



Chrome 102 Enterprise release notes

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

These release notes were published on May 24, 2022 - updated on May 26, 2022

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

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Chrome 102 release summary

Chrome browser updates	Security	User productivity /Apps	Management
Chrome sends Private Network Access preflights for subresources	✓		
Chrome leverages MiraclePtr to improve security	✓		
Virtual card numbers in Autofill	✓	✓	
Changes to URL parameters	✓		
A redesign for browser downloads		✓	
Chrome releases on Windows and Android now include multiple versions			✓
New Profile Separation Dialog	✓		
New and updated policies in Chrome browser			✓
Chrome OS updates	Security	User productivity /Apps	Management
Long-term Support (LTS)	✓		✓
USB Type-C cable notifications		✓	
Camera settings improvements		✓	
Launcher redesign: Open Tab search		✓	
File manager ZIP extraction		✓	
Built-in IKEv2 VPN support on Chrome OS	✓	✓	
Admin console updates	Security	User productivity /Apps	Management
New look for the Device list and Browser list pages		✓	
New security events for the Chrome Audit Log	✓		✓

New policies in the Admin console			✓
Upcoming Chrome browser changes	Security	User productivity /Apps	Management
Privacy Sandbox updates	✓		
Case-matching on CORS preflight requests	✓		
Local Fonts Access API			✓
Unified password manager on Android	✓	✓	
Chrome Actions on iOS		✓	
Improved credit and debit card Autofill		✓	
Removing LockIconInAddressBarEnabled policy			✓
Improved first run experience on iOS		✓	
Chrome on Windows will use Chrome's built-in DNS client by default		✓	
Release of Speculation Rules API for prerender in Android			✓
Enhanced Safe Browsing on iOS	✓		
MetricsReportingEnabled policy will be available on Android			✓
Chrome 104 will no longer support OS X 10.11 and macOS 10.12			✓
Changes in cookie expiration date limit	✓		
Chrome will show Journeys on the History page on Android		✓	
Network Service on Windows will be sandboxed	✓		
Chrome 104 will remove U2F API	✓		
Private extensions using Manifest V2 no longer accepted in the Chrome Web Store in June 2022	✓		
Chrome apps no longer supported on Windows, Mac, and Linux as early as Chrome 104		✓	✓

Default to origin-keyed agent clustering	✓		
Upcoming Chrome OS changes	Security	User productivity /Apps	Management
Fast Pair on Chrome OS		✓	
Forced reboot in user session	✓		✓
Backlight PDF support with text annotation		✓	
Smart Lock UX update	✓		
Upcoming Admin console changes	Security	User productivity /Apps	Management
New CSV export for some Admin console Reports in Chrome 103			✓

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

Chrome sends Private Network Access preflights for subresources

In Chrome 102, Chrome sends 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. If no response is received, or it does not carry a matching

``Access-Control-Allow-Private-Network: true`` header, a warning is shown in DevTools (more details [here](#)).

In Chrome 105 at the earliest, the warnings will turn into errors and affected requests will fail. You can disable Private Network Access checks using the [InsecurePrivateNetworkRequestsAllowed](#) and [InsecurePrivateNetworkRequestsAllowedForUrls](#) enterprise policies.

If you want to test this feature prior to Chrome 106, the Chrome team has created the `--enable-features=PrivateNetworkAccessRespectPreflightResults` command-line flag (also available as `chrome://flags/#private-network-access-respect-preflight-results`).

To learn more about mitigating this change proactively, see details on [what to do if your site is affected](#). Read the [whole blog post](#) for a more general discussion about Private Network Access preflights.

Chrome leverages MiraclePtr to improve security

MiraclePtr is a technology that reduces the risk of security vulnerabilities relating to memory safety. In the past months, Chrome has been testing the impacts of MiraclePtr for some users. A full release is happening in Chrome 102.

Virtual card numbers in Autofill

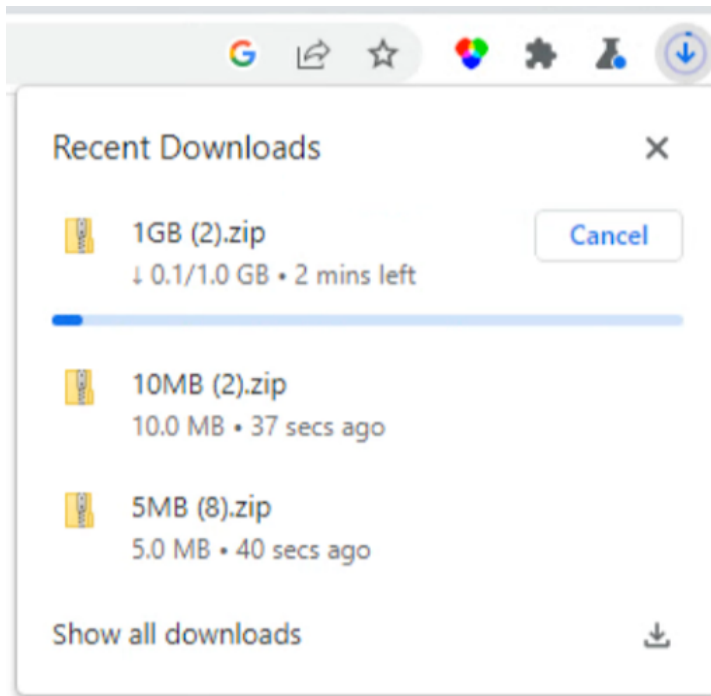
To make checking out with autofill more secure, virtual cards for participating US banks are available in Chrome 102. Virtual cards let users pay with unique virtual card numbers so they don't need to share their real card numbers with merchants. When autofill is enabled, virtual card numbers are automatically generated at checkout for opted-in users. You can control Chrome's credit card autofill behavior with the [AutofillCreditCardEnabled](#) enterprise policy.

Changes to URL parameters

Chrome 102 might remove some URL parameters when a user selects Open link in incognito window from the context menu. You can control this behavior with the [UrlParamFilterEnabled](#) enterprise policy.

A redesign for browser downloads

With Chrome 102, some users see a redesigned user experience for browser downloads. We are replacing the existing downloads shelf with a dedicated downloads bubble in Chrome browser's top bar. You can control this with the [DownloadBubbleEnabled](#) enterprise policy.



Chrome releases on Windows and Android include multiple versions

To better compare the behavior of a new release of Chrome against the existing one, Chrome now makes multiple new versions available during a rollout. This is an internal change to our update strategy, which has no effect on enterprises. Admins do not need to adjust their update policies and strategy. However, in the interest of transparency, we're sharing this update so that those responsible for Chrome releases understand why they're seeing extra versions of Chrome available during rollouts.

Chrome New Profile Separation Dialog

Chrome 102 brings better separation between personal and enterprise-managed data. When the user signs into a managed account, they will have the option to either keep existing browsing data separate, or merge it with the managed account. By default, the data is kept

separate, so a new profile will be created. Or, if they choose, they can merge the existing profile into the managed account. This prevents inadvertent sharing of personal data with work accounts. The [ManagedAccountsSigninRestriction](#) policy can be used to hide the checkbox altogether, allowing admins to force users to create a separate work profile.

New and updated policies in Chrome browser

Policy	Description
UrlParamFilterEnabled	When enabled or not set, the URL parameter filter might remove some parameters when a user selects Open link in incognito window from the context menu. When disabled, no filtering is performed.
WebAppSettings	This policy allows an admin to specify settings for installed web apps.
AccessCodeCastEnabled	This policy controls whether a user will be presented with an option, within the Google Cast menu, which allows them to cast to devices that do not appear in the Google Cast menu. If enabled, users can cast to the device using either the access code or QR code displayed on the cast device's screen.
WarnBeforeQuittingEnabled	Controls Warn Before Quitting (⌘Q) dialog when the user is attempting to quit the browser (Mac only).
ManagedAccountsSigninRestriction	This policy allows adding restrictions on managed accounts. Two new options are available in Chrome 102: <i>primary_account_keep_existing_data</i> and <i>primary_account_strict_keep_existing_data</i> .

Chrome OS updates

Long-term support (LTS)

With the release of Chrome 102, devices that are on the Long-term support candidate (LTC) channel automatically upgrade from version LTC-96 to version LTC-102. This is our first major LTC update.

Devices that are on the LTS channel will remain on LTS-96 until LTS-102 releases in September.

Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023
96 S	97 S	98 S	99 S	100 S	101 S	102 S	103 S	104 S	105 S	106 S	107 S	108 S	109 S	110 S
96 LTC						102 LTC						108 LTC		
			96 LTS						102 LTS					

Note: This is a good time to check your organization’s release configuration and verify if your devices are on the LTS or the LTC channel.

As a best practice, most of your devices should be on the LTS channel. We recommend that you keep some devices on the LTC channel in order to preview features in the upcoming LTS release in advance, and have time to plan and execute any necessary change management before the new LTS is released.

Admins can [switch](#) between LTS and other channels if desired. For more details about LTS, see [this article](#) in the Help center.

USB Type-C cable notifications

USB-C cable notifications have been added to Chrome OS. When a user connects a device to their Chromebook, and the features or performance of their device are affected by the cable, they now receive a warning to let them know that there is an issue with the cable.

Camera settings improvements

Chrome 102 adds 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.

Launcher redesign includes Open Tab search

Chrome 102 adds Open Tab search integration into the redesigned Launcher. This updated version allows users to open the Launcher, and search for a browser tab that is currently open.

As a category, open tabs are ranked just like any other category; the order is based on how often the user tends to click on that type of result.

- A match is done on both the URL and the tab name.
- A user can select the tab and go to it within the browser.

Tabs playing active audio are returned as top search values, as well as tabs that have been recently used or other tabs with the same name.

File manager ZIP extraction

One click extraction for ZIP archives comes to Chrome OS. Users can right click ZIP archives, choose **Extract All** and the content inside the ZIP archive is extracted.

Built-in IKEv2 VPN support on Chrome OS

Chrome OS now supports IKEv2 VPN as a built-in VPN client. It is configurable through system settings and policies, similar to L2TP/IPsec VPN, and OpenVPN.

IKEv2 VPN is one of the modern and most widely used VPN protocols. This feature allows users to connect to IKEv2 VPNs directly through Chrome OS system settings, without the need to install third-party apps.

Admin console updates

New look for the Device list and Browser list pages

The Device list and Browser list pages now have a new look, more consistent with many other pages in the Admin console, designed with better accessibility and responsiveness to different screen sizes.

New security events for the Chrome Audit Log

The Chrome Audit Log now has three new categories of security events, which include events for when users login and logout of devices, for when user accounts are added or removed from a device, and for when a managed device changes boot mode to developer or verified mode. For more information, go to the [Chrome Workspace Admin Help Center](#).

New policies in the Admin console

Policy Name	Pages	Supported on	Category/Field
KeepFullscreenWithoutNotificationUrlAllowList	User & Browser Settings; Managed Guest Session	Chrome OS	User Experience > Fullscreen after unlock
NTPMiddleSlotAnnouncementVisible	User & Browser Settings	Chrome Chrome OS	User Experience > Middle slot announcement on the New Tab Page
UnaffiliatedArcAllowed	Device Settings	Chrome OS	Other settings > Android apps for unaffiliated users

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

Privacy Sandbox updates

The Privacy Sandbox release in Chrome 103 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 allows them to manage their preferences. This dialog is not shown for Guest users or managed EDU users.

Admins can 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 might 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*.

Case-matching on CORS preflight requests

Chrome 102 and earlier uppercase request methods when matching with Access-Control-Allow-Methods response headers in CORS preflight. Chrome 103 will not uppercase request methods, except for DELETE, GET, HEAD, OPTIONS, POST, and PUT (all case-insensitive). So, Chrome 103 will require exact case-sensitive matching.

Previously accepted, but rejected in Chrome 103:

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

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

Previously rejected, but accepted in Chrome 103:

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.

Local Fonts Access API

Users of design applications often want to use fonts present on their local device. The [Local Fonts Access API](#) will give web applications the ability to enumerate local fonts and some metadata about each. This API will also give web applications access to the font data as a binary blob, allowing those fonts to be rendered within their applications using custom text stacks. The enterprise policies applicable to this feature are **DefaultLocalFontsSetting**, **LocalFontsAllowedForUrls** and **LocalFontsBlockedForUrls**. The API will be available as early as Chrome 103.

Unified password manager on Android

For Chrome on Android users who are syncing, they will see a new password management experience, which is the same surface used to manage passwords when logging in to Android apps.

Chrome Actions on iOS

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'll be bringing some of them to Chrome on iOS, like:

- Manage passwords

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

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

Improved credit and debit card Autofill

Over the course of Chrome 103, credit and debit card Autofill will start supporting cloud-based upload via Google Pay, enabling Autofill for your cards across all your Chrome devices. You can control credit card autofill with the [AutofillCreditCardEnabled](#) enterprise policy.

Removing LockIconInAddressBarEnabled policy

Chrome 94 launched an experiment to replace the lock icon as the connection security indicator. The [LockIconInAddressBarEnabled](#) policy was added to allow organizations to continue to show the lock icon during the experiment. The experiment is no longer active, so the policy will no longer be available starting with Chrome 103.

Improved first run experience on iOS

In Chrome 103, some users might see a new onboarding experience with fewer steps and a more intuitive way to sign into Chrome. Enterprise policies, like [BrowserSignin](#), [SyncDisabled](#), [SyncTypesListDisabled](#) and [MetricsReportingEnabled](#), to control whether the user can sign into Chrome and other aspects of the onboarding experience will continue to be available as before.

Chrome on Windows will use Chrome's built-in DNS client by default

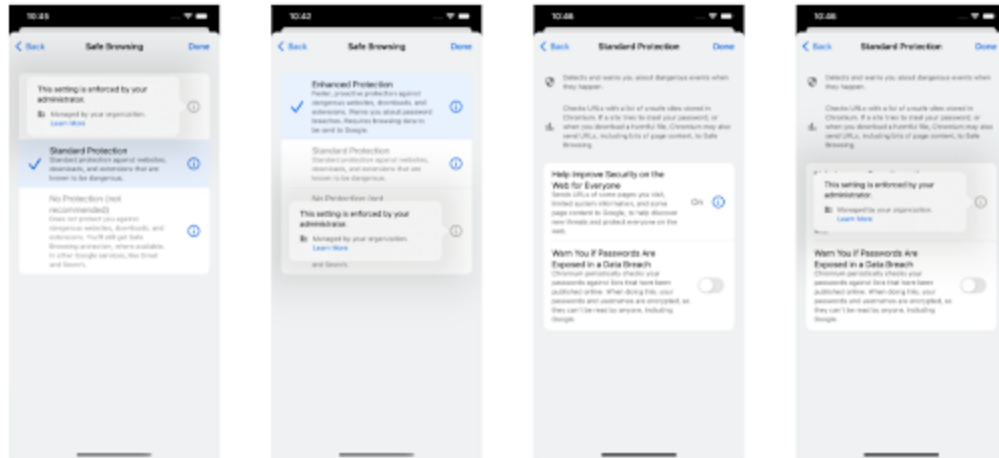
The built-in DNS client is enabled by default on macOS, Android and Chrome OS. Chrome on Windows will also use the built-in DNS client by default as early as Chrome 103. Enterprises can opt out by setting **BuiltInDnsClientEnabled** policy to Disabled.

Release of Speculation Rules API for prerender in Android

Expanding our prerender efforts released on Chrome 101, we will ship the Speculations Rules API for Android in Chrome 103. This API will allow web authors to suggest to Chrome which pages that the user is very likely to navigate to next. This will influence Chrome during the decision to prerender a particular URL before the user navigates to it, aiming to offer an instant navigation. An enterprise policy, [NetworkPredictionOptions](#), is available to block the usage of all prerendering activities which will result in Chrome ignoring the hints provided using this API. See our [article on speculative prerendering](#) for more information.

Enhanced Safe Browsing on iOS

To match Safe Browsing functionality from other platforms, we will add functionality so that a user on iOS can choose what type of Safe Browsing protection they would like. Where an enterprise controls this setting, the enterprise will be allowed to set the level of Safe Browsing protection, and users under the enterprise will not be allowed to change the preference. An enterprise policy [SafeBrowsingProtectionLevel](#) is available to control Safe Browsing and the mode it operates in.



MetricsReportingEnabled policy will be available on Android in Chrome 103

Chrome-on-Android will slightly modify the first run experience to support the [MetricsReportingEnabled](#) policy. If the admin disables metrics reporting, there will be no change to the first run experience. If the admin enables metrics, users will still be able to change the setting in Chrome settings. When enabled, the [MetricsReportingEnabled](#) policy allows anonymous reporting of usage and crash-related data about Chrome to Google.

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.

Changes in cookie expiration date limit

Beginning with Chrome 104, any newly set or refreshed cookies will have their expiration date limited to no more than 400 days in the future. Cookies which request expiration dates after 400 days in the future will still be set, but their expiration will be adjusted down to 400 days.

Existing cookies will retain their prior expiration date (even if it was more than 400 days in the future), but refreshing them will cause the cap to be enforced.

Chrome will show Journeys on the History page on Android

Chrome 96 started clustering local browsing activity on the History page into Journeys to make it easier to find prior activity and continue it with related search suggestions. These Journeys will become available on Android in Chrome 104. For keywords typed into the Omnibox that match a cluster, an action chip displays for seamless access to the Journeys view. Users can delete clusters and disable Journeys, if desired. Additionally, admins will have the option to disable this feature using the [HistoryClustersVisible](#) policy.

Network Service on Windows will be sandboxed

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 may 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 allows 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.

Chrome 104 will remove U2F API

The U2F API for interacting with USB security keys has been disabled by default since Chrome 98. Chrome is currently running an [Origin Trial](#) that lets websites temporarily re-enable the U2F API. This Origin Trial will end on July 26, 2022 and the U2F API will be fully removed in Chrome 104.

If you run a website that still uses this API, please refer to the [deprecation announcement](#) and [blog post](#) for more details.

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 which are already submitted may continue to be updated until January 2023.

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

Chrome apps no longer supported on Windows, Mac, and Linux as early as Chrome 106

As [previously announced](#), Chrome apps are being 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 106 or later on Windows, Mac, and Linux. If you need additional time to adjust, a policy **ChromeAppsEnabled** will be available to extend the lifetime of Chrome Apps an additional 2 milestones.

If you're force-installing any Chrome apps, starting Chrome 104, users will be shown a message stating that the app is no longer supported. The installed Chrome Apps will still be launchable.

Starting with Chrome 106, Chrome Apps on Windows, Mac and Linux will no longer work. 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	pjkljhegncpnkpnbcohdijoejaedia	https://mail.google.com/mail/installwebapp?usp=admin
Docs	aohghmighlieiainnegkciijnfilokake	https://docs.google.com/document/installwebapp?usp=admin
Drive	apdfllckaahabafndbhieahigkjlhalf	https://drive.google.com/drive/installwebapp?usp=admin

Sheets	felcaaldnbdnccImgdncolpebgiejap	https://docs.google.com/spreadsheets/installwebapp?usp=admin
Slides	aapocclcgogkmnckokdopfmhonfmgoek	https://docs.google.com/presentation/installwebapp?usp=admin
YouTube	blpcfgokakmgkcojhkhkbfldkacnbeo	https://www.youtube.com/s/notifications/manifest/cr_install.html

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.

Upcoming Chrome OS changes

Fast Pair on Chrome OS

Starting in Chrome 103, Fast Pair will make Bluetooth pairing easier on Chrome OS devices and Android phones. When you turn on your Fast Pair-enabled accessory (like Pixel Buds), it will automatically detect and pair with your Chrome OS device in a single tap. Fast Pair will also associate your Bluetooth accessory with your Google account, making it incredibly simple to move between your Chrome OS and Android devices.

Forced reboot in user session

We recently released the ability to schedule forced reboots for kiosk devices. As early as Chrome 104, we will be extending this functionality on user devices, allowing scheduled forced reboots irrespective of whether the user is in session or not.

Backlight PDF support with text annotation

As early as Chrome 104, the Gallery app will support PDF viewing and annotating. You will be able to fill out forms, add text or freeform annotation, or highlight text in the app.

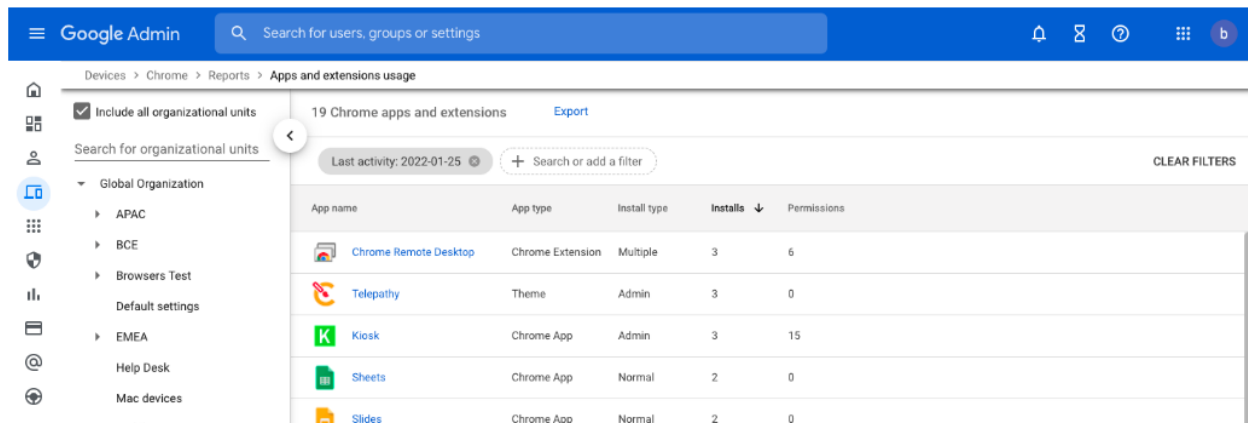
Smart Lock UX update

Starting in Chrome 104, [Smart Lock](#), which allows users to unlock their Chromebook using their connected Android phone, will be faster than ever, with greater performance, reliability, and an overhauled design.

Upcoming Admin console changes

New CSV export for some Chrome Admin console reports in Chrome 104

As early as Chrome 104, 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 search bar and navigation icons. The main content area is titled 'Apps and extensions usage' and shows a table of 19 Chrome apps and extensions. The table has the following columns: App name, App type, Install type, Installs, and Permissions. The data rows are as follows:

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 101: April 26, 2022	PDF
Chrome 100: March 29, 2022	PDF
Chrome 99: March 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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