Google for Education

Google for Education Storage Guide

January 2023

Click on the links below for this guide in additional languages:

(Arabic) | 실육ው (Burmese) | 國語 (Chinese - Taiwan) | Dansk (Danish) | Nederlands (Dutch) | Pilipino (Filipino) | Suomalainen (Finnish) | Francais (French) | Deutsch (German) | हिन्दी (Hindi) | Bahasa Indonesia (Indonesian) | Italiano (Italian) | 日本語 (Japanese) | 한국어 (Korean) | Norsk (Norwegian) | Polskie (Polish) | Português (Portuguese) | Español (Spanish) | Español - Latinoamérica (Spanish - LATAM) | Svenska (Swedish) | แบบไทย (Thai) | Tiếng Việt (Vietnamese)





Table of contents

Understanding The New Storage Policy	3
Calculate storage limits	3
More storage for larger domains	4
Storage management	5
User reports – determine current usage by users	6
User reports – analyze storage by OU	6
Set storage limits for users by OU / group	7
Maintain an exception group to work with users over quota limits	9
Managing shared drives – determine the scope of storage within shared drives	10
Set storage limits on shared drives	11
Analysis of storage utilization - additional options	13
User storage	13
Highlights reports – overall domain usage & growth over time	13
Account reports – determine current usage by users	14
Shared drive storage	15
Highlights reports – overall shared drive usage within domain	15
Sharing settings – audit shared drive creation & migration settings	16
Remediation - admin-driven	18
User storage	18

Shared drive storage	18
Storage tools – sort & delete shared drives	18
Remediation – user-driven	20
User experience – near or at quota limits	20
Moving data to personal Drive/Google One	21
Find large files to delete	24
Sample communication templates	26
To notify high-storage users	26
To notify users of the storage limits being enforced	27
Resource list	29



Understanding the new storage policy

A new storage policy comes into effect across all Google Workspace for Education editions for existing customers in July 2022. The amount of pooled storage available after this date depends on your edition and your Workspace active usage. Use the information in this section to assist you in calculating available storage for your domain. Storage across all editions includes usage in Drive, Photos, Gmail and Shared Drives. Note:

- Starting May 2, 2022, new and updated Google Docs, Sheets, Sides, Forms, Drawings, and Jamboard files count toward your organization's storage quota.
- Storage used by suspended users counts toward your storage pool.
- Deleted messages (Gmail) and files (Drive) retained by Google Vault do not count against the user's storage quota or your institution's total pooled storage.

Calculate storage limits

- **Google Workspace for Education Fundamentals** 100 TB of pooled storage shared by your organization.
- **Google Workspace for Education Standard** 100 TB of pooled storage shared by your organization.
- Google Workspace for Education Plus 100 TB of pooled storage shared by your organization, plus 20 GB added to the shared pool per license. Customers continuing on legacy G Suite Enterprise for Education licenses will also have 100 GB added to their shared pool per paid employee license.
- **Google Workspace for Education Teaching and Learning Upgrade** 100 TB of pooled storage shared by your organization, plus 100 GB added to the shared pool per staff license.

Examples:

- With 10,000 Workspace for Education Plus licenses purchased (student & staff), the pool of storage is 300 TB:
 100 TB (base storage) + (10,000 licenses x 20 GB = 200 TB) = 300 TB available storage
- With 100 Teaching and Learning Upgrade licenses purchased, the pool of storage is 110 TB: 100 TB (base storage) + (100 licenses x 100 GB = 10 TB) = 110 TB available storage

More storage for larger domains

Institutions with greater than 20,000 active users will receive additional baseline storage of 5GB per user for each user over 20,000. Active users are defined as the peak number of 30 day unique logins over the past 180 days. The report in the Admin Console titled <u>What's the 30-day unique login</u> <u>count</u>, reflects 30 day unique logins over the course of the past 6 months. This count will update twice per year and adjust the total storage amount in the domain accordingly.





Storage management

As of April 2022, all storage related activities can be accessed and managed from the Admin Console within the new Storage area.

Admins can view a variety of information and take actions related to storage management for their organization. Improvements you'll notice are:

- Enhanced features and added information for improved reporting capabilities
- Simplified user management, including setting storage limits for users and bulk management of shared drives, and more

The new Storage area shows the total storage usage of the domain, broken down by Drive, Gmail, and Photos and areas for:

- Storage settings configure limits on users using groups or OUs
- Users using the most storage view users with the highest storage usage and access a link to a detailed, customizable report
- Shared drives using the most storage view shared drives with the highest storage and access a link to a detailed, customizable report with the ability to easily delete and suspend shared drives from the action menu

→ Workspace storage					(j)
57.17 TB	Gmail 1.89 GB	Photos 10.2 MB			
Storage settings	වී. Users using the most	storage		Shared drives using the most storage	
	CD Sync	2	2.87 TB	_Audio Files	221.85 GB
	David Nunley	2	2.86 TB	Retention Policy	3 GB
	Ken Matthews	2	2.45 TB	_Migration Test	2.5 MB
	A Fresh		2.4 TB	SharedDrive1425	0 bytes
	Cloud Identity	2	2.21 TB	SharedDrive1330	0 bytes
Manage all storage limit policies for organizational units, groups, and users.	View all users			View all shared drives	
Manage					

User reports - determine current usage by users

This option is available for all Workspace for Education editions.

With the new storage tools, admins now have the ability to pull reports directly from the list of users under Directory > Users in the Admin Console. Advantages to this include:

- The ability to sort by 'Storage used' to quickly view and focus on top users
- The ability to quickly view storage used in relation to storage limits assigned for individual users
- The ability to download direct reports including total storage usage, usage across Gmail, Drive, and Photos, and options to quickly compare storage totals next to columns such as "Last Sign In" and "Org Unit path"

To pull a report from the Users list:

- 1. In the Admin Console Home page, select <u>Storage</u> > <u>View all users</u>
- 2. From the left, select the desired OU to filter results for export
- 3. Use the **Filter** menu at the top of the user list to further filter results. Filter examples:
 - a. User status: active or suspended users
 - b. **Storage status**: users out of storage, with less than 10% of storage remaining, or with less than 20% of storage remaining
- 4. Select Download users at the the top of the users list
- 5. Under **Select columns**, select **All users info columns and currently select columns**. *Note downloading all columns will include the 'Org Unit path' column*
- 6. Under Select format, select Google Sheets

Once the download is complete, navigate to the Google Sheet to begin to analyze the data. Reference the section '<u>User Reports - Analyze storage by OU</u>' in this guide for more information on how to analyze the data to make decisions about how to apply storage limits across OUs.

User reports – analyze storage by OU

This option is available for all Workspace for Education editions.

Downloaded Users' Reports offer admins a way to analyze average storage used by each OU, information which can be useful when deciding policies regarding storage limits. See the section '<u>User Reports - Determine current usage by users</u>' in this guide for more information on how to pull these reports.

Analyze storage by OU:

 Follow the steps outlined in the section <u>'User Reports - Determine current usage by users</u>' in this guide

- 2. Navigate to the downloaded Google Sheet from the Tasks icon in the upper right corner of the Admin Console
- 3. In the Google Sheet, add a column after 'Storage Used [READ ONLY]'
- 4. Label this column as 'Storage Used'
- In the top cell of this column, enter the formula below. This formula will provide storage in MB. Note 'AH2' referenced in this formula is the first cell under the 'Storage Used [Read ONLY]' column:

=SPLIT(AH2,CONCATENATE(SPLIT(AH2,".0123456789"))) * IF(REGEXMATCH(AH2, "GB"), 1000, IF(REGEXMATCH(AH2, "TB"),(1000*1000),1))

- 6. Copy the formula in each cell of the column or click option to autofill
- 7. Select all the cells in the sheet
- 8. Select Insert menu, then select Pivot table
- 9. From dialog box, select **New sheet**
- 10. On the right sidebar of the newly created sheet titled **Pivot table editor**, click **Add** button next to **Rows** and select 'Org Unit Path [Required]'
- 11. Click **Add** next to **Values** and select 'Storage Used'. In the **Summarized by** menu select 'Average'. This will give the average Storage used by each OU in the organization.

Set storage limits for users by OU / group

This option is available for all Workspace for Education editions.

After you have analyzed the average storage totals, go to <u>Storage</u> in the Admin Console to manage storage across the domain. When setting policies at the OU level and considering inheritance / override settings, it is important to note the following:

- Set a baseline limit at the root OU, followed by override limits at each sub-OU as needed. This will help account for any account moves between OUs, ensuring a limit is always set for every user in the domain.
- In the case where users in sub-OUs with higher storage than those at parent/root OU levels, set the override policies on the sub-OUs first.
- Use Exception Groups to work with users who are near, at, or over storage limits you want to set. See the section <u>'Maintain an Exception Group to work with users over storage limits</u>' in this guide for more information.
- When setting policies at the Group level for multiple groups, the limit on the group with the higher priority will take precedence. See this <u>Help Center documentation</u> for more information on working with configuration groups. *Note: best practice is to set the storage limits on the group with the highest limit first, then the group with the next highest limit, etc. until limits are set on all groups.*

To set individual storage limits on all users in an OU:

- 1. In the Storage tool, click Manage under the Storage settings card
- 2. On left, filter by the desired OU. Note default policies are set to Off
- 3. Under Storage use and Settings / User storage limit, select On
- 4. Under Storage limit*, enter a number for the storage limit
- 5. Under the **Unit** menu, select **MB**, **GB**, or **TB**
- 6. Select **OVERRIDE**
- 7. Repeat this process for all desired OUs

Storage use and settings										^
User storage limit Inherited from 'drive testing'	Turn o	n if you want each user in t	his organizat	onal unit to h	nave ar	n individual	storage l	imit.		
interior in an a county	0	Off Users in Faculty_Staff have r	f ers in Faculty_Staff have no individual storage limits							
	۲	On Users in Faculty_Staff each i	ave an individu	al storage limit						
		Storage limit* 50	\$	Unit GB	Ŧ					
	M	erride will overrule the settings ost changes take effect in a few u can view prior changes in the	minutes. Learn		itional u	init 'drive testi	ting'			
								1 unsaved change	CANCEL	OVERRIDE

To set storage limits on individual groups:

- 1. In the Storage tool, click Manage under the Storage settings card
- 2. On the left, select Groups
- 3. Type the group name and / or select the group you want to apply the storage policy to
- 4. Under Storage use and Settings / User storage limit, select On
- 5. Under Storage limit*, enter a number for the storage limit
- 6. Under the **Unit** menu, select **MB**, **GB**, or **TB**
- 7. Select **SAVE**
- 8. Repeat this process for all desired groups

Storage use and settings							
User storage limit Not Set		urn on if you want each user in this organizational unit to have an individual storage lim Off Users in Policy, Quota_500B have no individual storage limits					
 △ Storage 		On Users in Policy_Quota_50GB each have an individual storage limit Storage limit* Unit					
Users	~	50 GB *					
Groups Policy_Quota_50GB	^	Override will overrule the settings inherited from parent organizational unit 'drive testing' Most changes take effect in a few minutes. Learn more You can view prior changes in the Audit log					
01021			1 un:				

To view an individual user limit:

- 1. In the Storage tool, click Manage under the Storage settings card
- 2. On the left, select Users
- 3. Begin typing in the email address / account to focus on. Select the desired user
- 4. Under Storage use and settings, you can view the following information for the individual user:
 - a. Used storage vs. total storage limit, including a graphic representation of how much is stored in each service (Google Drive, Google Photos, and Gmail)
 - b. The number of documents a user owns
 - c. The name of the group or OU that the storage limit is inherited from
 - d. The storage limit for a user and the state of the policy ('ON' or 'OFF')

Storage use and settings				^
20.03 GB of 25 GB (80%) used				Docs owned
Google Drive Google Photos Gmail				7
Storage limit Inherited from Group "Policy_Quota_25GB"	Storage limit for user ON (25 GB)	Storage		
		Users	^	
		kematthews_ <kematthews_user< td=""><td>r@eduf.wss 🕲</td><td></td></kematthews_user<>	r@eduf.wss 🕲	

Maintain an exception group to work with users over quota limits

This option is available for all Workspace for Education editions.

Users may need flexibility in the assigned storage limit, and groups give admins more options when working within such scenarios. Admins can temporarily add the user as a member of a group with a higher storage limit than the OU or group the user is already a member of, and the user will inherit the higher storage limit. **Note: Limits set for groups will always override any limits set on the OU**.

To temporarily add a user to a group with a higher storage limit:

- 1. Follow the instructions for <u>setting up a group</u>. Best practices to consider:
 - a. Create a Custom group limiting Access Settings and Membership settings to Group Owners
 - b. Select Only invited users under Who can join the group
 - c. Do not allow members outside the organization
 - d. Note: Users will be able to remove themselves from the Group until you set the appropriate permissions via the API only. For more details on available properties in the API, see this <u>documentation</u>. Using the <u>API Explorer and the Group: update method</u>, admins should set the 'whoCanLeaveGroup' property to 'NONE_CAN_LEAVE'. Admins can also update this setting using GAM. See this <u>documentation</u> for more details on commands to run using GAM.

- Name the group after the policy you will set making it easier to know at a glance what the group is for. For instance <u>Policy_Storage_25GB@domain.edu</u>. Use the description field to further describe the purpose of the group for other admins
- Assign users as members to the group created. Potential members can be isolated by using <u>User Reports</u>. Sort by 'Storage used' column to locate top users, multi-select the users to focus on, select More options, then select Add selected users to groups
- 4. When the user has reduced their storage to be under the limit set for the OU they are in, remove the user from the exception group created

Best practice dictates setting group storage policy limits higher than OU limits. This way if users are removed from a group, the user will be subject to the lower OU limit.

Managing shared drives – determine the scope of storage within shared drives

This option is available for all Workspace for Education editions.

From the Admin Console Home page:

- 1. Select Storage > View all shared drives to view a list of all shared drives for the domain
 - a. Note this will pre-sort the list of shared drives by size, ascending to descending order
 - For an unsorted list, admins can select <u>Apps > Google Workspace > Drive and Docs ></u> <u>Manage shared drives</u>
- 2. The following filters are available under Add a filter:
 - Select no members to view shared drives without members
 - Select **Date created** and enter a range of dates to view shared drives created before a certain date

Ν	Man	age shared dri	ves				
	D	ate created: 202	0-01-01 -	- 2020-12-31	\otimes		
N	lame		Status	Date created	Creator	Storage used	Item cap (j)
Į		Migration Test	Active	Oct 7, 2020	Ken Matthews	0 KB	0%

• Now available with the new Storage Tools, select the down arrow next to the 'Storage used' column to sort the shared drives according to storage used:

	Status	Date created	Creator	Storage used 🛛 🕹	Item cap 🕠
	Active	Feb 23, 2022	kematthews_ admin	8 GB	0%
s	Active	Feb 10, 2022	itstom_ admin	4.08 GB	0%
	Active	Feb 9, 2022	otrussell_ admin	244.1 MB	0%
	Active	Jan 18, 2022	manasa chekuri	5 KB	0%

For additional features available with the new Storage Tools, refer to the section '<u>Storage Tools -</u> <u>Sort & Delete Shared Drives</u>' in this guide for details on the ability to delete an entire shared drive, including its contents.

Set storage limits on shared drives

This option is available for all Workspace for Education editions.

To prevent shared drives from using too much of your organization's storage, you can set a storage limit for the shared drives assigned to a specific organizational unit. For example, you might want each shared drive in a "Students" organizational unit to have a 10GB limit while each shared drive for the rest of the organization has a 100GB limit. To set these limits, set the 10GB limit on shared drives in your top-level organizational unit, then set the 10GB limit on shared drives in the "Students" organizational unit.

Note the following when working with storage limits on shared drives:

- If you want to apply different storage limits to different shared drives, learn how to <u>assign</u> <u>shared drives to organizational units</u>.
- Without shared drive limit policies set at the top-level or child organizational unit, all newly created shared drives may receive a default limit of 100GB after January 23rd, 2023. To override this default limit, admins should set a shared drive limit policy at the top-level organizational unit, or override the top-level organizational unit policy by setting a separate policy for child organizational units. For more information on setting separate policies by organizational unit, refer to <u>Change service settings for different users</u>.
- If a shared drive exceeds its storage limit, users will not be able to add new files or edit existing files stored within the shared drive. To restore service, content managers or managers of the shared drive can move files out of the shared drive or delete files as needed. Admins can also increase the storage limit applied to the shared drive.
- Shared drive limits do not prevent users from creating more shared drives. To restrict users from creating more shared drives and using up the domain-wide storage pool, see <u>Sharing</u> <u>settings</u>: <u>audit shared drive creation and migration settings</u> in this guide.

To set a shared drive limit on shared drives in the top-level or child organizational unit:

- 1. Navigate to the <u>Google Admin console</u>.
- 2. In the Admin console, select **<u>Storage</u>**.
- 3. In the Storage settings section, click **Manage**.
- 4. Click Shared drive storage limit.
- 5. At the left, click the organizational unit with the shared drives you want a storage limit policy applied to.
- 6. Select **On**, and enter the amount of storage each shared drive in that organizational unit can use.
- Click Save. If you set a limit for a child organizational unit after setting a limit for its parent organizational unit, click Override. If some shared drives already exceed the storage limit, admins will receive a warning.

Storage use and settings		^
User storage limit Inherited from OU: 'gwfe storage test'	Turn on if you want each user in this organizational unit to have an individual storage limit. Off	
Shared drive storage limit Inherited from OU: 'gwfe storage test'	 Turn on if you want each shared drive in this organizational unit to have a storage limit. Off Shared drives in Hogwarts will not have a storage limit On Shared drives in Hogwarts will have a storage limit Storage limit* 100 Unit GB Override will overrule the settings inherited from parent organizational unit 'gwfe storage test' Most changes take effect in a few minutes. Learn more You can view prior changes in the Audit log 	
	3 unsaved changes CANCEL	OVERRIDE



Analysis of storage utilization – additional options

The reporting tools described in this section can be used to gain insight into storage usage domain-wide, important for being adequately prepared for the July 2022 storage limits. Following these steps, admins will gain a better understanding of how to clean up existing data and communicate with users on remediation steps that can be taken before storage deadlines.

User storage

Highlights reports - overall domain usage & growth over time

This option is available for all Workspace for Education editions.

To identify the pattern of storage growth over time, establish the pattern over 6 months then multiply by 2 to estimate the storage growth over the year. The following section tells you how to analyze the domain-wide storage use for a 6-month timeframe.

- From the Admin Console Home page, click on <u>Reports</u> and navigate to 'What's the storage being used?' panel. This panel will detail total Gmail, Drive, and Photos storage used for all users domain-wide.
- 2. Click on <u>View details</u> for more information. The following itemized storage details are available:
 - 'Storage used by apps' details total storage for all users in your domain broken down by 'Gmail storage used', 'Drive storage used', and 'Photos storage used'. Check and uncheck each item to see individual domain-wide totals for each service.

Storage (used by apps									<u>+</u>
							Feb 27, 2022 Drive storage used : 2.53	тв		3.2 TB
										2.4 TB
										1.6 TB
										800 G
Oct 24	Nov 11	Nov 29	Dec 17	Jan 4	Jan 22	Feb 9	Feb 27	Mar 17	Apr 4	Apr 22
Gmail sto	orage used 🛛 🔽 Driv	e storage used	Photos storage used	Shared Drive sto	rage used					

• 'Total storage used' - details total Gmail, Drive, and Photos storage for all users in your domain.

Total stor	age used									<u>+</u>
					Mar 31, 2022 Total stora	ge used : 3.53 TB				4 TB
										3 TB
										2 TB
										1 TB
Mar 7	Mar 12 age used	Mar 17	Mar 22	Mar	27	Apr 1	Apr 6	Apr 11	Apr 16	, 0 MB

3. Download a report to sheets to view aggregate numbers for any of these options over the last 6 months.

Account reports - determine current usage by users

This option is available for all Workspace for Education editions.

From the Admin Console Home page, click <u>Reports > User Reports > Accounts</u>.

Using the 'Manage columns' 🖸 icon in the upper right corner of the table, be sure the following minimum columns are selected / visible:

- User account status
- Gmail storage used (MB)
- Drive storage used (MB)
- Photos storage used (MB)
- Total storage used (MB)

Optional columns to select in order to gain insight into how active an account is:

- Gmail (IMAP) last used time
- Gmail (POP) last used time
- Gmail (Web) last used time
- Drive last active time
- Classroom last used time

Optional columns to select to determine sharing implications around account removal:

- Public
- Anyone with link
- Anyone in domain shares
- Anyone in domain with link shares
- Outside domain

• Within domain shares

Once all relevant columns are chosen, select filters to limit the output to under 100,000 records (the limit on exporting this data to Google Sheets). Options for filters include:

- Organizational Unit filter on a student or staff OU
- Group to isolate high usage customers for targeted communications
- User account status to isolate total storage used by suspended accounts
- Total storage used (MB) to isolate top users, such as all users over 50 GB (50000 MB)
- Gmail storage used (MB) to isolate top Gmail users for targeted communications
- Drive storage used (MB) to isolate top Drive users for targeted communications
- Photos storage used (MB) to isolate top Photos users for targeted communications

s: Active 🛞 Total storage	e used (MB): >= 50000 💿	1		
User account status @	Gmail storage used (MB) 🔞	Drive storage used (MB) @	Photos storage used (MB) @	Total storage used (MB) @
Active	0	59826	0	59826
Active	0	71433	0	71433
Active	86	61466	0	61553

Once desired filters have been selected, you can download $_$ selected columns into a Google Sheets file.

Shared drive storage

Highlights reports - overall shared drive usage within domain

This option is available for all Workspace for Education editions.

From the Admin Console Home page, click on <u>Reports</u> and navigate to 'What's the storage being used?' panel. Note that shared drive storage is not reflected in this panel. Click on <u>View details</u> for more information on total shared drive storage.

Storage used by apps - details total storage for all shared drives domain-wide. Check only **Shared Drive storage used** to highlight only shared drive storage. Download the report to Google Sheets to view aggregate numbers over the last 180 days.

Storage used by apps

				Jan 22, 20 Shared	D22 I Drive storage used : 3	364.08 GB				500 GB 375 GB
	ſ									250 GB
										125 GB
Oct 24	Nov 11	Nov 29	Dec 17	Jan 4	Jan 22	Feb 9	Feb 27	Mar 17	Apr 4	Apr 22
Gmail st	torage used 🗌 Driv	e storage used	Photos storage used	Shared Drive stor	rage used					

Sharing settings - audit shared drive creation & migration settings

It is essential that admins of Workspace for Education domains audit shared drive creation and management settings in order to ensure shared drives in the domain are used in accordance with best practices. See this <u>Help Center documentation</u> for more information.

To view members of individual shared drives:

- From the Admin Console Home page, click on <u>Apps > Google Workspace > Drive and Docs ></u> <u>Manage shared drives</u>
- 2. Sort the largest share drives to the top of the list, then highlight the desired shared drive and select **Manage members**
- 3. Quickly scan through the membership list to get a sense of how many external groups and consumer accounts (@gmail.com) are members of the shared drive

To limit access to an already created shared drive:

- 1. In **Apps** > **Google Workspace** > **Drive and Docs** > **Manage shared drives**, sort the largest shared drives to the top of the list, highlight the desired shared drive and select **Settings**
- 2. For the most restrictive settings, uncheck all options under **Shared drive settings**, including **Allow managers to modify shared drive settings**
- 3. Select Done

Shared drive settings	?
Allow managers to modify shared drive settings	
 People outside KMET University can be added to files People who aren't shared drive members can be added to files Viewers and commenters can download, print, and copy files 	
	Done

To audit settings for all newly shared drives created in the domain:

 From the Admin Console Home page, click on <u>Apps > Google Workspace > Drive and Docs ></u> <u>Sharing settings</u>

- 2. In the left-hand panel, select an OU or group to apply shared drive setting defaults. For example a 'Students' OU
- 3. Select **Shared drive creation**. These are the default settings for all newly created shared drives and will not affect settings on existing shared drives.
- 4. For the most restrictive settings, check Prevent users in domain from creating new shared drives and uncheck all other settings (see screenshot below). Recommendation is to limit shared drive creation and control to admins of the domain and apply access to shared drives through permissions on the individual shared drives.
- 5. Select Save

Shared drive creation Applied at 'KMETU'	~	Prevent users in KMET University from creating new shared drives
		n people in KMET University create shared drives, these are the default settings. The settings won't change if a shared drive is ed to a different organizational unit. To override individual shared drive settings, go to Manage shared drives.
		Allow members with manager access to override the settings below
		Allow users outside KMET University to access files in shared drives This setting depends on Sharing outside of KMET University. Learn more
		Allow people who aren't shared drive members to be added to files
		Allow viewers and commenters to download, print, and copy files
		Most changes take effect in a few minutes. Learn more You can view prior changes in the Audit log

Admins also have the ability to restrict or allow the migration of data into Shared Drives. See this <u>Help Center documentation</u> for more information:

- From the Admin Console Home page, click on <u>Apps > Google Workspace > Drive and Docs ></u> <u>Migration Settings</u>
- 2. In the left-hand panel, select an OU or group
- 3. To allow users to migrate data into a shared drive, check **Allow users to migrate files to shared drives**. To disallow users to migrate data into a shared drive, uncheck this option.



Remediation – admin-driven

User Storage

One way to remove data stored in a user's account is to <u>delete the account</u>, which also removes all Vault data associated with the account. Additionally, Admins can enable Takeout to give users the option to download a copy of data stored in the account or to transfer Drive and Gmail data to a personal account. For more information on settings to enable Google Takeout for users, see this <u>Help</u> <u>Center documentation</u>.

For user driven remediation steps of data stored in Gmail, Drive, and Photos, see the '<u>Remediation -</u> <u>User Driven</u>' section in this guide.

Shared drive storage

Storage tools – sort & delete shared drives

This option is available for all Workspace for Education editions.

With the release of the storage tools in the Admin Console, admins now have the ability to sort the list of shared drives by size and delete shared drives that are no longer needed.

Caution - This option removes all data stored in the Shared Drive, including the Shared Drive. Data is able to be restored up to 25 days after deletion date, after that time it is permanently removed.

To remove a shared drive and the contents within:

- From the Admin Console Home page, click on <u>Apps > Google Workspace > Drive and Docs ></u> <u>Manage shared drives</u>, to view a list of all shared drives for the domain
- 2. (Optional) Click Add a filter of No members to list all shared drives with no members
- 3. Next to the **Storage used** column', click the arrow to sort all shared drives by size, ascending to descending
- Hover over the desired shared drive. Select the More menu on the far right and click Delete. (Optional) Clicking Restore in the menu will restore any Shared Drive that has been deleted within the last 25 days

Manage members	Settir	ngs	More 🔻
			Restore
			Restore
		D	elete

- 1. In the Delete shared drive window, confirm understanding that items will be permanently deleted and click **DELETE SHARED DRIVE**
- 2. The Shared Drive will register as 'Deleted' under the status column. To remove visibility of all deleted shared drives from this view, select **Add a Filter** and select **Status** as **Active**



Remediation – user-driven

User experience - near or at quota limits

When users reach the storage limit set by admins on the account, access to the services such as Drive, Gmail, and Photos will be affected in the following ways:

- Gmail: Users will still be able to send and receive email.
- **Drive**: You won't be able to sync or upload new files. You will not be able to create new files in Google Docs, Sheets, Slides, Drawings, Forms, and Jamboard. Until storage is reduced, owners won't be able to edit or copy the files affected by the storage quota set; collaborators won't be able to edit the affected files. Syncs stop between your computer's Google Drive folder and My Drive.
- Photos: You won't be able to add any more or back up existing photos or videos.

When a user's account is 80%-100% full, in-app notifications will be visible in both Drive, Photos, and Drive for Desktop to warn users of disruption of these services.

For instance, within Google Drive the following will be displayed when storage is full for an account:



When users click on <u>Manage Storage</u> within Google Drive, they will see the following banners when 80% and 100% full:







For Photos, the following banner notification will be displayed when storage is 80% and 100% full for the account:

|--|

For Drive for Desktop, the following desktop notification will be displayed when storage is 80% and 100% full for the account:



See the following sections - '<u>Moving data to personal Drive/Google One</u>' and '<u>Find large files to</u> <u>delete</u>' in this guide - for more information on how admins can discuss options users have to remove data from their accounts.

Moving data to personal Drive/Google One

This option is available for all Workspace for Education editions.

Users have two options to copy their data before their account - or the data within the account - is removed (when Takeout is enabled by admins):

- Users can download a copy of their data in an archive format. See this <u>Help Center</u> <u>Documentation</u> for more information.
- 2. Users can transfer a copy of Gmail and Drive contents to another Google account, for instance students leaving a school or University. See this <u>Help Center Documentation</u> for more information.

To download user data from a school account:

1. Go to the <u>Takeout page</u>

- Select the individual services that contain the data you would like to download or select all services. If there are important services that are not listed, for instance Blogger or YouTube, reach out to your school administrator
- 3. Some services have different options regarding specifics of export. For example:
 - a. The Calendar service has options to select all calendars or individual calendars
 - b. The Drive service has options to export Docs and Spreadsheets into Microsoft formats or PDFs
 - c. The Photo service has the option to select all Photo albums or individual albums
- 4. Once all services and options within those services are selected, click Next step
- 5. Under **Choose file type, frequency & destination** choose a **Delivery method**. Available options include:
 - a. Download link via email
 - b. Add to Drive (not recommended if the intent is to remove data from Gmail, Drive, and Photos)
 - c. Add to Dropbox
 - d. Add to OneDrive
 - e. Add to Box
- 6. Select Export once
- 7. Select File type & size, either .zip or .tgz archive files
- 8. Select archive file size, up to 50GB per file
- 9. Select Create export
 - a. If Dropbox, OneDrive, or Box were selected in step 5 above, select Link accounts and create export. This will redirect to a sign-in page for the service selected
- An email will be sent once the export process has completed. Depending on the delivery method selected above, exports can be managed and downloads can be accessed under the <u>Manage your exports</u> section of Google Takeout.

To transfer Gmail and Drive data to another account from school accounts:

 In the school account (myaccount.google.com), go to Transfer your content under Data and privacy and select <u>Start transfer</u>

Data & privacy

Key privacy options to help you choose the data saved in your account, the ads you see, info you share with others, and more



- 2. Enter the destination email address of the Google Account to copy content to
- 3. Select SEND CODE

(

4. In the destination Google Account, check the Gmail inbox for a confirmation email from Google entitled 'Verify your account'. In the email, select **Get confirmation code**. A new tab will open with a code. The code will be valid for 24 hours.

Verify your account 🔉 Inbox 🛪	
Google <noreply-transfer+tmtzril5evg=@google.com> to me ▼</noreply-transfer+tmtzril5evg=@google.com>	
Verify your account A request was made to transfer content to your account	. • •
from Get a confirmation code below to verify this account. The	
code will be valid for 24 hours. Learn more Not expecting this email? Do nothing and no content will	
be transferred.	
This message was sent to you because you recently used Google's Transfer your content service. Privacy Policy Terms of service	Google
← Reply ← Forward	

- 5. On your school account, go back to the **Transfer your content** page. Enter the code, then choose **Verify**.
- 6. Choose the content you'd like to copy, then click **START TRANSFER**.

he other accou	tent you'd like to copy and transfer to nt. People you've shared files with cess to the originals. Learn more 🖸
Take (Dut .
e talen	\rightarrow
Product	Details
-	My Drive files, Files you own, Shared with me files
🛆 Drive	
🛆 Drive M	All mail

- Once started, both email accounts will receive an email confirming the transfer process is in progress. To view transfer progress and the history of transfers from the last 30 days, click VIEW HISTORY.
- ← Transfer history

This page provides a record of content transfer events for the last 30 days. Dates and times are shown in your local time zone.

Content	Transferred to	Completed on	
2 products	ken@jkg.rucks	In progress	~

Find large files to delete

This option is available for all Workspace for Education editions.

Users can navigate to <u>https://drive.google.com/settings/storage</u> to see overall storage numbers in Drive, Gmail, and Photos. This narrows the focus to the service that needs the most immediate attention.

To remove large or unnecessary files in Drive and Shared Drives:

- 1. Go to https://drive.google.com/drive/quota
 - This webpage can also be accessed through Drive Settings > Manage Storage

Storage

 $10.03 \, GB_{\text{of 50 GB used}}$

2. Sort by 'Storage used' column to view your largest files

3. Delete files as needed

Google Drive O Google Photos O Gmail

 Files count toward the overall storage limit of the account until they are removed from Trash in 30 days.

To expedite this process, navigate to 'Trash' on the left, right-click an individual file / folder and select **Delete forever** or select **Empty trash** in the upper right to purge all files / folders. Confirm by clicking **Delete forever**.

5. If files have been copied to Shared Drives, scan through the contents of accessible Shared Drives and trash files as needed as this data may be consuming twice the storage space.

To begin removing data from gmail, consider the following options:

- 1. Searching for large emails by typing 'has:attachment larger:10M' in the Search box, selecting the emails not needed from the results, and selecting the Delete icon
- 2. Searching for emails before a specific date by typing 'before:*enter date*', selecting the emails not needed from the results, and selecting the Delete icon
- 3. Remove all items from the Spam folder by clicking the checkbox for all messages and selecting **Delete forever**
- Emails will still count toward the overall storage limit of an account until they are removed from Trash in 30 days. To expedite this process, navigate to **Trash** on the left, select all messages in Trash, then select **Empty Trash now**.



Sample communication templates

Below are several email templates that you can customize and use to inform your users about storage limits and the actions required of them to meet their limits.

To notify high-storage users

[Note for admins] You can customize this email by including how much storage each person is using. You can find this information by following these steps.

Subject: Important: Please reduce your overall storage usage

Hi,

Your account has been identified as consuming a large amount of Google storage.

Google recently announced that new storage limits for Google Workspace for Education (formerly known as G Suite for Education) will take effect in July 2022. Currently, you have unlimited storage for Google Drive, Gmail, and Google Photos. In order to prepare, we need you to review your current storage usage and delete any unnecessary files in Drive, Gmail, and Photos.

You are one of the largest users of our storage in our institution, so we wanted to check in with you to learn more about your storage needs.

Please complete the following steps:

- 1. To confirm how much storage you're using, go to https://drive.google.com/settings/storage.
- 2. To review and delete large or unnecessary files in Drive, go to https://drive.google.com/drive/quota.
- 3. To review and delete large or unnecessary files in shared drives, go to https://drive.google.com/drive/shared-drives.
- 4. Consider deleting Drive content that you may have copied to a shared drive. If a file resides in 2 locations, it may be consuming twice the storage space.
- 5. To search for and delete unnecessary or large emails, go to Manage files in your Google Drive storage and follow instructions for Gmail.
- 6. And finally, if you have larger storage needs due to projects, data sets, film production, etc. please reach out to us so we can explore other Google Cloud storage options.

[Remove if not applicable] Please review our institution's Acceptable Use Policy [Link to your Acceptable Use Policy] and make sure you're storing data in accordance with our policies.

These steps will be voluntary through June 2022. In July 2022, we will implement storage limits on all users in our organization. Please complete the steps above as soon as possible.

We'll share more information, including your specific storage limit, later this year.

Thank you,

Your friendly IT team

To notify users of the storage limits being enforced

[Note for admins] You can customize this email by including how much storage each person is using. You can find this information by <u>following these steps.</u>

Subject: New storage limit will be implemented on your account

Hi,

Your account will be moving to a new storage limit of [enter storage amount here] on [enter date here].

In 2021, Google announced that new storage limits for Google Workspace for Education will take effect in July 2022. In preparation for these changes, Workspace admins will be implementing storage limits across all accounts to ensure domain-wide limits are maintained in line with this new storage policy for Google Workspace for Education.

The new storage limit for your account will apply to Google Drive, Gmail, and Google Photos.

To review how much storage you're using in each service, go to <u>https://drive.google.com/settings/storage</u>. To delete any unnecessary files in Drive, Gmail, and Photos, please complete the following steps:

- 1. To review storage usage in relation to quota and delete large or unnecessary files in Drive, go to https://drive.google.com/drive/quota.
- 2. To review and delete large or unnecessary files in shared drives, go to https://drive.google.com/drive/shared-drives.
- 3. Consider deleting Drive content that you may have copied to a shared drive. If a file resides in 2 locations, it may be consuming twice the storage space.
- 4. To search for and delete unnecessary or large emails, go to <u>Manage files in your Google Drive</u> <u>storage</u> and follow the instructions for Gmail.
- 5. [Remove if not applicable] Google Takeout has been enabled for Drive, Gmail, and Photos. Use this service to export an archive of your Drive, Gmail, and Photos data. Note, exporting an archive of your data does not remove the data from your school account. Follow the instructions below for the two options for downloading your data:
 - a. Download your data into an archive

b. Copy your data to another Google Account

[Remove if not applicable] Please review our institution's Acceptable Use Policy [Link to your institution's Acceptable Use Policy] and make sure you're using data in accordance with our policies.

After [enter date here], you will need to maintain shared storage across Drive, Gmail, and Photos to ensure access to these services. If your account runs out of storage the following will occur until you free up additional space within these services:

- Gmail: Users will still be able to send and receive email.
- Drive: You will not be able to sync or upload new files. You will not be able to create new files in Google Docs, Sheets, Slides, Drawings, Forms, and Jamboard. Until storage is reduced, owners won't be able to edit or copy the files affected by the storage quota set; collaborators won't be able to edit the affected files. Syncs stop between your computer's Google Drive folder and My Drive.
- Photos: You will not be able to add or back up existing photos or videos.

For further questions or clarifications around this policy, please reach out to your IT Help Desk Team. Thank you,

Your friendly IT team

Resource list

Below is a list of Google and third-party resources to assist admins in managing storage across Workspace for Education editions. Not everything listed below was mentioned in this guide.

Google help center documentation

Understanding Storage Limits

How licensing works

Storage Management resources

- Customize service settings with configuration groups
- Groups API Property Overview
- Groups: update method Overview
- Managing Google Workspace for Education Storage as an admin (YT video)

Analysis of Storage Utilization - All Workspace for Education Editions

- Highlights Report What's the storage being used? / What's the 30-day unique login count?
- User reports: Accounts
- Drive log events
- Improved audit and investigation experience
- <u>Control access to files and folders in shared drives</u>
- Move content to a shared drive

Analysis of Storage Utilization - Workspace for Education Standard and Plus only

- About reporting logs and BigQuery
- Example queries for reporting logs in BigQuery
- Drive log events Security investigation tool
- File exposure report Security dashboard
- Create a custom chart based on an investigation
- Create and manage activity rules

Remediation

• Delete your organization's Google Account

- Turn Google Takeout on or off for users
- Options to preserve former employee data
- How to download your Google data
- <u>Copy content from your school account to another account</u>
- Graduation log events
- Use groups to customize service access
- <u>Transfer Drive files to a new owner</u>
- Add an account for a new user
- Retain Gmail messages with Vault
- Retain files in Drive with Vault
- Manage files in Google Drive storage
- Manage your Google Workspace storage
- Drive storage FAQ for admins

Google tools

Google Workspace for Education Storage Report



Third-party / open source tools

Important: Google Cloud Support doesn't support third-party solutions. We support the Admin SDK Directory API those tools use. Other third-party solutions are subject to their own terms of use.

Working with Google Workspace APIs

- Exponential backoff
- Working with quotas

Amplified IT / Gopher for Drive

- Blog Google Workspace Storage Limits are Coming
- Blog Getting Google Workspace Storage Usage
- Blog Reducing Google Workspace Storage Usage / Data Studio template
- Gopher for Drive Terms of Use
- Install Gopher for Drive
- Domain level reports
- Drive level reports
- Shared Drive level reports

GAM / GAMADV-XTD3

- Apache 2.0 license
- Installations instructions for GAM
- Installation instructions for GAMADV-XTD3
- GAM Who Can Leave Group
- GAM Bulk processing
- GAMADV-XTD3 Bulk processing
- GAMADV-XTD3 Scripts to work with Drive ACLs
- GAMADV-XTD3 Wiki Shared Drives

Kincaid IT / Kit Central

• <u>Kit Central Storage+ / Kit Central Admin+</u>