

HTTPS encryption on the web

HTTPS helps keep your browsing safe by securely connecting your browser or app with the websites you visit. HTTPS relies on encryption technology—SSL or TLS—to secure these connections. This report provides data on the status of HTTPS adoption and usage across the web.

Encryption keeps you safe

HTTPS web connections protect against eavesdroppers, man-in-the-middle attacks, and hijackers who attempt to spoof a trusted website. In other words, encryption thwarts interception of your information and ensures the integrity of information that you send and receive. Because older hardware and software often don't support modern encryption technologies, users of these devices may be more vulnerable to security threats.

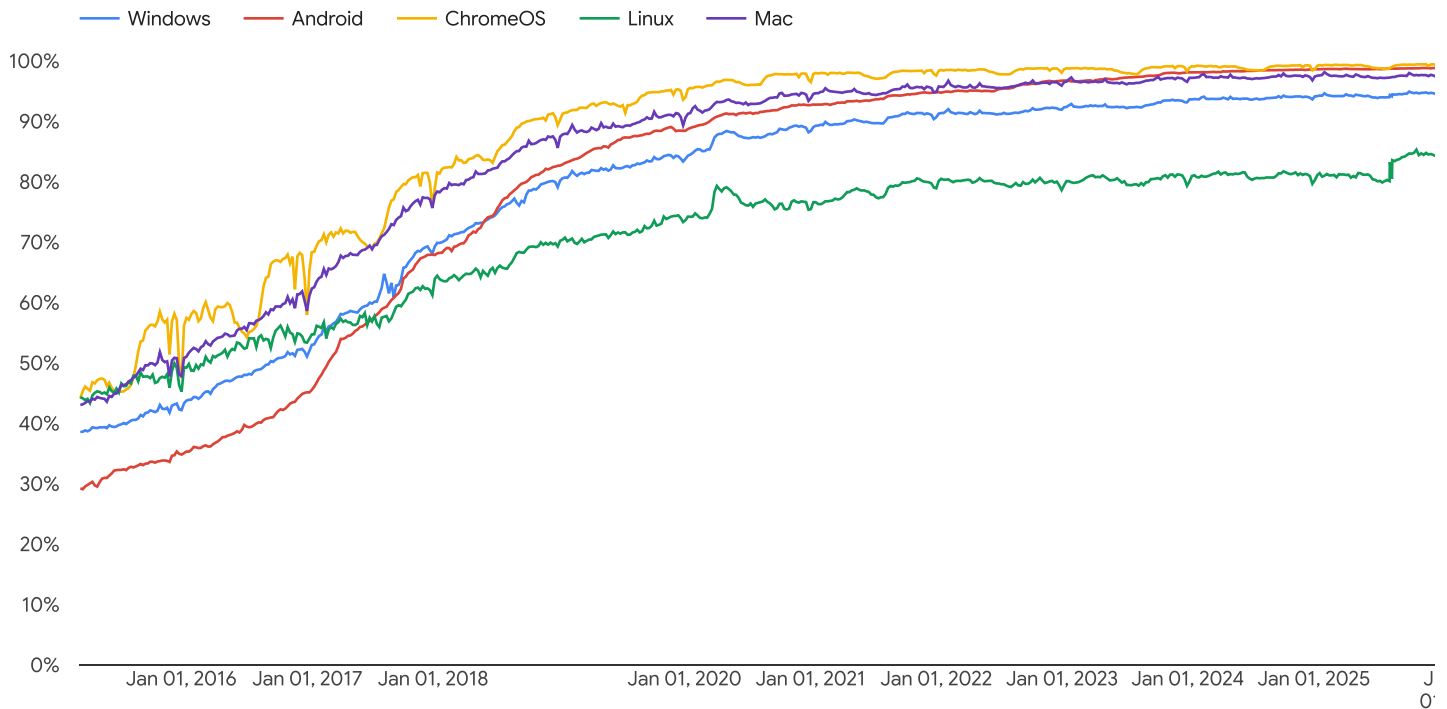
Obstacles to encryption

Several technical and political challenges stand in the way of achieving full encryption of all web traffic. For example, certain countries/regions and organizations block or otherwise degrade HTTPS traffic. Some companies and organizations lack the technical resources to implement HTTPS or don't see it as a priority. At Google, certificate management can be challenging for products like Blogger, where a user's non-Google domain can be used and may not support HTTPS.

HTTPS Encryption by Chrome platform

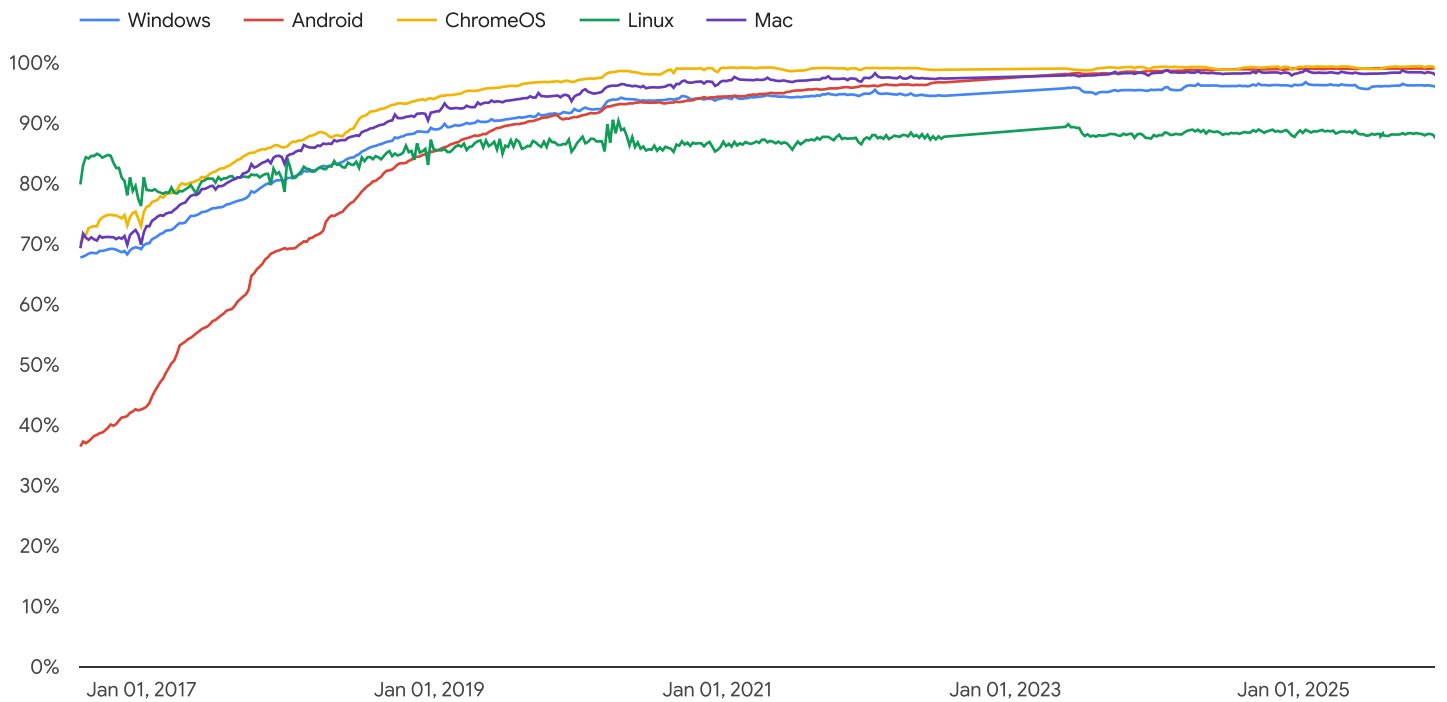
Since early 2015, we have been able to measure the prevalence of HTTPS connections thanks to Chrome users who choose to [share usage statistics](#). The graphs below show the growth in HTTPS usage across platforms and countries/regions. Desktop users load more than half of the pages they view over HTTPS and spend two-thirds of their time on HTTPS pages. HTTPS is less prevalent on sites accessed on mobile devices, but there is still an upward trend in encryption usage there.

Percentage of pages loaded over HTTPS in Chrome by platform



Fragment navigations, history push state navigations, and all schemes besides HTTP/HTTPS (including new tab page navigations) are not included.

Percentage of HTTPS browsing time by Chrome platform



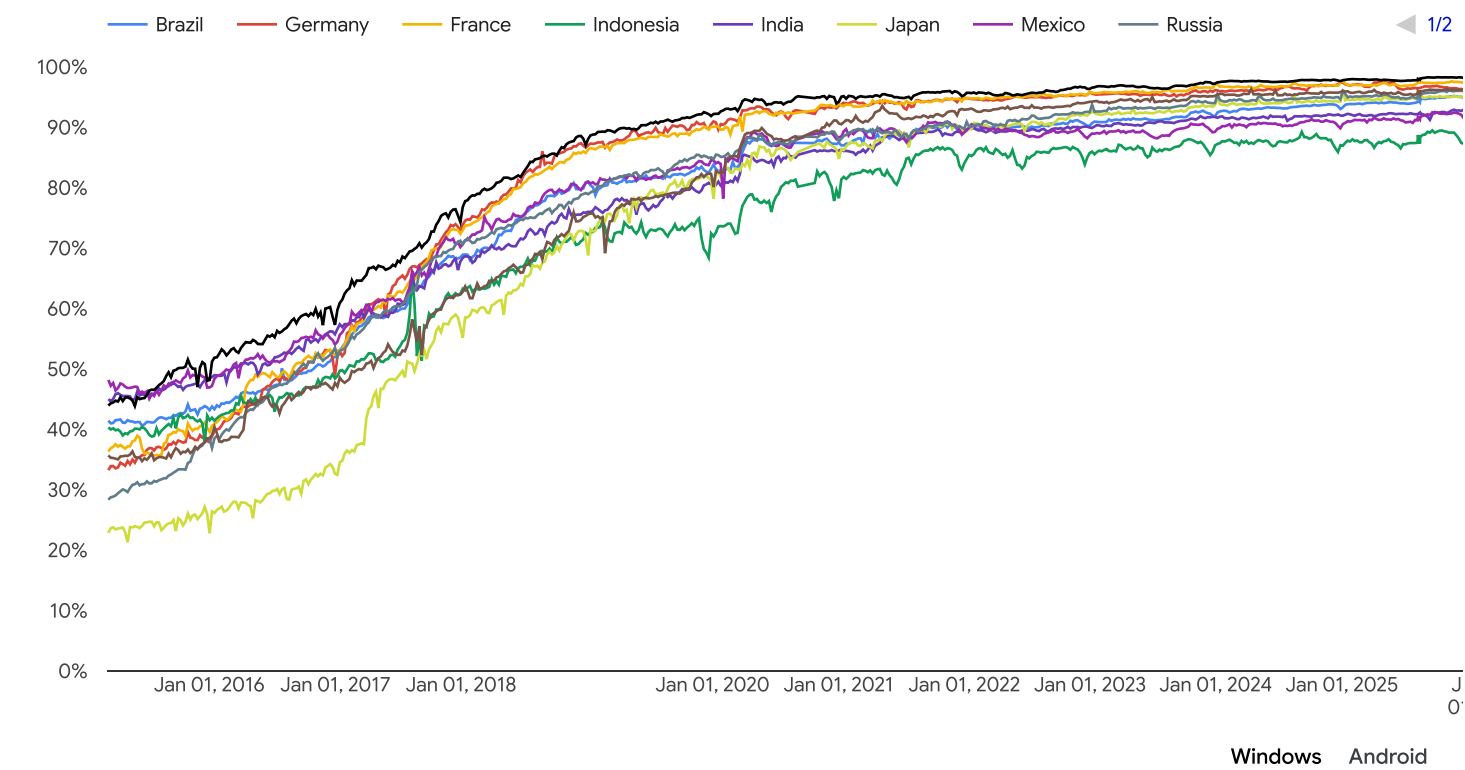
If a user has multiple tabs open in Chrome, metrics come only from the active foreground tab. Schemes other than HTTP or HTTPS (such as chrome://) are not included.

HTTPS usage in Chrome worldwide

HTTPS usage in Chrome is growing faster in some countries/regions than others. For example, the prevalence of HTTPS has increased quickly in Russia compared to Japan, which has seen slower growth of HTTPS usage.

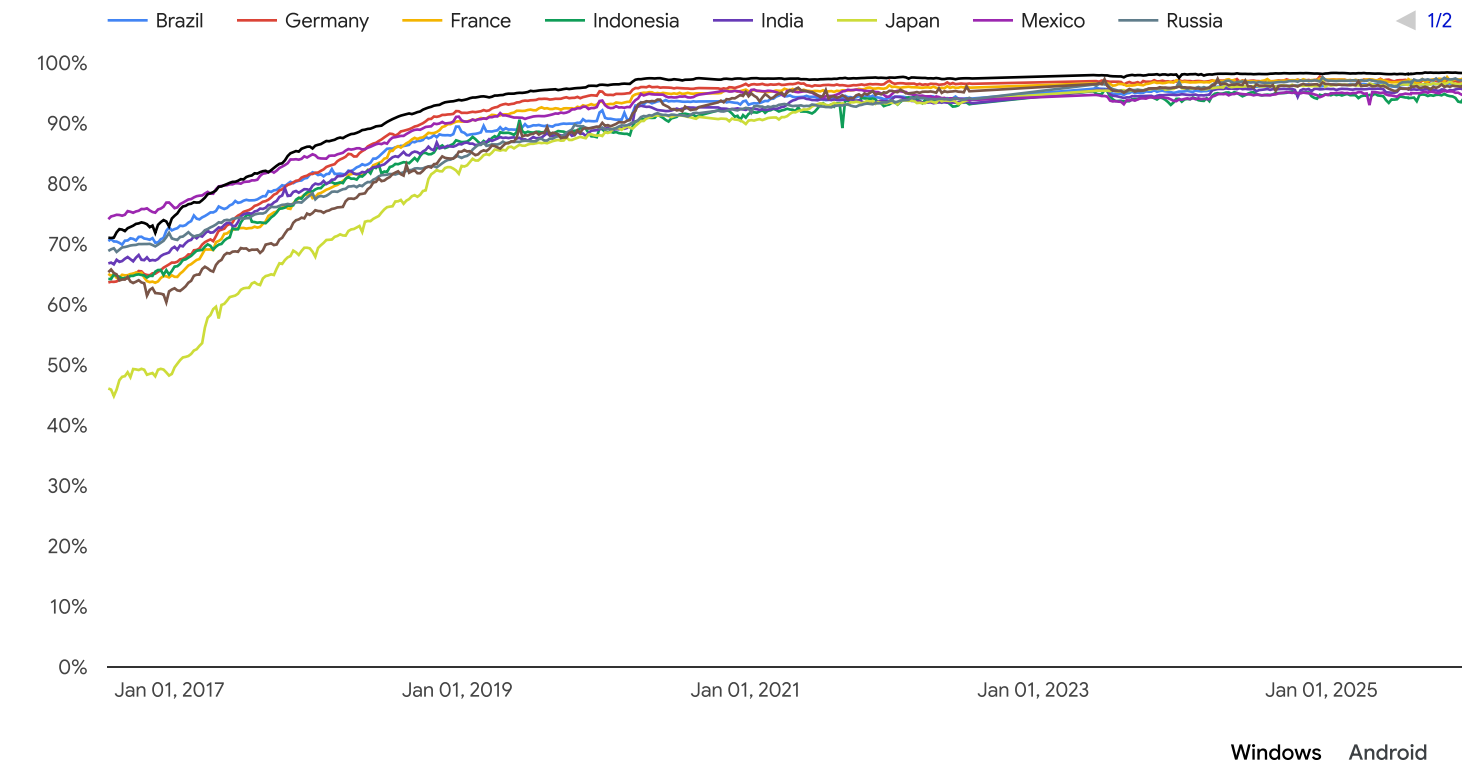
[Learn about how we select these countries/regions](#)

Percentage of pages loaded over HTTPS in Chrome by country/region



Fragment navigations, history push state navigations, and all schemes besides HTTP/HTTPS (including new tab page navigations) are not included.

Percentage of HTTPS browsing time in Chrome by country/region



If a user has multiple tabs open in Chrome, metrics come only from the active foreground tab. Schemes other than HTTP or HTTPS (such as chrome://) are not included.

As of August 2024, charts covering encrypted traffic and requests across Google products have been [archived](#).

Encryption makes the web more secure

HTTPS ensures the content you view online hasn't been eavesdropped on or altered by others on the network, like your internet service provider.

[Own a site? Learn how to turn HTTPS on, and protect your visitors](#)

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