



Chrome 101 Enterprise release notes

For administrators who manage Chrome browser or Chrome devices for a business or school.

These release notes were published on April 26, 2022, and last updated May 05, 2022.

See the latest version of these release notes online at <https://g.co/help/ChromeEnterpriseReleaseNotes>

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Chrome 101 release summary

Chrome browser updates	Security	User productivity /Apps	Management
Removing setTimeout(0) clamping to 1ms		✓	
Deprecation Origin Trial for UA reduction	✓		
Chrome Browser Cloud Management maintains compatibility with the most recent 12 versions of Chrome			✓
Chrome supports notification permission changes on Android 13 and above		✓	
Chrome removes support for WebSQL in a third-party context	✓		
Compare search results with new Side Search feature		✓	
Control camera and microphone permissions on iOS		✓	
Chrome runs prerendering autocomplete suggestions from the Omnibox		✓	
Chrome removes legacy policies with non-inclusive names			✓
New and updated policies in Chrome browser			✓
Chrome OS updates	Security	User productivity /Apps	Management
Network-based recovery for Chrome OS			✓
Policy support for additional openVPN settings			✓
UI-based firmware updates for peripherals		✓	
Crostini upgrade to Debian 11 (Bullseye)			✓
UI improvements for the Camera app		✓	
Cursive canvas lock		✓	

Forced reboots across managed devices			✓
Admin console updates	Security	User productivity /Apps	Management
Identification variables for Android managed configuration policy			✓
New policies in Admin console			✓
Upcoming Chrome browser changes	Security	User productivity /Apps	Management
Chrome apps no longer supported on Windows, Mac, and Linux as early as Chrome 102		✓	✓
Privacy Sandbox updates in Chrome 102			
Private extensions using Manifest V2 no longer accepted in the Chrome Web Store in June 2022			✓
Chrome to send Private Network Access preflights for subresources as early as Chrome 102	✓		
Chrome will use MiraclePtr to improve security as early as Chrome 102	✓		
MetricsReportingEnabled policy available on Android in Chrome 102			✓
Chrome 103 will use case-matching on CORS preflight requests	✓		
Chrome Actions on iOS in Chrome 103		✓	
Network Service on Windows will be sandboxed in Chrome 104	✓		
Default to origin-keyed agent clustering in Chrome 106	✓		
Chrome 107 will replace master_preferences with initial_preferences			✓
Upcoming Admin console changes	Security	User productivity /Apps	Management

New CSV export for some Admin console reports in Chrome 103		✓	✓
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The enterprise release notes are available in 8 languages. You can read about Chrome's updates in English, German, French, Dutch, Spanish, Portuguese, Korean, and Japanese. Please allow 1 to 2 weeks for translation for some languages.

Chrome browser updates

Removing `setTimeout(,0)` clamping to 1ms

Chrome 101 removes a web intervention for some users that clamped `setTimeout(,0)` timers to 1ms. In Chrome 101, those users see timers fire immediately. Note that nested timer calls clamp to 4ms after repeated nested calls. This change brings Chrome in line with web specifications and might improve performance on some pages.

It's possible that this change will introduce bugs in web applications that rely on the current clamped behavior. If you have any apps affected by this change, you can use the [SetTimeoutWithout1MsClampEnabled](#) policy to revert to the Chrome 100 behavior.

Deprecation Origin Trial for UA reduction

As [previously announced](#), Chrome 101 protects user privacy by reducing the granularity of information in the User-Agent string. In this phase, the MINOR.BUILD.PATCH version info is reduced to 0.0.0. If a site needs this information, it should migrate to the [User Agent Client Hints API](#). Sites that need more time to test or migrate can take advantage of [a Deprecation Trial](#), which started in Chrome 100.

You can also control this using the [UserAgentReduction](#) enterprise policy. You can test the new reduced-granularity User-Agent string by setting the policy to 2, or you can delay the change while you update your apps by setting it to 1.

Chrome Browser Cloud Management maintains compatibility with the most recent 12 versions of Chrome

Starting with Chrome 101, Chrome Browser Cloud Management maintains compatibility with the most recent 12 versions of Chrome. Older versions may lose some Chrome Browser Cloud Management features without notice, or behave unexpectedly. For your security, you should keep Chrome auto-update enabled, which keeps your fleet on the most recent version of Chrome. If you manage Chrome updates manually, staying close to the most recent version both keeps your users safer, and ensures you stay within the compatibility window.

Chrome 101 supports notification permission changes in Android 13 and above

Android 13 is changing the way push notification permissions behave by default. All Android apps require users to explicitly allow OS notification permissions, as opposed to Android 12 and earlier where it was granted by default. Chrome running on Android 13 now prompts the user for permission at app launch up to two times.

Chrome removes support for WebSQL in a third-party context

The [WebSQLInThirdPartyContextEnabled](#) policy was introduced to give admins additional time to react to the removal of WebSQL in a third-party context. As planned, this policy is removed in Chrome 101.

Compare search results with new Side Search feature

Side Search allows users to compare search results via a side panel UI to get the right answer faster. This means users can view a page and the search results at the same time, without needing to navigate back and forth or losing their search results. This is helpful for users who are actively searching for something and need more than one site, for example, planning an employee dinner, putting together presentations, and so on. You can control this feature using the [SideSearchEnabled](#) policy.

Control camera and microphone permissions on iOS

In Chrome 101, after granting Chrome both app level and site level permission to use the camera or microphone, users can now control camera or microphone usage. Users can tap the icon on the left of the location bar to trigger a popup that shows switches to control the camera or microphone. Alternatively, users can go to **Site Information** in the context menu and do the same.

Chrome runs prerendering autocomplete suggestions from the Omnibox

Chrome 101 enables Omnibox, or URL bar, prerendering. With this feature, Chrome starts prerendering the high-confidence Omnibox autocomplete suggestions. Chrome is currently prefetching resources for high-confidence suggestions using No-state Prefetch, but with this feature we can further process the webpage, including DOM tree construction and script execution. Enterprises can opt-out of this feature using the [NetworkPredictionOptions](#) policy.

Chrome removes legacy policies with non-inclusive names

Chrome 86 through Chrome 90 introduced new policies to replace policies with less inclusive names (for example, whitelist, blacklist). In order to minimize disruption for existing managed users, both the old and the new policies currently work.

This transition period was originally planned for Chrome 95, but was extended to Chrome 101 to give admins more time to transition their policies. In Chrome 101, the policies in the left column of the following table no longer function. Please ensure you're using the corresponding policy from the right column instead:

Legacy Policy Name	New Policy Name
NativeMessagingBlacklist	NativeMessagingBlocklist
NativeMessagingWhitelist	NativeMessagingAllowlist
AuthNegotiateDelegateWhitelist	AuthNegotiateDelegateAllowlist

AuthServerWhitelist	AuthServerAllowlist
SpellcheckLanguageBlacklist	SpellcheckLanguageBlocklist
AutoplayWhitelist	AutoplayAllowlist
SafeBrowsingWhitelistDomains	SafeBrowsingAllowlistDomains
ExternalPrintServersWhitelist	ExternalPrintServersAllowlist
NoteTakingAppsLockScreenWhitelist	NoteTakingAppsLockScreenAllowlist
PerAppTimeLimitsWhitelist	PerAppTimeLimitsAllowlist
URLWhitelist	URLAllowlist
URLBlacklist	URLBlocklist
ExtensionInstallWhitelist	ExtensionInstallAllowlist
ExtensionInstallBlacklist	ExtensionInstallBlocklist
UserNativePrintersAllowed	UserPrintersAllowed
DeviceNativePrintersBlacklist	DevicePrintersBlocklist
DeviceNativePrintersWhitelist	DevicePrintersAllowlist
DeviceNativePrintersAccessMode	DevicePrintersAccessMode
DeviceNativePrinters	DevicePrinters
NativePrinters	Printers
NativePrintersBulkConfiguration	PrintersBulkConfiguration
NativePrintersBulkAccessMode	PrintersBulkAccessMode
NativePrintersBulkBlacklist	PrintersBulkBlocklist
NativePrintersBulkWhitelist	PrintersBulkAllowlist

UsbDetachableWhitelist	UsbDetachableAllowlist
QuickUnlockModeWhitelist	QuickUnlockModeAllowlist
AttestationExtensionWhitelist	AttestationExtensionAllowlist
PrintingAPIExtensionsWhitelist	PrintingAPIExtensionsAllowlist
AllowNativeNotifications	AllowSystemNotifications
DeviceUserWhitelist	DeviceUserAllowlist
NativeWindowOcclusionEnabled	WindowOcclusionEnabled

If both the legacy policy and the new policy are set for any row in the table above, the new policy overrides the legacy policy.

If you're managing Chrome via the Admin console (for example, Chrome Browser Cloud Management), no action is required; the Admin console manages the transition automatically.

New and updated policies in Chrome browser

Policy	Description
SideSearchEnabled	Allow showing the most recent default search engine results page in a browser side panel.
CloudReportingUploadFrequency	Frequency of cloud reporting in hours.
OptimizationGuideFetchingEnabled	Enable Optimization Guide Fetching.
WebSQLAccess	Force WebSQL to be enabled.
SetTimeoutWithout1MsClampEnabled	Control Javascript <code>setTimeout()</code> function minimum timeout.

Chrome OS updates

Network-based recovery for Chrome OS

Network-based recovery provides a built-in recovery mechanism for Chrome OS that doesn't need external tools such as a USB stick, an Android device, a second computer, a USB cable, and so on. It is available on most of the new Chrome OS devices launching after April 20, 2022.

Policy support for additional openVPN settings

Additional OpenVPN properties can now be set in the Admin console when configuring a managed VPN connection. This includes packet authentication and encryption algorithms, compression algorithm, key direction, and TLS auth key.

UI-based firmware updates for peripherals

Chrome OS now performs firmware updates for peripherals using [fwupd](#), an open source firmware update framework. The previous automatic firmware update approach has its limits as major market players introduce significant changes requiring long update sessions, which can sometimes cause devices to malfunction.

Using fwupd, Chrome OS provides a UI for firmware updates for peripheral devices, allowing users to perform the update when needed.

Crostini upgrades to Debian 11 (Bullseye)

When users signed up for Crostini, they received a container with Debian 10 (Buster). Debian 11 (Bullseye) is now stable and used for new Crostini installs. We recommend that existing Crostini users upgrade to Bullseye to access new features and simplify support.

Chrome allows users to trigger an upgrade, both via a prompt that occurs at certain times, as well as through **Settings**. The upgrade displays progress to the user and explains any errors that might occur.

In addition, Chrome 101 now stores an upgrade log, in Downloads, and notifies the user about it, so it's easier to troubleshoot upgrade issues.

UI improvements for the Camera app

Chrome 101 includes improvements for the Chrome OS Camera app, to make it simpler and easier to use. On the left-side tool, it is easier to access the different options and users can now clearly see what feature is currently turned on or off. Under the **Settings** tab, we've made all Camera options more readable and easier to find.

Cursive canvas lock

A new canvas lock toggle in Cursive allows you to quickly enable or disable pan and zoom for the canvas. This helps avoid any accidental movements of the canvas while you write. You can turn on canvas lock from the 3-dot menu, and then quickly toggle it using a button on top of the canvas.

Forced reboot across managed devices

Admins can now automate the reboot process across managed devices. To help reduce operational overhead and improve certain application flows, you can schedule recurring device reboots across kiosks, managed guest and standard user sessions. This essentially forces the device to reboot, even during an active session.

Admin console updates

Identification variables for Android managed configuration policy

Managed configuration files can now include placeholders that Chrome OS substitutes for the indicated value(s) before providing the configuration file to the Android app. Admins can work with the Android app developer to determine what values to use in a custom policy. All values are optional. See the [help center](#) for more details on specific identification variables.

New policies in the Admin console

Policy Name	Pages	Supported on	Category/Field
CORSNonWildcardRequestHeadersSupport	User & Browser Settings	Chrome Chrome OS Android	Network > CORS non-wildcard request headers support
TouchVirtualKeyboardEnabled	User & Browser Settings Managed Guest Session	Chrome OS	Accessibility > On-screen keyboard in tablet mode
DeviceRestrictedManagedGuestSessionEnabled	Device Settings	Chrome OS	Imprivata > Shared Kiosk mode
RestrictedManagedGuestSessionExtensionCleanupExemptList	Device Settings	Chrome OS	Imprivata > Shared apps & extensions
FastPairEnabled	User & Browser Settings Managed Guest Session	Chrome OS	Other settings > Fast Pair (fast Bluetooth pairing)

Coming soon

Note: The items listed below are experimental or planned updates. They might change, be delayed, or canceled before launching to the Stable channel.

Upcoming Chrome browser changes

Chrome apps no longer supported on Windows, Mac, and Linux as early as Chrome 102

As [previously announced](#), Chrome apps will be phased out in favor of Progressive Web Apps (PWAs) and web-standard technologies. The deprecation schedule was adjusted to provide enterprises who used Chrome apps additional time to transition to other technologies, and Chrome apps will now stop functioning in Chrome 102 or later on Windows, Mac, and Linux. If you need additional time to adjust, a policy called **ChromeAppsEnabled** will be available to extend the lifetime of Chrome Apps an additional 2 releases.

If you're force-installing any Chrome apps, users will be shown a message stating that the app is no longer supported. To fix this, remove the extension ID from the [force-install extension list](#), and if necessary they can add the corresponding **install_url** to the [Web App force install list](#). For common Google apps, the **install_urls** are listed below:

Property	Extension ID (Chrome App)	install_url (PWA / Web App)
Gmail	pjkljhegncpnkpknbcohdijeoejaedia	https://mail.google.com/mail/installwebapp?usp=admin
Docs	aohghmighlieiainnegkciijnfilokake	https://docs.google.com/document/installwebapp?usp=admin
Drive	apdfllckaahabafndbchieahigkjilhalf	https://drive.google.com/drive/installwebapp?usp=admin
Sheets	felcaaldnbdnclmgdcncolpebgiejap	https://docs.google.com/spreadsheets/installwebapp?usp=admin
Slides	aapocclcgogkmnckokdopfmhonfmgoek	https://docs.google.com/presentation/installwebapp?usp=admin
Youtube	blpcfgokakmgnkcojhhkbfldkacnbeo	https://www.youtube.com/s/notifications/manifest/cr_install.html

Privacy Sandbox updates in Chrome 102

The Privacy Sandbox release in Chrome 102 will provide controls for the new Topics & Interest Group APIs. It will also introduce a one-time dialog that explains Privacy Sandbox to users and will allow them to manage their preferences. This dialog will not be shown for Guest users or managed EDU users.

Admins will be able to prevent the dialog from appearing for their managed users by controlling third party cookies explicitly via policy:

- To allow third party cookies and Privacy Sandbox features, set [BlockThirdPartyCookies](#) to disabled
- To disallow third party cookies and Privacy Sandbox features, set [BlockThirdPartyCookies](#) to enabled. This may cause some sites to stop working.

Privacy Sandbox features will also be disabled, and no dialog shown, if [DefaultCookiesSetting](#) is set to *Do not allow any site to set local data*.

Private extensions using Manifest V2 no longer accepted in the Chrome Web Store in June 2022

As part of the gradual deprecation of Manifest V2, the Chrome Web Store stopped accepting submissions of new Public or Unlisted Manifest V2 extensions after January 17, 2022. In June 2022, Chrome expands this restriction to new extensions with Private visibility, which may have a more significant impact on Enterprise extension workflows. Extensions that are already submitted can continue to be updated until January 2023.

For more details, refer to the [Manifest V2 support timeline](#).

Chrome will send Private Network Access preflights for subresources as early as Chrome 102

As early as Chrome 102, Chrome plans to send a CORS preflight request ahead of any private network requests for subresources, asking for explicit permission from the target server. This request carries a new `Access-Control-Request-Private-Network: true` header. In this initial phase, this request is sent, but no response is required from network devices.

In a future milestone of Chrome, the response must carry a matching `Access-Control-Allow-Private-Network: true` header.

A private network request is any request from a public website to a private IP address or localhost, or from a private website, for example, an intranet, to localhost. Sending a preflight request mitigates the risk of cross-site request forgery attacks against private network devices such as routers, which are often not prepared to defend against this threat.

Chrome will use MiraclePtr to improve security as early as Chrome 102

MiraclePtr is a technology that reduces the risk of security vulnerabilities relating to memory safety. Chrome is currently testing the impacts of MiraclePtr for some users. A full release is planned as early as Chrome 102.

MetricsReportingEnabled policy available on Android in Chrome 102

Chrome-on-Android will slightly modify the first run experience to support the [MetricsReportingEnabled](#) policy. If the admin has disabled metrics reporting, there will be no change. If the admin has enabled metrics, users will still be able to disable it.

Chrome 103 will use case-matching on CORS preflight requests

Chrome 101 and below uppercases request methods when matching with `Access-Control-Allow-Methods` response headers in CORS preflight. Chrome 101 doesn't uppercase request methods, except for those normalized in the spec <https://fetch.spec.whatwg.org/#concept-method-normalize>, and so requires exact case-sensitive matching.

Previously accepted, but now rejected:

```
Request: fetch(url, {method: 'Foo'})
```

```
Response Header: Access-Control-Allow-Methods: F00
```

Previously rejected, but now accepted:

Request: `fetch(url, {method: 'Foo'})`

Response Header: `Access-Control-Allow-Methods: Foo`

Note: `post` and `put` are not affected because they are in

<https://fetch.spec.whatwg.org/#concept-method-normalize>, while `patch` is affected.

Chrome Actions on iOS in Chrome 103

Chrome Actions help users get things done fast, directly from the address bar. We first released Chrome Actions on desktop a couple of years ago, with Actions like **Clear browsing data**. In Chrome 103, we will bring some of them to Chrome on iOS, like:

- Manage passwords
- Open Incognito tab
- Clear browsing data
- And more!

Chrome on iOS will allow users to take actions directly from the address bar, like clearing browsing data, using a button that will appear among auto-complete suggestions. This feature is already available on desktop platforms.

Chrome 104 will no longer support OS X 10.11 and macOS 10.12

Chrome 104 will no longer support macOS versions 10.11 and 10.12, which are already outside of their support window with Apple. Users will have to update their operating systems in order to continue running Chrome browser. Running on a supported operating system is essential to maintaining security.

Network Service on Windows will be sandboxed in Chrome 104

As early as Chrome 104, to improve security and reliability, the network service, already running in its own process, will be sandboxed on Windows. As part of this, third-party code that is currently able to tamper with the network service might be prevented from doing so. This might cause interoperability issues with software that injects code into Chrome's

process space, such as Data Loss Prevention software. The [NetworkServiceSandboxEnabled](#) policy will allow you to disable the sandbox if incompatibilities are discovered. You can test the sandbox in your environment using [these instructions](#) and report any issues you encounter.

Default to origin-keyed agent clustering in Chrome 106

As early as Chrome 106, websites will be unable to set `document.domain`. Websites will need to use alternative approaches such as `postMessage()` or Channel Messaging API to communicate cross-origin. If a website relies on same-origin policy relaxation via `document.domain` to function correctly, it will need to send an `Origin-Agent-Cluster: ?0` header along with all documents that require that behavior.

Note: `document.domain` has no effect if only one document sets it.

An enterprise policy will be available to extend the current behavior.

Chrome 107 will replace `master_preferences` with `initial_preferences`

[Initial preferences](#) allow you to deploy default preferences when users first open Chrome browser. The `initial_preferences` file will replace the `master_preferences` file, which accomplished the same thing before Chrome 91. To minimize disruption, Chrome currently accepts both `master_preferences` and `initial_preferences`. In Chrome 107, Chrome will stop accepting the old `master_preferences` file name, and only accept the file if it is named `initial_preferences`.

Please ensure that if you're using initial preferences, that the file is named `initial_preferences` and not `master_preferences`. You do not need to change the contents of the file in any way.

Upcoming Admin console changes

New CSV export for some Chrome Admin console reports in Chrome 103

As early as Chrome 103, Chrome will introduce a new CSV download option for the Apps & Extensions Usage report data and the Versions report data.

The screenshot shows the Google Admin console interface. At the top, there is a navigation bar with 'Google Admin' and a search bar. Below this, the breadcrumb trail reads 'Devices > Chrome > Reports > Apps and extensions usage'. The main content area is titled '19 Chrome apps and extensions' and includes an 'Export' button. A search bar for organizational units is present, with a filter for 'Last activity: 2022-01-25' and a 'CLEAR FILTERS' button. A table lists the following apps and extensions:

App name	App type	Install type	Installs ↓	Permissions
Chrome Remote Desktop	Chrome Extension	Multiple	3	6
Telepathy	Theme	Admin	3	0
Kiosk	Chrome App	Admin	3	15
Sheets	Chrome App	Normal	2	0
Slides	Chrome App	Normal	2	0

Previous release notes

Chrome version & targeted Stable channel release date	PDF
Chrome 100: March 29, 2022	PDF
Chrome 99: March 01, 2022	PDF
Chrome 98: February 01, 2022	PDF
Chrome 97: January 04, 2022	PDF
Archived release notes	

Additional resources

- For emails about future releases, [sign up here](#).
- To try out new features before they're released, sign up for the [trusted tester program](#).
- Connect with other Chrome Enterprise IT admins through the [Chrome Enterprise Customer Forum](#).
- How Chrome releases work—[Chrome Release Cycle](#)
- Chrome Browser downloads and Chrome Enterprise product overviews—[Chrome Browser for enterprise](#)
- Chrome version status and timelines—[Chrome Platform Status](#) | [Google Update Server Viewer](#)
- Announcements: [Chrome Releases Blog](#) | [Chromium Blog](#)
- Developers: Learn about [changes to the web platform](#) and features [planned for upcoming releases](#).

Still need help?

- Google Workspace, Cloud Identity customers (authorized access only)—[Contact support](#)
- Chrome Browser Enterprise Support—Sign up to [contact a specialist](#)
- [Chrome Administrators Forum](#)
- [Chrome Enterprise Help Center](#)

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