

Microsoft Edge vs Google Chrome vs Mozilla Firefox – a comparison between the browsers

The Internet has evolved dramatically today, and with the revolutionary progression in technology used in websites and web apps, the browsers have also developed massively to provide enhanced and optimized support for the users. In today's world, Google Chrome has surpassed expectations in usage, and over 50% of internet users use Google Chrome as their primary browser. That being said, Microsoft Edge and Mozilla Firefox are also leading in positions of web browsing, although they lag far behind Google Chrome. It doesn't necessarily mean they are poorer browsers, but the *user interface and user experience* are far better when it comes to Google Chrome. The two other browsers are doing their very best to stay in the competition as we can see in recent developments. All three browsers constitute a majority of the share of the whole bunch of web browsers that we use today. In this article, we will discuss a generous comparison between the three browsers- Microsoft Edge, Google Chrome and Mozilla Firefox, and help you in figuring out which is the best browser for your requirements.

Round 1: Features

Web browsers have been in the competition for over 30 years, and they have developed tremendously over the decades to come to the form you see today. All three browsers have an address bar at the top, with a search button and the ability to create new tabs or new windows that work simultaneously with the primary window. You can easily switch between the multiple tabs during work. All the browsers have special features such as adding bookmarks, saving passwords in their own password manager, and private browsing modes that let you search in full incognito mode. This means that your browsing activity will stay hidden, and the browser will not record browsing history. The password manager feature in Google Chrome offers advanced features of storing the passwords on their cloud system in a secure format. This comes as an advantage if you decide to uninstall the web browser and install a fresh version of Google Chrome. Then, you can synchronize your passwords from the previous browser since it was stored on the cloud. Microsoft Edge and Google Chrome support Google's casting technology. This allows you to send web pages and apps and stream them directly to a Chromecast device or a Chromecast-compatible TV. This is something that the regular Mozilla Firefox is unable to do (for the desktop version) but the Android edition of Firefox can, using the casting framework that is in-built in the mobile operating system.

Microsoft Edge has a beautiful feature called Immersive Reader mode, which strips out advertisements and other forms of distractions such as popups from compatible web pages. This gives a cleaner user experience while surfing the web pages and you can read the websites without any form of distraction. A toolbar allows you to modify the appearance of text on the web pages and offers a one-click read-aloud function whenever you visit a website. There are options to highlight nouns, adjectives, and verbs and the ability to present contextual pictures to demonstrate the meaning of certain complex words. These tools and features to help in the improvement of English is a much welcome move. Unlike Edge, Chrome's reader mode is quite basic and not even available by default. You have to tweak the advanced settings of Chrome to activate it. Once you do it, there will be a book icon displayed at the top of the page near the address bar. The best reader mode can be awarded to Firefox which includes an elegant floating toolbar in combination with font controls and a text-to-speech button with the free *Pocket* service that allows you to save pages for later use with a single click. Although you can install Pocket using extensions in Chrome and Edge, for Firefox, it is built right out of the box.

Round 2: Speed and performance

Speed and performance are the most important criteria for any application, and the same applies to a web browser. It determines how fast a browser can load itself and the web pages without consuming too much system resources resulting in the system performing slowly. To judge this, we have performed several tests using Pingdom and HTML5 Test tool. We come to the conclusion that Microsoft Edge is the fastest web browser that consumes minimal system resources, followed by Google Chrome and Mozilla Firefox.

On the contrary, if we load multiple extensions for the Chrome or Edge Webstore and try to use the browsers again, the speed of the browsers decreases significantly. This concludes that web extensions can slow down your browsing experience. Besides, there are several third-party web extensions that are generally unverified and not tested towards their performance benchmarks. They can also bring in malware and further decrease the system performance. So if you are browsing the internet and want some additional assistance by installing web extensions, make sure that you install only authentic and trusted extensions after going through their reviews on the Internet or getting assurance from the owner of the extension if possible.

Round 3: Extensibility

When it comes to extensibility, there is simply no comparison between the oldest and newest browsers. Google Chrome has been in the business since 2008, so it is not surprising that it has a plethora of extensions available in the Webstore. There are over thousands of extensions in the Google Chrome Webstore that ranges across several categories such as productivity, multi-tasking, remote management, project management, entertainment, blogging, and so much more. Google Chrome also features an abundance of add-ons like apps, games and themes from Google and third-party providers. Chrome also has an extension connection to its online or offline Google Docs office suite which is a massive help to collaborations and presenters.

Firefox, on the other hand, has many extensions available in the Privacy and Security category alone and this category is something that Google Chrome lacks. It also features many extensions, both from its own Webstore and third-party providers.

Microsoft Edge is a new product in the market and hence there are not many extensions available for Microsoft Edge. You only have a few tens of extensions available for Microsoft Edge. The good news is that you can synchronize your Google Chrome extensions with Microsoft Edge and if compatible, they will run perfectly on Microsoft Edge as well.

Round 4: Support for standards of the web

This time, we did a full test of browser compatibility with HTML 5 and CSS 3 tests, along with Javascript as well. On the HTML 5 test, Chrome performed superbly, followed by Mozilla Firefox. On the CSS 3 test, Firefox has a leading edge over Chrome. However, Microsoft Edge performed poorly in both HTML 5 and CSS 3 support or compatibility test.

All three browsers provide support for WebGL for rendering interactive 3D Graphics but at differing degrees. On the Oort Online GL benchmark, Edge outperformed both Chrome and Edge by a significant margin in the WebGL support test.

After seeing all the benchmarks, we conclude that all the three browsers have their own pros and cons in standards support for the web. If you are purely surfing the internet without involving yourself in too many 3D animations, then Chrome will surely be the first choice for you. For web

developers and programmers, Chrome should be a win-win option and the primary testing browser to install. However, developers need to install all three browsers for cross-compatibility testing and to ensure that their product is working well across all the browsers.

Conclusion

Undoubtedly, Google Chrome retains the trophy for being the best Windows 10 browser due to its overall usability, functionality, performance, security and extensibility. Google Chrome's minimalist interface is a joy to work with as it gives you complete freedom to mould your browsing experiences to your preferences. Its support for web standards helped Google Chrome to cement its top position.

Followed by Google Chrome is Mozilla Firefox. It has a purely elegant design, lots of add-ons and extensions as well as creative themes. Firefox gave a lot of attention to privacy and security, and its decent performance makes it shine in the industry. Microsoft Edge is our personal podium winner. It serves as a great default browser as it has good performance, security and awesome built-in features such as Cortana integration, Reading View and special hovering tabs. Since it is new in the market compared to the two other browsers, it will take some time for Edge to make a solid competition with Firefox and Chrome. We will wait and see what happens.