



GOOGLE APP ENGINE

CHAPTER 2

PRICING & QUOTAS

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App Engine Pricing

Each App Engine application can consume a fixed amount of computing resources for free, defined by a set of [quotas](#). If your application needs more resources you can make it a *paid app* by enabling billing and linking to a credit card or bank account for automatic payment. When your application uses resources beyond the free quotas, you will be charged only for the additional usage up to a daily maximum amount which you specify. Charges are accumulated monthly and are paid at the beginning of the following month.

Pricing

Resource billing rates

Resource	Unit	Unit cost (in US \$)
Instances*	Instance hours	\$0.05
Outgoing Network Traffic	Gigabytes	\$0.12
Incoming Network Traffic	Gigabytes	Free
Datastore Storage	Gigabytes per month	\$0.18
Blobstore, Logs, and Task Queue Stored Data	Gigabytes per month	\$0.026
Dedicated Memcache	Gigabytes per hour	\$0.06
Logs API	Gigabytes	\$0.12
SSL Virtual IPs** (VIPs)	Virtual IP per month	\$39.00
Sending Email, Shared Memcache, Pagespeed, Cron, APIs (URLFetch, Task Queues, Image, Sockets, Files, and Users)		No Additional Charge

* Frontend and backend instances cost the same. Price may vary based on [performance](#).

** SNI SSL certificate slots are offered for no additional charge for accounts that have billing activated. Free accounts are limited to 5 certificates.

Note: If your free app exceeds the free quota for some resource needed to initiate a request, such as the bandwidth quota or instance hours quota, users of the app will get a server error, such as a 503 error. For all other services, exceeding quota from a free app will generate a quota exception that your app can handle gracefully by showing a message to the users. See [When a Resource is Depleted](#) for more details.



Costs for Datastore Calls

Datastore operations are billed as follows:

Operation	Cost
Read / Write	\$0.06 per 100,000 operations
Small	Free

Calls to the datastore API result in the following billable operations. Small datastore operations include calls to allocate datastore ids or keys-only queries, and these operations are **free**. This table shows how calls map to datastore operations:

API Call	Datastore Operations
Entity Get (per entity)	1 read
New Entity Put (per entity, regardless of entity size)	2 writes + 2 writes per indexed property value + 1 write per composite index value
Existing Entity Put (per entity)	1 write + 4 writes per modified indexed property value + 2 writes per modified composite index value
Entity Delete (per entity)	2 writes + 2 writes per indexed property value + 1 write per composite index value
Query*	1 read + 1 read per entity retrieved

* Queries that specify an offset are charged for the number of results that are skipped in addition to those that are returned.

Costs for Search

Fees for use of the Search API are listed in the table below. Refer to the [Java](#) and [Python](#) documentation for a detailed description of each type of Search call.

Resource	Cost
Total Storage (Documents and Indexes)	\$0.18 per GB per month*
Queries	\$0.50 per 10K queries
Indexing Searchable Documents	\$2.00 per GB

* Storage is at datastore rates.



Billing cycles

When you enable billing you specify a maximum [daily budget](#). This is the maximum resource cost you are willing to pay. This daily budget will limit the total amount you can be charged on any single day. The daily budget should be large enough to be able to handle spikes in resource usage. An application can only consume budgeted resources up to its maximum daily budget. When an application exceeds its daily budget, any operation whose free quota has been exhausted will fail. Charges are posted in daily and monthly billing cycles:

- **Daily:** Every day you are charged for the resources you actually use. Usage up to the free quota limits is included in the usage total, but not in the billable amount. Usage above the free quota is charged at the regular rates.
- **Monthly:** At the beginning of each month all daily charges for the previous month are summed, applicable taxes are computed, and the total charges are debited from the payment instrument that is linked to the app.

Taxes

Some countries tax App Engine fees. If taxes apply in your country of residence, your bill will include any applicable taxes. Taxes appear only in the Transaction History log. You do not need to include taxes in your daily budget. They are added to your charges after daily spend has been calculated, so the final charge to your account, including taxes, may be larger than the daily budget amount.

Using the Developers Console to control billing

Billing administrators

Only project owners can enable and disable billing, and perform the functions described below in [Managing a paid app](#).

Enable billing

Sign in to the [Google Developers Console](#).

1. Create a new account or sign in to an existing account
2. Create a new project or select an existing project



3. On the project's page, select **Settings**
4. Click **Enable Billing**
5. You are now in the page that controls the billing account for your project. Fill in the form that specifies the billing information that will apply to this project only.
6. Click **Submit and enable billing**

Disable billing

Go to the project's page in the Developers Console and select **Settings**. Click **Disable billing** in the Billing section of the page.

Note: Disabling an application does not automatically disable billing. If you disable your app but do not disable billing, the app can still be charged for fixed billing costs, like datastore storage.

Changing the billing settings

For setting budgets and monitoring app usage, see [managing a paid app](#). For additional questions about billing, see [Cloud Billing Help](#).

Using the Admin Console to control billing

Note: If you are logged into your browser under multiple accounts you must be sure to access the App Engine Admin Console from the account that's linked to your application.

Billing administrators

Only billing administrators can enable billing and manage paid apps. To be a billing administrator a user must already be one of the application's [application administrators](#). A paid app should have more than one billing administrator to ensure there is always someone available who can change the budget. Before you assign billing administrators be sure you have granted an application administrator role to all the people you have in mind.

The application administrator who initially enables billing automatically becomes a billing administrator. The initial administrator can be [removed later](#) once other billing administrators exist. To add or remove billing administrators click Manage Billing Administrators. A list of all the current application administrators will appear, with check boxes next to each. Check and uncheck the boxes to add or remove billing administrators. Then click Save.



Any billing administrator can add or remove other billing administrators. Application administrators can only view the list of billing administrators. Go to the Billing Status page and click Manage Billing Administrators. A billing administrator can remove himself - as long as other billing administrators exist. There must be at least one billing administrator at all times.

Enable billing

Follow these steps to enable billing:

1. Sign in to the Administration Console at <https://appengine.google.com>. Google Apps users can sign in at https://appengine.google.com/a/your_domain.com.
2. Select an application.
3. Click the Settings link (under the Billing Status section).

The billing status page appears and the application's status will be Free.

Click Enable Billing. The first time you enable billing, three consecutive screens appear to enter budget, billing profile, and billing settings:

- Budget: Specify your application's budget. This is the maximum dollar amount of resources you're willing to purchase each day. See [Estimating Costs](#) for more information.
- Billing profile: Enter your company's address and one or more billing contacts with phone, email, and notification preferences. The person who initially enables billing automatically becomes the primary contact. Contacts do not have to be billing administrators. Currently the only billing notifications contacts can receive is a warning when a charge has failed. Each new contact receives an email that includes a link that must be clicked to verify the address and to enable the transmission of notifications.
- Billing settings: Enter information for one or more credit cards or bank accounts. You must have at least one account which will be the primary payment source for the monthly bills. If you enter other accounts one of them can be selected as a backup. If a charge to the primary fails, the billing system will try the backup account.

After you fill in all three screens click Submit. You're done! If you cancel out of enable billing while creating a paid app none of the budget, profile, or settings information will be retained. You'll have to enter it all again.



Verify Paid App Status

When you click Submit the application's billing status changes from Free to Enabling Billing. It can remain in this state for several minutes while Google processes your billing settings. You can cancel the pending enable process by pressing Do not enable billing.

Note that the status page does not update automatically. To verify that your application has become a paid app refresh the billing status page until you see that the status has changed to Enabled. After the app has been enabled it may take several minutes for any changes in budget quotas to take effect.

Disable billing

Go to the Billing Status page and click Disable Billing. Your app's usage limits will revert to the free quotas. However, you'll still be charged for your data use up to that point at the end of the month.

Note: Disabling an application does not automatically disable billing. If you disable your app but do not disable billing, the app can still be charged for fixed billing costs, like datastore storage.

Making a payment

The billing system calculates your monthly charges and posts them in the transaction history on the first of the month. The exact date that the linked payment account is actually debited may vary, so when the automatic withdrawal or charge appears in the transaction history it may be after the first of the month.

You can also make a payment through any of your linked accounts at any time by visiting the Transaction History billing page. At the top of the page you'll see your current balance, and a Make a payment button.

Changing contact information

To change company contact information go to the Billing Profile page. You can edit or remove existing contacts or add new ones. You can also edit the company business information.

Changing payment settings

To change payment information go to the Billing Settings page. You can edit or remove existing [payment accounts](#) or add new ones.



Managing a paid app

Use the [App Engine Admin Console](#) to view the billing status of all your apps, and to set or change an app's budget.

Note: If you are logged into your browser under multiple accounts you must be sure to access the App Engine Admin Console from the account that's linked to your application. One way to do this is to open a Chrome incognito window or a Firefox private browsing window first, then navigate to the App Engine Admin Console and log in.

Once billing is enabled, your app's charges will appear in the billing logs [Transaction History](#) page. No paper invoices are sent to the billing contact.

All of the application's billing administrators can use the links in the application console billing section to view and change billing information. The following table shows what management operations are available from each page:

Billing Page	Operations
Billing Status	View billing status, Change budget, Add/remove/view billing administrators
Usage History	View daily usage statistics and costs
Transaction History*	Make payments, view the current balance and monthly billing transactions
Billing Profile *,**	View and change contact information
Billing Settings *,**	View and change payment information

* These pages are only visible to billing administrators.

** These pages only appear for apps created on or before March 21, 2014, newer apps use the Developers Console to change billing settings.

Billing status

The app's current billing status is displayed on the Billing Status page. Possible values are:

- Free
- Enabling Billing
- Enabled
- Premier Account Billing



- Grace Period

When a monthly payment fails the app's account is delinquent and its status becomes "Grace Period." The app will continue to run with its budget constraints and you have up to 30 days to pay the outstanding balance. More information can be found on the [App Engine Billing FAQ](#) page.

Creating or changing a budget

A budget can only be created or changed when the billing status is Enabled or you have a Grace Period. Go to the [Billing Status](#) page and click Change Budget. Make your changes and click Submit. (A new budget can also be specified when you re-enable a paid app that has had billing disabled.)

Changing the maximum daily budget can be tricky. When you increase the maximum daily budget the new limit takes effect immediately, so an application that has been failing because it is over budget will work again. However, if you *lower* the daily maximum the change will take effect immediately only if the current daily usage is below the old maximum. Otherwise, the new maximum takes effect the next day.

Billing logs

The billing section includes two log pages:

Usage history

This page can be viewed by any *application administrator*. It shows daily resource usage reports along with details of any associated charges. Billing events, such as budget modifications and billed administrator changes also appear here. These reports can be viewed online, printed, or downloaded as a comma-separated values (CSV) file.

Frontend and backend instance hours are not enumerated by instance class name. They appear as a single instance hours total and the corresponding hourly usage and cost is computed as multiple of the base class (F1 and B1). For example, one hour of F4 usage is billed as four instance hours at the F1 rate.

Transaction history

This page can only be viewed by billing administrators. It shows all account activity related to resource charges and payments. The report uses US Pacific timezone.

Note: Daily usage costs are rounded to the penny when they are displayed in the usage



history, but the transaction history accumulates the actual full costs. Therefore the sum of the daily charges may not be identical to the amount reported (and billed) in the transaction history. Daily usage is posted on the next day but it can take longer to update the transaction history, so the transaction history may not include the most recent usage history.

Help

More information can be found on the [App Engine Billing FAQ](#) page. You can also report a billing problem to cloud services by filling out this [online form](#).



Quotas

An App Engine application can consume resources up to certain quotas. With these quotas, App Engine ensures that your application won't exceed your budget, and that other applications running on App Engine won't impact your application's performance.

Billable limits and safety limits

App Engine has three kinds of quotas or limits:

- **Free Quotas:** Free quotas are limits set on free applications. These quotas can only be exceeded by paid applications, up to the limits of the application's budget or the safety limit, whichever applies first.
- **Billable Limits:** Billable limits apply to paid apps and cannot be exceeded. Billable limits are set by the application administrator in the **Billing** section of the Administration Console. These quotas allow administrators to manage application cost.
- **Safety Limits:** Safety limits are set by Google to protect the integrity of the App Engine system. These quotas ensure that no single app can over-consume resources to the detriment of other apps. If you go above these limits you'll get an error whether you are paid or free.

Billable limits

Every application gets an amount of each resource for free, but application administrators can increase these quotas by [enabling paid apps](#) and setting a daily budget. You will be charged for the resources your application actually uses, and for the amount of resources used above the free quota thresholds.

After you enable billing for your application, you can set your daily budget and adjust quotas using the Administration Console. For more information about setting your budget and allocating resources, see [Pricing](#). When you enable billing for your application, the application's safety limits increase. See the [Resources](#) section for details.

Note: Premier accounts do not use daily budgets, relying instead on monthly billing and pay-per-use.



Safety limits

Safety limits include *daily quotas* and *per-minute quotas*:

- Daily quotas are refreshed daily at midnight Pacific time. Paid applications can exceed this free quota until their budget is exhausted.
- Per-minute quotas protect the application from consuming all of its resources in very short periods of time, and prevent other applications from monopolizing a given resource. If your application consumes a resource too quickly and depletes one of the per-minute quotas, the word "Limited" appears next to the appropriate quota on the Quota Details screen in the Admin Console. Requests for resources that have hit their per-minute maximum will be denied.

See [When a Resource is Depleted](#) for details about what happens when a quota is exceeded and how to handle quota overage conditions.

Tip: For paid apps, the maximum per-minute quotas accommodate high traffic levels, enough to handle a spike in traffic from your site getting mentioned in news stories. If you believe a particular quota does not meet this requirement, please [create a feature request issue in the issue tracker](#). Please note that filing a feature request will not assure an actual quota bump for a particular app, but it will help us understand which quota is potentially too low for general use cases.

If you're expecting extremely high traffic levels, or for some reason your app requires particularly high quotas (e.g. because of significant product launch or large load tests), consider signing up for support using the [Google Developers Console](#) or [a premier account](#).

How resources are replenished

App Engine tracks your application's resource usage against system quotas. For both free and paid applications, App Engine resets all resource measurements at the beginning of each calendar day (except for Stored Data, which always represents the amount of datastore storage in use). When free applications reach their quota for a resource, they cannot use that resource until the quota is replenished. Paid apps can exceed the free quota until their budget is exhausted.

Daily quotas are replenished daily at midnight Pacific time. Per-minute quotas are refreshed every 60 seconds.



When a resource is depleted

When an application consumes all of an allocated resource, the resource becomes unavailable until the quota is replenished. This may mean that your application will not work until the quota is replenished.

For resources that are required to initiate a request, when the resource is depleted, App Engine by default returns an HTTP 403 or 503 error code for the request instead of calling a request handler. The following resources have this behavior:

- Bandwidth, incoming and outgoing
- Instance hours

Tip: You can configure your application to serve a custom error page when your application exceeds a quota. For details, see Custom Error Responses documentation for [Python](#), [Java](#), and [Go](#).

For all other resources, when the resource is depleted, an attempt in the application to consume the resource results in an exception. This exception can be caught by the application and handled, such as by displaying a friendly error message to the user. In the Python API, this exception is `apiproxy_errors.OverQuotaError`. In the Java API, this exception is `com.google.apphosting.api.ApiProxy.OverQuotaException`. In the Go API, the `appengine.IsOverQuota` function reports whether an error represents an API call failure due to insufficient available quota.

The following example illustrates how to catch the `OverQuotaError`, which may be raised by the `SendMessage()` method if an email-related quota has been exceeded:



```
try:

    mail.SendMessage(to='test@example.com',

                     from='admin@example.com',

                     subject='Test Email',

                     body='Testing')

except apiproxy_errors.OverQuotaError, message:

    # Log the error.

    logging.error(message)

    # Display an informative message to the user.

    self.response.out.write('The email could not be sent. '

                             'Please try again later.')
```

If you're exceeding your system resource quota unexpectedly, consider [profiling your application's performance](#).

Is your app exceeding the default limits? If you are a Premier customer, you can request additional quota by [contacting support](#). If you are not a Premier customer, you can [apply for more Mail API quota](#) or [file a feature request](#) for any other quota increase. Or you can [find out more about our Premier accounts](#).

Resources

An application may use the following resources, subject to quotas. Resources measured against billable limits are indicated with "(billable)." Resource amounts represent an allocation over a 24 hour period.

The cost of additional resources is listed on the [Pricing](#) page.



Default GCS Bucket

Each app can have a default Google Cloud Storage (GCS) bucket that is ready to use with no further activations, configurations, or permission settings required. For more information see the documentation for default buckets in your language ([Java](#) | [Python](#) | [Go](#) | [PHP](#)). The following quotas apply specifically to use of the default GCS bucket.

GCS default bucket Stored Data

The total amount of data stored in the default GCS bucket. Available for both paid and free apps.

Resource	Free Default Limit	Billing Enabled Default Limit
Default GCS Bucket Stored Data	5 GB	First 5 GB free; no maximum

Blobstore

The following quotas apply specifically to use of the blobstore.

Blobstore Stored Data

The total amount of data stored in the blobstore. Available for both paid and free apps.

Resource	Free Default Limit	Billing Enabled Default Limit
Blobstore Stored Data	5 GB	First 5 GB free; no maximum

Channel

Channel API Calls

The total number of times the application accessed the Channel service.

Channels Created

The number of channels created by the application.

Channel Hours Requested

The number of hours of channel connect time requested by the application.

Channel Data Sent

The amount of data sent over the Channel service. This also counts toward the Outgoing Bandwidth quota.



Resource	Free Default Limit		Billing Enabled Default Limit	
	Daily Limit	Maximum Rate	Daily Limit	Maximum Rate
Channel API Calls	657,000 calls	3,000 calls/minute	91,995,495 calls	32,000 calls/minute
Channels Created	100 channels	6 creations/minute	Based on your budget	60 creations/minute
Channel Hours Requested	200 hours	12 hours requested/minute	Based on your budget	180 hours requested/minute
Channel Data Sent	Up to the Outgoing Bandwidth quota	22 MB/minute	1 TB	740 MB/minute

Code and static data storage

Code and Static Data

Storage space used by all program code and static data. This combines space used by all versions. For example, if you keep two versions of your application, each using 100Mb, this is 200Mb. The total stored size of code and static files is listed in the Main Dashboard table. Individual sizes are displayed on the Versions and Backends screens respectively. Free apps may only upload up to 1 GB of code and static data. Paid apps may upload more, but will be charged \$ 0.026 per GB per month for any code and static data storage that exceeds 1 GB.

Resource	Cost
Code & Static Data Storage - First 1 GB	Free
Code & Static Data Storage - Exceeding 1 GB	\$ 0.026 per GB per month



Datastore

The **Stored Data (billable)** quota refers to all data stored for the application in the Datastore, the Task Queue, and the Blobstore. Other quotas in the "Datastore" section of the Quota Details screen in the Administration Console refer specifically to the Datastore service.

Stored Data (billable)

The total amount of data stored in datastore entities and corresponding indexes, in the task queue, and in the Blobstore.

It's important to note that data stored in the datastore may incur significant overhead. This overhead depends on the number and types of associated properties, and includes space used by built-in and custom indexes. Each entity stored in the datastore requires the following metadata:

- The entity key, including the kind, the ID or key name, and the keys of the entity's ancestors.
- The name and value of each property. Since the datastore is schemaless, the name of each property must be stored with the property value for any given entity.
- Any built-in and custom index rows that refer to this entity. Each row contains the entity kind, any number of property values depending on the index definition, and the entity key.

See [How Entities and Indexes are Stored](#) for a complete breakdown of the metadata required to store entities and indexes at the Bigtable level and [How Index Building Works](#) for a detailed explanation of how datastore indexes are managed.

Number of Indexes

The number of Datastore indexes that exist for the application. This includes indexes that were created in the past and no longer appear in the application's configuration but have not been deleted using AppCf's `svacuum_indexes` command.

Write Operations

The total number of Datastore write operations.

Read Operations

The total number of Datastore read operations.

Small Operations

The total number of Datastore small operations.



Resource	Free Default Daily Limit	Billing Enabled Default Limit
Stored Data (billable)	1 GB *	1 GB free; no maximum
Number of Indexes	200 *	200
Write Operations	50,000	Unlimited
Read Operations	50,000	Unlimited
Small Operations	50,000	Unlimited

*Not a daily limit but a total limit.

Note: Datastore operations generated by the [Datastore Admin](#) and [Datastore Viewer](#) count against your application quota.

Deployments

Deployments

The number of times the application has been uploaded by a developer. The current quota is 10,000 per day.

An application is limited to 10,000 uploaded files per version. Each file is limited to a maximum size of 32 megabytes. Additionally, if the total size of all files for all versions exceeds the initial free 1 gigabyte, then there will be a \$ 0.026 per GB per month charge.

Instance hours

Instance usage is billed by instance uptime, at a given hourly rate. Billable time starts when an instance starts, and ends fifteen minutes after it shuts down. There is no billing for idle instances above the maximum number of idle instances set in the Performance Settings tab of the Admin Console.

There are separate free daily quotas for frontend and backend instances. Note that when you use the [ModulesAPI](#), the module's instance class determines which quota applies.

Resource or API Call	Free Quota
Frontend Instances (Automatic Scaling Modules)	28 free instance-hours per day
Backend Instances (Basic and Manual Scaling Modules)	8 free instance-hours per day



Logs

The Logs API is metered when log data is retrieved, and is available for both paid and free apps.

Logs storage contains request logs and application logs for an application, and is available for both paid and free apps. For paid apps, you can increase total logs storage size and/or log data retention time, using the [Log Retention setting](#) in the Admin Console.

Resource	Free Default Limit	Billing Enabled Default Limit
Logs data retrieval	100 megabytes	No maximum for paid app.
Logs data	1 gigabyte	Log data kept for a maximum of 365 days if paid, 90 days if free.

Mail

App Engine bills for email use "by message," counting each email to each recipient. For example, sending one email to ten recipients counts as ten messages.

Mail API Calls

The total number of times the application accessed the mail service to send a message.

Messages Sent (billable)

The total number of messages (email/recipient pairs) that have been sent by the application. Note that the maximum quota for Messages Sent stays at free levels until the first charge for your application has cleared.

Admin Emails

The total number of messages to application admins that have been sent by the application.

Message Body Data Sent

The amount of data sent in the body of email messages. This also counts toward the Outgoing Bandwidth quota.

Attachments Sent

The total number of attachments sent with email messages.

Attachment Data Sent

The amount of data sent as attachments to email messages. This also counts toward the Outgoing Bandwidth quota.



Resource	Free Default Limit		Billing Enabled Default Limit	
	Daily Limit	Maximum Rate	Daily Limit	Maximum Rate
Mail API Calls	100 calls	32 calls/minute	1,700,000 calls	4,900 calls/minute
Messages Sent (billable)	100 messages	8 messages/minute	The daily email quota for billing-enabled apps depends on which billing system your app is using. See Increasing your Daily Mail Quota below to learn how to increase the quota in each case.	5,100 messages/minute
Admins Emailed	5,000 mails	24 mails/minute	3,000,000 mails	9,700 mails/minute
Message Body Data Sent	60 MB	340 KB/minute	29 GB	84 MB/minute
Attachments Sent	2,000 attachments	8 attachments/minute	2,900,000 attachments	8,100 attachments/minute
Attachment Data Sent	100 MB	10 MB/minute	100 GB	300 MB/minute



Increasing your daily mail quota

When you enable billing, the email quota remains at 100 messages per day. You must explicitly request a higher mail quota. Go to the Quota Details page of the Admin Console and scroll to the Mail section. There you'll find a link to submit a request for additional email quota. After you submit the request you can monitor its status by visiting the same link again. This will display a page that shows the status of the request: whether the request has been granted, is under review, or has been denied. If the request is granted it may be several minutes before the new quota of 20,000 messages per day takes effect. If the request is denied you cannot make another request to increase mail quota until some time has passed.

If your app will need to send more than 20,000 messages per day, consider signing up for a [premier account](#).

Requests

Outgoing Bandwidth (billable)

The amount of data sent by the application in response to requests.

This includes:

- data served in response to both secure requests and non-secure requests by application servers, static file servers, or the Blobstore
- data sent in email messages
- data sent over XMPP or the Channel API
- data in outgoing HTTP requests sent by the URL fetch service.

Incoming Bandwidth

The amount of data received by the application from requests. Each incoming HTTP request can be no larger than 32MB.

This includes:

- data received by the application in secure requests and non-secure requests
- uploads to the Blobstore



- data received in response to HTTP requests by the URL fetch service

Secure Outgoing Bandwidth

The amount of data sent by the application over a secure connection in response to requests. Secure outgoing bandwidth also counts toward the Outgoing Bandwidth quota.

Secure Incoming Bandwidth

The amount of data received by the application over a secure connection from requests. Secure incoming bandwidth also counts toward the Incoming Bandwidth quota.

Resource	Free Default Limit		Billing Enabled Default Limit	
	Daily Limit	Maximum Rate	Daily Limit	Maximum Rate
Outgoing Bandwidth (billable , includes HTTPS)	1 GB	56 MB/minute	1 GB free; 14,400 GB maximum	10 GB/minute
Incoming Bandwidth (includes HTTPS)	1 GB; 14,400 GB maximum	56 MB/minute	None	None

Search

Free quotas for Search are listed in the table below. Refer to the [Java](#), [Python](#), and [Go](#) documentation for a detailed description of each type of Search call.

Once billing is turned on, Search API resources are charged according to the rates on the [pricing schedule](#).

Resource or API Call	Free Quota
Total Storage (Documents and Indexes)	0.25 GB
Simple Queries	1000 queries per day
Complex Queries	100 queries per day
Adding documents to Indexes	0.01 GB per day
Other API Calls (billed as operations)	1000 operations per day



The application console quota section displays a raw count of API requests. Note that when indexing multiple documents in a single call, the call count is increased by the number of documents.

The Search API imposes these throughput limits to ensure the reliability of the service:

- 100 minutes of search execution time per minute
- 15,000 Documents added/deleted per minute

In addition, there is a limit of 10GB storage per index. When an app tries to exceed this amount, an insufficient quota error is returned.

Note: Although these limits are enforced by the minute, the Admin Console displays the daily totals for each. Customers with [Silver, Gold, or Platinum support](#) can request higher throughput limits by contacting their support representative.

Sockets

Daily Data and Per-Minute (Burst) Data Limits

Applications using sockets are rate limited on a per minute and a per day basis. Per minute limits are set to handle burst behavior from applications.

Resource	Per Day Limits	Per Minute (Burst) Limits
Socket Bind Count	864,000	4,800
Socket Create Count	864,000	4,800
Socket Connect Count	864,000	4,800
Socket Send Count	663,552,000	3,686,400
Socket Receive Count	663,552,000	3,686,400
Socket Bytes Received	20 GB	113 MB
Socket Bytes Sent	20 GB	113 MB

Task queue

Task Queue API Calls

The total number of times the application accessed the task queue service to enqueue a task.

Task Queue Stored Task Count

The total number of tasks the application has enqueued that are not yet executed.

Task Queue Stored Task Bytes



The bytes consumed by tasks the application has enqueued that are not yet executed. This quota is counted as part of Stored Data (billable).

Tip: You can configure the Stored Task Bytes Limit by adjusting your queue configuration. See the [Python](#), [Java](#), or [Go](#) documentation for more details.

These limits apply to all task queues:

Resource	Free Default Limit		Billing Enabled Default Limit	
	Daily Limit	Maximum Rate	Daily Limit	Maximum Rate
Task Queue API Calls	100,000	<i>n/a</i>	1,000,000,000	<i>n/a</i>
Resource	Free Default Limit		Billing Enabled Default Limit	
Task Queue Stored Task Count	1,000,000		10,000,000,000	
Task Queue Stored Task Bytes	500 MB. Configurable up to 1 GB.		None. Configurable up to the Stored Data (billable) .	

The following limits apply to task queues according to their type:

Push Queue Limits	
Maximum task size	100KB
Maximum number of active queues (not including the default queue)	Free apps: 10 queues, Billed apps: 100 queues
Queue execution rate	500 task invocations per second per queue
Maximum countdown/ETA for a task	30 days from the current date and time
Maximum number of tasks that can be added in a batch	100 tasks
Maximum number of tasks that can be added in a transaction	5 tasks
Pull Queue Limits	
Maximum task size	1MB
Maximum number of active queues (not including the default queue)	Free apps: 10 queues, Billed apps: 100 queues
Maximum countdown/ETA for a task	30 days from the current date and



Pull Queue Limits

	time
Maximum number of tasks that can be added in a batch	100 tasks
Maximum number of tasks that can be added in a transaction	5 tasks
Maximum number of tasks that you can lease in a single operation	1000 tasks
Maximum payload size when leasing a batch of tasks	32MB (1MB when using the REST API)

Note: Pull queues are not available in PHP.

URL fetch

URL Fetch API Calls

The total number of times the application accessed the URL fetch service to perform an HTTP or HTTPS request.

URL Fetch Data Sent

The amount of data sent to the URL fetch service in requests. This also counts toward the Outgoing Bandwidth quota.

URL Fetch Data Received

The amount of data received from the URL fetch service in responses. This also counts toward the Incoming Bandwidth quota.

Resource	Free Default Limit		Billing Enabled Default Limit	
	Daily Limit	Maximum Rate	Daily Limit	Maximum Rate
UrlFetch API Calls	657,000 calls	3,000 calls/minute	46,000,000 calls	32,000 calls/minute
UrlFetch Data Sent	4 GB	22 MB/minute	1 TB	740 MB/minute
UrlFetch Data Received	4 GB	22 MB/minute	1 TB	740 MB/minute

XMPP

XMPP API Calls



The total number of times the application accessed the XMPP service.

XMPP Data Sent

The amount of data sent via the XMPP service. This also counts toward the Outgoing Bandwidth quota.

Recipients Messaged

The total number of recipients to whom the application has sent XMPP messages.

Invitations Sent

The total number of chat invitations sent by the application.

Stanzas Sent

XMPP stanzas sent when the application sends a message, invitation, or presence information.

Resource	Free Default Limit		Billing Enabled Default Limit	
	Daily Limit	Maximum Rate	Daily Limit	Maximum Rate
XMPP API Calls	46,000,000 calls	257,280 calls/minute	46,000,000 calls	257,280 calls/minute
XMPP Data Sent	1 GB	5.81 GB/minute	1,046 GB	5.81 GB/minute
XMPP Recipients Messaged	46,000,000 recipients	257,280 recipients/minute	46,000,000 recipients	257,280 recipients/minute
XMPP Invitations Sent	100,000 invitations	2,000 invitations/minute	100,000 invitations	2,000 invitations/minute
XMPP Stanzas Sent	10,000 stanzas	n/a	Based on your budget	n/a