Amazon Gift Codes On Demand Web Creation

Integration Technical Specification

Amazon Gift Codes On Demand (AGCOD) is a set of systems designed to allow partners and third party developers to create and distribute Amazon gift codes in real-time, on demand. Examples include: Applicable use cases include inserting gift codes into electronic gift cards, Group gifting, Real time redemption of gift codes in loyalty programs (i.e. points programs), etc.

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I. What is Amazon Gift Code On Demand?

1. Summary

Amazon Gift Codes (GC) can be purchased by third party partners using a web services interface, which can then be distributed to their customers. The Amazon Gift Codes On Demand (AGCOD) product is the multi-component system that provides a way to acquire GC in real time. This document describes how to integrate with the AGCOD API.

2. Audience

This document is intended for developers and third-party partners who enter into a contractual agreement with Amazon to purchase Amazon Gift Codes. This document assumes working knowledge of web service technologies (XML, RESTful protocols, etc.), basic concepts of security (encryption/digital signatures, etc.) and Service Oriented Architectures (SOA).

3. AGCOD Overview

Amazon Gift Codes/Gift Cards (GCs) can be used on the Amazon website as currency to purchase products.

AGCOD Gateway provides a programmatic interface for partners to create GCs in real time. Partners can make synchronous requests to the AGCOD endpoint, specifying the value of the GC they want to create. The AGCOD API responds with a status indicating the success/failure of the operation and with a claim code if successful, which partners can deliver to their customers in a manner that has been approved by Amazon.

Funding for the cards is through the partner's payments account by wiring to Amazon's bank account. For additional information, please refer to Appendix-1 High Level AGCOD Gateway Service Architecture from FAQ-Appendix for details.

4. Support Operations & Requests/Response examples

AGCOD Gateway handles real-time requests from partners to create/cancel Gift Codes. It is a publicly accessible Web Service that supports RESTful requests over HTTPS.

(a) Definitions

1. **partnerId:** A unique identifier (CASE SENSITIVE, 1st letter is capitalized and the next four are lower case) provided by the Amazon GC team. This value is part of the *Payload* of every AGCOD Gateway request.

2. **creationRequestId:** A unique identifier for every *CreateGiftCard* call that results in the creation of a GC. The partner must generate a new value for every Create request (except for retries). To keep this as the globally unique transaction identifier, the partner needs to:

   - Generate an alphanumeric value that is unique within the partner's systems. ID may have a maximum of 19 alphanumeric characters
   - Creation Request ID must begin with the partnerID

   For example: if your partnerID is Amzn1, your creationRequestId must start with Amzn1 and any additional characters you would like in your ID (example: Amzn154321).

   Since the API is idempotent, if a request is sent in with a creationRequestId that was used prior, the AGCOD Gateway will return the original status that was created the first time the *creationRequestId* was used.

3. **CreateGiftCardResponse/CancelGiftCardResponse:** AGCOD Gateway will generate a status response on every successful Create/Cancel call associated with the GC.

4. **Transaction:** A transaction is any request-response that results in the Create/Cancel of a GC within Amazon systems.

(i) Health Check

Partners can send an https request (with a simple https query in a browser or using curl in a terminal window or command prompt) using one of the following URLs to check the AGCOD service status as well as the connectivity of your host to the endpoint (not restricted by your firewall or any other intermediary devices).

Sandbox

For IT/ES/DE/FR/UK (EU) - https://agcod-v2-eu-gamma.amazon.com/sping (use region eu-west-1)
For JP (FE) - https://agcod-v2-fe-gamma.amazon.com/sping (use region us-west-2)

Production

For IT/ES/DE/FR/UK (EU) - https://agcod-v2-eu.amazon.com/sping (use region eu-west-1)
For JP (FE) - https://agcod-v2-fe.amazon.com/sping (use region us-west-2)

You should receive the following message in your browser (or from curl in a terminal window or command prompt)

200 response. healthy

(ii) CreateGiftCard

The partner sends in a *creationRequestId* that uniquely identifies the creation request, along with other details like the amount, currency, etc. (in addition to the meta-data about that request, authentication info, etc.) For additional information, refer to Appendix-2 "AGCOD Gateway Service message schematics" located in the FAQ-Appendix.

To perform this operation, the following steps must occur:

1. Customer sends a CreateGiftCardRequest message to the AGCOD Gateway
2. Amazon confirms sufficient funds for the request by checking the pre-payment account
3. Amazon deducts the order amount and responds with a synchronous CreateGiftCardResponse message which contains the live GC claim code, expiration date (not applicable in the US) along with the gcId. The partner is required to store the creationRequestId, gcId, amount and currency code for future communication and troubleshooting.

Sample Message:

```
POST /CreateGiftCard HTTP/1.1
accept:application/x-www-form-urlencoded; charset=UTF-8
content-type:application/x-www-form-urlencoded; charset=UTF-8
host:agcod-v2-eu-gamma.amazon.com
x-amz-date:20130910T221949Z
x-amz-target:com.amazonaws.agcod.AGCODService.CreateGiftCard
Authorization:AWS4-HMAC-SHA256 Credential=AKIAJBYCL67O6NJUNYBQ/20130910/us-
east-1/AGCODService/aws4_request, SignedHeaders=accept;content-type;host;x-
amz-date;x-amz-target,
Signature=6dce900ea3557473ee750dfe11489dc667366ffc8823541fadf13934e5d64790
<CreateGiftCardRequest><creationRequestId>AwssbTSpecTest001</creationRequestI
d><partnerId>Awssb</partnerId><value><currencyCode>EUR</currencyCode><amount>
1.00</amount></value></CreateGiftCardRequest>
```

RESPONSE:

```
<CreateGiftCardResponse>
    <gcClaimCode>W3GU-YD4NGH-88C8</gcClaimCode>
    <cardInfo>
        <value>
            <currencyCode>EUR</currencyCode>
            <amount>1.0</amount>
        </value>
        <cardStatus>Fulfilled</cardStatus>
    </cardInfo>
    <gcId>A3B6AC387ESRIX</gcId>
    <creationRequestId> AwssbTSpecTest001</creationRequestId>
    <gcExpirationDate>Mon Jun 09 21:59:59 UTC 2025</gcExpirationDate>
    <status>SUCCESS</status>
</CreateGiftCardResponse>
```

This operation is idempotent, in the sense that if the AGCOD Gateway receives more than one such request with the same *creationRequestId,* then the first request will result in the creation of a new GC, while all subsequent responses will return the originally created GC. They will not be treated as a different transaction.

Note that one invocation of the CreateGiftCard call results in the creation of only one GC (bulk creation is not supported at this time).

(iii) CancelGiftCard

The partner can cancel a GC, as long as the GC is not claimed by an Amazon customer. The original creationRequestId used for creating the GC and the GCID from the successful gcCreateResponse will be necessary to cancel a GC.

To perform this operation, the partner sends a *CancelGiftCard request*, and the AGCOD Gateway responds with a synchronous *CancelGiftCardResponse.*

Both CreateGiftCard and CancelGiftCard operation are idempotent, if the AGCOD Gateway receives more than one such request with the same *creationRequestId,* then the first request will result in the creation/cancellation of the GC request, while all subsequent responses will result in a NO-OP (they will not be treated as a different transaction).

Sample Message:

```
POST /CancelGiftCard HTTP/1.1
accept:application/x-www-form-urlencoded; charset=UTF-8
content-type:application/x-www-form-urlencoded; charset=UTF-8
host:agcod-v2-eu-gamma.amazon.com
x-amz-date:20130910T222449Z
x-amz-target:com.amazonaws.agcod.AGCODService.CancelGiftCard
```

```
Authorization:AWS4-HMAC-SHA256 Credential=AKIAJBYCL67O6NJUNYBQ/20130910/us-
east-1/AGCODService/aws4_request, SignedHeaders=accept;content-type;host;x-
amz-date;x-amz-target,
Signature=0bef87e8b01aec57fca532e79a5819fcc55d3c02cfafcdf08495ed4a26d0cd87
<CancelGiftCardRequest><creationRequestId>AwssbTSpecTest001</creationRequestI
d><partnerId>Awssb</partnerId><gcId>A3B6AC387ESRIX</gcId></CancelGiftCardRequ
est>

RESPONSE:

<CancelGiftCardResponse>
  <creationRequestId>AwssbTSpecTest001</creationRequestId>
  <status>SUCCESS</status>
  <gcId>A2GCN9BRX5QS76</gcId>
</CancelGiftCardResponse>
```

(iv) GetGiftCardActivityPage

The partner can retrieve a list of transactions (up to 1,000 per call) for a given timeframe. The API call limits the timeframe to only return transactions that are at least 30 minutes old or older (up to 90 days in the past). For example, the partner would be able to retrieve transaction activity from 1/1/2015 12:30PM to 4/1/2015 12:30PM if the current time is 4/1/2015 1:00 PM. The GetGiftCardActivityPage API should not exceed the threshold of 1 call per minute (i.e., the API should not be called more than once per minute; one off back-to-back retry requests due to a timeout for example, is ok). This operation may be blocked on a per partner basis if the above threshold is exceeded in a manner (the system is flooded with excessive requests which causes a Denial of Service) which affects the availability of the system for other operation calls.

The "showNoOps" flag indicates whether the returned results would include idempotent operations.

Please refer to Appendix-4 "Sample Code and Example Requests/Responses" located in the FAQ-Appendix for details, request examples, including digital signatures.

The above examples were created using the sample code provided in the appendix.

5. Error Handling

Every response sent from the AGCOD Gateway has an associated S*tatus* element that describes the execution status for the particular operation; there are three *statusCode* values: SUCCESS/FAILURE/RESEND.

(i) statusCode: SUCCESS

A *statusCode* of SUCCESS is returned if the operation is successful.

(ii) statusCode: FAILURE

A *statusCode* of FAILURE is returned if the request cannot be honored by AGCOD Gateway – this status response may include invalid request data or some business logic error that needs to be reviewed by the partner. The *errorCode* field will be populated in such cases providing additional details pertaining to the error.

(iii) statusCode: RESEND

A *statusCode* of RESEND is returned if there is a temporary/recoverable system failure that can be resolved by the partner retrying the request. The *errorCode* field will be populated in such cases providing additional details pertaining to the error.

The RESEND error should not be interpreted as a failure. The operation status simply could not be determined at the time of submission. In these cases, the partner is expected to retry the request using the same input data as the original request until a definitive response status (SUCCESS or FAILURE) is obtained.

The partner should throttle their retry requests to avoid flooding the AGCOD Gateway. We recommend a simple approach like an exponential back-off scheme.

(iv) Error Codes

We are using a convention of F2XX codes to denote errors when the cause is on the partner's side and F1XX if the cause is on Amazon's side.

We have provided mock error request IDs to simulate certain error responses with the Create/Cancel calls. When simulating an error response, the mock error request ID will need to be passed in to the *creationRequestId* field, similar to a normal request ID. The values passed in for the rest of the fields will simply be echoed in the response. To simulate a successful response, the value of F1000 can be passed in for the mock error request ID. See the "Mocking test examples" section and Appendix-8 "Error Handling" located in the FAQ-Appendix for details.

6. Digital Signatures – Signing Process

Every request to the AGCOD Gateway must be digitally signed using the AWS access identifiers and credentials.

The AGCOD Gateway supports the Version 4 signature algorithm.

Generating Digital Signatures for HTTP Requests.

Reference articles on *Signing AWS Requests By Using Signature Version 4*, *Signed Signature Version 4 Requests Examples* , *Signature Version 4 Key Derivation Samples*, *Test Suite*, *Troubleshooting AWS*

Signature V4 Errors in the publicly available Amazon AWS Developer Guide for instructions on how to sign AWS API requests.

7. Basic Flow

Refer to Appendix-3 "Basic flow for Gift Card Creation / Cancel requests" located in the FAQ-Appendix for details.

8. Sample HTTP POST Requests/Responses

Refer to Appendix-4 "Sample Codes and Sample Requests/Responses" located in the FAQ-Appendix for details.

9. Security

GC Claim codes have monetary value and need to be treated very securely. We recommend having controls in place to ensure safe and secure handling of sensitive data (GC claim codes, AWS access credentials, etc.). This includes defining proper audit controls on the file systems/databases where sensitive information is stored. Partners should periodically change the password on their AWS account. The AWS portal allows partners to generate a new AWS Access Key at any time. **However, AGCOD does not support automatic key rotation.** We recommend that AGCOD partners **NOT** use this feature to regenerate the AWS Access Key. If you do need to change the AWS Access Key, please allow at least one-week advance notice and coordinate with your Account Manager to ensure disruption is minimal.

- Claim codes should be kept confidential while in transit between Amazon and the Partner
- Claim codes should be kept confidential within the Partner's system
- There should be safe data handling practices in place at the Partner's premises where claim codes are accessible (either in transit or at rest).

Note: the partner will be liable for the claim codes as soon as the AGCOD Gateway responds successfully to the partner's CreateGiftCard request.

(a) Secure Data Transmission

AGCOD Gateway is open **ONLY** through a secure port (HTTPS) and all traffic over this channel is to be SSL encrypted - this will ensure confidentiality of the GC data while in transit. The partner is required to provide their own secure mechanisms within their systems.

(b) Access Control

AGCOD Gateway imposes access control on its operations. For a partner to make successful requests to the AGCOD Gateway, they will need to enter into a contractual agreement with the Amazon Gift Card team and register for an AWS account (see Section III for details on setting up AWS accounts).

10. Related Reference Documentation

Please refer to the **Amazon DynamoDB API** section of the DynamoDB Developer guide (AGCOD Gateway shares some of the same backend as DynamoDB) for more detailed information and instructions on JSON Data Format and Making HTTP POST Requests to Amazon DynamoDB (which will be utilized by the AGCOD Gateway).

II. Integration Process Overview

Follow these basic steps to integrate with the AGCOD Gateway (more detailed steps located here: Section III):

Step 1 - Account registration, one-time setup - Create a Sandbox and a Production AWS account and provide Amazon with some basic information (email addresses) for those accounts.

Step 2 – Sandbox access provisioning - Provide the email addresses that are associated with your AWS Accounts to your Account Manager in order to obtain access to our Sandbox environment (Sandbox access must be granted by Amazon).

Amazon will assign you a 5-character Partner ID. Use the below format as a guide for sending Amazon the requested account information:

Examples	Test (Sandbox)	Production
AWS account email address	amzn-sand@awssb.com	amzn-prod@awssb.com
Partner ID	Awssb	Awssb

Step 3 - Begin development and test your application in the Sandbox environment using your Partner ID and AWS accounts.

Step 4 - Certification - Once code-complete, notify your Account Manager. You will begin the certification process with Amazon to validate that the integrated system operates as expected in the Sandbox environment.

Step 5 - Production Activation - Upon successful certification, work with Amazon to activate your AGCOD account in the Production environment.

Note: *Certification of AGCOD does not include approval of your application's user experience or Amazon brand usage (i.e. Amazon logos and marks by Amazon). Getting brand approval is a separate process. For additional details, please see the Amazon Corporate Gift Cards Brand Use Resource Center at:*

	Locale	Link
	*United States*	*US*
	*Canada*	*CA*
	*United Kingdom*	*UK*
	*France*	*FR*
	*Germany*	*DE*
	Spain	*ES*
	Italy	*IT*
	Japan	*JP*
	*China*	*CN*

III. Registration and One-time Setup

To use the AGCOD system, the following setup work needs to be completed (one-time).

1. Setup AWS Accounts

The AGCOD components impose access control on the incoming requests from partners. To gain access to make requests, follow the steps below:

i. Go to http://aws.amazon.com and click on the "Create an AWS Account" button. Note: Use a valid email address with your company domain, e.g. @yourcompany.com (*No public email domains such as @hotmail.com, @yahoo.com, @msn.com, @gmail.com, etc. will be accepted*) accessible by your developers/operators and click the "Create an AWS account now!" link when prompted during the registration process. *** Credit Card info is required for identity verification purposes only and will not be charged if the AWS account is used only for AGCOD service.*

ii. Register for two separate AWS accounts, one for **Sandbox** and one for **Production**. We recommend setting up email addresses such as "awsdev-test@companyname.com" and "awsdev-prod@companyname.com".

iii. After creating the AWS Accounts, login to the AWS portal http://aws.amazon.com with the 1st account email and password, click on the Security Credentials link on top right of the screen (see screenshot here) and check if the Access Key ID is listed. If not, click on the "Create a new Access Key" link to generate a new one (AGCOD does not support IAM at this point. DO NOT create an AWS Access Key using the Identity and Access Management option).

Note: Make sure to log out of the 1st account, close the browser, and login to http://aws.amazon.com with the 2nd account email address and password.

2. Assignment of Partner ID

Your Account Manager will provide you with a unique 5-character Partner ID (case sensitive). This identifier should be used in all requests to the AGCOD Service. If you did not receive your *Partner ID*, please follow up with your Account Manager.

3. Max Transaction Amount

Country	US	CA	UK	DE	FR	IT	ES	CN	JP
Denom	$0.01 - $2,000	$0.01 - $5,000	£ 0,01 - £ 5,000	€ 0,01 - € 5,000	€ 0,01 - € 5,000	€ 0,01 - € 5,000	€ 0,01 - € 5,000	¥ 1 RMB - ¥ 1,000 RMB	¥ 1 - ¥ 500,000 JPY

4. Discounts

Your discount (if applicable) can be found in your Amazon legal agreement. If you were not involved in the contract negotiation, you can refer to your business team or your Account Manager for information regarding your discount. During development and testing, you will want to use this information to verify that you are being charged and refunded the appropriate amounts when creating/canceling gift codes.

IV. Development and Integration

1. Sandbox Environment Development and Testing

(i) Accessing the Sandbox

Use the Sandbox environment to conduct development and integration testing. Please refer to Appendix-6 for a list of Sandbox and Production Endpoints located in the FAQ-Appendix for details.

Note: Sandbox access is granted once you notify your Account Manager that you're AWS Sandbox and Production accounts have been set up.

(ii) Development and Testing

Once Sandbox access has been granted, the partner can begin code development and testing. We provide fully functional sample codes in C#, Java, Python, JavaScript, Ruby, and PHP. Please refer to Appendix-4 located in the FAQ-Appendix for details.

You can test the AGCOD API with the below fully functional online page using your AWS Credentials and assigned Partner ID without any development work/coding.

https://s3.amazonaws.com/AGCOD/htmlSDKv2/htmlSDKv2_NAEUFE/index.html



Upon code completion of development and testing, the partner will proceed to the certification phase. At this point the partner should be able to answer "**YES**" to the following questions:

1. Are you confident that the Tech Spec from Amazon has been completely followed and there are no questions around the specs you intend to raise during Certification?
2. Have you implemented all the applicable AGCOD Gateway APIs (CreateGiftCard, CancelGiftCard) in their entirety?
3. Has your code been thoroughly tested? Your QA process should include a good mix of developer unit tests and (internal) QA integration tests.
4. Are you confident that the Certification process will flow smoothly without additional bugs and code changes?
5. Are you going to run the certification on production/close-to-production software/systems with minimal manual intervention?
6. Are you aware of the discount you are receiving on the gift codes?
7. Are you confident that you have the internal processes in place to ensure your account remains fully funded to support your gift card purchases?

If you are not confident in answering "**YES**" to any of the following questions, please contact amazon-gcws-setup@amazon.com.

(iii) Certification in Sandbox

Once the partner has confirmed they are code complete and has thoroughly tested their application internally, Amazon will initiate the Certification process. Amazon will provide a Certification document containing scenarios that will be executed in the Sandbox environment to validate that the partner's system has been implemented according to the specifications necessary.

2. Production Activation

Upon successful certification in the Sandbox, the partner will be given access to the production endpoint during the production activation call with Amazon. During the production activation call, we will run through some production test scenarios to ensure a successful activation. Upon successful completion of the test scenarios, the partner will be production ready and successfully onboarded.

V. Contacting Amazon for Technical Support (requires active contract/agreement)

Throughout the development and integration process, technical questions can be directed to amazon-gcws-setup@amazon.com. Please refer to the FAQ-Appendix for helpful use case scenarios and common troubleshooting.

Please note that if you do not have an active agreement and have not been given Sandbox access, you likely will not be recognized by the developers that monitor this alias. It is important that you work with your Account Manager to follow the steps required to get Sandbox access.

It is important to include your Partner ID in communications with our developers to ensure they can easily identify your account. In your communication please provide as much of the following information as possible (as applicable)

- Complete Request/Response pair of your call to AGCOD API
- Complete endpoint URL used (including the Server URL) to make the request
- The StringToSign used in the request, if not already in the Request/Response above
- The corresponding signature of the StringToSign used, if not already in the Request/Response above
- Complete response when hitting the Health Check URL, e.g., https://agcod-v2-eu-gamma.amazon.com/sping (North America Sandbox), https://agcod-v2-eu.amazon.com/sping (North America Production), or the appropriate HealthCheck URL for your locale using a browser from the host experiencing the issue (if possible)
- Approximate time (with time zone) used in your request (the time zone that is configured on the machine making the above request)
- Programming language used
- Any recent changes (both programming and infrastructure) on your end
- Screenshot of error
- Partner's technical contact email/phone #
- Partner's time zone

VI. Request/Response Examples

Please refer to Appendix-4 Sample Codes and Sample Requests/Responses located in the FAQ-Appendix for request examples, including digital signatures. The examples were created using the sample code provided in the appendix.

VII. Document Revision History

Date	Version	Changes
2-23-2015	1.01	Create document
6-11-2015	1.02	Minor editing