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# Audit logs for Google Workspace



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This document provides a conceptual overview of the audit logs that Google Workspace provides as a part of Cloud Audit Logs.



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If you don't enable Google Workspace data sharing with Google Cloud, then you can't see audit logs for Google Workspace in Google Cloud.

★ **Note:** Some Enterprise Groups Audit membership changes automatically populate the `principalEmail` field in the audit log with `cloud-support@google.com`. For example, an audit log might show `cloud-support@google.com` as the principal removing a user from the group, when the removal of the user is automatic due to the expiration of a user's membership.

## Types of audit logs

[Admin Activity audit logs](#) contain log entries for API calls or other actions that modify the configuration or metadata of resources. For example, these logs record when users create VM instances or change Identity and Access Management (IAM) permissions.

[Data Access audit logs](#) contain API calls that read the configuration or metadata of

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captured in the Google Workspace Enterprise Groups Audit logs. When you use the Google Admin console, changes to Group settings are captured in the Google Workspace Admin Audit logs. For example, if you changed a Group email address in groups.google.com, then those changes are captured in Google Workspace Enterprise Groups Audit logs.

- **Google Workspace Enterprise Groups Audit:** Enterprise Groups Audit logs provide a record of actions performed on groups and group memberships. For example, you can see when an administrator added a user or when a group owner deleted their group.

Enterprise Groups Audit writes Admin Activity audit logs only.

- **Google Workspace Login Audit:** Login Audit logs track user sign-ins to your domain. These logs only record the login event. They don't record which system was used to perform the login action.

Login Audit writes Data Access audit logs only.

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# Google Workspace Admin Activities



Google Workspace Admin Audit audit logs use the resource type `audited_resource` for all audit logs.

Google Workspace Admin Audit audit logs use the service name `admin.googleapis.com`.

Google Workspace Admin Audit writes Admin Activity audit logs only. The following are the audited operations:

Activity type	AuditLog.method_name
AI_CLASSIFICATION_SETTINGS	<code>google.admin.AdminService.aiClassificationInsufficientTrainingE</code> <code>google.admin.AdminService.aiClassific</code> <code>google.admin.AdminService.aiClassific</code>

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CALENDAR\_SETTINGS

google.admin.AdminService.createManag  
google.admin.AdminService.deleteManag  
google.admin.AdminService.updateManag  
google.admin.AdminService.  
flashlightEduNonFeaturedServicesSelec

google.admin.AdminService.createBuild  
google.admin.AdminService.deleteBuild  
google.admin.AdminService.updateBuild  
google.admin.AdminService.createCalen  
google.admin.AdminService.deleteCalen  
google.admin.AdminService.createCalen  
google.admin.AdminService.deleteCalen  
google.admin.AdminService.updateCalen  
google.admin.AdminService.renameCalen  
google.admin.AdminService.updateCalen  
google.admin.AdminService.changeCalen  
google.admin.AdminService.cancelCalen  
google.admin.AdminService.releaseCalen

CHAT\_SETTINGS

google.admin.AdminService.meetInteron

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	<div>google.admin.AdminService.createRole</div> <div>google.admin.AdminService.deleteRole</div> <div>google.admin.AdminService.addPrivilege</div> <div>google.admin.AdminService.removePrivilege</div> <div>google.admin.AdminService.renameRole</div> <div>google.admin.AdminService.updateRole</div> <div>google.admin.AdminService.unassignRole</div>
DEVICE_SETTINGS	<div>google.admin.AdminService.deleteDevice</div> <div>google.admin.AdminService.moveDeviceTo</div>
DOCS_SETTINGS	<div>google.admin.AdminService.transferDoc</div> <div>google.admin.AdminService.driveDataRe</div> <div>google.admin.AdminService.changeDocsS</div>
DOMAIN_SETTINGS	<div>google.admin.AdminService.changeAccou</div> <div>google.admin.AdminService.addApplicat</div> <div>google.admin.AdminService.addApplicat</div> <div>google.admin.AdminService.changeAdver</div> <div>google.admin.AdminService.createAlert</div> <div>google.admin.AdminService.changeAlert</div>

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google.admin.AdminService.toggleSsoEn  
google.admin.AdminService.changeCusto  
google.admin.AdminService.  
changeDataLocalizationForRussia  
google.admin.AdminService.changeDataL  
google.admin.AdminService.  
changeDataProtectionOfficerContactInfo  
google.admin.AdminService.deletePlayFi  
google.admin.AdminService.viewDnsLogin  
google.admin.AdminService.changeDomain  
google.admin.AdminService.changeDomain  
google.admin.AdminService.changeDomain  
google.admin.AdminService.toggleEnabl  
google.admin.AdminService.changeDomain  
google.admin.AdminService.addTrustedDo  
google.admin.AdminService.removeTrust  
google.admin.AdminService.changeEduTy  
google.admin.AdminService.toggleEnabl  
google.admin.AdminService.toggleSsoEn  
google.admin.AdminService.toggleSsl  
google.admin.AdminService

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EMAIL\_SETTINGS

google.admin.AdminService.createRule  
google.admin.AdminService.changeRuleC  
google.admin.AdminService.deleteRule  
google.admin.AdminService.renameRule  
google.admin.AdminService.ruleStatusCl  
google.admin.AdminService.addSecondary  
google.admin.AdminService.removeSecon  
google.admin.AdminService.skipSeconda  
google.admin.AdminService.verifySecon  
google.admin.AdminService.verifySecon  
google.admin.AdminService.updateDomain  
google.admin.AdminService.changeSsoSe  
google.admin.AdminService.generatePin  
google.admin.AdminService.updateRule  
  
google.admin.AdminService.dropFromQua  
google.admin.AdminService.emailLogSea  
google.admin.AdminService.emailUndele  
google.admin.AdminService.changeEmail  
google.admin.AdminService.chanqeGmail



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LICENSES\_SETTINGS

google.admin.AdminService.labelPermis  
google.admin.AdminService.labelPermis  
google.admin.AdminService.labelPublis  
google.admin.AdminService.labelCreate  
google.admin.AdminService.labelUpdate

google.admin.AdminService.orgUsersLic  
google.admin.AdminService.orgAllUsers  
google.admin.AdminService.userLicense  
google.admin.AdminService.changeLicen  
google.admin.AdminService.userLicense  
google.admin.AdminService.orgLicenseR  
google.admin.AdminService.userLicense  
google.admin.AdminService.updateDynam  
google.admin.AdminService.licenseUsag

MOBILE\_SETTINGS

google.admin.AdminService.actionCance  
google.admin.AdminService.actionReque  
google.admin.AdminService.addMobileCe  
google.admin.AdminService.companyDevi

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ORG\_SETTINGS

google.admin.AdminService.  
enrollForGoogleDeviceManagement  
google.admin.AdminService.useGoogleMol  
google.admin.AdminService.  
useGoogleMobileManagementForNonIos  
google.admin.AdminService.  
useGoogleMobileManagementForIos  
google.admin.AdminService.mobileAccou  
google.admin.AdminService.  
mobileDeviceCancelWipeThenApprove  
google.admin.AdminService.  
mobileDeviceCancelWipeThenBlock

google.admin.AdminService.chromeLicen  
google.admin.AdminService.  
chromeApplicationLicenseReservationCro  
google.admin.AdminService.  
chromeApplicationLicenseReservationDe  
google.admin.AdminService.  
chromeApplicationLicenseReservationUp

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google.admin.AdminService.  
securityInvestigationChartCreate  
google.admin.AdminService.  
securityInvestigationContentAccess  
google.admin.AdminService.  
securityInvestigationDownloadAttachme  
google.admin.AdminService.  
securityInvestigationExportActionResu  
google.admin.AdminService.  
securityInvestigationExportQuery  
google.admin.AdminService.  
securityInvestigationObjectCreateDraf  
google.admin.AdminService.  
securityInvestigationObjectDeleteInve  
google.admin.AdminService.  
securityInvestigationObjectDuplicateI  
google.admin.AdminService.  
securityInvestigationObjectOwnershipT  
google.admin.AdminService.  
securityInvestigationObjectSaveInvest  
google.admin.AdminService

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SITES\_SETTINGS

google.admin.AdminService.  
changeTwoStepVerificationGracePeriodD  
google.admin.AdminService.  
changeTwoStepVerificationStartDate  
google.admin.AdminService.disallowSer  
google.admin.AdminService.  
enableNonAdminUserPasswordRecovery  
google.admin.AdminService.enforceStro  
google.admin.AdminService.removeFromT  
google.admin.AdminService.sessionCont  
google.admin.AdminService.toggleCaaEn  
google.admin.AdminService.trustDomain  
google.admin.AdminService.unblockOnDe  
google.admin.AdminService.untrustDoma  
google.admin.AdminService.  
updateErrorMsgForRestrictedOauth2Apps  
google.admin.AdminService.  
weakProgrammaticLoginSettingsChanged  
google.admin.AdminService.addWebAddre  
google.admin.AdminService.deleteWebAd

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google.admin.AdminService.changeUserO  
google.admin.AdminService.changeUserPl  
google.admin.AdminService.changeRecov  
google.admin.AdminService.changeRecov  
google.admin.AdminService.changeUserR  
google.admin.AdminService.changeUserA  
google.admin.AdminService.createEmail  
google.admin.AdminService.createDataT  
google.admin.AdminService.grantDelega  
google.admin.AdminService.deleteAccou  
google.admin.AdminService.deleteEmail  
google.admin.AdminService.deleteMailb  
google.admin.AdminService.changeFirstl  
google.admin.AdminService.gmailResetU  
google.admin.AdminService.changeLastN  
google.admin.AdminService.mailRoutingl  
google.admin.AdminService.mailRoutingl  
google.admin.AdminService.addNickname  
google.admin.AdminService.removeNickn  
google.admin.AdminService.changePassw

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google.admin.AdminService.  
userPutInTwoStepVerificationGracePeriod  
google.admin.AdminService.renameUser  
google.admin.AdminService.unenrollUser  
google.admin.AdminService.suspendUser  
google.admin.AdminService.unarchiveUser  
google.admin.AdminService.undeleteUser  
google.admin.AdminService.unsuspendUser  
google.admin.AdminService.upgradeUser  
google.admin.AdminService.usersBulkUp  
google.admin.AdminService.  
usersBulkUploadNotificationSent

Google Workspace Enterprise Groups



Google Workspace Login Audit



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## Audit log format

Google Workspace audit log entries include the following objects:

- The log entry itself, which is an object of type `LogEntry`. When examining audit logging data, you might find the following useful:
  - `logName` contains the organization ID and audit log type.
  - `resource` contains the target of the audited operation.
  - `timeStamp` contains the time of the audited operation.
  - `protoPayload` contains the Google Workspace audit log in its `metadata` field.

The `protoPayload.metadata` field holds the audited Google Workspace information. The following is an example of a Login Audit log:



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```
    },
    {
      "name": "login_challenge_method",
      "type": "TYPE_STRING",
      "label": "LABEL_REPEATED",
      "multiStrValue": [
        "password",
        "idv_preregistered_phone",
        "idv_preregistered_phone"
      ]
    },
  ],
}
],
"activityId": {
  "uniqQualifier": "358068855354",
  "timeUsec": "1632500217183212"
},
"@type": "type.googleapis.com/ccc_hosted_reporting.ActivityProto"
}
```



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## Route audit logs

You can route Google Workspace audit logs from Cloud Logging to supported destinations, including other Logging buckets.

Here are some applications for routing audit logs:

- To use more powerful search capabilities, you can route copies of your audit logs to Cloud Storage, BigQuery, or Pub/Sub. Using Pub/Sub, you can route to other applications, other repositories, and to third parties.
- To manage your audit logs across an entire organization, you can create [aggregated sinks](#) that combine and route logs from all the Google Cloud projects, billing accounts, and folders contained by your organization. For instance, you might aggregate and route audit log entries from an organization's folders to a Cloud Storage bucket.

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You can configure Cloud Logging to retain the logs in the `_Default` logs bucket for a period ranging from 1 day to 3650 days.

To update the retention period for the `_Default` logs bucket, see [Custom retention](#).

You can't change the retention period on the `_Required` bucket.

## Quotas and limits

The same quotas apply to audit logs for Google Workspace and Cloud Audit Logs.

For details about these usage limits, including the maximum sizes of audit logs, see [Quotas and limits](#).

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Multicloud		Smart analytics	Google Cloud Marketplace	Events
Global infrastructure		Artificial Intelligence	Learn about cloud computing	Podcasts
Customers and case studies		Security	Support	Developer Center
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				Google Cloud on YouTube



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