

Comparison of Web Browsers

This comparison compares the most popular cross-platform (desktop and mobile) browsers and their features. Until 2016, there were the "Big 5" browsers (Firefox, IE/Edge, Chrome, Opera, and Safari), but since then the market has become more fragmented with new browsers such as Brave and Vivaldi becoming more popular. I have decided to limit my test to these 7 browsers as they are both available on PCs and on phones (unlike for example Pale Moon, which stopped developing its mobile version), and also have decided against including "regional" browsers such as Yandex Browser (Russia), Naver Whale (Korea) or the Chinese browsers (Baidu, 360, Sogou, QQ, ...).








The result of the comparison is less clear than last time. In terms of pure features, Vivaldi, Opera and Firefox are at the top of list, followed by Edge and Brave, with Chrome and Safari being the most "bare-bones" and least customizable browsers. Ironically, the "worst" browsers have the highest market shares, thanks to their being preinstalled on iOS and Android.

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Source: eylenburg.github.io

Last updated: 4 August 2024

☒ Show Desktop browsers ☒ Show Android browsers ☒ Show iOS browsers

	<div><div>Mozilla Firefox</div><div></div><div><div>Developer</div><div>Developer name Developer country Privacy ratings</div></div><div><div>General technical information</div><div>Based on Predecessors and first release HTML and Javascript engine</div></div><div><div>Usage share</div><div>Usage share over time * worldwide * all device types included * source: TheCounter 2002-07, StatCounter 2008-23</div></div><div>Market share mid-2023</div><div><div>Operating system support</div><div>Windows macOS GNU/Linux BSD Unix System V Android iOS Other modern operating systems Legacy operating systems</div></div></div>	<div><div>Apple Safari</div><div></div><div><div>Developer</div><div>Developer name Developer country Privacy ratings</div></div><div><div>General technical information</div><div>Based on Predecessors and first release HTML and Javascript engine</div></div><div><div>Usage share</div><div>Usage share over time * worldwide * all device types included * source: TheCounter 2002-07, StatCounter 2008-23</div></div><div>Market share mid-2023</div><div><div>Operating system support</div><div>Windows macOS GNU/Linux BSD Unix System V Android iOS Other modern operating systems Legacy operating systems</div></div></div>	<div><div>Google Chrome</div><div></div><div><div>Developer</div><div>Developer name Developer country Privacy ratings</div></div><div><div>General technical information</div><div>Based on Predecessors and first release HTML and Javascript engine</div></div><div><div>Usage share</div><div>Usage share over time * worldwide * all device types included * source: TheCounter 2002-07, StatCounter 2008-23</div></div><div>Market share mid-2023</div><div><div>Operating system support</div><div>Windows macOS GNU/Linux BSD Unix System V Android iOS Other modern operating systems Legacy operating systems</div></div></div>	<div><div>Microsoft Edge</div><div></div><div><div>Developer</div><div>Developer name Developer country Privacy ratings</div></div><div><div>General technical information</div><div>Based on Predecessors and first release HTML and Javascript engine</div></div><div><div>Usage share</div><div>Usage share over time * worldwide * all device types included * source: TheCounter 2002-07, StatCounter 2008-23</div></div><div>Market share mid-2023</div><div><div>Operating system support</div><div>Windows macOS GNU/Linux BSD Unix System V Android iOS Other modern operating systems Legacy operating systems</div></div></div>	<div><div>Opera</div><div></div><div><div>Developer</div><div>Developer name Developer country Privacy ratings</div></div><div><div>General technical information</div><div>Based on Predecessors and first release HTML and Javascript engine</div></div><div><div>Usage share</div><div>Usage share over time * worldwide * all device types included * source: TheCounter 2002-07, StatCounter 2008-23</div></div><div>Market share mid-2023</div><div><div>Operating system support</div><div>Windows macOS GNU/Linux BSD Unix System V Android iOS Other modern operating systems Legacy operating systems</div></div></div>	<div><div>Vivaldi</div><div></div><div><div>Developer</div><div>Developer name Developer country Privacy ratings</div></div><div><div>General technical information</div><div>Based on Predecessors and first release HTML and Javascript engine</div></div><div><div>Usage share</div><div>Usage share over time * worldwide * all device types included * source: TheCounter 2002-07, StatCounter 2008-23</div></div><div>Market share mid-2023</div><div><div>Operating system support</div><div>Windows macOS GNU/Linux BSD Unix System V Android iOS Other modern operating systems Legacy operating systems</div></div></div>	<div><div>Brave</div><div></div><div><div>Developer</div><div>Developer name Developer country Privacy ratings</div></div><div><div>General technical information</div><div>Based on Predecessors and first release HTML and Javascript engine</div></div><div><div>Usage share</div><div>Usage share over time * worldwide * all device types included * source: TheCounter 2002-07, StatCounter 2008-23</div></div><div>Market share mid-2023</div><div><div>Operating system support</div><div>Windows macOS GNU/Linux BSD Unix System V Android iOS Other modern operating systems Legacy operating systems</div></div></div>
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Other notable, still developed browsers which were not included in this comparison (list not exhaustive):

Using Blink/V8 engine: Samsung Browser, ungoogled-chromium, Falkon, Yandex Browser (*except iOS*), Naver Whale (*except iOS*), DuckDuckGo Browser (*Android*), Cromite, Vanadium, *seemingly all Chinese browsers* (e.g. 360 Secure, Baidu, CM, Maxthon, QQ, Sogou, UC), *many more...*

Using WebKit/Nitro engine: GNOME Web, Otter, Orion, DuckDuckGo Browser (*macOS/iOS*), Yandex Browser (*iOS*), Naver Whale (*iOS*), *all iOS browsers...*

Using Gecko/SpiderMonkey engine: Floorp, Waterfox, LibreWolf, Mullvad Browser, Fennec F-Droid, Mull, SeaMonkey, Tor Browser, ...

Using Goanna/SpiderMonkey engine: Pale Moon, Basilisk, K-Meleon, ...

Using other engines: NetSurf, Ekioh Flow, Ladybird, iBrowse, Servo, *text browsers...*

	Mozilla Firefox			Apple Safari		Google Chrome			Microsoft Edge			Opera			Vivaldi			Brave		
Feature Comparison												MeeGo, EPOC/Symbian, Bada, BlackBerry, Windows Mobile/Phone, Linux-based TVs								
	Win/Mac/Linux	Android	iOS	Mac	iOS	Win/Mac/Linux	Android	iOS	Win/Mac/Linux	Android	iOS	Win/Mac/Linux	Android	iOS	Win/Mac/Linux	Android	iOS	Win/Mac/Linux	Android	iOS
Bookmarking & archiving																				
Bookmarks bar or speed dial with folders	Yes (bookmarks bar)NoNo			Yes (bookmarks bar)NoNo		Yes (bookmarks bar)NoNo			Yes (bookmarks bar)NoNo			Yes (both)YesDropped			Yes (both)YesNo			Yes (bookmarks bar)NoNo		
Session manager	with extensionYesNo			with extensionNoNo		with extensionNoNo			Dropped (w/ ext.)NoNo			Dropped (w/ ext.)NoNo			YesNoNo			with extensionNoNo		
Download/screenshot whole website	HTML/PNGPDFNo			Webarchive/PDFNoNo		(M)HTMLMHTMLNo			MHTML/PNGMHTML/PNGNo			(M)HTML/PDF(M)HTML/PDFNo			(M)HTML/PNG/JPGMHTML/PNGNo			(M)HTMLMHTML/PNGPDF		
Search																				
Default search engine	Google			Google		Google			Bing			Google			Bing			Brave Search		
Can delete/hide preinstalled search engines	YesYesNo			NoNo		YesNoNo			YesNoNo			DroppedDroppedNo			YesNoNo			YesNoNo		
Can add new search engines	YesYesYes			Nowith extension		YesNoNo			YesNoNo			YesYesDropped			YesNoNo			YesNoYes		
Search keywords	YesNoNo			Nowith extension		YesNoNo			YesNoNo			YesNoNo			YesYesNo			YesNoNo		
Tracking																				
Tracking protection	YesYesYes			YesYes		with extensionNoNo			YesYesYes			YesYesYes			YesYesYes			YesYesYes		
Ad blocking (cosmetic, alongside trackers)	with extensionw/ ext.No			with extensionwith extension		with extensionNoNo			with extensionYesYes			YesYesYes			YesYesYes			YesYesYes		
Can clear cookies on exit	YesYesNo			NoNo		YesNoNo			YesYesNo			YesYesNo			YesYesNo			YesYesNo		
CNAME unclinking support	YesYesYes			YesYes		NoNoYes			NoNoYes			NoNoYes			NoNoNo			YesYesYes		
Partitioning of third-party storage	YesYesYes			YesYes		NoNoYes			NoNoYes			NoNoYes			NoNoNo			YesYesYes		
Can grant ephemeral website permissions	NoNoNo			NoNo		NoNoNo			NoNoNo			NoNoNo			NoNoNo			YesYesNo		
Can disable built-in ad measurements/tracking?	OptionalNoneNone			OptionalOptional		OptionalOpt.No			NoNoNone			NoNoNone			NoneNoneNone			NoneNoneNone		
Freedom																				
License	MPL			Proprietary		Proprietary			Proprietary			Proprietary			Source available			MPL		
Web Environment Integrity API	NoNoNo			NoNo		StoppedStoppedNo			NoNoNo			NoNoNo			NoNoNo			NoNoNo		
EME & DRM	YesYesYes			YesYes		YesYesYes			YesYesYes			YesYesYes			YesNoNo			YesYesYes		
Synchronisation																				
Bookmarks sync	YesYesYes			YesYes		YesYesYes			YesYesYes			YesYesDropped			YesYesYes			YesYesYes		
Passwords sync	YesYesYes			YesYes		YesYesYes			YesYesYes			YesYesDropped			YesYesYes			YesYesNo		
History and open tabs sync	YesYesYes			YesYes		YesYesYes			YesYesYes			YesYesDropped			YesYesYes			YesYesNo		
End-to-end encryption of sync data	Default E2E encryption			Default E2E encryption		Optional E2E encryption			Limited E2E encryption			Optional E2E encryption			Default E2E encryption			Default E2E encryption		
Ability to sync without creating an account	Yes (self-hosted server)			No		No			No			No			No			Yes (sync chain)		
Convenience																				
Autofill (passwords, addresses, payments)	YesYesYes			YesYes		YesYesYes			YesYesYes			YesYesYes			YesYesYes			YesYesYes		
Website translation	YesNoNo			YesYes		YesYesYes			YesYesYes			with extensionYesYes			YesYesNo			YesYesNo		
Dynamic text reflow when zooming	YesNoNo			YesNo		YesDroppedNo			YesNoNo			YesYesDropped			YesNoNo			YesNoNo		
Temporary downloads ("Open" file)	Dropped			NoNo		NoNoNo			YesNoNo			Dropped			NoNoNo			NoNoNo		
Reader view	YesYesYes			YesYes		Dropped (w/ ext.)YesNo			YesYesYes			with extensionYesNo			YesYesYes			with extensionYesYes		
Enforce dark theme for websites	with extensionw/ ext.Yes			with extensionwith extension		hidden (w/ ext.)hiddenNo			hidden (w/ ext.)YesNo			YesYesDropped			hidden (w/ ext.)YesNo			hidden (w/ ext.)YesYes		
Upload file from clipboard	with extensionNoNo			NoNo		NoNoNo			NoNoNo			YesNoNo			NoNoNo			NoNoNo		
Tab handling																				
Tab groups/stacks/workspaces	Dropped (w/ ext.)NoNo			YesYes		YesYesNo			YesNoNo			YesNoNo			YesYesNo			YesYesNo		
Change between horizontal and vertical tabs	No (w/ ext.)NoNo			NoNo		DroppedNoNo			YesNoNo			DroppedNoNo			YesNoNo			YesNoNo		
Configurable placement of new tabs	hidden (w/ ext.)DroppedNo			NoNo		with extensionNoNo			with extensionNoNo			Dropped (w/ ext.)NoNo			YesYesNo			with extensionNoNo		
Configurable tab focus after closing tab	with extensionNoNo			NoNo		with extensionNoNo			with extensionNoNo			Dropped (w/ ext.)NoNo			YesNoNo			with extensionNoNo		
Quickly jump back to last active tab	Yes (Ctrl+Tab)NoNo			NoNo		NoNoNo			NoNoNo			Yes (Ctrl+Tab)NoNo			Yes (Ctrl+Tab)NoNo			Yes (Ctrl+Tab)NoNo		
Connection																				
Proxy settings (independent from OS)	Yesw/ ext.No			NoNo		with extensionNoNo			with extensionNoNo			Dropped (w/ ext.)NoNo			with extensionNoNo			with extensionNoNo		
Automatic upgrading to HTTPS	YesYesNo			for known websitesfor known websites		YesYesNo			hidden (w/ ext.)NoNo			YesNoNo			YesYesYes			YesYesYes		
Data compression	NoNoNo			NoNo		NoDroppedNo			NoNoNo			DroppedYesDropped			NoNoNo			NoNoNo		
IPFS support	with extensionNoNo			NoNo		with extensionNoNo			with extensionNoNo			YesYesYes			with extensionNoNo			YesYesNo		
DNS-over-HTTPS support	YesDroppedNo			NoNo		YesYesNo			YesNoNo			YesYesNo			hiddenYesNo			YesYesNo		
Oblivious-DNS-over-HTTPS support	NoNoNo			in private modein private mode		NoNoNo			NoNoNo			NoNoNo			NoNoNo			NoNoNo		
Encrypted Client Hello support	YesNoNo			NoNo		hiddenhiddenNo			hiddenNoNo			hiddenNoNo			hiddenhiddenNo			hiddenhiddenNo		
Can access .onion websites (ootb)	NoNoNo			NoNo		NoNoNo			NoNoNo			NoNoNo			NoNoNo			YesNoNo		
Can access .i2p websites (ootb)	NoNoNo			NoNo		NoNoNo			NoNoNo			NoNoNo			NoNoNo			NoNoNo		
Extensions																				
Extension support	YesYesNo			YesYes		YesNoNo			YesLimitedNo			YesNoNo			YesNoNo			YesNoNo		
Support for uBlock Origin (content blocker)	YesYesNo			DroppedNo		Yes (limited features)NoNo			Yes (limited features)NoNo			Yes (limited features)NoNo			Yes (limited features)NoNo			Yes (limited features)NoNo		
Can "sideload" extension (install from file)	If signedhiddenNo			DroppedNo		Recurring warningNoNo			Recurring warningNoNo			YesNoNo			YesNoNo			Recurring warningNoNo		
Extension store	Mozilla			Apple		Google			Microsoft & Google			Opera & Google			Google			Google		
Advanced features																				
Can clear browsing history on exit	Yes (flawed)YesNo			NoNo		NoNoNo			YesYesNo			NoYesNo			YesYesNo			YesOn startNo		
Multi-account containers	w/ official extensionNoNo			NoNo		NoNoNo			NoNoNo			NoNoNo			NoNoNo			NoNoNo		
Can disable JavaScript	hidden (w/ ext.)hidden (w/ ext.)No			YesYes		YesYesNo			YesYesNo			YesNoNo			hiddenYesNo			YesYesYes		
Supports PWAs/add to homescreen	NoYesNo			NoYes		YesYesNo			YesYesNo			NoYesNo			YesYesYes			YesYesNo		

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	Mozilla Firefox			Apple Safari			Google Chrome			Microsoft Edge			Opera			Vivaldi			Brave		
Userscript support	with extension	w/ ext.	No	with extension	with extension		with extension	No	No	with extension	No	No	Dropped (w/ ext.)	No	No	with extension	No	No	with extension	No	No
Portable settings profiles	Yes (user.js)	No	No	No	No		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Browser's UI elements can be modified	limited / hidden	No	No	No	No		No	No	No	No	No	No	Dropped	No	No	limited / hidden	No	No	No	No	No
Support for JPEG XL image format	with extension	w/ ext.	Yes	Yes	Yes		with extension	No	Yes	with extension	No	Yes	hidden (w/ ext.)	No	Yes	with extension	No	Yes	with extension	No	Yes
Can use another HTML engine	No	No	No	No	No		No	No	No	Yes (Trident)	No	No	No	Dropped	Dropped	No	No	No	No	No	No
Can view and save files in cache	Yes	No	No	No	No		No	No	No	No	No	No	Dropped	No	No	No	No	No	No	No	No
Master password for password autofill	Yes (no mobile sync)	Dropped	No	No	No		No	No	No	Yes	Device PIN	No	Dropped	Device PIN	No	No	No	No	No	No	No
Site isolation (to enhance security)	Yes	No	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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Do you have any comments or corrections? [Please drop me an e-mail](#) or [create an issue on Github](#)

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