updated the MoTTY engine with the latest improvements from the PuTTY project
- **Improvement:** the "MobaSSHTunnel" button now brings any existing window to the front, even if it was minimized
- **Improvement:** merged fonts locations "/usr/share/fonts" and "/usr/share/X11/fonts" into a single one
- **Improvement:** added a new setting in MobaDiff in order to highlight small text changes with a different color
- **Improvement:** the X server is not moved anymore to the top left corner once it is started
- **Improvement:** the "screen" parameter in "XWinSwitches" overloads the existing one instead of being added to the X11 command line
- **Improvement:** you can now go to the parent directory in the SSH browser by clicking on the 4th mouse button
- **Improvement:** improved compatibility of the terminal with the "tsh" Teleport client
- **Improvement:** you can now close a tab by using middle-click on the corresponding top-right popup menu item
- **Improvement:** when closing a tab, other remaining tabs are now immediately replaced
- **Bugfix:** in MobaDiff, the "Find" dialog theme was incorrect when the dialog was spawned twice on 2 different files
- **Bugfix:** when MobaXterm is hidden and an SSH session without a login is launched, the characters in the login prompt are not masked anymore
- **Bugfix:** deleted an error message when starting a 64-bit local terminal with the agent enabled and an RSA key present in the home directory
- **Bugfix:** prevented renaming of a sessions folder when dragging a session over that folder
- **Bugfix:** there was an overlap issue when the Home tab was set to be replaced when starting a terminal and the tabs were set to be opened beside the current tab
- **Bugfix:** when a local WSL terminal was launched just after a WSL session containing a command, the shell command was executed in the local WSL terminal
- **Bugfix:** under some specific circumstances, the passphrase for SSH keys was asked twice in 64-bit mode

Version 23.1 (2023-04-01)

- **New feature:** it is now possible to modify directly shared sessions that are stored in a network folder, as long as you have write access to this folder
- **New feature:** it is now possible to automatically refresh shared sessions that are stored in a network folder
- **Improvement:** added a new security setting in the Customizer program in order to disallow the "Remember master password" feature
- **Improvement:** updated the interface for creating shared sessions and for managing existing shared sessions
- **Improvement:** a folder of shared sessions can now display a green "Refresh" icon when the shared sessions are updated by someone else
- **Improvement:** updated OpenSSL library and OpenSSH command line client to the latest version

- **Improvement:** added a message in the command line SSH client in case you are trying to connect to an old SSH server with legacy algorithms
- **Improvement:** improved MOSH sessions compatibility with remote TCSH, CSH, and FISH shells
- **Improvement:** improved MOSH sessions compatibility with legacy SSH servers that use outdated algorithms
- **Improvement:** added mouse wheel scrolling feature in the MobaSSHTunnel list and in the sessions SSH jump hosts list
- **Improvement:** the file extension is now automatically appended when exporting a color theme
- **Improvement:** create files /etc/passwd and /etc/groups at first start for proper names resolution in the "ls" commands in 32-bit terminals
- **Improvement:** improved switching to MobaSSHTunnel window to prevent potential focus loss
- **Improvement:** you can now use double quotes around the full "File/Folder" sessions parameters
- **Improvement:** do not display font ligatures in the terminal and the text editor by default (the feature remains available in the global settings, terminal tab, font selection)
- **Bugfix:** fixed the "Soliterm" game display that was scrambled in the latest release
- **Bugfix:** when searching for a session in the "Quick Connect" field, the results list was not resized properly when resizing the sidebar
- **Bugfix:** refreshing shared sessions stored on an HTTP backend did not work properly when the session was cached by the browser
- **Bugfix:** the tab color selection button was hardly visible when the tab color was white
- **Bugfix:** in the Customizer program, the custom toolbar buttons were not always refreshed
- **Bugfix:** fixed a race condition when starting a very slow SSH session, and stopping it immediately, while another one is already started
- **Bugfix:** with the "Deep" skin, the "Recent sessions" list was hardly readable on light background
- **Bugfix:** detached tabs were sometimes sticking to the borders of the screen in a multi-monitor environment
- **Bugfix:** fixed a potential race condition when using the mouse wheel in the sessions SSH jump hosts list

Version 23.0 (2023-01-27)

- **Improvement:** added a new web browser engine based on Microsoft Edge WebView
- **Improvement:** added a new RDP "Zoom" feature that allows you to specify a Zoom level for your remote RDP session
- **Improvement:** added a new RDP setting "Authentication level" that is useful when you use RDP over SSL
- **Improvement:** added a new RDP setting "Color depth" in order to specify the desired color depth on the client side
- **Improvement:** added a new RDP setting "Redirect smartcards" that allows using local smartcards on the server side, even for authentication
- **Improvement:** arranged RDP advanced settings in a more convenient fashion
- **Improvement:** added proxy support in browser sessions based on Edge/WebView
- **Improvement:** improved VNC sessions overall speed with embedded engine
- **Improvement:** increased the width of port fields for better reading of port numbers greater than 9999
- **Improvement:** added a new setting in the professional Customizer program to disable the Remote Monitoring feature
- **Improvement:** it is now possible to select a 64-bit terminal from the Customizer program
- **Improvement:** the plugins are now unpacked after installation when the Slash directory is set to the "Program Files" folder
- **Improvement:** you can now include 64-bit plugins in MobaXterm Customizer
- **Bugfix:** fixed an issue with the SSH command line client when a jump host was set and the Slash directory was set to the "Program Files" folder

- **Bugfix:** fixed a potential crash on VNC sessions when the new embedded engine and an SSH gateway were set
- **Bugfix:** the local terminal setting was not properly restored when importing an old customization file into the Customizer program
- **Bugfix:** fixed the OpenSSH daemon start-up when the slash directory was set to "same as application" in the customizer
- **Bugfix:** fixed Unicode characters display in the SSH key sessions fields
- **Bugfix:** fixed Unicode characters display in the start-up folder sessions fields
- **Bugfix:** fixed Unicode characters display in the persistent Home and persistent Slash folders fields

Version 22.3 (2022-12-12)

- **Improvement:** increased the maximum number of tabs per instance from 36 to 100
- **Improvement:** you can now paste some files to the SSH browser using Ctrl+V or Shift+Insert
- **Improvement:** you can now paste some files to the FTP, SFTP or S3 sessions using Ctrl+V or Shift+Insert
- **Improvement:** the 3 INI configuration settings TermReconnectKey, TermSaveKey, and TermExitKey can now be set to special keys (e.g. "Return", "F4", "Backspace", ...)
- **Improvement:** improved the embedded VNC viewer speed
- **Improvement:** the VNC passwords are now identified by using the server address and port
- **Improvement:** the VNC passwords are saved with the proper server name, even when using an SSH gateway or jump host
- **Improvement:** added several new authentication methods to the embedded VNC viewer (Plain, SSL, TLS, X509Vnc, and X509Plain)
- **Improvement:** added SSL tunnel connection feature in the embedded VNC viewer
- **Improvement:** added Unix authentication support with login and password in the embedded VNC viewer
- **Improvement:** added SOCKS4, SOCKS5, and HTTP proxy support in the embedded VNC viewer
- **Improvement:** you can now choose to position a duplicate tab beside the current tab (in the "Misc" global settings section)
- **Improvement:** you can now choose to position every new tab beside the current tab
- **Improvement:** added a new "OpenVMS2" terminal type that adds application keypad feature and PF1-PF4 keys
- **Improvement:** when using the "-exitwhendone" command line parameter, the terminal does not prompt for reconnection
- **Improvement:** increased the color saturation of inactive tabs
- **Improvement:** when MobaXterm is started in hidden mode, password prompts are no more printed into the hidden terminal
- **Bugfix:** fixed an issue with SSH sessions to AWS when using the AWS SSM plugin as a local proxy
- **Bugfix:** in split mode, the main window title is now properly updated when the first terminal title is updated
- **Bugfix:** in split mode, the active vertical tab is now properly updated when a non-focused terminal is selected

Version 22.2 (2022-11-15)

- **Improvement:** updated the local terminal environment to the latest version
- **Improvement:** updated packages downloaded through "apt"
- **Improvement:** increased the speed of "apt" and "MobApt" packages managers
- **Improvement:** better detection of special Unicode characters in Windows console applications
- **Improvement:** set "MSYSTEM" variable to "MINGW64" for Git-Bash sessions

- **Improvement:** set preferred PATH to /usr/bin instead of /bin by default
- **Improvement:** unified profile scripts in order to have similar features in all local shells
- **Improvement:** removed the MobaSendMsg binary which is no longer needed
- **Improvement:** removed "mkpasswd" and "mkgroup" which are no longer needed for faster startup
- **Improvement:** you can now choose precisely the local terminal shell and distribution
- **Improvement:** you can now choose an external distribution for MobaXterm local terminal
- **Improvement:** added ZSH support in the local terminal environment and "Shell" sessions
- **Improvement:** several speed improvements when dealing with many sessions (more than 1000)
- **Improvement:** you can now scroll the remote monitoring status bar when it is larger than the window
- **Improvement:** you can now choose to display NFS mounted partitions in the remote monitoring status bar
- **Improvement:** disabled the "Redirect drives", "Redirect printers" and "Redirect ports" by default for RDP sessions
- **Improvement:** added 3 INI configuration settings for terminal reconnection hotkeys, TermReconnectKey, TermSaveKey, and TermExitKey
- **Improvement:** added default security presets in the Professional Customizer program
- **Improvement:** added a new setting to disable "MobApt" package manager from the Professional Customizer program
- **Improvement:** added a new setting to disable "RDP Reconnect" feature from the Professional Customizer program
- **Improvement:** in portable mode, the agent keys paths automatically use variables for "CurrentDrive" or "CurrentFolder"
- **Improvement:** you can now select the SSH protocol version for each SSH session
- **Improvement:** you can now sort the key exchange algorithms list for each SSH session
- **Improvement:** you can now sort the host key algorithms list for each SSH session
- **Improvement:** you can now sort the ciphers algorithms list for each SSH session
- **Improvement:** you can now choose to prevent MobaXterm from advertising the host key algorithm it already knows to the server
- **Improvement:** you can now choose to enable or disable agent authentication and agent forwarding for each SSH session
- **Improvement:** improved support for multi-monitors with different DPI settings
- **Improvement:** improved support for changing Windows resolution while MobaXterm is open
- **Improvement:** prevented MobaXterm from being blurry when started on a secondary 4K monitor
- **Improvement:** improved MobaXterm and MobaTextEditor icons sharpness
- **Improvement:** prevented RDP sessions from being blurry on the secondary monitor
- **Improvement:** improved speed of embedded resources decompression
- **Bugfix:** removed the password prompt when starting a tunnel with a proxy connection without authentication
- **Bugfix:** underscores were not properly rendered in the "paste confirmation" dialog when Windows DPI was set to 125%
- **Bugfix:** expanding a sessions folder using double-click could lead to launching the first session in some specific circumstances
- **Bugfix:** fixed some download issues in the SCP browser when the SSH connection password was not stored into MobaXterm
- **Bugfix:** X11-forwarding was failing under specific circumstances in SSH sessions with proxy
- **Bugfix:** fixed a connection issue with SSH sessions, when a SOCKS proxy and a jump host were configured in the same session
- **Bugfix:** after clicking "Cancel" in SFTP sessions authentication prompts, the connexion is properly aborted
- **Bugfix:** properly check for the remote server host key when starting SFTP sessions (fixes CVE-2022-38336 reported by Manfred Kaiser from Austrian MilCERT)
- **Bugfix:** when an SFTP session is aborted, the "canceled" password is no more sent to the server (fixes CVE-2022-38337 reported by Manfred Kaiser from Austrian MilCERT)

Version 22.1 (2022-06-26)

- **New feature:** you can now activate font ligatures from MobaXterm font settings or from the terminal contextual menu
- **New feature:** you can now choose between 3 included terminal fonts from MobaXterm font settings or from the terminal contextual menu
- **New feature:** you can now activate font ligatures into MobaTextEditor
- **New feature:** you can now choose between 3 included fonts for MobaTextEditor
- **New feature:** you can now save your proxy passwords in MobaXterm secure vault
- **New feature:** you can now add, import, or export the terminal color themes
- **Improvement:** improved default terminal font for better readability
- **Improvement:** better detection of pending transfers when SSH connections are closed
- **Improvement:** make SFTP sessions work even if a remote login script writes some output to the terminal
- **Improvement:** improved SCP and SFTP transfer speed by improving hardware-accelerated encryption, especially on AMD Ryzen CPUs
- **Improvement:** improved MobaXterm startup and MobaXterm main window activation speed
- **Improvement:** better detection of extended characters for password storage and SSH authentication
- **Improvement:** upgraded the terminal engine to the latest PuTTY release
- **Improvement:** added a new "Monochrome" colors scheme, for users who do not want colors in their terminal
- **Improvement:** added a new "Local" proxy type that allows specifying an arbitrary command on the local machine to act as a proxy
- **Improvement:** added detection and storage for local proxy passwords
- **Improvement:** cleaned up the terminal settings section for better readability
- **Improvement:** better detection of available RAM in the remote monitoring bar by using the recent "MemAvailable" Linux kernel entry
- **Improvement:** the text files encoding is set to ANSI by default when opening them in MobaTextEditor
- **Improvement:** the "Adapt remote DPI" setting is now faster and does not require the live creation of a specific executable
- **Improvement:** transfers using Z-modem do not output the transferred file to the terminal anymore
- **Improvement:** improved speed of the "Find existing session" feature of the home page
- **Improvement:** added the ability to use a SOCKS5 or HTTP proxy for localhost connections
- **Improvement:** the content of the "Quick Connect" field is automatically copied if you start a new session
- **Improvement:** decreased MobaXterm memory usage, especially when a "Persistent Slash directory" is set
- **Improvement:** you can now send Alt+Tab through the new VNC engine by pressing "Alt+PageDown"
- **Improvement:** renamed the "Use smartcard for login" RDP option to "Native authentication"
- **Improvement:** added a submenu called "Import sessions from external programs" in the sessions tree
- **Improvement:** support for "Diff/Patch" syntax highlighting added to MobaTextEditor and MobaDiff
- **Improvement:** if your SSH authentication uses an ECDSA, ED25519, or RSA-SHA2 key, the SSH-browser can now use the SFTP protocol
- **Improvement:** you can now trust and store multiple host keys for the same hostname or IP address (it can be useful for load-balancing)
- **Bugfix:** the version number was partly hidden at the bottom of the splash screen when the Windows DPI value was "150"
- **Bugfix:** in the SSH browser, the permissions of an edited file were sometimes lost when the "Preserve files dates" setting was checked
- **Bugfix:** fixed an issue with a PyCharm popup window that immediately disappeared after calling it with Ctrl+F12
- **Bugfix:** fixed an error with the X11 server when the "Xfixes" extension was disabled
- **Bugfix:** removed some potential "Access denied" messages from the Remote monitoring module
- **Bugfix:** fixed an issue with the X11 server blocking the arrow keys in Matlab command window history

- **Bugfix:** when 3 sessions are selected in the sessions tree, the selection is no longer cleared when you click on one of them
- **Bugfix:** when selecting files in the SSH-browser, the selection is refreshed when you change the browser sort order
- **Bugfix:** proxy passwords in SSH tunnels were incorrectly decrypted and sometimes asked twice at tunnel startup
- **Bugfix:** prevented a startup failure when the Slash directory was set to a folder called "MobaXterm" in the root of a partition
- **Bugfix:** prevented issues with SFTP sessions authentication when many different SSH keys were used for previous connections

Version 22.0 (2022-03-04)

- **New feature:** you can apply some specific settings to multiple sessions by right-clicking on a session, copying its settings, and pasting them to a group of sessions
- **New feature:** you can now define your own default presets for sessions by right-clicking on a session and choosing "Save session settings as default presets"
- **New feature:** you can now edit your own default presets for sessions by clicking on the "Edit my sessions presets" button in the general settings window
- **New feature:** in MobaXterm Professional Edition, you can now edit MobaXterm default presets for new sessions in the Customizer program
- **New feature:** there is a new "Bash (external)" shell session that can be used in order to start an external (Git-Bash, Msys2, Cygwin, ...) distribution in a MobaXterm terminal tab
- **New feature:** if MobaXterm detects an external bash installation (Git-Bash, Msys2, or Cygwin), it will propose it in the homepage right-click menu
- **New feature:** the graphical browsers (SSH, SFTP, FTP, S3) now remember the folders you browsed in each session and allow you to jump directly to them using the top address bar
- **New feature:** you can now start or pause the recording of the terminal output to a file using a new option available in the terminal contextual menu (Ctrl + right-click on the terminal)
- **Improvement:** switched to the latest Xorg server version 21.1.3 (the previous Xorg version 1.20.4 is still available in the general settings) (fixes CVE-2021-4008, CVE-2021-4009, CVE-2021-4010, CVE-2021-4011)
- **Improvement:** suppressed the 2 seconds latency that was encountered the first time an application was run over X11-forwarding
- **Improvement:** you can now select multiple files or folders in MobaDiff and perform actions (copy/delete) on all of them at once
- **Improvement:** you can now search for some text in all the files listed in MobaDiff
- **Improvement:** added Go and Json syntax highlighting in MobaTextEditor and MobaDiff
- **Improvement:** the custom icons for your sessions can now be imported from png, ico, bmp or exe files
- **Improvement:** added a "refresh file" feature in MobaTextEditor (this can be triggered with the "F5" shortcut)
- **Improvement:** the session tree which pops up when clicking on the "Sessions" top button now handles mouse wheel events
- **Improvement:** added TLS 1.3 support in FTP sessions
- **Bugfix:** the terminal title was not updated when the title length was only 1 character (like "/" or "~")
- **Bugfix:** the top toolbar buttons in MobaTextEditor were bright when they were pushed in dark mode
- **Bugfix:** removed a "Clipboard not available" message in MobaTextEditor when the copy/paste operation was too fast
- **Bugfix:** properly reset the proxy settings after editing a session that contains SOCKS parameters
- **Bugfix:** the "Open with" contextual menu entry now works properly in FTP and SFTP sessions

- **Bugfix:** the graphical SSH-browser used to display several empty entries when the "MaxSessions" parameter on the server was set to "1"
- **Bugfix:** with some SFTP servers, uploading a file immediately after connecting used to fail
- **Bugfix:** the terminal scrollbar was sometimes hidden before resizing the terminal
- **Bugfix:** better detection of files with spaces in the WSL graphical browser in "Localhost connection" mode
- **Bugfix:** the "Save terminal output" dialog could be hidden behind a detached window
- **Bugfix:** the menu bar was sometimes partly white in dark mode, with a high-resolution monitor

Version 21.5 (2021-11-25)

- **New feature:** added an option to choose between 2 SSH engines, "legacy" (for better compatibility with old servers) or "new" (for latest security features)
- **Improvement:** the new SSH engine supports the rsa-sha2-256 and rsa-sha2-512 signature methods, which are required by some recent servers in order to use RSA keys
- **Improvement:** added support for the rsa-sha2-256 and rsa-sha2-512 signature methods in SFTP sessions
- **Improvement:** the new SSH engine and SFTP sessions now support the new PuTTY keys format (PPK v3)
- **Improvement:** added a new SSH agent setting in order to prompt the user before using an agent key
- **Improvement:** in "MultiExec" mode, the terminal title is written in the "Exclude" checkbox under each terminal
- **Improvement:** better detection of URLs delimiters and URLs that contain a port number
- **Improvement:** improved terminal syntax highlighting speed, especially on long lines
- **Improvement:** improved FTP sessions compatibility with recent FTPS servers
- **Improvement:** enhanced validation of FTP TLS certificates and allow users to trust self-signed certificates
- **Improvement:** added some warning messages in the SSH-browser (SCP mode) after a transfer error
- **Improvement:** characters are now properly displayed in sessions tooltips, even if they use "special" character encodings
- **Improvement:** you can now force log files to be created for every terminal-based session from the Customizer program
- **Improvement:** many visual controls have been improved for a better rendering on Windows 11
- **Improvement:** in VNC sessions with the new VNC engine, you can now type Ctrl+Alt+End to simulate the remote Ctrl+Alt+Del key sequence
- **Improvement:** in VNC sessions with the new VNC engine, the "Win" key is now forwarded to the remote server
- **Improvement:** in SFTP sessions, you can now authenticate with an ED25519 SSH key retrieved from MobAgent
- **Improvement:** in MultiExec mode, the paste confirmation popup is now managed once for all terminals (when using the new SSH engine mode)
- **Bugfix:** using the "Connect as" option for a session did not work with SSH jump hosts configured
- **Bugfix:** removed some flickering issues on the persistent Home and Slash directory fields
- **Bugfix:** the "Sample entries" text was truncated in the syntax highlighting settings window
- **Bugfix:** the RDP "autoscale" setting was not adapting remote DPI if the local DPI was set to 150
- **Bugfix:** fixed the "tabs to space" setting which was not properly applied in MobaTextEditor and MobaDiff
- **Bugfix:** fixed the "tabs width" setting which was not properly applied in MobaTextEditor and MobaDiff
- **Bugfix:** in some specific circumstances, the MobaTextEditor caret was hidden at first start
- **Bugfix:** the "Save password" dialog window can no more disappear behind a fullscreen RDP session
- **Bugfix:** the "browse for folder" dialog can no more disappear behind the MobaXterm window
- **Bugfix:** when resizing the main window in "MultiExec" mode with High DPI enabled the "Exclude from MultiExec" checkbox was truncated
- **Bugfix:** MobaTextEditor no longer opens a new tab for an already open file

- **Bugfix:** the "Fit to window size" button was closing RDP sessions when the RDP setting "Do not show reconnect message" was activated
- **Bugfix:** when a VNC server is closed and immediately respawned, MobaXterm VNC client sessions do not generate an exception anymore
- **Bugfix:** the vertical tabs tooltips were not properly closed in some specific circumstances
- **Bugfix:** avoiding name collisions when defining 2 sessions with the same name, but with different cases for some characters
- **Bugfix:** fixed a potential issue when the "CygUtils64" and "CygUtils" plugins are used at the same time
- **Bugfix:** the "Log filename" field tooltip is now properly shown in the Customizer
- **Bugfix:** when the slash folder is set to "same as application" into the Customizer, the Cygwin X11 server now works properly

Version 21.4 (2021-10-07)

- **New feature:** you can now directly edit text files using MobaTextEditor by right-clicking on the files in Windows Explorer
- **New feature:** you can now directly compare text files or folders using MobaDiff by right-clicking on the files/folders in Windows Explorer
- **Improvement:** you can edit Windows right-click menu entries from MobaXterm global settings
- **Improvement:** automatic detection of Windows ransomware protection in order to set MobaXterm working directory accordingly
- **Improvement:** changed some icons of the graphical interface for better legibility
- **Improvement:** enhanced the documentation and added a navigation bar for better browsing
- **Improvement:** improved live screenshots creation for inline documentation
- **Improvement:** automatic creation of log file output folder when it does not exist
- **Improvement:** added a way to select the "Local Applications Data" folder in the Customizer as the default user profile directory
- **Bugfix:** the "Log filename format" tooltip was not properly printed (the ampersand was not visible in the variables names)

Version 21.3 (2021-08-27)

- **New feature:** added a new "Read-only" feature in the terminal right-click menu
- **New feature:** added the ability to compare text files directly from the SSH browser, SFTP, FTP, and S3 sessions with the new "MobaDiff" tool
- **New feature:** added syntax highlighting in MobaDiff
- **New feature:** added recursive comparison in MobaDiff
- **New feature:** added character by character comparison for each text line in MobaDiff
- **New feature:** added ability to open and save GZip compressed text files (with ".gz" extension) in MobaTextEditor and MobaDiff
- **Improvement:** added "Ignore timestamps" setting in MobaDiff in order to compare 2 files with different timestamps at the beginning of each line
- **Improvement:** added Alt+arrows keyboard shortcuts to the MobaDiff tool
- **Improvement:** added dark mode in MobaDiff
- **Improvement:** added undo and redo features in MobaDiff
- **Improvement:** increased MobaDiff folders comparison speed by using multi-threading listing
- **Improvement:** added more information for each directory or file listed in MobaDiff (size, date)
- **Improvement:** the lines that contain differences are now clearly highlighted with different colors in MobaDiff

- **Improvement:** the format of text files (Dos, Unix, or Mac) and the charset are now automatically recognized in MobaDiff
- **Improvement:** removed the vertical tab titles (use the "Toggle sidebar title" menu option to modify this)
- **Improvement:** increased the width of the paste confirmation dialog for better compatibility with Wine under MacOS and Linux
- **Improvement:** added an inline message after RDP disconnection with a "Reconnect" button
- **Improvement:** improved buttons painting speed by using full caching
- **Improvement:** improved the graphical interface by removing unused borders and by improving elements alignment
- **Improvement:** added a setting for choosing light or dark theme for MobaXterm graphical interface
- **Improvement:** added a setting for choosing the style of tabs on the left (with or without titles)
- **Improvement:** improved OpenSSH terminal commands speed
- **Improvement:** MobaTextEditor "Find" feature now searches from the current position
- **Improvement:** you can select a word in MobaTextEditor and hit "F3" to quickly find other occurrences of this pattern
- **Improvement:** improved the files/folders comparison tools with several ergonomics enhancements
- **Improvement:** removed the "CygwinPort" packages option in the MobApt package manager
- **Improvement:** replaced the "CWD" operation with "NOOP" in the FTP client for better compatibility with old FTP servers
- **Improvement:** do not attempt GSSAPI key exchange anymore when GSSAPI setting is unchecked
- **Improvement:** eliminated flickering when starting FTP, SFTP, and S3 sessions
- **Improvement:** removed a spurious "Unbound variable" error message when using "set -u" into bash
- **Improvement:** increased switching speed between standard Windows light theme and standard Windows dark theme
- **Improvement:** added detection of Unix symlinks in FTP sessions with ProFTPD server, whether the "UseSlink" directive is on or off
- **Improvement:** better detection of server messages encoded in UTF-8 for FTP sessions
- **Improvement:** better detection of UTF-8 encoding when showing sessions tooltips
- **Improvement:** better detection of potential FTP disconnections during file transfers
- **Improvement:** removed the dotted focus rectangle on focused buttons with the light theme
- **Improvement:** removed the glowing effect when the mouse hovers a title menu entry that is not selectable
- **Bugfix:** in dark mode, the "Services" window title bar was white
- **Bugfix:** prevented top toolbar buttons from overlapping each other when the main window width was too small to display all buttons
- **Bugfix:** the "MobApt" package manager was not properly updated using ZSH (64 bits) mode
- **Bugfix:** fixed some potential issues when editing several files at once from the SSH browser in SCP mode
- **Bugfix:** fixed an error when launching the "rxvt" or "xterm" commands from the portable version of MobaXterm
- **Bugfix:** prevented the scrollbar in the macros sidebar to appear when there was no need for it
- **Bugfix:** in the sessions tree, when some nodes were selected, the selection was not cleared after right-clicking on another node
- **Bugfix:** fixed a shift in macros hotkeys list that had been introduced in previous version 21.2
- **Bugfix:** after copying a shared session to the "Users sessions" tree, the source session was not properly refreshed
- **Bugfix:** fixed a "space" character that was added at the end of the "Comments" section after editing a session
- **Bugfix:** when Windows was set to 125% DPI, the "General" tab was hidden in the Professional Customizer "Settings" section

- **New feature:** added a simple "Wake On Lan" feature which sends a magic packet to the given MAC address
- **Improvement:** SSH tunnels can now be defined with a private SSH key located on a network UNC path
- **Improvement:** the "Save terminal text to file" feature is now supported under Linux (Wine) and MacOS (PlayOnMac)
- **Improvement:** the terminal "zoom/unzoom font" feature is now mapped to a configurable keyboard shortcut
- **Improvement:** WSL sessions now use a login shell by default in order to be consistent with Windows Terminal
- **Improvement:** better detection of UTF-8 encoding in the remote-monitoring bar hints
- **Bugfix:** fixed the "Use font encoding" setting which was not fully working
- **Bugfix:** input dialogs are not closed anymore when you hit Ctrl+C
- **Bugfix:** in the Customizer, some checkboxes were overlapping each other with specific DPI settings
- **Bugfix:** fixed some typos, especially on the "connection" word

Version 21.1 (2021-04-20)

- **Improvement:** you can now select a custom log file name with several variables available
- **Improvement:** enhanced syntax highlighting speed, the terminal is now 16x faster when processing colored patterns
- **Improvement:** added basic SSH certificate support, you can now define a CA-signed OpenSSH user key in your SSH sessions
- **Improvement:** enhanced overall terminal rendering speed and decreased CPU consumption when refreshing, especially on High DPI monitors
- **Improvement:** better support for mouse "infinite scrolling mode" into terminals
- **Improvement:** decreased the SSH connection time, especially when using private keys with more than 2048 bits
- **Improvement:** support for ECDSA private keys with "aes-256-ctr" cipher in "OpenSSH_v2" format into SFTP sessions
- **Improvement:** support for RSA private keys with a passphrase in "OpenSSH_v2" format into SFTP sessions
- **Improvement:** it is now possible to clear the startup folder of a WSL session that had been previously chosen
- **Improvement:** when remote monitoring items are disabled, the remote command is adjusted accordingly
- **Improvement:** better detection of any process which is running from outside the slash folder
- **Improvement:** disabled background color changes in the terminal when special UTF-8 characters were used
- **Improvement:** better detection of the previous running sessions when clicking on the "Recover previous sessions" button
- **Improvement:** when shared sessions are defined, the "Sessions" top button now expands all sessions folders accordingly
- **Bugfix:** the remote monitoring was incomplete when there were too many entries into the server output of "netstat" command
- **Bugfix:** when duplicating a session that uses an SSH jump host, the duplicated session will not close anymore after the initial session is closed
- **Bugfix:** prevented the SSH sessions to try to use Pageant keys when MobAgent and Pageant were disabled in global settings
- **Bugfix:** prevented the "View log file" button text to be wrapped onto 2 lines
- **Bugfix:** prevented MobaXterm from removing the "COM" pattern when using serial console sessions with named pipes

- **Bugfix:** fixed a potential issue with the remote permissions editor when the remote ls command displays permissions in an unusual format
- **Bugfix:** in case a terminal line was wrapped exactly at the beginning of a highlighted word, the syntax highlighting was disabled in the lines below
- **Bugfix:** the "Recover previous sessions" button used to start only one session when the "Home tab is replaced" setting was checked
- **Bugfix:** fixed SSH and WSL banners that wrongly identified MobaXterm Personal Edition as being "Professional" edition
- **Bugfix:** the output of "ls" command on some system was blue on green background for folders with 777 permissions, so it was hardly readable

Version 21.0 (2021-03-06)

- **New feature:** you can now select "PowerShell 7" or "Windows PowerShell" in Shell session settings
- **New feature:** added a new "Import/Export configuration" feature in the "Settings" menu which allows you to backup or share your MobaXterm configuration as a single file
- **New feature:** added a new "Reset configuration" feature in the "Settings" menu which allows you to reset the entire MobaXterm configuration or only reset some specific defaults
- **Improvement:** the Professional Customizer is now compatible with Wine, under Linux and Mac OsX
- **Improvement:** improved several components design in dark mode (checkboxes, comboboxes, ...)
- **Improvement:** many components have been themed for a better look under Wine
- **Improvement:** added support for SSH keys with ED25519 algorithm in SFTP sessions
- **Improvement:** filtered out several useless entries from the remote monitoring "disk space" section
- **Improvement:** the Professional Customizer is now able to embed big plugin files into the generated ZIP archive
- **Improvement:** the Professional Customizer can now extract the main executable properly, even if the Windows installer is disabled by some third-party software
- **Improvement:** the Professional Customizer allows you to edit all the banners of sessions that rely on a terminal (SSH, WSL, local terminal, telnet, rlogin)
- **Improvement:** you can now define the default font charset and select "Use font encoding" as terminal charset (useful for special character encodings)
- **Improvement:** you can now define a specific terminal font charset for each terminal-based session
- **Improvement:** the local terminal prompt is now adapted when the current path is too long to fit into the terminal width
- **Improvement:** the SSH-browser header has been adapted to the dark theme
- **Improvement:** an enhanced tooltip and a right-click menu with a list of listening DISPLAYS have been added to the "X" button in the top toolbar
- **Improvement:** when the X server is off, its DISPLAY is now reserved in order to prevent sessions that have been started with a specific DISPLAY to lose it
- **Improvement:** if the X server is off and an application tries to access it, a popup dialog informs you and allows you to start it
- **Improvement:** better detection of each X server and Remote monitoring instances ownership when MobaXterm is launched in "Multi-instances" mode
- **Improvement:** the detection of running X server instances has been improved in order to prevent MobaXterm from slowing down
- **Improvement:** added a "Start Windows Powershell as admin" menu entry in the "Tools" section
- **Improvement:** added a specific icon for imported PuTTY sessions folder
- **Improvement:** added an entry in the sessions right-click menu which allows to autodetect and import WSL sessions
- **Improvement:** added a right-click menu in the tabs bar which allows to quickly start a specific shell (Bash, Cmd, Powershell, Wsl) or jump to a specific tab

- **Improvement:** a check at MobaXterm startup verifies if the CygUtils plugin is obsolete
- **Improvement:** better detection of the OneDrive folder when its name is in 8.3 format
- **Improvement:** shared sessions with SFTP backend can now use passphrase protected SSH keys
- **Improvement:** better auto-detection of the default shell for each WSL session
- **Improvement:** better identification of external programs windows that overlap RDP sessions when they are "always on top"
- **Improvement:** added some information concerning the currently active network connections in SSH remote monitoring bar
- **Improvement:** broken text files with UTF-8 BOM header but ANSI encoding are now automatically identified
- **Improvement:** improved the "RemoteMonitoringCompatibleMode" configuration setting which allows the remote monitoring feature to work properly with the Fish shell
- **Improvement:** adapted the width of the multi-execution message to the width of the main window
- **Improvement:** many tooltips have been added in order to display contextual help when your mouse cursor is over a component
- **Improvement:** when you use the search feature of MobaTextEditor and hit the end of the file, searching now continues from the beginning of the file
- **Improvement:** the terminal now supports many font icons for better compatibility with enhanced shell prompts like oh-my-zsh and Powerlevel10K
- **Improvement:** the TCPCapture tool can now be started with another user account if the current user account is not an administrator
- **Improvement:** better identification of the AltGr key in order to prevent AltGr+Space to be treated as the Ctrl+Space ("Quick macro menu") keyboard shortcut
- **Improvement:** added a new "lsfont" tool which prints the complete font character set into the terminal
- **Improvement:** added some information about apt-get in case you try to start yum, urpmi, or emerge command in the local terminal
- **Improvement:** the "Documents" folder can now be selected under the "Libraries" folder in the file picker
- **Improvement:** better detection of all the partitions with their corresponding sizes in the remote monitoring bar
- **Improvement:** you can now change text files encoding in MobaTextEditor or convert text files encodings
- **Improvement:** the application title is now set after a few milliseconds in order to prevent MobaXterm from being flooded with tab title change requests (fixes CVE-2021-28847)
- **Improvement:** the %USERNAME% variable is now resolved to the local user name in SSH remote command
- **Improvement:** improved startup speed and removed some small visual glitches in dark mode
- **Bugfix:** fixed the tab order in the global settings and sessions windows
- **Bugfix:** when using the "Quick search" feature and clicking on the blank part under the "New session" icon, the "New session" window was started
- **Bugfix:** in the SSH-browser and FTP/SFTP sessions, when editing a file and simultaneously clicking on another one resulted in a popup asking if you wanted to rename the file
- **Bugfix:** in the global settings window, scrollbars no longer lose their dark theme when switching focus with the "TAB" key
- **Bugfix:** right-clicking on a folder to open MobaXterm terminal in that folder did not work if the default shell was WSL and MobaXterm was already running
- **Bugfix:** the tab titles were sometimes incorrect when extended characters were used in conjunction with a specific Windows language configuration
- **Bugfix:** fixed a tab moving issue when "focus follows mouse" was set in Windows
- **Bugfix:** corrected a slowness issue when browsing for plugins in the Customizer
- **Bugfix:** the "Terminal type" setting was not properly refreshed the first time a session was edited
- **Bugfix:** the Display resolution setting of RDP sessions was not taken into account when starting an RDP session just after MobaXterm startup
- **Bugfix:** fixed a potential redirection ambiguity in the ServersListToMxtSessions.sh script
- **Bugfix:** fixed a potential missing library file in ZSH shell (64 bit) which prevented Cmd or Powershell from starting properly

- **Bugfix:** after having selected a file to upload in the explorer dialog, the parent folder is no longer locked by MobaXterm
- **Bugfix:** fixed a potential issue when reconnecting or duplicating a telnet or rsh session which uses an SSH gateway
- **Bugfix:** when closing several terminals at the same time, sometimes some of them were missing from the prompt dialog list
- **Bugfix:** duplicate tab feature now works properly when you duplicate a WSL tab that uses a localhost connection
- **Bugfix:** removed a small glitch with the "Deep" skin when clicking on the "View" menu item
- **Bugfix:** removed a casual issue with file sizes greater than 4 GB in the SSH-browser when the SSH-browser mode is set to SCP
- **Bugfix:** in "Split mode", when cycling through tabs using a keyboard shortcut (Ctrl+Alt+arrow or Ctrl+Tab), the focus can no more be assigned to an invisible tab
- **Bugfix:** the Slash directory can now be set to the same folder as the application, even if the CygUtils plugin is disabled
- **Bugfix:** the macros combobox in terminal sessions was out of bounds when Windows DPI setting was at 125%
- **Bugfix:** when selecting several sessions and launching one of them from the "Recent sessions" panel, all the selected sessions were launched

Version 20.6 (2020-11-29)

- **Improvement:** MobaTextEditor can now auto-detect UTF-8 text files which do not contain any BOM ("Byte Order Mark") header
- **Improvement:** MobaTextEditor auto-detects encoding when opening a file and will use it when saving the file if the encoding has not been changed manually in the meantime
- **Improvement:** you can now search backward in files by using Shift+F3 keyboard shortcut in MobaTextEditor
- **Improvement:** increased speed of search in MobaTextEditor, especially when you choose to highlight all results
- **Improvement:** MobaTextEditor can now be closed with the ESCAPE key
- **Improvement:** added support for v4 signatures for Amazon AWS S3 sessions
- **Improvement:** added support for buckets regions auto-detection for Amazon AWS S3 sessions
- **Improvement:** the "Browse for folder" feature speed has been improved in MobaTextEditor
- **Bugfix:** removed an "unspecified error" which occurred in RDP sessions under Windows 7
- **Bugfix:** fixed an incorrect remote desktop resolution in RDP sessions, when "Adapt remote DPI" setting was checked
- **Bugfix:** when creating or duplicating a macro, the macros list was not properly refreshed

Version 20.5 (2020-11-01)

- **Improvement:** suppressed the confirmation message when you close the local terminal under Wine
- **Improvement:** several small speed improvements at startup, but also in secondary windows
- **Bugfix:** typing ESCAPE key in a detached window no longer closes the window
- **Bugfix:** in split mode, resizing an SSH session terminal had no effect if the remote monitoring was enabled

- **Improvement:** improved detection of WSL (Windows Subsystem for Linux) distributions, even with multiple versions of the same distribution
- **Improvement:** allow manual selection of any WSL1 or WSL2 distribution and manual selection of its connection type
- **Improvement:** allow manual selection of the username for WSL1 and WSL2 distributions instead of using the default one
- **Improvement:** improved Wine compatibility for Linux and Mac users, many MobaXterm features now work under Linux or Mac, thanks to Wine, PlayOnMac, PlayOnLinux or Crossover
- **Improvement:** graphical applications can now be displayed directly without any extra step needed, on WSL1 and WSL2 distributions
- **Improvement:** when running WSL2 applications, a graphical browser allows you to easily browse the distribution filesystem
- **Improvement:** when running WSL2 applications, you can use the "remote monitoring" bar to monitor your WSL2 distribution
- **Improvement:** improved remote monitoring toolbar compatibility with systems where the "sleep" command does not work
- **Improvement:** improved SCP browser compatibility with systems where the "ls" command displays "?" when it cannot list a file
- **Improvement:** in WSL, the TERM variable is now set to "xterm-256color" for compatibility with extended terminal color schemes
- **Improvement:** checking "Adapt remote DPI" setting in RDP sessions will no longer open the session fullscreen but in a detached window instead
- **Improvement:** your DPI settings are now automatically adapted when you connect to a remote Windows 10 desktop using RDP, even when you switch to another monitor
- **Improvement:** added the "autoscale" setting in RDP sessions which allows to automatically adapt the remote desktop to local resolution
- **Improvement:** added the "redirect microphone" setting in RDP sessions which allows redirecting the default local audio capture device to the remote server
- **Improvement:** added support for link-local IPv6 addresses with specified network adapter in SSH sessions with jump hosts
- **Improvement:** for PRO users, the customizer program is now able to import your "*.mxtpro" files, in order for you to easily apply any previous customization
- **Improvement:** for PRO users, there are now tooltips on each security settings in order to give more details about each option
- **Improvement:** for PRO users, there is a new "disable X11 remote access" setting which allows forcing X11 server to be bound to localhost (loopback) network only
- **Improvement:** added a right-click menu on the remote monitoring bar in order to select the items to monitor (CPU, RAM, Partitions, File descriptors, ...)
- **Improvement:** added 2 options into the remote monitoring right-click menu in order to copy or save the remote server information as text
- **Improvement:** added a menu entry in order to disable Forced-ASLR on MobaXterm local terminal tools and utilities
- **Improvement:** improved the speed of the "Quick connect" feature, especially when you have many sessions (more than 1000)
- **Improvement:** added some more checks at startup in case the "Documents" folder is a network path which is not immediately available
- **Improvement:** a new configuration setting "RemoteMonitoringCompatibleMode" (in the "SSH" section) allows the remote monitoring feature to work properly with FISH shell
- **Improvement:** the local GIT prompt is now in blue by default instead of red for better readability
- **Improvement:** inform the user in the terminal that a workaround exists when a graphical application fails to start because it was run using "sudo" or "su"

- **Improvement:** improved some of the MobaFont glyphs for better readability on HD and High DPI monitors
- **Improvement:** the "MobaXterm" folder is no more created into "MyDocuments" at MobaXterm startup if you choose the "AppData" folder for MobaXterm profile
- **Improvement:** startup speed has been slightly improved by avoiding some useless disk access, threading access to plugins, and setting main form DPI earlier
- **Improvement:** improved creation speed of SpinEdit and WebLabel graphic components
- **Improvement:** improved speed of upload and download transfers in SFTP sessions
- **Improvement:** modified X server startup command when MobaXterm runs into App-V in order to prevent a shell console from being created
- **Improvement:** removed the green highlighting color when the prompt is just a "#" character
- **Improvement:** added a new "UseOriginalSshAgent" setting in the "SSH" section of the configuration file, in order to use OpenSSH agent instead of Pageant
- **Improvement:** added some more icons for sessions and folders
- **Bugfix:** in some specific conditions, pressing the "ESCAPE" key to close some dialog windows sometimes did not work
- **Bugfix:** when opening twice the same SSH session with SSH-browser set to SCP, the "Follow terminal" feature used to follow only the 1st opened session
- **Bugfix:** after having copied a session from the "CUSTOM" tree to the "USER" tree, the new session is immediately saved in case MobaXterm is closed after that
- **Bugfix:** fixed some issues when MobaXterm is run from a Unicode PATH or when the profile directory is set to a Unicode PATH
- **Bugfix:** in MOSH sessions, the "Charset" and "Prediction type" settings were incorrect when the session was created using the Customizer
- **Bugfix:** fixed an "assertion failed" error message if the "Answerback" feature was manually modified by the user and was set to an empty string
- **Bugfix:** fixed an "assertion failed" error message when starting 2 SSH tunnels configured as remote port forwarding on the same SSH gateway
- **Bugfix:** after clicking on "Refresh shared sessions", the shared sessions defined into the professional customizer were not taken into account
- **Bugfix:** when a WSL distribution was chosen as default shell, right-clicking on a Windows folder and choosing "Open MobaXterm here" did not open MobaXterm into that folder
- **Bugfix:** the macro popup menu was sometimes hidden behind the terminal in detached window mode
- **Bugfix:** Xdmcp failed to start with some specific monitor DPI configurations
- **Bugfix:** in dark mode, the SSH key selection dialog box in the SSH tunnels window was sometimes hidden behind the main window
- **Bugfix:** when right-clicking on a folder and choose "Open MobaXterm here", if the default shell was Cmd or Powershell, the session was not opened into the selected folder
- **Bugfix:** starting a session by typing its name in the terminal sometimes failed when the session definition contained a UTF-8 character
- **Bugfix:** in WSL, the default LOCALE variable was sometimes not set to the chosen default WSL value

Version 20.3 (2020-07-19)

- **New feature:** a new keyboard shortcut (Ctrl+SPACE by default) allows you to quickly choose and run a macro directly from the terminal
- **New feature:** you can now define multiple SSH jump hosts (or SSH "gateways") for SSH, Telnet, VNC and RDP sessions
- **Improvement:** default syntax highlighting definition for terminals (local or remote) has been greatly improved with enhanced support for shell scripts and network devices
- **Improvement:** added dark mode to MobaTextEditor

- **Improvement:** macros are now encrypted using your Master Password, in order to keep sensitive information confidential
- **Improvement:** added a way to set a named pipe instead of a real COM port in Serial sessions (useful for connecting to virtual COM ports)
- **Improvement:** added an experimental setting in browser sessions in order to choose "Firefox" or "Chrome" browser engines
- **Improvement:** improved detection of running MobaXterm sub-processes in order to increase startup speed
- **Improvement:** decreased embedded resources size by compressing them with a better algorithm
- **Improvement:** options set in MobaTextEditor are now remembered after MobaXterm restart
- **Improvement:** added a new syntax for log files in MobaTextEditor
- **Improvement:** MobaTextEditor window size and position is properly reset if a change in monitors configuration is detected
- **Improvement:** when recording a macro, if you paste some text, it is now recorded into the macro
- **Improvement:** better support for "docker" with bash completion, automatic terminal and DISPLAY setting
- **Improvement:** better support for kubernetes "kubectl" command when run from local terminal
- **Improvement:** added a link to the "winpty" tool, which allows running commands in "DOS-mode"
- **Improvement:** the "Use Windows PATH" and "Use icons cache" options are now set by default
- **Improvement:** added 2 new fun terminal games, soliterm and termwalk
- **Improvement:** increased speed of shared sessions refresh
- **Improvement:** improved SCP transfer speed by disabling compression when the file to be transferred is already compressed
- **Improvement:** increased stored credentials retrieval speed, which leads to faster SSH authentication
- **Improvement:** added a new setting in "File/folder" sessions in order to add command-line switches to the external program
- **Improvement:** added some more information to the hint which is displayed when the mouse cursor is over a session
- **Improvement:** when a SSH connection is made on a disabled tab, automatic switch to this tab after successful SSH connection is now disabled
- **Improvement:** added more information like stack trace into MobaXterm log file in case of unhandled exception
- **Improvement:** when you start a Windows command in ZSH (64 bits) shell (e.g. ping or ipconfig), special characters are now properly displayed
- **Improvement:** you can now start PowerShell 7 from the local terminal by typing the "pwsh" command if you have it in your Windows PATH
- **Improvement:** in CMD sessions, the Ctrl+C character is no more displayed in the terminal
- **Improvement:** user keyboard shortcuts are now displayed in terminal right-click menu
- **Improvement:** removed executable link to the deprecated Windows library "version.dll"
- **Improvement:** autodetection of buggy SSH servers which send inconsistent ED25519 hostkey signatures and automatically switch to RSA hostkey
- **Improvement:** changed executable SHA1 signature algorithm to dual signature (SHA1 / SHA256)
- **Improvement:** improved some icons for better compatibility High-DPI monitors
- **Improvement:** when you launch PowerShell from within MobaXterm terminal, the keyboard and colors configuration are automatically set
- **Bugfix:** fixed some connections errors when using an SSH jump host to connect to an IPv6 SSH server
- **Bugfix:** fixed a potential issue when checking the "Remember me" setting in the Master Password dialog box
- **Bugfix:** when the "cache icons" setting was enabled, icons colors were not changed when modifying black intensity in dark mode
- **Bugfix:** syntax highlighting was disabled on the first visible line of the terminal
- **Bugfix:** free memory earlier after unpacking resources (instead of waiting for the end of the whole unpacking process)

- **Bugfix:** when you close a popup window using Escape key, the key sequence is no more transferred to the terminal
- **Bugfix:** fixed issues during folders conversions to "CurrentPath" or "MyDocuments" folders
- **Bugfix:** the title bar was white when dark mode was activated on latest Windows 10 update of May 2020

Version 20.2 (2020-04-10)

- **Improvement:** better detection of Multi-Factor Authentication (MFA) when authentication code is requested before password
- **Improvement:** the download location of SSH-browser is now remembered after restarting MobaXterm
- **Improvement:** the screensaver has been updated in order to decrease CPU consumption
- **Improvement:** the penguins of the screensaver have been updated for HighDPI monitors support
- **Improvement:** improved compatibility with screen and tmux by specifying a proper default folder for their socket
- **Improvement:** added a new "Use icons cache" setting in order to improve MobaXterm graphical interface speed
- **Bugfix:** when upgrading, the MSI installer sometimes deleted old files without installing new ones
- **Bugfix:** fixed a crash in remote monitoring bar which occurred when messages received from remote server were too long
- **Bugfix:** fixed a leap year bug in FTP/SFTP sessions which occurred only on 29th of february
- **Bugfix:** the dropdown session tree (under the yellow "Sessions" button) was sometimes not updated after a session modification

Version 20.1 (2020-02-28)

- **Improvement:** fixed some slowness issues when a stored SSH key is located on a network share that no more exists
- **Improvement:** SSH connections to inconsistent servers that send improper SSH signature are tried in SSHv2 by default
- **Improvement:** added some more supported screen resolutions for RDP sessions
- **Improvement:** use a light color by default in Powershell sessions for command line switches, in order to make them more readable
- **Bugfix:** a master password was requested at each startup when passwords were stored in MobaXterm whereas the option to store passwords was set to "never"
- **Bugfix:** fixed the display of serial (COM) sessions speed which could be wrong when switching between different sessions with different speeds
- **Bugfix:** fixed a typo in the master password window ("loose" instead of "lose")
- **Bugfix:** fixed a connection issue with SSH keys, when inconsistent passphrase was stored into MobaXterm

Version 20.0 (2020-02-15)

- **Improvement:** by default, MobaXterm autodetects if Windows is in bright or dark mode and adapts its default settings accordingly
- **Improvement:** increased MobaXterm startup speed and removed splash screen when using an installed version or a persistent slash folder

- **Improvement:** increased MobaXterm closing speed, by replacing a very slow Windows folder cleanup function by some enhanced code
- **Improvement:** added an option in the "Display" tab of global settings window in order to choose if you want to round out borders for tabs
- **Improvement:** MobaXterm now allows you to use a Master Password even on Home Edition
- **Improvement:** use of Master Password is now mandatory for your stored passwords
- **Improvement:** added a "Remember me on this computer" option in the Master Password prompt at MobaXterm startup
- **Improvement:** when setting a graphic theme in the Customizer, the chosen theme is previewed in the Customizer itself
- **Improvement:** enhanced tabs bar (paint speed, antialiased rendering) and macros sidebar (paint speed, antiflickering)
- **Improvement:** added a new setting in macros edition in order to select the delay which will be used between each simulated keystroke
- **Improvement:** when recording a new macro, MobaXterm now tries to detect the command you typed and propose a macro title accordingly
- **Improvement:** several small improvements in macros edition window: decreased default delay, minified text for INI storage
- **Improvement:** added a new "apt-get" command which is faster and easier to use
- **Improvement:** if you type an unknown command in local BASH terminal, MobaXterm detects if it can be installed using apt-get
- **Improvement:** when dark mode is activated, SFTP and FTP sessions now use dark theme for graphic widgets
- **Improvement:** added a small border around the terminal in order to ease mouse selection
- **Improvement:** better detection of minimum window width in order to set the terminal size to 80 columns and 24 lines by default
- **Improvement:** decreased CPU consumption of terminals, especially when syntax highlighting is turned on
- **Improvement:** upgraded MoTTY by backporting the latest PuTTY modifications
- **Improvement:** improved speed of shared sessions refresh, especially when there are many saved sessions
- **Improvement:** improved speed of new session creation, especially when there are many saved sessions
- **Improvement:** improved speed of session name change, especially when there are many saved sessions
- **Improvement:** auto-detection of UTF-8 character set in FTP sessions
- **Improvement:** prevented some incompatibilities when running MobaXterm from Dropbox or Google Drive folder with multiple accounts
- **Improvement:** enhanced auto-detection of Cisco/HPE/Comware network devices in order to adjust SSH session settings
- **Improvement:** default GIT_EDITOR variable has been set to MobaTextEditor (this can be changed in user ".profile" script)
- **Improvement:** added native support for Windows Subsystem for Linux (WSL) on ARM computers
- **Bugfix:** username of SSH sessions was not properly reset to default after editing a session and selecting saved credentials
- **Bugfix:** when the prompt for saving passwords was shown and if you hit "RETURN" the prompt dialog was canceled instead of being acknowledged
- **Bugfix:** fixed an issue which occurred during the "Save terminal text to file", when the file format was TXT
- **Bugfix:** when typing "tcpdump" or "wireshark" commands in the local terminal, MobaXterm now starts TCPCapture instead
- **Bugfix:** the "Close" button of MobaXterm embedded SSH agent process does no longer quit the process but hides it instead
- **Bugfix:** in some cases, passphrases for SSH keys were not saved after starting SSH tunnels or gateways
- **Bugfix:** fixed a crash error message when a session uses an SSH gateway which does not exist or is unreachable
- **Bugfix:** fixed an issue with the font selection combobox which was not displayed properly with Asian languages

- **Bugfix:** properly detect UTF-8 characters encoding when setting terminal tab titles
- **Bugfix:** in dark mode, the "OpenFile" and "SaveFile" dialog windows can no longer be hidden behind MobaXterm main window
- **Bugfix:** in dark mode, a memory device context which was used for painting main menu was not properly released after use
- **Bugfix:** a double-update issue occurred on terminals when switching from/to MultiExec mode
- **Bugfix:** fixed a dependency issue on the "kinit" local command
- **Bugfix:** fixed an error in Powershell sessions when several commands and a startup directory with spaces were set
- **Information:** changed versions numbering to "year . release_number_in_that_year . maintenance_release_for_this_version . build_number"

Version 12.4 (2019-12-01)

- **New feature:** added a new "dark theme" which is much more reactive than the old skins as it is based on Windows native controls
- **Improvement:** increased the SSH-browser sorting speed, in order to avoid MobaXterm slowdowns when listing folders contents
- **Improvement:** color of the "+" button on the tabs bar changes when mouse hovers it
- **Improvement:** themes can now be applied from the global settings window without restarting MobaXterm
- **Improvement:** enhanced drawing speed of files and folders icons into SSH-browser
- **Improvement:** improvements in popup windows for better compatibility with multiple monitors
- **Improvement:** enhanced graphical controls painting speed when their background is not transparent
- **Improvement:** better detection of core files which had been created with another account and are not writable
- **Improvement:** eliminated some flickering effects from the tabs-based graphical components
- **Bugfix:** prevented SSH-browser to switch to SCP mode when using keyboard-interactive authentication without 2 factor authentication
- **Bugfix:** prevented some issues when running MobaXterm from OneDrive folder and using it with several different computers or accounts
- **Bugfix:** when ctrl+clicking on an URL into the terminal, the URL was not properly detected if its last character was a slash

Version 12.3 (2019-10-08)

- **Security fix:** prohibited the use of URL which do not correspond to a MobaXterm session (fixes CVE-2019-16305)
- **Security fix:** added a comprehensive warning message when opening a session from an URL. This message contains details about the session to be launched and a warning concerning the URL provider.
- **Bugfix:** in the password management window, after showing passwords and closing the form, the password fields are now automatically hidden
- **Bugfix:** RDP size was not calculated properly when launching a remote desktop session while the SSH remote monitoring toolbar was active

Version 12.2 (2019-09-17)

- **Improvement:** slightly modified foreground text color for ls results in order for the text on green background to be readable
- **Improvement:** improved speed of command line SCP and SFTP clients
- **Improvement:** better detection of /tmp folder for SSH random seed temporary file
- **Improvement:** added a Customizer parameter which allows to disable X11 auto-start feature
- **Improvement:** added a Customizer parameter which allows to disable X11 server feature completely
- **Improvement:** improved multi-monitor support with enhanced "save window position" feature
- **Improvement:** added an error message when a connection through a gateway fails because of network failure between client and gateway
- **Improvement:** brought back the "backspace sends Ctrl+H" global setting as many users need it when SSHing from local terminal
- **Improvement:** added some additional checks in order to prevent remote monitoring from being launched several times if SSH connection is too slow
- **Bugfix:** fixed some SSH agent failures with commandline SSH client and SSH key encryption size greater than 2048 bits
- **Bugfix:** fixed a potential issue with some antivirus programs when running CMD or POWERSHELL session within MobaXterm terminal
- **Bugfix:** fixed a bug with RDP sessions, when "HighDPI adaptation" mode and SSH gateway options were set
- **Bugfix:** fixed a status line length bug with Byobu on Ubuntu 18.04
- **Bugfix:** removed the limit in paste buffer, huge paste operations are now performed by chunks to prevent pipes overflows
- **Bugfix:** fixed a potential issue with window closed unexpectedly during Browser sessions
- **Bugfix:** fixed tunnels auto-reconnection feature which failed after network connection cut
- **Bugfix:** fixed crash issues with SSH tunnels and gateways, especially after waking up Windows from sleep/hibernate mode
- **Bugfix:** fixed a connection issue with some Huawei routers which require RSA hostkey first in hostkeys list

Version 12.1 (2019-08-05)

- **Bugfix:** corrected SSH connection failures caused by hardware accelerated encryption
- **Bugfix:** in some specific cases, local terminal output was garbled after a commandline SSH connection and a network error during SSH communication
- **Bugfix:** fixed "ldd" command which was missing some DLLs in its listing
- **Bugfix:** fixed an issue in Windows colors selection dialog resulting in black color being applied in case of dialog failure
- **Bugfix:** fixed an issue with the "cmd" command when it was started from a local terminal
- **Bugfix:** fixed an issue with backslash characters being duplicated in SSH sessions "Execute command" field
- **Bugfix:** fixed an issue with backslash characters being duplicated in SSH sessions "Username" field

Version 12.0 (2019-07-28)

- **New feature:** added a new prompt for local terminal with GIT branch and other useful information
- **Improvement:** added support for ECDSA and ED25519 keys for SSH tunnels and gateways
- **Improvement:** embedded X server updated to latest Xorg source code
- **Improvement:** X11 applications have a new default icon which is different from MobaXterm main icon
- **Improvement:** X server speed has been improved using unused features clean up

- **Improvement:** embedded terminal has been rebuilt from latest PuTTY source code
- **Improvement:** new setting allows to set X server DPI or to set it to "stretch mode" on High DPI displays
- **Improvement:** when pasting multiple lines, a popup window allows you to edit the clipboard content
- **Improvement:** multiple gateways or tunnels connected to the same host use the same SSH connection transport for single authentication
- **Improvement:** increased startup speed by deferring creation of "Settings" and "Sessions" windows
- **Improvement:** when checking "KeepAlive" option, it activates SshKeepAlive but not TCPKeepAlive by default in SSH sessions, tunnels and gateways
- **Improvement:** improved compatibility of MobaXterm terminal with WSL distributions
- **Improvement:** added a new X11 DPI setting in order to force X server DPI value (useful for HighDPI monitors)
- **Improvement:** added YAML syntax coloration in MobaTextEditor
- **Improvement:** added KDE and GNOME in the list of desktop environments for WSL
- **Improvement:** auto-detection of any desktop environment you may have installed in WSL (XFCE4, LXDE, MATE, KDE, ...)
- **Improvement:** added a Customizer setting in order to choose the same folder as application for slash/home directories
- **Improvement:** WSL distributions can now run even if MobaXterm is started from a USB thumb drive
- **Improvement:** after installing a package using apt-get, the man pages can now be rendered using the built-in "man" command
- **Improvement:** improved compatibility of MobaTextEditor with HighDPI monitors
- **Improvement:** improved terminal support for Powershell and Cmd
- **Improvement:** improved man pages for tools downloaded using apt-get
- **Improvement:** better integration of GIT and CURL commands into the local terminal
- **Improvement:** slightly modified default terminal theme, colors have been softened for a modernized look and feel
- **Bugfix:** Gnome3 and latest version of KDE now start properly with latest Xserver update
- **Bugfix:** prevented tunnels from starting twice when pressing "Start all tunnels" while some tunnels have "Connecting" status
- **Bugfix:** fixed a potential bug which could prevent MobaXterm from stopping when a SSH tunnel is in "not-fully-started" state
- **Bugfix:** tried to avoid garbled graphics in "Sessions" and "Params" windows and to be robust to potential graphic adapters or graphic drivers failures
- **Bugfix:** limited paste buffer size to prevent terminal from crashing if the paste buffer is too big
- **Bugfix:** avoided a potential issue when closing MobaXterm while a Web Browser session is running
- **Bugfix:** the HTTP or SOCKS proxy type was not properly saved in Telnet sessions
- **Bugfix:** fixed an issue with tab colors which occurred when unselecting a color or duplicating an existing colored tab
- **Bugfix:** fixed a potential bug which could prevent connecting to FTPS server with TLS enabled
- **Bugfix:** fixed a potential issue with macros containing "percent" character, when macro was created in "Sessions" window
- **Bugfix:** in WSL sessions, the "USER" environment variable was incorrectly set to the distribution name instead of the user name
- **Bugfix:** main window had some random issues with borders being shifted by a few pixels instead of sticking to Windows desktop edges
- **Bugfix:** fixed a potential issue with a window displayed when no SSH server name or IP address was provided
- **Bugfix:** fixed a display issue when editing a SSH tunnel with a username containing "@" characters
- **Bugfix:** fixed the CURL command with https websites
- **Bugfix:** fixed completion for GIT commands in the ZSH 64-bits package
- **Bugfix:** you can now select and edit multiple files in the SSH-browser
- **Bugfix:** fixed an issue with FVWM2 startup and X server
- **Security fix:** fixed a potential vulnerability with MobaXterm URI handler which could allow to execute some arbitrary commands in MobaXterm when clicking on a URL link (fixes CVE-2019-13475)

- **Security fix:** fixed a potential issue when a SSH key was used, the SSH key and passphrase could stay in memory during the life of MobaXterm process instead of being deleted immediately (fixes CVE-2019-7690)

Version 11.1 (2019-01-20)

- **Improvement:** eliminated flickering effects in remote monitoring bar
- **Improvement:** improved MobaXterm startup speed by decreasing resources size
- **Improvement:** improved size of main executable by increasing compression of embedded resources
- **Improvement:** Windows PATH is now appended to the terminal PATH in the dropdown terminal (Ctrl+Alt+M)
- **Improvement:** you can now manually select COM interface speed for Serial sessions
- **Improvement:** you can now manually type a path in folder selection dialogs
- **Improvement:** improved "ShiftFnKeys" terminal type with proper key sequences for Shift+F9 and Shift+F11
- **Improvement:** in TCPCapture tool, a new interactive console menu allows you to choose which network adapter to use for capture
- **Bugfix:** fixed a potential issue with AltGr key into RDP sessions
- **Bugfix:** fixed checkboxes which were not properly painted when using very high DPI (more than 250%)
- **Bugfix:** typing the first character of a file/folder in SSH-browser now gets you to that file/folder
- **Bugfix:** files and folders were displayed twice when pressing F5 without releasing the key in SSH-browser (SCP mode)
- **Bugfix:** fixed a potential freeze issue when trying to connect to a SFTP session and authentication fails 3 times
- **Bugfix:** middle-click on an SSH-browser element copies full path to the terminal
- **Bugfix:** fixed setxkbmap command which was not working in local terminal
- **Bugfix:** prevented MobaXterm for asking twice to close open sessions when closing MobaXterm

Version 11.0 (2018-11-01)

- **New feature:** native integration of WSL (Windows Subsystem for Linux) into MobaXterm - run WSL into MobaXterm advanced terminal instead of Windows console and run graphical applications thanks to MobaXterm X server
- **New feature:** new experimental local terminal package "CygUtils64.plugin" comes with ZSH shell, 64-bit console utilities and improved apt-get packages manager - activate it from global settings, "terminal" tab
- **New feature:** added a new global setting in order to choose which local shell to use (Bash, ZSH (64-bits), Cmd, Powershell, or one of the Linux WSL distributions)
- **Improvement:** enhanced the Remote Monitoring bar to display information in red or orange when the values reach critical levels
- **Improvement:** improved SSH-browser performances, especially when remote folder contains many files/folders
- **Improvement:** improved sessions tree performances, especially when number of sessions is greater than 100
- **Improvement:** reworked the global settings window for easier settings identification
- **Improvement:** improved compatibility of "Follow terminal folder" feature with remote Unix/Linux environments
- **Improvement:** added a prompt dialog in order to assign right-click action (context menu or paste) the first time you right-click into the terminal
- **Improvement:** updated OpenSSH client to version 7.5 when the new local terminal package is selected

- **Improvement:** updated "top", "ps", "ldd", "kill", and other core commands when the new local terminal package is selected
- **Improvement:** you can now specify the color of each tab by right-clicking on the tab or by specifying a custom tab color for each session
- **Improvement:** improved MobaXterm startup speed by using lazy loading for resources which may be unused
- **Improvement:** prevent the remote monitoring bar from disappearing temporarily when switching between tabs
- **Improvement:** updated icons for files/folders in SSH-browser and (s)FTP sessions
- **Improvement:** updated tray icon to the new MobaXterm flat logo
- **Improvement:** after choosing Bash or Zsh terminal in global settings, if you do not have the CygUtils plugin on your computer, a popup window prompts you to download it
- **Improvement:** updated PuTTY-based SSH engine to the latest version
- **Improvement:** adapted default settings to Brocade switches on SSH sessions
- **Improvement:** updated terminal smart selection to better detect URLs and delimiters when using default settings
- **Improvement:** added 5 manual Ini settings under the "Misc" section in order to control smart selection behavior (ForcedLeftDelimChars, ForcedRightDelimChars, DisabledLeftDelimChars, DisabledRightDelimChars and SmartDelimsForUrls)
- **Improvement:** with default syntax, URLs are now underlined - remember that you can ctrl+click them to open in default browser
- **Improvement:** improved size of main executable by removing unused code and optimizing several subfunctions
- **Improvement:** decreased latency when navigating through tabs, especially for SSH sessions
- **Improvement:** tooltips in the Remote Monitoring bar are now displayed using fixed font if necessary
- **Improvement:** disk usage tooltip values are displayed in human-readable format
- **Improvement:** try to detect Nexus devices and to avoid startin SCP when connecting through SSH
- **Improvement:** improved SFTP / FTP / S3 sessions performances, especially when remote folder contains many files/folders
- **Improvement:** after terminal has been paused (Ctrl+S), any key will "unfreeze" it. Many users thought that terminal was frozen after accidentally hitting Ctrl+S
- **Bugfix:** after setting the graphical interface elements size from global settings, modifications are properly applied at first MobaXterm restart
- **Bugfix:** fixed detection of disk space in remote monitoring when "df" returns results splitted across multiple lines
- **Bugfix:** when hitting "R" to reconnect a SSH session, if the gateway had been disconnected, MobaXterm will try to reconnect it first
- **Bugfix:** fixed some checkboxes placements, elements sizes and placements for High-DPI monitors
- **Bugfix:** fixed syntax highlighting which was disabled when running systemctl commands
- **Bugfix:** fixed VNC connections issues through SSH gateway (jump host) when new VNC engine was selected
- **Bugfix:** fixed an issue with hidden sidebar when it was set to the right and monitor DPI was above 144 pixels per inch
- **Bugfix:** MobaXterm now handles properly pipes characters in sessions folders names
- **Bugfix:** MobaXterm now handles properly arobace characters in tunnels usernames
- **Bugfix:** MobaXterm now handles properly arobace characters in stored passwords usernames
- **Bugfix:** fixed some visual flickering effects which occured on some buttons when mouse was over them
- **Bugfix:** the SSH-browser no longer follows the wrong terminal when the same SSH session is connected twice
- **Bugfix:** removed an unnecessary delay when waiting for the X server to start up
- **Bugfix:** passwords defined for VNC, telnet or FTP services were sometimes lost after restarting MobaXterm
- **Bugfix:** fixed some flickering effects which occured into Home tab after MobaXterm startup

- **Bugfix:** upload of multiple files in SSH-browser no longer gets stuck when "SSH preserve files dates" setting is activated
- **Bugfix:** fixed remote edition of multiple files in SSH-browser when remote files had the same names
- **Bugfix:** aligned sessions tree to the left at start up
- **Bugfix:** fixed some issues with MobApt when downloading old packages
- **Bugfix:** disabled "Remote monitoring" feature for SSH connections to Cisco routers
- **Bugfix:** "MobaFoldersDiff" tool has been re-added, after fixing the startup issue
- **Bugfix:** added "VISUAL" environment variable in order to fix potential issues with "crontab" command

Version 10.9 (2018-08-02)

- **Improvement:** when SSH-browser is disabled, remote-monitoring feature is now also disabled, in order to avoid issues on Cisco routers
- **Improvement:** the experimental CygUtils64 plugin can be used with MobaXterm. If you want to test it, you can download it at <https://mobaxterm.mobatek.net/CygUtils64.plugin>
- **Bugfix:** fixed the "live-unpack" mechanism for local terminal plugins - some plugins were not working properly in "installed mode" or when using "persistent root"
- **Bugfix:** fixed some issues with X server detection which led to the "X" icon to stay red whereas X11 server was started
- **Bugfix:** fixed some issues with "Follow terminal folder" when remote monitoring was enabled

Version 10.8 (2018-07-07)

- **Bugfix:** fixed the error message which occurred when running the graphical package manager "MobApt"

Version 10.7 (2018-07-01)

- **Improvement:** updated "mobapt" package manager with new versions of downloadable tools and a fix for the "package not found" errors
- **Improvement:** X11 programs are now shown in front of MobaXterm window, you do not need to click on the taskbar button in order to bring these windows to the front
- **Improvement:** backup of MobaXterm.ini file is now created faster and more securely, write operations are verified to ensure that the file is properly created on disk
- **Bugfix:** fixed height of elements in SSH keys list in High-DPI mode
- **Bugfix:** fixed remote inspector elements sizes in High-DPI mode
- **Bugfix:** backup of MobaXterm.ini file is now compatible with any archiver, even 7-zip

Version 10.6 (2018-05-27)

- **New feature:** "Remote Monitoring": continuous display of your server resources usage (CPU, RAM, NET, Disk, ...) in a small bar below SSH terminal. This feature is experimental and does not work with any Unix system
- **Improvement:** enhanced browse-for-folder dialogs and prevent them from freezing

- **Improvement:** enhanced local folders browsing in FTP/SFTP sessions and prevent them from freezing
- **Improvement:** new "DisableAccountsLookup" option in MobaXterm.ini file prevents MobaXterm from building Unix-like "/etc/passwd" file at start-up
- **Improvement:** Pro edition only: added new customizer settings in order to disable Aws S3, Sftp or Mosh sessions
- **Improvement:** Pro edition only: added new customizer settings in order to disable Iperf or Cron services
- **Improvement:** new "MacrosDelay" option in MobaXterm.ini file allows to tune delay (in milliseconds) between each keystroke when running macros
- **Improvement:** added the "-justunpack -quiet" commandline switches which prevent MobaXterm from showing a popup window after unpacking core files
- **Improvement:** new global setting: "Preserve files dates during SSH-browser transfers"
- **Improvement:** new setting for SFTP sessions: "Preserve files dates"
- **Improvement:** better detection of GMT time for files/folders displayed in SSH-browser
- **Improvement:** show information message if trying to run local terminal while ASLR is forced
- **Improvement:** the paste confirmation popup now shows the text which is about to be pasted
- **Improvement:** added "Do not show again" checkbox in the paste confirmation popup message
- **Bugfix:** when a folder is uploaded through SSH-browser (SCP) over an existing folder with same name, folders contents are now merged

Version 10.5 (2018-01-07)

- **Improvement:** new experimental embedded VNC engine for VNC sessions with improved rescaling, speed, keyboard and clipboard handling
- **Improvement:** slightly improved overall speed by removing some regular checks on MobaXterm main interface
- **Improvement:** added password authentication for the embedded basic telnet server (fixes CVE-2017-15376)
- **Improvement:** added a popup warning when starting clear-text embedded services such as telnet, ftp, tftp or vnc
- **New feature:** added a confirmation popup message for each connection on telnet or ftp services
- **Improvement:** updated documentation with latest features and frequently asked questions
- **Improvement:** added a workaround for long startup on computers with slow or broken AD users/groups listing
- **Improvement:** improved documentation generation feature by taking fast screenshots of program windows
- **Improvement:** improved professional generator tool on computers where MSI packages extraction is disabled
- **Improvement:** better detection of pre-configured persistent folders on custom version, in order to display a popup when trying to modify them
- **Improvement:** better detection of network equipments in order to automatically enable/disable supported features in SSH sessions (X11-forwarding, SSH-browser)
- **Improvement:** improved rendering of icons and buttons, especially with High DPI monitors
- **Improvement:** added F2 shortcut for quick rename of sessions, but also files and folders in SSH-browser
- **Improvement:** added a workaround for the "missing wfapi.dll" message at MobaXterm startup which occurs with old Citrix installations
- **Bugfix:** session edition was disabled when session tree sidebar was on the right side
- **Bugfix:** removed a bug on drag and drop operations in RDP sessions
- **Bugfix:** after choosing a skin in the customizer, MobaXterm welcome message is no more broken
- **Bugfix:** bookmarks saved to .moba files were not started correctly with previous version
- **Bugfix:** corrected a potential issue with the "grep" command with Windows 2000 and Windows XP
- **Bugfix:** corrected a potential issue with custom session icons with a resolution lower than 48x48

- **Bugfix:** if MobaTextEditor last instance was moved to 2nd monitor and you run it again with a single monitor, it will be moved to 1st monitor
- **Bugfix:** in settings section of customizer program, the main window was blurred in some specific cases when a skin was used
- **Bugfix:** fixed a potential scroll issue with mouse wheel in SFTP or FTP sessions
- **Bugfix:** after disabling tools from the customizer program, MobApt is properly disabled

Version 10.4 (2017-08-24)

- **New feature:** added support for shared sessions files: you can export some sessions to a file, put it in a shared location, and share it among your team members
- **New feature:** added import from SuperPuTTY: you can now right-click on the session tree and choose "Import SuperPuTTY sessions"
- **New feature:** added experimental support for Amazon AWS S3 sessions: you can browse your S3 buckets using this graphical session type
- **Known issue:** session edition is disabled when session tree sidebar is on the right side. **Workaround:** move sessions tree to the left and restart MobaXterm
- **Improvement:** a confirmation message can be displayed before pasting multiple lines to the terminal, in order to avoid unexpected lines execution in interactive shell
- **Improvement:** if a commandline tool is installed using mobapt and provided by busybox at the same time, MobaXterm shell now chooses the non-busybox tool
- **Improvement:** added a right-click menu in the password manager in order to copy entry content
- **Improvement:** modified the embedded FTP server for better compatibility with clients and enhanced transfer speed
- **Improvement:** improved syntax coloration of standard keywords (OK/warning/error/...)
- **Improvement:** Windows 10 "Scroll inactive windows when I hover over them" feature is now supported
- **Improvement:** added host fingerprint to "remote host identity changed" warning message for SSH sessions
- **Improvement:** added a new setting which allows to validate host identity at first SSH connection
- **Improvement:** added "SpectrWM" to the list of available remote desktops in SSH sessions
- **Improvement:** added new setting which allows to hide the popup terminal instead of closing it in order to avoid losing previous terminal commands
- **Improvement:** a "permission denied" error message is now displayed when modifying a remote file through SCP without proper permissions on file/folder
- **Improvement:** improved IPv6 support for SSH, SFTP, FTP sessions, and for SSH gateway servers (jump hosts)
- **Improvement:** improved IPv6 support for SSH tunnels created in MobaSSHTunnel tool
- **Improvement:** improved fonts rendering and hinting, especially on progress bars
- **Improvement:** enhanced mouse scroll detection in MobaXterm graphical interface and terminals
- **Bugfix:** fixed HOME and END keys not working properly in MOSH session
- **Bugfix:** fixed show/hide hotkey (Ctrl+M) which did not work if another application was displayed on top of screen Z-order
- **Bugfix:** fixed some dialog windows which were displayed on the wrong screen in multi-monitors mode
- **Bugfix:** fixed popup console which was displayed on the wrong screen in multi-monitors mode
- **Bugfix:** fixed taskbar button for MobaXterm application which was displayed on the wrong screen in some specific cases on Windows 10
- **Bugfix:** fixed shell scripts sourcing in /etc/profile.d folder at shell startup
- **Bugfix:** fixed a persistent Windows warning message if CapsLock is activated in Master Password popup window
- **Bugfix:** embedded FTP server does not allow users to retrieve a file outside chosen root directory anymore
- **Bugfix:** fixed MobaXterm window not starting on 2nd monitor if it was maximized during previous stop

- **Bugfix:** fixed "Size" and "Last modified" columns which were not resizable in SFTP sessions
- **Bugfix:** fixed some missing entries in "ascii" command
- **Bugfix:** fixed some issues with mobapt postinstall scripts
- **Bugfix:** fixed keyboard shortcuts "F1" to "F12" which were not working properly
- **Bugfix:** main window dimensions were not restored when MobaXterm graphical interface was set to "Compact mode"
- **Bugfix:** fixed a scroll bug with some laptop touchpads

Version 10.2 (2017-03-20)

- **Vulnerability fix:** embedded TFTP server does not allow users to retrieve a file outside root directory anymore: fixes CVE-2017-6805

Version 10.1 (internal release)

- **Improvement:** created MobaXterm Generator program for professional edition: it is now easier to generate MSI installer or portable package for Pro users
- **Improvement:** took professional customization settings out of MobaXterm executable, in order to keep pro executable and MSI installer signed
- **Improvement:** merged MobaXterm and Customizer executables: the customizer can now be tested from "Help" menu in Home edition
- **Bugfix:** the manual "check for update" feature was always detecting an outdated version, even when MobaXterm version was up to date
- **Bugfix:** after zooming/unzooming terminal font, the terminal window was not placed properly
- **Bugfix:** fixed the "RDP for High-DPI" feature

Version 10.0 (2017-02-18)

- **New feature:** added new "Flat design" icons theme, for a simple and clear look and feel
- **New feature:** you can now select one of the 2 icon themes from MobaXterm global settings: "Flat design" (new theme) or "Crystal" (old theme)
- **New feature:** you can now set your own custom session icons for each entry in the "Saved sessions" tree
- **New feature:** you can now increase MobaXterm graphical interface elements size from global settings window for better readability
- **New feature:** easily show/hide MobaXterm using a new keyboard shortcut (Ctrl+M by default): let MobaXterm run hidden and instantly show it when you need it using a single keystroke
- **New feature:** added a simple semi-transparent popup terminal which can be shown/hidden using a simple keyboard shortcut (Ctrl+Alt+M by default), like the great "Guake" top-down console
- **Improvement:** enhanced transfer speed for SSH-browser, when "SCP (enhanced speed)" setting is chosen in session parameters
- **Improvement:** added identification of Cisco devices which do not support SSH-browser for automatic override
- **Improvement:** new global setting under "Terminal" tab allows to log terminal content with a timestamp for each line
- **Improvement:** enhanced Byobu terminal type support by properly handling Shift+F9, Ctrl+F9, Shift+F11 and Ctrl+F11 sequences

- **Improvement:** added "Print" feature with syntax coloration for MobaTextEditor
- **Improvement:** improved graphical interface for advanced terminal settings section, in session editor
- **Improvement:** when clicking on the "Credentials" button in session settings, the "credentials" section is displayed by default
- **Improvement:** improved mouse input handling for RDP sessions (move windows and drag/drop operations now work in any session)
- **Improvement:** improved custom logo drawing when logo file is in PNG format with alpha transparency enabled
- **Improvement:** added the "GIT_EDITOR" environment variable set to "/bin/vim"
- **Improvement:** improved interface speed when "Track terminal changes" is enabled
- **Improvement:** improved overall SSH speed by modifying RX/TX buffers handling
- **Improvement:** ctrl+end now works properly in "less" program
- **Improvement:** files containing ":" on remote Linux servers can now be downloaded (":" characters are replaced by "_")
- **Improvement:** added a new undocumented INI setting "MobaNoAclForDrives": if set to "1", local terminal will not use ACLs under /drives
- **Improvement:** new setting to allow or disallow multiple MobaXterm instances
- **Improvement:** added a basic "Ping host" menu entry on sessions
- **Improvement:** added 230400 speed setting for serial (COM ports) connections
- **Improvement:** on 64-bit systems, Powershell sessions no longer use 32-bit version of Powershell, but 64-bit version instead
- **Improvement:** added the "png2ico" terminal tool
- **Improvement:** improved MobaXterm start up speed
- **Improvement:** decreased MobaXterm executable size
- **Improvement:** redesigned MobaXterm logo
- **Bugfix:** eliminated some potential flickering effects or visual glitches on tabs and buttons when no skin was selected
- **Bugfix:** at MobaXterm startup focus is set to the master password popup window, even if another window was focused before
- **Bugfix:** fixed file dates in SSH-browser with SCP protocol enabled: in some specific cases, the year was not displayed properly
- **Bugfix:** fixed an unexpected error message in SSH-browser, with SCP protocol enabled, when file path length is more than 128 characters
- **Bugfix:** fixed a potential file corruption when downloading files in ASCII mode from some Unix servers using SFTP protocol
- **Bugfix:** fixed SSH-browser download of multiple folders, when some sub-folders are hidden
- **Bugfix:** when session username contained a backslash, session logs were created under a subdirectory
- **Bugfix:** eliminated a potential freeze after restarting a terminal session
- **Bugfix:** reconnection message was sometimes displayed even if "Display reconnection message" box was unchecked in the session settings
- **Bugfix:** removed unexpected error message when cancelling master password after resuming from standby mode
- **Bugfix:** eliminated some potential flickering effects or visual glitches into VNC sessions when skins were enabled
- **Bugfix:** fixed a bug with the "Delete all passwords" button: when no username was specified, some passwords were not deleted
- **Bugfix:** fixed Socks5 proxy connections for FTP sessions which were using SOCKS4 protocol instead of SOCKS5
- **Bugfix:** fixed some popup windows which sometimes went behind main window
- **Bugfix:** fixed the "tput" commandline tool which failed when using "tput cup 1" for instance
- **Bugfix:** in some specific cases, sessions did not start and "New session" window was shown after scrolling down sessions tree and starting the top entry
- **Bugfix:** fixed display glitch with residual text in the bottom and right margins of terminals after resize
- **Bugfix:** credentials can no longer be created with "@" character in their names, in order to avoid conflicts

- **Bugfix:** under Windows XP, checkboxes under the "Terminal" tab of global settings were grey
- **Bugfix:** replaced ":" character in session log file names for sessions using IPv6
- **Bugfix:** multi-selection in sessions tree was not properly rendered when a skin was active

Version 9.4 (2016-10-26)

- **New feature:** MobaXterm supports native Windows GSSAPI authentication in SSH-browser, SSH-Gateway (jump hosts), SSH-tunnels, SSH and SFTP sessions, when GSSAPI is checked in MobaXterm global settings
- **New feature:** a new button in MobaXterm home page allows you to recover sessions which had been opened in previous instance of MobaXterm
- **New feature:** it is now possible to assign comments to sessions and to use them in the "Quick connect" field in order to find a session
- **Improvement:** added support for the third-party "MIT Kerberos" library for GSSAPI authentication in SSH sessions, SSH-browser, SSH-Gateway, SSH-tunnels and SFTP sessions
- **New feature:** a new button in MobaXterm SSH-browser allows you to switch to "SUDO" mode in the SSH-browser (this button is available only if "Use SCP protocol" is checked in session settings)
- **Improvement:** improved default keywords, unix and cisco network syntax coloration definitions with many new patterns detected
- **Improvement:** the "new session" window is now displayed when double-clicking on the "Saved sessions" tree node
- **Bugfix:** with some specific devices, the port scanner indicated port 5632 as being open whereas it was not
- **Improvement:** ssh stored passwords now use port number in order to allow different ssh passwords on different network ports
- **Improvement:** added "curl" commandline tool for client-side url transfers
- **Improvement:** improved SSH, SSH-browser, SSH-gateway and SFTP compatibility with regard to different server-side GSSAPI implementations
- **Bugfix:** when starting a session as a detached form, the new window was sometimes created off screen
- **Improvement:** improved accuracy of tabs drag and drop actions to avoid detaching tab instead of moving it
- **Improvement:** columns in the SSH-browser can now be sorted in reverse order
- **Improvement:** sort preferences in the SSH-browser are now saved in MobaXterm preferences
- **Improvement:** slightly improved startup speed by removing some needless files decompression
- **Improvement:** choosing "Properties" in the SSH-browser now displays filesizes in Bytes
- **Improvement:** added a "Stay on top" button for fullscreen windows in order to toggle "window always in foreground" mode
- **Improvement:** added a new "iperf" daemon in the servers list
- **Bugfix:** fixed some issues with apt-get on Windows platforms newer than Windows XP
- **Improvement:** files and folders permissions can now be changed in SFTP sessions by right-clicking on files/folders
- **Improvement:** it is now possible to disable "MobaSSHTunnel" from the professional "Customizer" program
- **Improvement:** it is now possible to force users to set up a "Master Password" from the professional "Customizer" program
- **Improvement:** when you right-click on a folder and start MobaXterm from here, the session opens up in a new tab instead of starting a new MobaXterm instance

Version 9.3 (2016-09-19)

- **Bugfix:** fixed an issue with SSH sessions using SCP protocol and SSH agent: in some specific cases, sessions were closed just after authentication
- **Improvement:** added some enhancements to the embedded SSH agent in order to support some newer key algorithms
- **Improvement:** enhanced SSH-browser transfer speed when using SCP protocol

Version 9.2 (2016-09-18)

- **New feature:** you can now create your own custom syntax highlighting definitions for the terminal, using the embedded syntax customization tool
- **New feature:** added line delay option while pasting to the terminal. This gives some time for slow remote systems to handle pasted text properly
- **Improvement:** enhanced startup speed when many sessions are present
- **Improvement:** enhanced "network" syntax highlighting
- **Improvement:** added a graphical editor for files/folders permissions through SSH, SFTP or SCP
- **Bugfix:** corrected SSH-browser display of "special files" (block device, ...) when SCP protocol is checked
- **Improvement:** users are now prompted for master password when resuming from a locked screen (for better security)
- **Improvement:** enhanced SSH-browser display of "parent folder"
- **Bugfix:** Mosh sessions are forced to IPv4 only (IPv6 is not yet supported by Mosh client/server)
- **Improvement:** hidden files/folders are now faded out in SSH-browser
- **Improvement:** added 1920x1200 RDP resolution setting
- **Improvement:** added "PERL" and "SQL" terminal syntax colorations
- **Improvement:** added "i3" and "wmii" remote desktops in SSH advanced settings
- **Improvement:** "Ubuntu Bash 4 Windows" sessions now start in the proper "HOME" folder
- **Improvement:** backup archive for configuration files now stores the last 16 configurations (instead of 8)
- **Bugfix:** fixed a potential tabs drag/drop issue when "mouse follows focus" feature was activated in Windows Accessibility settings
- **Bugfix:** fixed some issues with html web page generation from sessions list
- **Improvement:** properly support "special" characters in Ubuntu Bash for Windows (WSL): now Home, End, Insert, Delete, F1 - F16 and Ctrl+A - Ctrl+Z keys are properly handled

Version 9.1 (2016-07-01)

- **Improvement:** added automatic scrolling of the sessions tree: you can now move a session to a folder which is not reachable without scrolling
- **Improvement:** added new "Monokai" color scheme for terminal emulator
- **Improvement:** better detection of non-writeable configuration file
- **Bugfix:** fixed a focus issue with RDP sessions when switching from another application to MobaXterm
- **Bugfix:** fixed some small issues when selecting/moving/duplicating sessions from the sessions tree
- **Bugfix:** fixed default home symbolic links which occurred when targets are on a shared folder
- **Improvement:** added "MATE desktop" to the list of remote desktop managers in SSH session settings
- **Improvement:** added some more debugging information for INI file detection, localisation and update
- **Bugfix:** fixed a "freeze" issue which occurred when attempting to perform the "ls -al /usr/./" command
- **Improvement:** added a "-nomultitaskbar" commandline option (in order to force MobaXterm to the first taskbar)
- **Bugfix:** fixed an issue when starting a new PowerShell or Cmd session in "C:": session did not start in "C:", but in default directory instead
- **Bugfix:** resized some folder icons in order for all folder icons to have the same size

- **Improvement:** improved logging information concerning SSH host keys
- **Bugfix:** MobaXterm used to take SSH hosts keys from PuTTY if available, with some potential issues if a host key was modified in MobaXterm but not in PuTTY
- **Improvement:** escape sequence sent when pressing alt+arrow keys in terminal are the same as in standard xterm terminal emulator
- **Bugfix:** in some specific cases, tab titles were displayed in red after disconnection/reconnection
- **Bugfix:** suppressed a transient visual "glitch" on the top buttons bar when a new session was started
- **Improvement:** added a new setting in RDP sessions in order to enable or disable Credential Security Support Provider (CredSSP) for authentication
- **Improvement:** the embedded SSH agent is now launched before SSH tunnels
- **Improvement:** when MobaXterm starts and a tunnel is slow to connect, startup continues without waiting for tunnel connection to terminate
- **Bugfix:** function keys now work properly in "MultiExec" mode
- **Improvement:** SSH-browser with SCP protocol now preserves files permissions after a direct file edition
- **Bugfix:** fixed an issue with "Store password" window which could be activated twice with RDP session
- **Improvement:** enhanced macros at sessions start: now macros can be executed simultaneously when you start multiple sessions
- **Bugfix:** improved SSH tunnels closing function (in some rare cases, some tunnels could leave MobaXterm in a pending state after closing it)
- **Improvement:** number of terminal lines when printing is limited to the last terminal lines in order to save the environment
- **Bugfix:** suppressed an incorrect warning concerning host identification verification when SSHing through a gateway server (SSH jump host)
- **Improvement:** MobaXterm start up speed has been slightly improved
- **Bugfix:** fixed a maximize/restore issue on Windows 10 when multiple monitors are present and a specific taskbar is affected to each monitor
- **Bugfix:** fixed a typo in the Home page on "Professional" word (thanks to Dewi for reporting it)

Version 9.0 (2016-05-04)

- New feature: added support for the new "Ubuntu Bash on Windows" feature (introduced in latest Windows 10 builds). In "Shell" sessions, you can choose between native Bash, Cmd, Powershell and "Ubuntu bash"
- New feature: added terminal activity tracking: icon of terminal tab is displayed with a blue dot if some activity is detected
- New feature: added terminal modification tracking: title of inactive terminal tab is displayed using blue color if something occurred in the terminal
- New feature: added terminal disconnection tracking: title of inactive terminal tab is displayed using red color if session has been disconnected
- New feature: added a new experimental setting in the "File" session type, which allows you to open any file/folder directly into MobaXterm tabbed interface
- New feature: you can now specify a start up macro for SSH, Telnet, RSH, Mosh, Serial (COM) and Shell sessions
- New feature: you can now specify pattern conditions in macros (wait for a pattern before following up with macro execution)
- New feature: added new browser session setting which allows to emulate older IE versions, from IE7 to IE11
- Improvement: you can now specify the COM port to use for serial connection at session start (useful if you use a USB/COM adapter which can be attached to random COM ports numbers)
- Improvement: enhanced macro editor: you can now type some text directly into the macro editor instead of editing each keystroke
- Improvement: you can now use the following variables in macros: \$MobaDisplay and \$MobaIP

- Improvement: terminal syntax highlighting feature (a.k.a. keyword coloration) is no more tagged as "experimental"
- Improvement: enhanced terminal speed when syntax highlighting is enabled: the terminal no longer suffer from slower speed when syntax highlighting is active
- Improvement: added a new "Byobu" terminal type in sessions which is compatible with Byobu escape sequences (Ctrl+Fn and Shift+Fn keys)
- Improvement: added "R" programming language in MobaTextEditor syntax list
- Improvement: when you save terminal output to file, the file format you choose (RTF or TXT) is now saved
- Improvement: added /dev/shm directory structure (especially useful in order to use Ansible on Windows with MobaXterm)
- Improvement: added a new "Duplicate macro" feature for existing macros
- Improvement: enhanced saving speed when dealing with huge terminal output
- Improvement: added a new "Hide toolbar" button in detached windows
- Improvement: added a refresh feature for local folders for FTP/SFTP sessions, by pressing "F5" key
- Improvement: implemented 2 undocumented settings "AllowBlinking" and "CtrlAltIsAltGr" (more info on <https://blog.mobatek.net>)
- Improvement: MobaXterm is now displayed on the proper taskbar with multiple monitors
- Improvement: when saving huge terminal output, a prompt now allows you to choose whether to limit the number of lines to save
- Improvement: added the iperf3 tool in the CygUtils plugin
- Improvement: updated the "Default (OK/warning/error keywords)" terminal syntax highlighting with new patterns detection
- Improvement: updated the "Unix shell script" terminal syntax highlighting with new patterns detection
- Improvement: added new manual INI setting "AllowLegacyAlgos" under the "SSH" section (set to "0" by default), which allows to activate legacy protocols and keys for SSH client
- Improvement: improved Ctrl+C and arrows handling in Dos and PowerShell sessions
- Improvement: added basic keywords coloration (Ok/warning/error) as default global setting
- Bugfix: TFTP server (embedded TFTP daemon) can now handle folders structure in order to upload/upload files
- Bugfix: corrected typo in syntax highlighting: the keyword "successful" is now properly detected
- Bugfix: added Windows path environment variable to RDP sessions for proper Smartcards authentication
- Bugfix: the "SSH-browser" label in MobaXterm global settings was not displayed entirely
- Bugfix: commandline SSH client was missing support for GSSAPI authentication in previous version
- Bugfix: the /registry symlink was incorrect on some Windows systems
- Bugfix: terminal scrollbar was erased when telnet or rlogin sessions were reconnected
- Bugfix: fixed libraries incompatibilities with the "findutils" package downloaded using "apt-get"
- Bugfix: a "reconnection message" was displayed on CMD or POWERSHELL sessions types, even if the setting was unchecked
- Bugfix: "Quick search" menu was displayed in the wrong place when sidebar was docked to the right
- Bugfix: with Pro Edition, the separation line was shown even if it was unchecked in global settings
- Bugfix: corrected a freeze issue in MultiExec mode, when connecting several SSH sessions to the same host and using Keyboard-interactive authentication
- Bugfix: removed an error message when starting a beta version with Compact mode enabled
- Bugfix: removed an error message when starting a Powershell session with a command and no home folder specified
- Bugfix: fixed file access rights issues in HOME folder

Version 8.6 (2016-01-20)

- New feature: added terminal syntax coloration in global and sessions settings

- New feature: added experimental support for Z-modem transfers in MobaXterm terminal if you have the CygUtils plugin installed: you can now transfer files directly through the terminal by launching sz, rz, lsz or lrz on your remote host and choosing "Z-modem send" or "Z-modem receive" in terminal right-click menu
- Bugfix: updated OpenSSH to version 7.1p2 in order to fix CVE-2016-0777 and CVE-2016-0778 bugs. Note that this fix is for manual SSH connections from local terminal commandline only: "normal" MobaXterm SSH sessions are not concerned by the OpenSSH CVE-2016-0777 and CVE-2016-0778 bugs
- Bugfix: corrected the "search" feature which was not properly reset when closed
- Improvement: added another check for master password in passwords management, when showing stored passwords
- Bugfix: terminals in detached windows no longer lose focus when spawning SSH connections
- New feature: added xrb and setx11dpi tools: useful for retrieving/modifying Xserver settings, especially Xserver DPI value
- Improvement: allowed log files to be written to UNC network paths
- Improvement: added new available keyboard shortcuts combinations: WindowsLogo + F1-F12 and WindowsLogo + 0-9

Version 8.5 (2015-12-19)

- Security fix: in previous releases, when opening a session with a configured SSH gateway (jump host), the gateway connection was bound to any local network adapters. This has been changed in current version by only binding SSH gateway connections to loopback network interface. Thanks to thomas (at) bleier.at for reporting this issue.
- New feature: added basic syntax coloration (right-click on the terminal and choose "Syntax highlighting" sub-menu). Currently 3 syntax types are available: keywords, shell script and Cisco (network configuration)
- Improvement: added automatic detection and fix for buggy Cisco SSH servers which do not properly handle "Winadj" SSH message
- Improvement: added automatic basic import feature for Exceed sessions (xs files)
- Bugfix: some third-party software installed with "MobApt" package manager were unable to start properly
- Bugfix: MobaXterm used to eat a huge amount of CPU while displaying the "reconnection" message and waiting for user input
- Bugfix: when checking the "FlickerFree" setting in "Display" section, MobaXterm displays a prompt message before restarting the application
- Bugfix: bookmarks from the top menu were not ordered and started properly in a border case related to using special characters in sessions
- Bugfix: when saving terminal output to RTF file, text font in the RTF file is set to "Courier New" for proper fixed-width text rendering
- Bugfix: some graphical corrections have been performed for proper High DPI display on 4K (HDPI) monitors.
- Bugfix: fixed an "Assertion failed" error message when connecting to a SSH server with "KexAlgorithms" set to "diffie-hellman-group14-sha1"

Version 8.4 (2015-11-20)

- New feature: added "SCP" protocol for the graphical SSH-browser: MobaXterm can now use SCP in order to browse your remote server content. This experimental feature can be activated from your SSH session settings.
- Improvement: accelerated terminal display even in TrueColors mode

- Improvement: with SCP protocol, SSH-browser does not open a new SSH connection anymore, but makes use of the existing terminal connection instead (SSH multiplexing)
- Improvement: with SCP protocol, SSH-browser is not "connected" anymore and thus it stays alive as long as the terminal SSH connection is enabled
- Improvement: greatly improved SSH-browser transfer speed when using the new SCP protocol
- Improvement: if SSH-browser cannot connect using SFTP protocol, it will try SCP protocol instead
- Improvement: renamed "SFTP browser" to "SSH-browser"
- Improvement: added a "Flicker Free" setting for MobaXterm main window
- Improvement: added color support to "less" and "git" commands
- Improvement: improved detection of running sub-process when starting or stopping MobaXterm
- Improvement: starting a session from a file now opens it in a new tab if an existing instance of MobaXterm already exists
- Improvement: added "OpenIniFile" command which allows to directly open MobaXterm.ini file from local terminal
- Improvement: you can now clear the screen AND the scrollbar buffer by using the "Clear scrollbar" right-click menu entry on any terminal
- Improvement: using the "newtab" commandline switch now sets MobaXterm running instance to foreground
- Bugfix: fixed a potential issue with open remote files through SSH when multiple instances of MobaXterm were opened and a file with same name is open on 2 different remote servers
- Bugfix: fixed a vulnerability in "MoTTY" PuTTY-based terminal (CVE-2015-5309)
- Bugfix: fixed the filter field in "MobApt" package manager which displays "Filter packages" instead of "Filter sessions"
- Bugfix: fixed log file names which did not properly mention remote hostname in case a SSH gateway has been defined
- Bugfix: fixed fullscreen mode on multi-monitors environment when 2nd monitor coordinates were negative
- Bugfix: fixed bug on "paste" command which did not work properly with Windows files
- Bugfix: fixed a bug with commandline SSH when default SSH username chosen in global settings contains special characters
- Bugfix: fixed an issue in FTP sessions: when removing a folder, MobaXterm tried to perform a CWD in the removed folder after its deletion

Version 8.3 (2015-10-31)

- Security fix: in previous releases, some remote users could spy on X11 connections when Access Control was turned off. This has been changed in current version by activating Access Control by default with an authorization prompt when a remote program requests local display connection (fixes CVE-2015-7244)
- New feature: added full TrueColor (24 bit) support in MobaXterm terminal (can be tested using the "lsicolors" command)
- New feature: added a tooltip containing columns / rows values when resizing a terminal
- Improvement: xterm-256color is now properly supported with a proper 256 colors palette
- Improvement: when "User" field is left blank for SSH gateway, MobaXterm will use the default username configured in your global settings
- Improvement: improved focus behaviour with RDP sessions: clicking on RDP session when another window overlaps it should raise MobaXterm
- Improvement: added a new option to leave audio at remote computer in RDP sessions
- Improvement: pressing RETURN key while browsing sessions now starts the selected session
- Improvement: you can now press RETURN key in the "store password" prompt in order to quickly accept
- Improvement: added some more inline information and tooltips
- Improvement: added sessions details in tooltips when hovering nodes in the main sessions tree

- Improvement: disabled automatic completion for DLL libraries
- Improvement: improved resize function in "MultiExec" mode
- Improvement: MobaXterm now detects at startup if another different version of MobaXterm is running and shows a warning in this case
- Bugfix: Alt+Tab now brings focus to MobaXterm even when a modal window is in foreground
- Bugfix: in RDP sessions, the "Disconnect" button now performs a proper RDP disconnection instead of killing RDP session
- Bugfix: paste shortcut was sent to the incorrect terminal when used in a detached form with another tabbed terminal active
- Bugfix: with some specific folder privileges, Mosh session did not start properly
- Bugfix: some checkbox settings in RDP sessions were overlapped on high DPI monitors
- Bugfix: added a workaround in order to avoid a warning message caused by an old install of "MIT Kerberos" application
- Bugfix: ssh agent forwarding was not properly disabled when "Forward agents" was unchecked in global settings
- Bugfix: bash completion (using tab key) for ssh commands deleted @ character

Version 8.2 (2015-09-12)

- New feature: added a new "inline search" feature which allows you to highlight search terms directly into the terminal itself
- New feature: added an internal SSH agent "MobAgent" which allows you to automatically load SSH keys at MobaXterm startup and to forward them
- Improvement: the keyboard shortcut for "Paste inside terminal" can now be modified (default: Shift+INSERT). Remember that there is no shortcut for "COPY" as copying is performed automatically when you select some text.
- Improvement: you can now scroll in Tmux using Shift+MouseWheel if you have the "set-window-option -g mode-mouse on" feature enabled in your ".tmux.conf" file
- Improvement: enhanced compatibility with Emacs in terminal mode (better scrolling, better selection using shift+arrows, better home/end/arrows keys handling, better Ctrl+Alt shortcuts handling)
- Improvement: added "Pageant" support for SSH tunnels and SSH gateways
- Improvement: if you use a laptop and sometimes connect it to an external monitor, MobaXterm will automatically store 2 independant graphical configuration profiles (window position/size, sidebar visibility) for each configuration.
- Improvement: you can now select terminals for writing in "MultiExec" mode
- Improvement: you can now force terminal font antialiasing even if ClearType is disabled in your Windows configuration
- Improvement: better URL detection for Ctrl+click on the terminal
- Improvement: improved GSSAPI authentication for the SFTP browser
- Improvement: added a new global setting which allows to disable SSH banner
- Improvement: the terminal popup menu can be displayed using Ctrl+right-click or Shift+right-click when using right-click to paste
- Improvement: enhanced compatibility with Byobu (Ctrl+function keys)
- Improvement: telnet escape sequence was not handled correctly on German and French keyboards
- Improvement: when using "-newtab" command with MobaXterm minimized, the application is properly restored
- Improvement: you can now navigate in the SFTP browser using arrows, return and back keys
- Improvement: added some more debugging information in log for failed SFTP connection attempts
- Improvement: HOME and END keys now work properly in "less" command
- Bugfix: main window size/position were not automatically saved after MobaXterm was closed with some particular Windows configuration

- Bugfix: Sidebar visibility and "compact mode" were not automatically saved after MobaXterm was closed with some particular Windows configuration
- Bugfix: corrected some issues when pasting to all terminals (in MultiExec mode): some terminals were not updated in some specific conditions
- Bugfix: corrected a "freeze" issue when closing SSH tab with SFTP browser and "follow SSH path" checked, in some particular cases
- Bugfix: corrected a "freeze" issue when resizing MobaXterm while a CMD or POWERSHELL session is running on Windows 10
- Bugfix: corrected some issues with flashing taskbar or focus loss at terminal startup
- Bugfix: disabled GSSAPI authentication attempt when it is unchecked in global settings
- Bugfix: corrected the erroneous "closewhendone" mention in the documentation (the correct commandline parameter is "exitwhendone")
- Bugfix: the "newtab" command was not starting a new tab properly for ssh commands
- Bugfix: fixed "Decrease font size" menu entry which resized the terminal window instead of changing columns/rows number
- Bugfix: you can now extend selection using Shift+left-click
- Bugfix: HOME and END keys did not send correct key codes in some applications
- Bugfix: Shift+Arrow keys did not work properly in some applications

Version 8.1 (2015-08-03)

- Bugfix: corrected the SFTP browser which was not displayed if you used a private SSH key with no passphrase
- Bugfix: advanced terminal settings were not accessible for telnet sessions
- Bugfix: corrected an issue with Powershell and Cmd sessions when a startup folder was specified
- Bugfix: the "duplicate tab" feature did not work in previous version
- Bugfix: SSH keys in a shared folder with UNC path were not handled correctly
- Bugfix: terminal resize was not handled correctly when asked by "screen", "tmux" or "reset" programs
- Bugfix: corrected the SFTP browser which did not work with GSSAPI SSH connections
- Bugfix: corrected an issue with "ascii" command which exited without displaying ascii table
- Bugfix: removed some code which made some antivirus detect games executable as false-positive
- Bugfix: the "-exec" feature was not working correctly with ssh commands in previous version
- Improvement: improved the KeepAlive function by enabling/disabling the application-level keepalive feature AND the TCP keepalive feature simultaneously
- Improvement: added some debugging information for MoTTY connections (right-click on the terminal and choose "Event log" to show it)
- Improvement: popup windows for fatal connection errors are now printed to the terminal output
- Improvement: display SSH banner before the remote server banner for better readability
- Improvement: replaced Ctrl+Insert shortcut by Ctrl+Shift+Insert for pasting in the terminal
- Improvement: added Ctrl+0 shortcut for resetting fonts size to default
- Improvement: added the Ctrl+Left_arrow / Ctrl+Right_arrow keyboard shortcuts for "forward-word" / "backward-word" in terminal
- Improvement: increased startup speed especially if you have many sessions folders
- Improvement: you can now save your SSH keys passphrases the same way as you save passwords if you activate the setting in "Manage passwords" window
- Improvement: a middle-click on a SFTP browser item copies the item path to the SSH session
- Improvement: added the VAGRANT_DETECTED_OS environment variable which allows Vagrant to work correctly inside MobaXterm
- Improvement: if SFTP browser does not work because your remote server echoes some text, an explicit warning message is displayed in MobaXterm log file

- Improvement: added a new script which allows to create MobaXterm sessions from a plain text list of servers: "ServersListToMxtSessions.sh"

Version 8.0 (2015-07-20)

- New feature: MobaXterm is now able to create shared credentials for multiple sessions
- Improvement: SSH, telnet, rlogin and serial sessions are now powered by a faster native Windows engine based on the efficient PuTTY tool by Simon Tatham
- New feature: Added "MobaKeyGen": a graphical SSH keys generator based on the great "PuTTYgen" tool by Simon Tatham
- Improvement: Default X server is now a native Windows port of Xorg with no wrapper (compiled using MinGW)
- Improvement: The embedded terminal is now based on a plain PuTTY engine
- Improvement: Re-organized session settings for better usability
- Improvement: MobaXterm is now able to retrieve/store SSH password, even in "keyboard-interactive" mode
- New feature: Dragging using Alt+drag performs a rectangular selection
- New feature: Right-click menu now allows to reconfigure many options on the current terminal for the current running session
- New feature: Added a "home page" at MobaXterm startup with recent sessions, a quick search bar and a button to start a new terminal. You can disable this home page from the global settings and choose to start a local terminal instead.
- Improvement: New keyboard configurations added
- Improvement: SFTP browser now works in keyboard interactive mode
- Improvement: Double-click selection in the terminal is now smarter when determining if a character is a separator or not
- Improvement: Local Unix utilities based on Cygwin are now in a separate plugin file. If you only need basic MobaXterm features like SSH, X11, Rlogin, Telnet, Serial or RDP, you do not need this plugin
- Improvement: MobaXterm startup speed has been improved
- Improvement: Banner message is now adapted to the session you launched. For SSH sessions, it displays some useful information about X11-forwarding, DISPLAY, SFTP browser and compression features
- Improvement: Added new proxy settings for SSH connections
- Improvement: Added some new charsets for remote sessions
- Improvement: Better SSH keys support (OpenSSH / PuTTY / SSH.com types are seamlessly managed)
- New feature: Added some cool puzzle games from Simon Tatham
- New feature: You can now select a terminal size (number of rows/columns) and keep it while resizing MobaXterm by increasing/decreasing font size
- Improvement: Added new SSH KEX algorithms for the SFTP browser (DH_GROUP_EXCHANGE256, RSA1024_SHA1, RSA2048_SHA256, GSS_GROUP_EXCHANGE, GSS_GROUP, GSS_GROUP_14)
- New feature: Added uptime, shred, truncate, nl, link, free, factor, compress, count, paste, nc (netcat) and host tools (thanks to Toybox: <https://landley.net/toybox/>)
- Improvement: Log file name is now automatically based on the session protocol, remote host, username and date/time
- New feature: You can now choose disable completely OpenGL rendering support in X11 server
- Improvement: Updated Cygwin version to version 2.0.4 in CygUtils plugin
- Bugfix: Corrected a bug with libopenssl, grep and bash update from apt-get
- Bugfix: Prevented Windows taskbar from being raised with fullscreen VNC sessions
- Improvement: Improved CMD sessions by using the "winpty" tool: Ctrl+C and TAB completion should work on any environment now
- New feature: Added Powershell to the "Local terminal" session type (experimental)
- New feature: Added TWM window manager as an option for X11 sessions

- Improvement: Added a Paste button on the MultiExec top toolbar
- New feature: Added a new tool entry in order to start a CMD window as admin
- Improvement: Added an explanation message when sub processes fail to start because of a group policy
- Bugfix: Corrected some issues when MobaXterm is installed in a Windows path containing unicode characters
- Bugfix: Corrected an issue with tab integration of XDMCP sessions
- Bugfix: Corrected an issue with tabs numbering when a VNC session was started but the remote host did not exist
- Bugfix: Prevented Windows taskbar from being raised with fullscreen RDP sessions
- Bugfix: Desktop shortcuts did not work on some Windows version because of truncated command line
- Bugfix: fixed a bug with PuTTY sessions import at first start
- Bugfix: Prevented MobaXterm slash directory from being set to the root of a drive or to a directory with other programs already present
- Bugfix: Corrected some focus issues in RDP sessions

Version 7.7 (2015-03-31)

- Bugfix: apt-get (MobApt) has been updated for compatibility with the new Cygwin checksums
- Improvement: MobaXterm is now compatible with Windows 10 build 10041
- Improvement: MobaXterm can now import PuTTY Connection Manager (PuttyCM) sessions
- Improvement: MobaXterm now keeps folders structure when importing Mremote, PuTTY and SCRT sessions
- Improvement: You can now choose between X11 server version 1.16.3 and 1.14.5 for better compatibility with your environment
- Improvement: Recompiled Xorg version 1.16.3 with latest OpenGL libraries
- Improvement: Selected a more compatible list of ciphers by default for SSH
- Improvement: Added CP1251 (Cyrillic) codepage to terminal sessions
- Bugfix: the "bc" command was not working correctly when launched from interactive shell in version 7.6
- Bugfix: the "List running process" tool was not working when launched from the sidebar button
- Bugfix: some users were shown an "Unknown+user" prompt instead of their standard username
- Improvement: Protocols which have been disabled from the customizer are no longer available in interactive terminals
- Bugfix: The main menu bar is now correctly repainted after maximizing the main window with a skin

Version 7.6 (2015-02-16)

- Improvement: Updated "ssh-copy-id" tool in order to handle new SSH keys (ed25519)
- Bugfix: SSH connections with a SSH gateway were not working correctly in v7.5
- Bugfix: SSH user config files were not correctly handled in v7.5

Version 7.5 (2015-02-15)

- Improvement: MobaXterm is now compatible with Windows 10 Technical Preview build 9926
- Improvement: Upgraded OpenSSH to version 6.7 with new ed25519 (curve25519) SSH keys support
- Improvement: MobaXterm is now compatible with 4K (Ultra-HD / High-DPI) monitors. Native HDPI mode has been added

- Improvement: Added a new RDP setting in order to automatically adapt the remote desktop size to the current DPI size of the screen
- Improvement: Increased font size for X server on 4K (UHD) screens
- Improvement: You can now select the scaling factor of MobaXterm interface using the "-dpi" command line parameter
- Improvement: Switched from Heimdal to MIT implementation of Kerberos for SSH
- Bugfix: Terminal lines were truncated after minimizing MobaXterm terminal
- Bugfix: TAB key was not correctly recorded in macros
- Bugfix: SFTP sessions through a web or socks proxy did not work with some proxy configurations
- Bugfix: In the SFTP browser, setting an empty file name is not allowed anymore
- Bugfix: With some skins, the "Quick connect" button was not displayed correctly
- Improvement: Added a tooltip with the full tab title when mouse hovers a tab with shranked title
- Improvement: Added a setting in the "Terminal" section for hiding terminal scrollbar
- Improvement: Added a setting in the "Terminal" section for hiding the separation line between each command in local terminal
- Bugfix: The "X11 compatible keyboard" setting is now applied without restarting MobaXterm
- Bugfix: In compact mode, main window state (maximized or normal) is now correctly applied at MobaXterm startup
- Improvement: It is now possible to leave the "remote user" field blank in order to use the default SSH user in MobaSSHTunnel
- Improvement: Added new shortcuts for increasing/decreasing font sizes: Ctrl+Minus_Key and Ctrl+Plus_Key
- Improvement: Added "Toggle scrollbar" option to the right-click menu on a terminal
- Improvement: Added "Flip screen" option to the right-click menu on a terminal which allows toggling primary/alternate screens (useful when using VIM in order to display underlying shell output)
- Improvement: Improved the "apt-get" feature (a.k.a. "MobApt") in order to allow downloads using default Windows internet connection settings
- Improvement: Added beep (bell feature) to MobaXterm terminal as a new setting under the "Terminal section" in global configuration
- Improvement: Added "beep" terminal command for use in shell scripts
- Improvement: Updated X server to version 1.16.3 (enhanced OpenGL support)
- Bugfix: X server sets a default keyboard layout when no keyboard has been automatically detected
- Improvement: The "Auto-reconnect" button now allows SSH tunnels to reconnect even after a network failure
- Bugfix: Using web browser sessions, on some websites, the return key was not handled correctly

Version 7.4 (2015-01-01)

- Improvement: MobaXterm is now compatible with Windows 10 "Technical Preview"
- Improvement: upgraded X server to version 1.16.2
- Improvement: upgraded bash to version 4.1.17
- Improvement: added a "Reconnect" button for SFTP (allows you to reconnect the SFTP browser in case of a network failure or a firewall disconnection)
- Bugfix: when exiting "Compact mode" on professional edition, the "Unregistered" bar is not displayed anymore
- Improvement: improved "Compact mode" (settings and menus improvements)
- Improvement: improved scrolling in the left sidebar using mouse wheel, even when the focus is set to the terminal
- Improvement: The main window title and the taskbar title are automatically changed to the active tab name
- Improvement: MobaXterm can now import mRemoteNG sessions
- Bugfix: corrected a bug in "Nimesweeper" (arrow keys were not working correctly)

- Improvement: improved main window for high DPI monitors
- Improvement: improved OpenGL support in X server
- Improvement: added a new setting in VNC and RDP sessions in order to disable the settings bar
- Improvement: Added a "ASCII" button in the SFTP browser in order to toggle ASCII/Binary mode for file transfers
- Improvement: Added a new button in the SFTP browser in order to toggle show/hide hidden files
- Bugfix: in some cases, the "Ctrl" key was incorrectly detected as pressed after using the "New tab" shortcut
- Improvement: COM ports are detected automatically each time you go to the "Serial" session manager (not only at MobaXterm startup)
- Improvement: MobApt is now able to force the installation of Cygwin tools
- Bugfix: Corrected a recurrent issue with private SSH keys rights
- Improvement: Added a graphical warning when the remote host identification has changed with a tool to reset the alarm
- Improvement: Added keyboard interactive authentication type for SSH gateway
- Bugfix: corrected a graphical bug in the graphical SSH tunnels tool: start buttons were not drawn correctly in skinned mode
- Improvement: Added an automatic detection of any deleted file in the temp folder during execution
- Improvement: Added the "showkey" tool
- Improvement: Added the "killX" tool
- Improvement: MobaTextEditor can now indent/unindent blocks with Tab/Shift+Tab
- Improvement: Updated documentation with new features
- Improvement: Added the "glxgears" and "glxinfo" tools for Xserver OpenGL tests
- Improvement: Added a new "AutoReconnect" setting in MobaSSHTunnel which automatically reconnects SSH tunnels after a network failure
- Improvement: Improved the way MobaXterm is started in order to avoid issues with sandboxes
- Improvement: Added some warnings when using a non-persistent HOME directory and using ssh-keygen

Version 7.3 (2014-09-28)

- Bugfix: updated bash to version 4.1.13 to fix "shellshock" vulnerability (CVE-2014-6271, CVE-2014-7169)
- Improvement: added a "compact mode" in the "View" menu in order to save screen real estate
- Bugfix: on German and French keyboards, the AltGr+] escape sequence was not working correctly
- Bugfix: if Persistent Root folder has been set to a network share, a FAT16 or ExFAT filesystem, an error message was displayed at X server startup
- Bugfix: on Windows 2000 and XP, MobaXterm logo background was not transparent
- Bugfix: with persistent root folder, new customizations were sometimes not applied correctly
- Improvement: the embedded browser now emulates the most recent engine available
- Improvement: added a "tweet" button in the "About" window (please send a tweet about MobaXterm if you like it)
- Improvement: added the "xauth" command for the embedded X server
- Bugfix: MobaSwInfo now lists install software correctly on Windows 8/8.1 64 bit
- Bugfix: Corrected the "Shift+Tab" shortcut in OpenSuse "Yast" installer
- Improvement: improved the way symlinks are handled via SSH or SFTP
- Bugfix: Corrected the Gnome session environment which did not start correctly through SSH when remote user had TCSH as default shell
- Bugfix: fixed a potential indexing issue when deleting a SSH tunnel
- Improvement: added a new telnet setting which prevents MobaXterm from closing when a telnet session is active
- Bugfix: corrected resizing issues with RDP sessions

- Improvement: added a new commandline setting in order to allow MobApt to work with local Cygwin repositories (e.g. MobApt -l /drives/c/MyCygwinRepository)
- Bugfix: corrected an issue with tar and hardlink decompression
- Improvement: added 2 more sections to the embedded documentation with detailed explanations about global settings and sessions settings
- Improvement: added a lot of new questions/answers in the FaQ section

Version 7.2 (2014-08-04)

- New feature: Added "MobApt", a new package manager based on the great "apt-cyg" tool, for automatic installation of Cygwin utilities through internet.
- New feature: Added CRON service and "crontab" tool
- New feature: You can now specify a persistent root folder ("/"). This is especially useful if you want to install packages using "MobApt" and you want to keep them across MobaXterm restarts.
- New feature: You can now specify an INI file using the "-i" commandline parameter. You can use a local path (C:\some\place\MobaXterm.ini), a network share (\\MyServer\shared\MobaXterm.ini) or an URL (https://mywebservice/MyConfigFile.ini)
- Improvement: Multi-selection is now enabled in sessions tree.
- Bugfix: Reconnection message window height has been increased
- Bugfix: the clipboard is no longer flushed when trying to find text in the terminal
- Improvement: Added RDP gateway feature in RDP sessions
- Improvement: Cygwin library has been updated to latest version (1.7.31)
- Improvement: Default tab size has been increased for high-DPI monitors
- Bugfix: Tab title was not correctly updated when connecting to SSH with the SFTP browser disabled
- Improvement: New variables are now available for folders selection (for logs folder, home directory, INI file folder, ...): %CurrentFolder%, %CurrentDrive%, %UserDir%, %UserName%, %ComputerName%, %TempDir%, %DesktopDir%, %ProfileDir%.
- Bugfix: SSH tunnels are now started one by one to prevent compatibility issues between tunnels
- Improvement: Configuration settings have been sorted by categories
- Improvement: FTP is now automatically reconnected after server disconnection or timeout
- Improvement: You can now specify the persistent HOME (/home/mobaxterm) and SLASH (/) folder paths in MobaXterm customizer
- Improvement: You can now specify the default text editor in MobaXterm customizer
- Improvement: Updated busybox to version 1.22.1
- Bugfix: the "pipe" key was not recorded into macros with French and German keyboards
- Improvement: Tried to implement a workaround for the GbpSv rootkit which kills MobaXterm randomly on Brazilian computers
- Improvement: Added the "sshpass" tool for ssh sessions automation
- Improvement: Hitting "Esc" now closes dialog boxes
- Improvement: SFTP browser now follows symbolic links
- Bugfix: the "new folder", "new file" and "rename" dialog windows were sometimes hidden behind main MobaXterm window
- Improvement: Telnet sessions can now be tunneled through SSH

Version 7.1 (2014-04-12)

- Feature addition: Added a new (experimental) MOSH session type
- Feature addition: Added a new (experimental) BROWSER session type
- Security fix: Updated OpenSSL library to 1.0.1g (for "Heartbleed Bug" correction)

- Improvement: Added a SSH setting in order to prevent "connection reset by peer" error with old SSH servers
- Improvement: Added SOCKS/WEB proxy support in SSH tunnels
- Improvement: It is now possible to hide the "Quick connect" bar when sidebar is disabled
- Improvement: "SSH keepalive" setting has been disabled by default
- Improvement: RDP connection resolution is no longer cropped in order to fit into the terminal
- Bugfix: SSH using Kerberos authentication did not work correctly when SFTP browser was enabled
- Bugfix: XDMCP sessions were sometimes not closed correctly
- Bugfix: MobaTextEditor now remembers correctly its main window size and position
- Bugfix: "grep" command was sometimes not working when invoked from a script after MobaXterm startup
- Bugfix: sorting by dates in FTP sessions now works correctly
- Improvement: SSH ECDSA keys are now correctly handled by MobaXterm
- Bugfix: Dialog windows can no more be hidden behind MobaXterm main window
- Bugfix: MobaXterm now handles correctly Windows usernames with SPACE characters
- Bugfix: Files owners and groups are now correctly displayed in FTP sessions
- Bugfix: In some particular environments, sessions were not correctly ordered in main menu
- Bugfix: X server had troubles starting with some keyboard models
- Bugfix: a problem with an increasing number of GDI handles has been fixed
- Improvement: when sessions edition is disabled in the Customizer, PuTTY and SCRT sessions are not imported anymore
- Bugfix: in some particular environments, an exception was raised when closing the last tab of MobaXterm
- Improvement: sidebar has now a minimum width
- Bugfix: in FTP sessions, hitting "Cancel" during a file transfer does not disconnect the FTP session anymore
- Bugfix: Escape sequence for telnet should now be handled by MobaXterm
- Improvement: MobaXterm font size is now adjusted automatically on high resolution monitors
- Improvement: Each time MobaXterm configuration file is updated, a backup file is now created in the "MobaXterm backup.zip" archive. This can be disabled in MobaXterm settings window.

Version 7.0 (2014-02-18)

- Improvement: MobaXterm graphical interface has been reworked (removed useless widgets, re-organized functions) in order to make it cleaner and easier to use
- Improvement: Chinese, Japanese and Korean keyboard are now fully managed using Input Method Editor (IME)
- Feature addition: The left sidebar can now be automatically shown/hidden by overlapping terminal, without resizing it
- Feature addition: A new "network scanner" tool allows you to search for computers in your network with listening services (can be disabled in PRO edition)
- Feature addition: A new "ports scanner" tool allows you to scan a computer in order to list open ports (can be disabled in PRO edition)
- Bugfix: Permission problems on SSH keys on Windows 8/8.1 have been fixed
- Feature addition: You can now specify terminal colors in global settings or per session
- Bugfix: Removed unwanted delay when changing from a tab to another one with an active SSH session and inactive SFTP
- Improvement: Changed terminal default charset to UTF-8 for better compatibility (you can change back to ISO-8859-1 in order to restore old charset behavior)
- Improvement: You can now specify a default login name for SSH sessions
- Improvement: SFTP upload speed is now 8 times faster on recent OpenSSH servers
- Feature addition: you can now specify a local folder for FTP and SFTP sessions

- Improvement: Updated X server to version 1.14.5 (some small fixes, especially for copy/paste operations)
- Bugfix: in SSH sessions, when a command was specified and the SFTP browser was enabled, it was not displayed
- Feature addition: A new "Quick connect" bar has been added in order to launch your saved sessions easily
- Bugfix: corrected a terminal problem on Windows 8.1 which resulted in a hidden cursor after resizing window
- Improvement: FTP passwords can now be saved
- Bugfix: Using FTP session, some files were incorrectly detected as "character devices" and thus were not editable
- Bugfix: Using FTP or SFTP sessions, some files were incorrectly detected as DOS/UNIX/MAC format in MobaTextEditor
- Improvement: After performing a "find" command in the terminal, the clipboard is now flushed
- Bugfix: In some very particular cases, the master password was asked although no master password was set
- Improvement: On the SFTP browser frame, the tooltip is now displayed after a short delay
- Bugfix: When password saving function had been disabled in the customizer (PRO edition), SSH gateway was not working correctly
- Improvement: COM ports are no longer tested at startup in order to increase startup speed
- Feature addition: 3 new X server modes available: these modes allow you to launch a transparent X server with window borders from fvwm, or even the full fvwm desktop
- Bugfix: The "follow SSH folder" feature did not work on old Solaris remote connections
- Bugfix: On German keyboard, AltGr+A now works correctly
- Improvement: Automatically set the correct charset for DOS commands (ipconfig, ping, ...)
- Improvement: Automatically set the correct charset for CMD sessions
- Improvement: Changed default sessions name

Version 6.6 (2013-11-11)

- Improved SFTP browser (increased performance, added new CTR cipher, automatic reconnection on session lost)
- Improved RDP sessions by putting each RDP tab in a separate process
- Added Pageant support (Settings --> Configuration --> SSH tab --> Use Pageant)
- Added dynamic SSH tunnels (this allows you to easily run SOCKS proxy!)
- When session logs are enabled, 2 files are now created: "<filename>.log" will contain everything that was typed into the terminal (including special characters and escape sequences) and "<filename>.txt" will contain only printable output
- Improved SSH gateway connections (increased performances, added new CTR cipher, automatic reconnection on session lost)
- Improved SSH tunnel connections (increased performances, added new CTR cipher, automatic reconnection on session lost)
- Corrected some small RDP focus bugs (especially with RDP sessions contained in detached windows)
- SFTP operations have been made asynchronous in order not to block other MobaXterm features when establishing SFTP connection, downloading file or changing directory
- Improved MobaTextEditor sessions by putting each MobaTextEditor tab in a separate process
- SFTP file dates are now displayed using local time and not GMT time
- Added ASCII mode support for SFTP sessions
- Corrected a bug: ssh-agent and ssh-pageant were not correctly restarted if MobaXterm process was killed before
- Added keyboard interactive authentication for SFTP browser
- Disabled "Follow SSH path" feature when SFTP browser is inactive
- MobaXterm now preserves directory structure when importing Scrt sessions

- Corrected a bug: when closing a tab with confirmation message disabled, in some cases the close button did not work at first time
- Removed user name from MobaXterm temp directory so that firewall rules for X11 server could be set up easily (in order to allow X11 server, add program "%tempfolder%\MobaXterm%Version%\bin\XWin.exe" to the firewall whitelist)
- Improved ergonomics of settings tabs
- SFTP browser now displays useful hints when mouse cursor is over a remote file
- Corrected a bug: when downloading files using the SFTP browser, empty directory were not downloaded
- Auto-detect FVWM2 version (if you are using FVWM2 plugin, this version is automatically selected)
- Added commandline parameter "-noX" for disabling X server at startup
- Added "Connect as..." right-click option on sessions
- Modified default shortcuts for "Find" (Ctrl+Alt+F) and "Find next" (Ctrl+F3)
- Updated documentation (New articles added in the FAQ section)
- Added "disable tools" setting in the customizer
- Added "disable macros" setting in the customizer
- Added "force access control" setting in the customizer
- Added macros import/export feature
- Added names for SSH tunnels
- Added new setting for X11 clipboard "disable copy-on-select": this setting prevents X11 clipboard from crashing when displaying some buggy applications
- Added new menu entry "Take a screenshot"
- Added new menu entry "View log file"
- Added new RDP setting "enable/disable clipboard redirection"
- Added private key setting for SFTP sessions
- Several cosmetic bugs corrected
- Added sorting feature for local browser in SFTP and FTP sessions
- Added a new option for saving a session to a file. Double-clicking on this file on another computer will allow you to launch the session.
- Added ASCII mode support for FTP sessions
- Added proxy support for FTP sessions
- Added FTPS support (FTP over SSL) for FTP sessions
- Updated Nc and Connect tools in order to allow SSH connections over SOCKS/HTTP proxies
- Added SOCKS/HTTP/Telnet proxy capabilities for SSH sessions (with SFTP browser!)

Version 6.5 (2013-07-25)

- New (experimental) feature: SFTP browser can now follow SSH terminal PATH: when you perform a "cd /tmp" in your terminal, SFTP browser will list /tmp content
- The buttons toolbar can now be customized
- Added vertical tabs: you can show/hide them by right-clicking on the tab bar and choose "Show/hide vertical tabs"
- Improved terminal speed by copying in TXT format by default (you can still copy with text formatting by using the terminal right-click menu)
- Corrected a fullscreen problem when using 2 monitors
- Added the "Ctrl+Shift+Tab" for reverse-cycling into tabs. As usual, this keyboard shortcut can be modified in the "Settings" window
- Removed "minimize/minimize to tray" menu
- Added more termcap definitions (vt100, vt200, xterm-256colors, etc...)
- Corrected some RDP tab closing bugs with slow RDP servers
- Implemented a more reliable network adapters detection
- Added the "ifconfig" command

- Fullscreen mode now displays the top toolbar for 2 seconds before closing it
- Serial connections can now be made using either minicom or microcom
- Telnet connections can now be made using either standard-telnet or busybox-telnet
- Updated Xorg to version 1.14.2 (corrected a bug with keyboard input in recent Java graphical applications)
- Corrected backspace key handling inside terminal when "Unix compatible keyboard" is unchecked
- Improved startup speed and CPU consumption while MobaXterm is running
- Added ssh private key connection mode for graphical tunnels
- Added an option for selecting the local network adapter for SSH tunnels
- Corrected a bug with XDMCP sessions not being started correctly at second launch

Version 6.3 (2013-05-09)

- Added new master password feature (secure passwords saving with strong encryption) - PRO EDITION ONLY
- Added an embedded NFS server
- Added an embedded VNC server
- Added a new option to set default text editor
- Improved serial connections and added some more options by replacing the "microcom" serial client by "minicom"
- MobaXterm speed has been increased by putting configuration (INI) file parsing in memory
- Re-enabled aero "glass" effect in the title bar when using "No skin" mode
- Added new skins
- Increased SFTP browser speed by increasing default buffer size
- Corrected a bug: buttons were not placed correctly in some forms with some graphic adapters
- Added CDE as remote desktop for SSH sessions
- Added "paste" command
- Corrected a bug: tab size after detaching is now the same as it was before detaching
- Corrected some typos in documentation
- Corrected issues when using 2 SFTP browsers with same SSH gateway
- Corrected a repainting problem with multi-desktops applications like VirtuaWin or Dexpot
- Changed embedded telnet client for better compatibility
- Added a way to launch macros at startup or to create desktop shortcuts for macros
- Improved tabs controls
- Added some inline help when mouse hovers components
- Created a "reset master password" tool that can be downloaded in order to reset a master password
- Default X11 font path has been set to take new fonts (from font plugins) into account
- Sessions can now be named using special characters like []
- Fixed persistent home directory detection when home directory has been set in the customizer
- Enabled fullscreen and detached tabs transparency
- Fixed OpenGL acceleration on computers which do not support HW OpenGL: you can uncheck the "HW OpenGL acceleration" from the "Settings" window in order to use safer SW OpenGL acceleration
- Many minor improvements
- Improved documentation

Version 6.2 (2013-02-25)

- Added new advanced tabs with move, detach, pin, rename and scroll features (thanks to the great component TChromeTabs)

- You can now launch MobaXterm sessions from a web page: this allows Sysadmins to publish shortcuts to pre-defined sessions (SSH, XDMCP, telnet, rlogin, SFTP, FTP, ...) on the company intranet
- Improved context-sensitive help by adding many tooltips, especially for SSH, RDP and X11 session settings
- MobaXterm now remembers the last launched session and automatically selects it on startup
- Added the "ttySxx" device name at microcom startup for easy file transfers using lrzsz
- Reverted to the previous way of managing SSH passwords and passphrase: the popup asking for password is now only displayed if MobaXterm is started hidden, or if it is needed for the gateway SSH server
- Added 2 new options for reconnecting or saving session after it stopped
- Added the "balance" load balancer application
- The "newtab" command can now take arguments in order to launch commands in the new tab
- The SFTP browser is no longer launched when using scp, sftp or ssh with a non-interactive command
- Added a button for importing PuTTY and SCRT sessions
- Added a new tab menu entry for going fullscreen on the 2nd monitor
- Corrected Ctrl+Shift+V shortcut for pasting into the terminal
- Corrected some other keyboard shortcuts (especially Alt+character or Ctrl+character)
- Corrected non-printable characters in some man pages
- Corrected a bug: Ssh-agent was not working properly
- Corrected a bug: rsync did not worked correctly with ssh client
- Added a new right-click option in SFTP browser for opening files with the default associated program
- Added new X11 fonts for very big and very small text
- Added a "check for updates" option in the "About" window

Version 6.1 (2013-01-07)

- Added new feature: it is now possible to launch a full remote desktop (Gnome, Kde, Lxde, Fvwm2, Openbox, ...) through a SSH secure connection.
- SSH password prompt is now asked in a popup window in order for SSH connections to work even if MobaXterm is started minimized
- Added a new "Check for updates" menu entry
- Added some speed improvements (at startup and during SSH/SFTP transfers) by optimizing program multi-threading
- Added a simple SSH/SFTP server
- Added a simple telnet server
- You can now use PuTTY private keys (PPK files) in SSH sessions
- Added automatic PuTTY connections importation at MobaXterm startup with automatic conversion of PuTTY private/public key files
- You can now specify a SSH private key for SSH connection
- You can now specify a SSH private key for bouncing gateway authentication
- Added GSSAPI (Kerberos5) authentication support (experimental)
- Corrected passwords saving for connections when using SSH bouncing
- Added a dropdown sessions list on the right of the sessions tab bar
- Added a new keyboard shortcut for filtering sessions (Ctrl+S by default)
- Added a short explanation of plugins creation in the documentation
- Added a short tutorial in the documentation explaining how to launch MobaXterm from a BATCH script and use advanced command line parameters
- Added network servers in the "tools" menu
- Network servers can now be started from the terminal (for instance, you can type: "service ssh restart")
- Added new options to the right-click menu of the terminal (Search in terminal, Save terminal output, print terminal output, set terminal title, fullscreen, start new macro)
- Corrected macros hotkeys which did not work in MultiExec mode

- Corrected a bug: renaming a session by left-clicking on it in the left sidebar now works correctly (new session name was not saved in version 6.0)
- Added a timestamp to history commands
- Increased minimum size for tabs
- Corrected passwords retrieving from configuration file when using MobaXterm on another computer
- Added new topics in the HowTo and the embedded documentation
- Corrected a bug: macro recording did not work in MultiExec mode

Version 6.0 (2012-10-11)

- Added a TFTP server (useful for connecting to network equipments such as routers)
- Added a FTP server
- Added a HTTP server with a simple directory browsing feature
- Added macros support: you can now record a macro (all your keystrokes to the terminal are being saved) or play a saved macro. This can be used for interactive scripting, such as telnet/rlogin passwordless login and automation
- Added a new search feature inside terminals
- Fixed a problem with usernames that contain a "." character
- Removed typespeed game that could cause some freezes
- Fixed a problem at startup caused by wrong Windows version detection
- Added a new option for setting terminal type string (vt100, vt220, vt900, xterm, ...)
- Added keyboard shortcuts for playing macros

Version 5.1 (2012-09-11)

- Corrected serial connection issues with incorrect numbering of COM ports
- Corrected fullscreen RDP issues with mouse cursor incorrect positions
- Added quick access settings to the right-click menu on tabs
- Bug correction: modal dialogs were sometimes disappearing behind MobaXterm main window
- Corrected "Access violation" bug at MobaXterm startup
- Corrected ssh-agent bug: when using a domain user, ssh-add was working on 1st tab but not on others
- Added debug information for bug reports
- Bug correction: pasting to multiple terminal at once using Ctrl+Shift+Insert
- Bug correction: session type "local terminal" did not correctly remembered the shell type (bash or cmd)
- It is now possible to launch sessions from command line again

Version 5.0 (2012-07-17)

- Added a graphical port forwarding editor called "MobaSSTunnel": this tool makes it easy for anyone to create SSH tunnels using a graphical tunnel builder
- Added a quick search field on top of the save sessions list in order to quickly find a session using a short pattern
- Added an option for enabling/disabling the SFTP browser
- Added the FVWM2 window manager in the tools list and as an X11 parameter in the settings window
- Added a new "MobaWMIRquest" commandline tool for executing WMI request and print output into MobaXterm (e.g. you can try to run the following command: MobaWMIRquest "SELECT * FROM

Win32_BaseBoard")

- Bug correction: when using the "TCPCapture" packet capture tool, privileges are automatically detected and TCPCapture asks user for higher privileges if necessary
- The "Esc" key was incorrectly used for leaving fullscreen mode, even when another shortcut key was defined
- With some screen configuration, MobaXterm default placement was not correctly centered
- Improved settings window with a tabbed interface
- Bug correction: When a modal dialog window was opened (Settings, or Session Settings), Windows did not display MobaXterm in the list of running apps (Alt-Tab)
- Bug correction: Modal dialog boxes were sometimes disappearing under the main window
- Added the "bc" command line calculator
- The default for "multimonitors" option has been set to "checked" in order to avoid issues with X11 programs on 2nd monitor
- The "Cursor type" label was invisible in the Settings section
- Bug correction: an error message was sometimes displayed when closing the application
- Improved the consolesaver performances on slow computers
- Improved startup speed by loading sessions into memory before reading them from the INI file.
- Added an option for enabling/disabling SSH "ServerAlive" setting (this setting is useful for keeping SSH connections persistent)
- Added the ability to use SmartCards authentication with RDP client
- Added an undocumented INI parameter for specifying the TEMP directory for MobaXterm files: "MobaTempDir" (into "Misc" section)
- Added an undocumented commandline parameter for starting MobaXterm in a pre-defined directory: "-openfolder"
- Updated OpenSSL to version 0.9.8x (security issues fixed)
- Updated bash to version 4.1.10 (fixed some random STATUS_ACCESS_VIOLATION issues)
- Improved embedded documentation and added a helpful F.A.Q. section
- Added a new option in "Settings window", "Misc" which allows you to put a "Start MobaXterm here" entry to the right-click menu of folders inside Windows explorer
- Added UTF-8 printing capabilities in the terminal: you can now configure your chaset to UTF-8 for printing non-English characters (e.g. Korean) and perform the "ls" command: it will show you the correct file names.
- Added new options for enabling/disabling X11 extensions (advanced users only)
- Added a new option for starting the X server in a container window. This can be useful for starting a full desktop in the X server (e.g. ssh myserver "gnome-session")
- Added the "newtab" command for launching a new tab from within terminal
- Added an new option for choosing the screen you want to run X11 server on
- Added a new Ssh option "prompt for username" in order to act like PuTTY by default (prompt for login at ssh connection)
- Improved rxvt/xterm keypad handling: now the keyboard numeric keys are handled correctly inside rxvt
- Bug correction: MobaXterm startup was freezing on some configurations with huge number of users or groups
- Bug corrected with RDP not saving passwords correctly
- SSH connection to Ericsson RedBack Routers has been corrected
- New syntax highlighting language in MobaTextEditor added: Cisco IOS
- It is now possible to set the X11 display offset for opening X11 server on another display than :0

Version 4.5 (2012-05-02)

- New feature added: you can now "detach" any MobaXterm tab to an independant window. This window can be "pinned" in order to stay always on top of all other windows or to be displayed in "real" fullscreen

(without displaying the task bar or title bar)

- Improved startup speed when using plugins: first time you start MobaXterm, a plugin index is created (file "MobaXterm.idx"). This speeds up MobaXterm plugins enumeration at startup
- You can now open an X11 tab. This allows X11 windows to be displayed into a single MobaXterm tab instead of being displayed outside MobaXterm, thanks to the powerful DWM window manager. This is also a replacement for the old Openbox feature that had disappeared since v4.0
- XDMCP sessions are now displayed into a MobaXterm tab: XDMCP windows are now managed as a standard MobaXterm tab. If you want to display your Xdmcp sessions outside MobaXterm, you can still "detach" the corresponding tab
- New session settings for starting in normal tab, detached tab, maximized detached tab or fullscreen
- RDP features have been added such as full NLA protocol compliance, an improved toolbar and a new fullscreen mode
- Added tab title "hints" displayed when mouse goes over a tab whose name is truncated
- Corrected a bug when switching to "no skin" mode: in some cases, the new skin setting was not correctly saved
- Corrected a bug with the "chmod" and "chown" commands not setting file access permissions correctly. This also solves an old bug with "ls -al" not displaying the correct permissions on some filesystems.
- Corrected a RDP focus bug
- Added basic SSH command completion (based on known hosts and users list)
- New setting for saving passwords to MobaXterm ini file and transfer previously saved passwords to the INI file (useful for transferring passwords from a computer to another)
- Corrected bugs when connecting to switch and router equipments using SSH
- Corrected a bug with terminal that did not render fonts correctly in some special cases and displayed only pink wide lines with nothing else written (this one was hard to find...)
- Improved fonts detection and choice: now the default MobaXterm font is not unpacked anymore before use, it is mapped in memory
- The X11 server now shows its DISPLAY as a small hint when you put the mouse cursor over the green "X" button
- Corrected a "File access denied" message that was displayed at MobaXterm startup when MobaXterm was previously started with admin privileges
- Corrected a bug that occurred at MobaXterm startup, when program was updated from a version older than v3.2
- Terminal logging can now be configured per session
- New keyboard shortcut for cycling through tabs (Ctrl+TAB by default)
- New "Duplicate tab" option
- Added a new command line option "-exec" for executing a command into MobaXterm bash shell (you can call for instance MobaXterm.exe -exec "date; sleep 1; echo 'This is a test'; echo 'Press any key to exit MobaXterm'; read i")
- PRO EDITION ONLY: Added a new button for showing stored passwords
- PRO EDITION ONLY: Added a new button for exporting stored passwords to a text file

Version 4.4 (2012-03-19)

- Increased start up speed, especially when using an antivirus (start up duration 12s --> 5s on a 4 years old computer)
- Added automatic RDP over SSH capabilities
- Added automatic VNC over SSH capabilities
- Added a new option for working with SSH gateway server (use an intermediate SSH server in order to reach the desired server)
- Added an option for launching a remote command when starting an SSH session without exiting this session when the command finishes

- RDP update for dealing with NLA security protocol (for Windows 2008 server compatibility)
- New RDP option "redirect audio"
- Improved RDP automatic password saving that did not work with very slow connections
- Improved RDP console connections detection on XP SP3 and higher (switched to the "ConnectToAdministerServer" RDP option instead of "ConnectToServerConsole")
- Corrected a bug: when one changed the name of a tab and pressed ENTER, the tab name was effectively changed but the active terminal also interpreted the ENTER command
- New commands: "ssh-copy-id" (copy your SSH public keys to remote servers for passwordless authentication) and "Rainbowizer"
- MobaXterm is now fully compatible with Windows 8 Consumer Preview

Version 4.2 (2012-01-23)

- Plugin libraries are now rebased on-the-fly in order to avoid some occasional errors inside bash
- Focus issues with VNC and RDP have been fixed
- New command added: "clearall" (Clears all screen but also the scrollbar buffer)
- Disabled the TTY allocation by default for SSH connections
- Corrected a bug: when saving the output from a terminal in RTF format, the last lines were occasionally missing
- When you double-click on a session bookmark, the keyboard focus is automatically set to the new terminal
- SSH manpage has been corrected (the minus character was missing)
- OpenSSL has been updated to version 0.9.8t (many vulnerabilities fixed)
- MobaXterm log files can now be re-opened using the "more" command, but also inside MobaTextEditor

Version 4.0 (2011-12-15)

General modification:

- New session type: VNC (connect to your remote Windows desktop directly from a MobaXterm tab)
- New session type: RDP (Microsoft Terminal Services: allows you to access your remote Windows desktop directly from a MobaXterm tab)
- New session type: FTP (File Transfer graphical client with a "\"remote edit\"" function)
- New session type: SFTP (Secure File Transfer graphical client with a "\"remote edit\"" function)
- New session type: Serial (COM) communication (Administer equipments such as switch/router directly from the MobaXterm terminal)
- New session type: Local Shell (start a local shell with embedded Unix commands ("\bash\"") or DOS ("\cmd\"") directly in a MobaXterm terminal)
- Sessions can now be created and managed easily from the new session sidebar
- Several sessions can be started at MobaXterm startup or by right clicking on a session folder. This can be useful for restoring a complete environment with many open tabs
- The main window, tabs and icons have been redesigned in order to look better and to be more ergonomic
- You can now set different advanced terminal options for each single session you create (colors, fonts, charsets, ...)
- Added an option for closing all tabs except the current one
- The X11 server (Xorg) has been updated to its latest version
- A lot of X11 server options have been added in order to fine tune the Xorg server at MobaXterm startup (OpenGL support, drawing engine, keyboard type, clipboard integration, ...)
- A lot of XDMCP server options have been added in order to deal with every kind of remote OS (Solaris, HP-Ux, AIX, GNU/Linux, ...)

- You can now export/import your sessions or only some of your sessions to/from a file
- MobaXterm documentation has been updated
- MobaTextEditor can now start instantly for editing your remote files via SFTP or FTP.
- Several instances of MobaXterm can now be launched simultaneously
- MobaXterm is now fully compatible with Windows 8 Developer Preview

Unix Terminal Modifications:

- The ForwardX11Trusted ssh option (SSH X11-forwarding) is now enabled by default: you do not have to specify manually the `"ssh -X"` or `"ssh -Y"` command in order to activate X11-forwarding in MobaXterm
- The Compression ssh option is now enabled by default if the server supports it: you do not have to specify manually the `"ssh -C"` command anymore.
- Added 5 network daemons: telnetd, ftpd, tftpd, httpd and dnssd. These daemons can be started using the `"service start"` command. Be careful: these daemons do not use any authentication at all and allow any user to connect anonymously.
- After each command, a new indicator tells you if the previous command failed (x) or succeeded (v)
- Prompt (PS1) has been updated in order to display the current date, time, folder, user and computer name with colors
- Terminal locale is now autodetected from your Windows environment
- The startup message has been cleaned in order to be more explicit. The DISPLAY variable now uses your IP address instead of your host name.
- If you use a light background colour in your terminal, the fonts colors are darkened
- Added 2 new options in the right-click menu: zoom-in and zoom-out
- Terminal default size is now 80x24 characters
- Matches highlighting has been added in `"grep"`
- Colors (syntax highlighting) have been added in man pages
- A new option allows you to choose whether to paste using middle or right click
- When closing multiple terminals with a running process inside, now only one warning dialog is displayed
- A new option allows you to disable the warning which is displayed when closing a terminal with a running process inside
- You can now directly run a session by typing its name inside a terminal

Professional edition related modifications:

- MobaXterm customization settings are now directly saved into MobaXterm executable
- MobaXterm professional customizer is now licensed on a per-user and per-device basis
- Added new security restriction options for disabling unsafe protocols (RSH, telnet, FTP, XDMCP, VNC), disabling changing settings or disabling saving passwords
- Disabling games now deletes the embedded games from the menus and the MobaXterm executable
- New options and settings for editing your MobaXterm banner
- You can now use pre-defined environment variables such for displaying IP address, computername, username, version and DISPLAY
- The custom profile script is now executed after other necessary profile scripts
- Added new settings: paste using right-click, use Windows path environment, enable/disable SSH compression, ...
- Your custom logo is now displayed on MobaXterm splash screen and in the About window
- Bookmarks are now saved directly into MobaXterm executable file
- You can now import your MobaXterm bookmarks instead of creating them one by one in the customizer
- Several new bookmarks options have been added

Bug fixes:

- Games and screensaver were not correctly disabled in Pro version
- Some terminal characters were lost upon terminal resize/split

- The XDMCP command now includes the `\\"from\\"` command switch which can be necessary when you have more than one NIC in your computer
- Tab names are now locked when you renamed them manually
- When editing remote files using MobaTextEditor, the save window sometimes disappeared under terminals
- The `\\"minimize to tray\\"` button did not work after changing application skin
- Fixed bugs with MobaXterm X server (Xorg) running in a multi-screens environment
- Correcting some bugs when moving bookmarks to another folder
- Corrected many bugs in the embedded X11 server
- Corrected the black `\\"I\\"` mouse cursor when the terminal background is black
- Fixed some bugs with MobaXterm X11 server (Xorg) and Windows 7
- Fixed the warning message `\\"No xauth data\\"` when using ssh with X11 Forwarding

Version 3.2 (2011-05-30)

- New options for the Customizer: "Disable games"
- Improved the bookmarks interface (bookmarks folders, better edition, custom icon, ...)
- Added an option to hide/show the SSH graphical browser dynamically
- Added a new button for bookmarking a running SSH session
- Terminal tabs can now be moved using drag n'drop
- Compression has been enabled by default for SSH --> it allows big speed improvements, especially across slow networks or the Internet
- Big improvements on skins (no more flickering or slow effects)
- Corrected some multi-screens bugs
- Big improvements on the graphical interface, especially in "no-skin" mode
- New command available: "ssh-noencryption"
- No more settings are written to the registry so that MobaXterm is now fully portable (thanks to portablefreeware.com)
- There is now no skin by default at first startup
- Corrected the MobaControl[...] tools
- Updated many tools (rsync, etc...)
- Added the Stty tool
- Added the glxgears, glxinfo, glxheads and glxdemo tools
- Added the typespeed tool
- Some improvements in the splash screen
- A double-click on the tab bar now opens a new tab
- Corrected a problem with the SFTP upload progressbar with big files
- MobaTextEditor now remembers its previous window size
- The address bar in the SFTP graphical browser is now editable
- Added a screensaver for Home users that can be disabled by the customizer
- Corrected a problem with Backspace not correctly erasing letters on old Unixes and on some terminal applications
- Corrected a window resizing bug when the sftp browser was closed
- Corrected a tab button placement bug when switching from a SSH tab to a local tab
- Corrected some bugs with the rxvt terminal under Openbox
- Corrected a bug that prevented the terminal from launching in some particular cases
- The "minimize to tray" button is now available, even in "no skin" mode
- You can now specify the sender IP address in the Xdmcp chooser
- Several internationalization issues, especially in X server and in the SSH / SFTP clients
- The SFTP graphical transfers are now non-blocking and multi-threaded
- Added some new plugins (Expect, TCL/TK, Corskrew, ...)

Version 3.0 (2010-08-20)

- Added a very cool graphical browser when connecting to a remote host using ssh or sftp
- Dramatically improved the startup speed (no need to display a progress bar anymore?)
- Dramatically improved the plugins activation
- Added a main menu (you can choose to show only the main menu, only the buttons toolbar or both in the settings window)
- Added a very cool option called "Multi-execution mode": this option allows you to execute a single command on all the opened terminals
- Added customizable keyboard shortcuts
- Added a new "top" implementation that shows many useful information about processes
- Ctrl + Clic on a file name, on a link or on a directory name inside the terminal will open it in the Windows explorer
- Improved greatly Windows interaction
- Added many new customization options
- Corrected many display bugs with Windows
- Added ssh-agent with its options
- Improved the main window design
- Improved the Text Editor toolbar design
- PRO VERSION ONLY: Added a "MSI creator" that allows professional users to create and customize their own MSI installer packages
- PRO VERSION ONLY: Added many new options to the customizer in order to customize deeply MobaXterm
- Added a new option for showing/hiding the main menu
- Added a new option for showing/hiding the buttons toolbar
- Added a new option for creating a shortcut to your bookmark on the desktop
- Added a new "Minimize to tray" option
- Added a fullscreen mode option
- Added a new option for selecting a font path
- New option for sending ^H when pressing the backspace key
- Added UTF-8 support
- Added drag and drop support (you can now drag a file and drop it onto the terminal)
- Updated all tools
- Added Midnight Commander, ncd, autossh, fdupes, iperf, full vim, rsync
- New accelerated X server (with OpenGL support)

Version 2.2 (2009-10-14)

- Added some new plugins
- Added an HTML documentation in the About window You can also type "help" in the terminal
- Improved the default console font
- Improved copy/paste when pasting to an external program
- Improved startup speed
- Added a great integrated picture viewer called "ShowImage"
- Added a great integrated text editor with development and diff features called "MobaTextEditor"
- Added a port monitoring program
- Added fdupes -a duplicate files finder (and optionally remover)
- When closing a remote ssh/telnet/rlogin/rsh connection, the tab title is set to the original tab title instead of "\$HOSTNAME"

- Corrected a bug when in installed mode, the home directory was not correctly mounted
- The MobaConsole default font has been modified in order to better support antialiasing in Windows Vista and Windows Seven
- The default window size is now adapted to your resolution
- Changed the error message when using the "Create shortcut" button in the bookmarks editor without any bookmark selected
- Added FTP capabilities for bookmarks creation
- In the bookmarks creation dialog, there is a little red star for indicating required fields
- The bookmarks are now editable by double-clicking on them
- You can now select your home directory location, even in portable mode, so that you can keep your home files persistent
- You can now use small buttons for the MobaXterm menus
- You can now start an X-Win session with a light Window Manager ("Openbox")

Version 2.1 (2009-07-16)

- Added a "print" button
- When the current tab is over the tab limits, it is now displayed at the middle of the tabs bar. 2 arrow buttons allow users to browse the entire tab bar, even if the tabs are hidden.
- Corrected a bug when using Vista's screenlock feature
- Corrected a bug when resizing a terminal with multiple tabs (the new size values were not kept correctly)
- Enlarged the resize area in the bottom-right corner
- Added an information icon to the balloon tips
- Corrected a bug: in some cases the X server fonts were not completely loaded at startup
- Corrected a bug: in some cases, the Vista firewall was blocking the X server and an error could occur
- When the program is installed, the "Install" button is now disabled in the options window

Version 2.0 (2009-06-08)

- Changed name from "MobaXVT" to "MobaXterm"
- Dramatically speeded-up the startup time, especially when an antivirus is present (up to 420% faster!)
- Completely redesigned the terminal interface using native Windows widgets
- Added a very useful "Multi-Split View" option for displaying 1, 2 or 4 terminals at once (also called "dual-panel view" and "4-panel view")
- Removed the first screen (selection of X session mode)
- Added an option for saving all the terminal output to a text file
- Added an option for choosing your font (name, size, antialiasing, parameters, ...)
- Added an option for choosing the terminal colors
- Added a "clear screen" button
- Added a right-click menu on the terminal with the following options: Select all, Copy, Paste
- Added a status bar for monitoring the X server and the clipboard
- Added a right-click menu on tab and an option for closing tab with a middle-click
- Added some documentation
- Added new unix commands like bzcat, dd, diff, du, ed, expand, ftpget, ftpput, hexdump, ipcrm, killall, lpr, md5sum, mkfifo, nice, nohup, od, patch, printf, renice, sendmail, setsid, sha1sum, strings, sum, sync, tac, tee, telnet, tftp, uname, unzip, uudecode, uuencode, watch, wc, wget, which, zcat
- Added some very light servers like httpd, tftpd, telnetd, dnssd
- Your parameters are now saved to an INI file which makes MobaXterm fully portable

Version 1.0 (2008-04-16)

- Initial release

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