Amazon Web Services Marketplace China Seller Guide

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6-30-2022

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What is Amazon Web Services Marketplace China

Amazon Web Services Marketplace China is a curated digital catalog that makes it easy for customers to find, buy, deploy, and manage the software or other content (Marketplace Content) from independent software vendors (ISVs)) or their resellers that customers need to build solutions and run their businesses.

Amazon Web Services Marketplace China is an online platform operated by Ningxia Western Cloud Data Technology Co., Ltd. (NWCD). Marketplace Content can be deployed with products and services in the Amazon Web Services China (Beijing) Region and Amazon Web Services China (Ningxia) Region.

You can use Amazon Web Services Marketplace China as a buyer, a seller, or both. You must have an Amazon Web Services China account to use Amazon Web Services Marketplace China. A seller can be an ISV or a value-added reseller that has software or other content that works with Amazon Web Services products and services. In accordance with Chinese regulations, you must be a business entity registered in mainland China to sell your products or other content through Amazon Web Services Marketplace China.

Every Marketplace Content in Amazon Web Services Marketplace China goes through a curation process. When the seller submits a listing request in Amazon Web Services Marketplace China, they define the price of Marketplace Content as well as the terms and conditions of use. When a customer subscribes to a Marketplace Content offering, they agree to the pricing and terms and conditions set for

the offer. Currently, Amazon Web Services Marketplace China supports free Amazon Machine Image (AMI), bring-your-own-license (BYOL) AMI, and SaaS products.

Getting started as a seller

If you are interested in selling your software or other content in Amazon Web Services Marketplace China, review the requirements, and then follow the steps to register as a seller. To register as a seller in Amazon Web Services Marketplace China, you can use an existing Amazon Web Services account or create a new account. All Amazon Web Services Marketplace China interactions are tied to the account that you choose.

Seller Requirements

To sell Marketplace Content in Amazon Web Services Marketplace China, you must meet the following requirements:

- You must be a business entity registered in mainland China and have a valid Amazon Web Services China account.
- You must be an Amazon Web Services China customer in good standing and meet the requirements in the terms and conditions for Amazon Web Services Marketplace China sellers.
- You must follow best practices and guidelines when marketing your Marketplace Content in Amazon Web Services Marketplace China.
- Your Marketplace Content must be publicly available production-ready software or other content. It cannot be a beta version.
- You must provide a way to keep Marketplace Content regularly updated and free of known vulnerabilities.

NOTE: Once you use an Amazon Web Services account to list a Marketplace Content in Amazon Web Services Marketplace China, you cannot change the Amazon Web Services account associated with it.

Seller Registration Process

To sell your Marketplace Content through Amazon Web Services Marketplace China, you must review and agree to the Terms and Conditions for Amazon Web Services Marketplace China Seller. Contact us if you are interested in selling in Amazon Web Services Marketplace China.

Preparing your Marketplace Content

Preparing to publish a Marketplace Content on Amazon Web Services Marketplace China includes configuring your package, setting a pricing scheme, determining the relevant categories in which to list your Marketplace Content, and adding keywords so your Marketplace Content appears in relevant searches.

The following list describes the ways you can deliver Marketplace Content, how Amazon Web Services Marketplace China buyers find each type of deliverable, and links to procedures for creating each type of deliverable:

Amazon Machine Image (AMI)

You can offer AMI-based products in the following ways:

- As a single AMI.

  Buyers select and use the AMI as a template for an EC2 instance. Buyers can find these products using the Amazon Machine Image delivery method filter. For more information, see AMI-based products.

- As AMIs delivered using Amazon Web Services CloudFormation templates.

  Buyers can find these products using the **CloudFormation** delivery method filter. For more information, see AMI-based delivery using Amazon Web Services CloudFormation.

Software as a service (SaaS)

You can offer SaaS products with subscription-based or contract-based pricing models. Buyers find these products using the **SaaS** delivery method filter. For more information, see Software as a service (SaaS)–based products.

Categories and metadata

Here are best practices and information for supplying Marketplace Content metadata. Amazon Web Services Marketplace China revises Marketplace Content metadata solely for quality assurance and error correction.

Naming and describing your Marketplace Content

The information that you provide about your product is visible to buyers. Ensure that potential buyers have enough information to make informed decisions about buying your Marketplace Content.

Creating the name

Keep the following guidelines in mind as you create the name:

- Use title case (capitalize the first letter of each important word)
- Ensure that a buyer can identify the product by the name alone
- Use the name of the brand or manufacturer
- Avoid descriptive data or hyperbole
- Comply with the requirement(s) of Chinese laws and regulations as applicable

Example name: Smart Solution Load Balancer - Premium Edition.

Writing the description

The description lists the features, benefits, and usage. It can also provide other relevant, specific information. The description can be up to 350 characters long.

Keep the following guidelines in mind as you write the description:

- Avoid unnecessary capitalization
- Avoid unnecessary punctuation marks
- Don't include redirect information
- Check spelling and grammar
- Include only critical, useful information

Example Marketplace Content solution: Smart Solution automatically distributes incoming application traffic across multiple Amazon EC2 instances. It enables you to achieve even greater fault tolerance in your applications, providing the amount of load-balancing capacity you need to respond to incoming application traffic. Smart Solution detects unhealthy instances in a pool and automatically reroutes traffic to healthy instances until the unhealthy instances are restored. You can enable Smart Solution in a single Amazon Web Services Availability Zone or across multiple Availability Zones to ensure more consistent application performance.

Writing the highlights

The Marketplace Content information page displays product highlights up to three bullet points. Use these bullet points to briefly describe the primary selling points.

Example of highlight: Projecting costs: With Smart Solution, you pay only for what you use. You're charged for each hour or partial hour that Smart Solution is running.

Writing the release notes

Each time you update an AMI product, you must provide a description of the changes in the release notes. The release notes should contain specific information to help the user decide whether to install the update. Use clear labels for the update, such as "Critical" for a security update or "Important" or "Optional" for other types of updates.

Writing the usage instructions

Provide usage instructions that help ensure that the buyer can successfully configure and run the software. The usage instructions you provide are shown during the AMI configuration process.

To write effective usage instructions, follow these guidelines:

- Write them with a new or moderately technical audience.
- Don't assume that the user has prior experience with or extensive knowledge of the Marketplace Content, computer operating systems, engineering, or IT operations.

- Take the buyer from launching to using the Marketplace Content, including any configuration or special steps to get the application running.

Example usage instructions:

1. Launch the product via 1-Click.
2. Use a web browser to access the application at https://<EC2_Instance_Public_DNS>/index.html.
3. Sign in using the following credentials:
    - Username: user
    - Password: the instance_id of the instance

Writing the upgrade instructions

Provide details on how buyer can upgrade from an earlier version of the Marketplace Content. Include information on how to preserve data and settings when creating another instance. If there is no upgrade path, edit this field to specifically mention that.

Example upgrade instructions:

1. Do ****, and then ****.
2. Check that all plugins used by your project are compatible with version *.*, by doing ***. If they aren't compatible, do ***.
3. Make a backup of your data, by doing ***.

Choosing categories and keywords

Categories

When you list your Marketplace Content, you can choose up to three categories and corresponding subcategories for your Marketplace Content. This helps buyers discover your Marketplace Content as they browse or search for products on Amazon Web Services Marketplace China. Choose only categories that are relevant to your Marketplace Content; in most cases, only one category applies. The product load form contains a complete list of categories.

Categories aren't the same as keywords. The categories and subcategories available are predefined for Amazon Web Services Marketplace China, and you decide which ones apply to your Marketplace Content by selecting them from a list during the listing request process. Keywords aren't predefined, but are created during the process. You don't need to add the category as a keyword.

Creating search keywords

During the listing request process, you can enter up to three keywords (single words or phrases) to help buyers discover your product through site searches. The keywords field can contain a maximum of 250 characters.

The following tips can help you to create a relevant set of search keywords:

- Use relevant terms.
- Don't use the names of Marketplace Content published by other sellers or use other sellers' names.
- Choose keywords from your buyer's vocabulary—that is, words and phrases that buyers are likely to use when thinking about your type of Marketplace Content.
- Create keywords based on specific features in your Marketplace Content.
- Don't use the Marketplace Content title as a keyword. The Marketplace Content title is already indexed in searches.

Note: Keywords aren't the same as software categories. Keywords are more specific terms that are related to your Marketplace Content.

Search engine optimization

The Amazon Web Services Marketplace China website ranks the results of search queries using search-optimization techniques similar to those used across the industry. By understanding how Amazon Web Services Marketplace China ranks and returns search results, you can create Marketplace Content details optimized for the Amazon Web Services Marketplace China search engine. We recommend taking this guidance into consideration when you create your Marketplace Content detail pages.

You can edit keywords after you create a Marketplace Content by editing the metadata for the Marketplace Content. For Marketplace Content that you created using a Product Load Form (PLF), you also use the PLF to make changes to those Marketplace Content.

Highlights section

The Marketplace Content details page displays up to three highlights as bullet points. Customers can search for Marketplace Content by highlights, so include highlights when you create a Marketplace Content. A highlight should describe the Marketplace Content primary selling points in brief and informative language. For example: "Projecting costs: With AnyCompany's Smart Solution, you pay only for what you use. You're charged for each hour or partial hour that Smart Solution is running."

Short description

The description lists the Marketplace Content features, benefits, and usage instructions, along with other relevant and specific information. Keep the following guidelines in mind as you create the description:

- Avoid unnecessary capitalization and punctuation marks
- Don't include redirect information
- Check spelling and grammar
- Include only critical and useful information

Example

AnyCompany's Smart Solution automatically distributes incoming application traffic across multiple Amazon EC2 instances. It enables you to improve fault tolerance in your applications by seamlessly providing the load balancing capacity that you need to respond to incoming application traffic. Smart Solution detects unhealthy instances in a pool and automatically reroutes traffic to healthy instances

until the unhealthy instances have been restored. Customers can enable Smart Solution in a single Amazon Web Services Availability Zone or across multiple Availability Zones to enable more consistent application performance.

The Amazon Web Services Marketplace China Operations team helps redirect queries with similar-sounding words or words with similar meanings: for example, when customers search for *automobile* when you expect them to search for *car*.

AMI-based products

One way of delivering your products to buyers is with [Amazon Machine Images (AMIs)](). An AMI provides the information required to launch an Amazon Elastic Compute Cloud (Amazon EC2) instance. You create a custom AMI for your product, and buyers can use it to create EC2 instances with your product already installed and ready to use.

When buyers use the AMI that you provide, they are billed your license fee for any instances that they create. Buyers can use your product AMI in the same way that they use other AMIs in Amazon Web Services, including making new custom versions of the AMI. EC2 instances created from the AMI are still billed as your product, based on the AMI product code.

Understanding AMI-based products

Product lifecycle

AMI-based products include a set of one or more versions of the software, and metadata about the product as a whole. When you create the product, you configure its properties in Amazon Web Services Marketplace China including your product's name, description, and pricing. You also determine the appropriate categories for your product and add keywords so your product appears in relevant searches.

You also create the first version of the software. Depending on how you are delivering your software, this might be a single AMI or a set of one AMI with Amazon Web Services CloudFormation templates.

When you create your product and the first version of your software, it's initially published in a limited scope so that only your account can access it. When you're ready, you can publish it to the Amazon Web Services Marketplace China catalog to allow buyers to subscribe and purchase your product.

The lifecycle of an AMI-based product for Amazon Web Services Marketplace China does not end after you publish the first version. You should keep your product up to date with new versions of your software and with security patches for the base operating system.

As an example of a complete AMI-based product lifecycle, imagine a seller wants to sell their AMI-based product on Amazon Web Services Marketplace China. Following is how the seller creates and maintains the product over time:

1. Create a product – The seller creates the product, and publishes version 1.0.0 to Amazon Web Services Marketplace China. Buyers can create instances of version 1.0.0 and use it.

2. Add a new version – Later, the seller adds a new feature to the product, and adds a new version, 1.1.0, that includes the feature. Buyers can still use the original version, 1.0.0, or they can choose the new version, 1.1.0.

   Note

   Unlike new products, new versions are published to full public availability. You can only test them in Amazon Web Services Marketplace China without customers seeing them if the product as a whole is in limited release.

2. Update product information – With version 1.1.0 available, the seller lets buyers know about the new feature by updating the product information with new highlight text describing the feature.
3. Add a minor version – When the seller fixes a bug in version 1.1.0, they release it by adding a new version 1.1.1. Buyers now have the choice of using version 1.0.0, 1.1.0, or 1.1.1.
4. Restrict a version – The seller decides that the bug is serious enough that they don't want buyers to be able to use version 1.1.0, so they restrict that version. No new customers can then buy 1.1.0 (they can only choose 1.0.0 or 1.1.1), although existing buyers still have access to it.
5. Update version information – To help those existing buyers, the seller updates the version information for 1.1.0 with a suggestion to upgrade to version 1.1.1.
6. Remove the product – When the product is no longer needed, the seller removes it from Amazon Web Services Marketplace China.

In this example, the seller created three different versions of the AMI in the product, but only two were available to new buyers (prior to removing the product).

Product ID and Product Codes

Each product in Amazon Web Services Marketplace China is assigned a unique Product ID which is used to track and identify the product in our catalog, and is included in seller reports.

Once your AMI is submitted, Amazon Web Services Marketplace China will create cloned AMIs for each region that you have indicated that software should be available in. During this cloning and publishing process, Amazon Web Services Marketplace China will attach a product code to each cloned AMI. The product code is used to both control access and to meter usage. All submissions must go through this AMI cloning process.

Amazon Web Services Marketplace China sets a unique product code on all AMIs associated with Amazon Web Services Marketplace China during our ingestion process. These codes are a key component in ensuring that only customers subscribed to a product are able to launch instances of AMIs, as well as ensuring correct billing.

Sellers can obtain the product code while developing their software so it can be used for extra security, such as a validating product code at product start. API calls to an AMI's product code will not be possible until the product has been published into a limited state for testing.

These product codes automatically propagate as customers work with the software. For example, a customer subscribes and launches an AMI, configures it and produces a new AMI. The new AMI will still

contain the original product code so correct billing and permissions will still be in place. For more information, see Instance Metadata and User Data in the Amazon EC2 User Guide.

Change requests

To make changes to a product or version in Amazon Web Services Marketplace China, you submit your request to the Marketplace China Operation team.

The types of changes you can request for AMI-based products include:

- Update product information displayed to buyers.
- Update version information displayed to buyers.
- Add a new version of your product.
- Restrict a version so that new buyers can no longer access that version.
- Update the Amazon Web Services Regions that a product is available in.
- Update the pricing and instance types for a product.
- Remove a product from Amazon Web Services Marketplace China.

Product Load Forms

A *Product Load Form* (PLF) is a spreadsheet that contains all the information about a product.

Multiple Versions

Amazon Web Services Marketplace China product listings allow for multiple versions of the product to be available to subscribers as part of their subscription as separate AMIs. The seller can request any number of versions to be available on a product listing. Note that once a subscriber has access to an AMI, they will always have launch permissions on the AMI regardless of the visibility or status of that version on the listing.

For example, product "Data Cleaner" might have versions "1.0.0", "1.2.5" and "2.0.1", all of which can be available to subscribers. If "1.0.0" is requested to be removed from the listing, it will still be available to customers who were subscribed at that time.

AMI-based delivery using Amazon Web Services CloudFormation

Amazon Web Services Marketplace China vendors can list AMI-based products that are delivered to Amazon Web Services Marketplace China customers by using Amazon Web Services CloudFormation templates. This feature was previously known as clusters and Amazon Web Services Resources (CAR). You can use the templates to define a cluster or distributed architecture for the products or product configurations. The Amazon Web Services CloudFormation templates can be configured to deliver a single Amazon Machine Image (AMI). Customers can browse the selection of solutions on Amazon Web Services Marketplace China, subscribe with one click, and deploy by using Amazon Web Services CloudFormation templates that you provide.

Building your product listing

To submit your product, you need to prepare and validate your AMI(s), create your Amazon Web Services CloudFormation template(s), create a topology diagram, complete the product load form, and submit the materials to Amazon Web Services Marketplace China. We recommend that you start by

creating and validating your AMI(s) and then complete and validate the Amazon Web Services CloudFormation template(s). After those steps are complete, you should create a topology diagram and estimate the software and Amazon Web Services services' price. Amazon Web Services Marketplace China validates your submission and works with you to make your product public.

Preparing your Amazon Web Services CloudFormation template

To build your Amazon Web Services CloudFormation templates, you must meet the template prerequisites and provide the required input and security parameters.

Template prerequisites

- Verify that the template is launched successfully through the Amazon Web Services CloudFormation console in all Regions enabled for your product.
- The template must contain only one AMI.
- AMIs must be in a mapping table for each region. The Amazon Web Services Marketplace China team updates the AMI IDs after they're cloned.
- Build templates so that they do not depend on the use in a particular Availability Zone (AZ). Not all customers have access to all AZs, and AZs are mapped differently for different accounts.
- If you're building a clustered solution using an Auto Scaling group, we recommend that you account for a scaling event. The new node should join the running cluster automatically.
- Even for single-node products, we recommend using an Auto Scaling group.
- If your solution involves a cluster of multiple instances, consider using placement groups if you want low network latency, high network throughput, or both among the instances.
- If your solution involves Docker containers, you must incorporate the Docker images into the AMI.
- For ease of review by the Amazon Web Services Marketplace China team and transparency to the customer, we recommend that you add comments in your UserData section.

Template input parameters

- Input parameters to the template must not include the Amazon Web Services Marketplace China customer's Amazon Web Services credentials (such as passwords, public keys, private keys, or certificates) or personal information such as email address.
- Do not set defaults for parameters such as remote access, CIDR/IP, or passwords for databases. The customer must provide these as input parameters.
- For sensitive inputs such as passwords, choose the No Echo property and enable stronger regular expression. For other inputs, set the most common inputs along with appropriate helper text.
- Use Amazon Web Services CloudFormation parameter types for inputs where available.
- Use AWS::CloudFormation::Interface to group and sort input parameters.

Network and security parameters

- Ensure that the default SSH port (22) or RDP port (3389) isn't open to 0.0.0.0.
- Instead of using the default virtual private cloud (VPC), we recommend that you build a VPC with appropriate access control lists (ACLs) and security groups.
- Access to the customer's Amazon Web Services environment should be enabled using an IAM role to call AssumeRole from the Amazon Web Services Security Token Service.
- Set IAM roles and policies to grant the least privilege and enable write access only when absolutely necessary. For example, if your application needs only S3:GET, PUT, and DELETE operations, specify those actions only. We don't recommend the use of S3:* in this case.

After your template is received, Amazon Web Services Marketplace China validates the product configuration and information and provides feedback for any required revisions.

Topology diagram

You must provide a topology diagram for each template. The diagram must use the Amazon Web Services product icons for each Amazon Web Services service deployed through the Amazon Web Services CloudFormation template, and it must include metadata for the services. The diagram must be 1100 x 700 pixels in size. Make sure that your diagram meets this sizing requirement to avoid cropping or stretching, as shown in the following image.
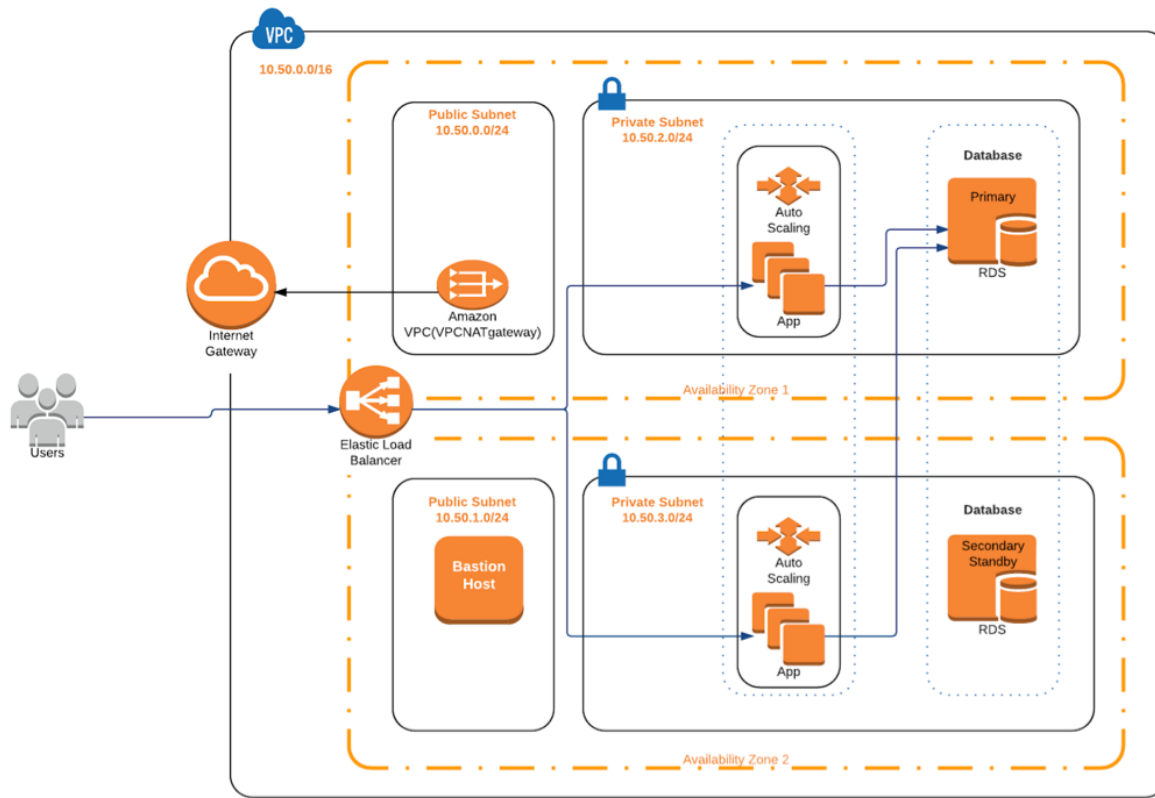
Meeting the submission requirements

To submit products delivered by using Amazon Web Services CloudFormation templates, you must provide the following resources:

- Amazon Web Services CloudFormation template or templates
- A single-AMI product can have one to three Amazon Web Services CloudFormation templates
- The estimated infrastructure price for the default configuration of each template
- A topology diagram and topology metadata
- Completed product load form

For each product, most of the required product data and metadata are the same as for traditional single-AMI products. Therefore, each AMI that is delivered by using an Amazon Web Services CloudFormation template must continue to meet the standards and requirements described for Amazon Web Services Marketplace China.

For each Amazon Web Services CloudFormation template, you must also provide the following information.

Field	Description	Restrictions
Title	Title of the topology. This appears on the detail and fulfillment pages and the popup that shows the topology details.	50 characters
Short description	This appears on the detail and fulfillment pages.	200 characters
Long description	This appears in the topology details pop-up.	2000 characters

Building AMIs

An AMI is a machine image of a specific computer running an operating system that is configured in a specific way and that can also contain a set of applications and services for accomplishing a specific purpose. An AMI contains all the information necessary to start up and run the software in the image. Amazon Elastic Compute Cloud (Amazon EC2) and Amazon Web Services infrastructure make up the computing environment for running an AMI.

AMI software allows the customer to deploy and run the software under their own Amazon Web Services account on Amazon Web Services infrastructure. A customer finds the software in Amazon Web Services Marketplace China, subscribes, and is immediately able to deploy the AMI onto Amazon Web Services Infrastructure and manage the software and their subscription.

All AMIs built and submitted to Amazon Web Services Marketplace China must adhere to all product policies. The following best practices and references can help you in building your AMI.

- Ensure your AMI meets all Amazon Web Services Marketplace China policies, including disabling root login.
- Create your AMI in Amazon Web Services China (Ningxia) Region. Or in certain cases, create your AMI in the Amazon Web Services East (N. Virginia) Region.
- Products should be created from existing, well-maintained EBS-backed AMIs with a clearly defined life-cycle provided by trusted, reputable sources such as Amazon Web Services Marketplace China.
- Build AMIs using the most up-to-date operating systems, packages, and software.
- For Linux-based and Windows-based software, we require starting with a public AMI that uses Hardware Virtual Machine (HVM) virtualization and 64-bit architecture.
- For updates (new versions) to existing paravirtual products, use the PV-GRUB Amazon Kernel Image (AKI). Using PV-GRUB, you can change the kernel on a running instance of your AMI. To learn more, see Enabling User Provided Kernels in Amazon EC2.
- Develop a repeatable process for building, updating, and republishing AMIs.
- Use a consistent OS username across all versions and products.
  - For Linux-based software, we recommend **ec2-user.**
  - For Windows-based software, we recommend **Administrator**.
- Configure a running instance from your final AMI to the end-user experience you want, and test all installation, features, and performance **prior** to submission to Amazon Web Services Marketplace China.

- Ensure that a valid SSH port is open (default is 22) for **Linux** based AMIs, and that an RDP port is open (default is 3389) for **Windows** based AMIs. WINRM (port 5985) must be open to 10.0.0.0/16.
- **Resources**
  - o [Creating Your Own AMIs](#)
  - o [Creating your Own Windows-based AMIs](#)
  - o [Using Amazon EBS-Backed AMIs and Instances](#)
  - o [Creating an AMI from an EBS-backed Windows Instance](#)
  - o [Amazon Linux](#)
  - o [EC2 Instance Types and Instance Families and Types](#)

Rights

You are responsible for securing resell rights for non-free Linux distributions, with the exception of Amazon Web Services provided Amazon Linux, RHEL, SUSE and Windows AMIs.

Securing an AMI

Keep the following best practices in mind when securing your AMI product:

- Architect your AMI to deploy as a minimum installation to reduce the attack surface. You should disable or remove unnecessary services and programs.
- Whenever possible, use end-to-end encryption for network traffic. For example, use Secure Socket Layer (SSL) to secure HTTP sessions between you and your customers. Ensure that your service uses only valid and up-to-date certificates.
- Use security groups to control inbound traffic access to your instance. Ensure that your security groups are configured to allow access only to the minimum set of ports required to provide necessary functionality for your services. In addition, allow administrative access only to the minimum set of ports and source IP address ranges necessary.
- Limit access to the ports used for administrative access by allowing in only the range of IP addresses that have a valid reason for accessing the system, for example, the range of IP addresses in your company or organization.
- Consider performing a penetration test against your Amazon Web Services computing environment at regular intervals; or, consider employing a third party to conduct such tests on your behalf. To learn more, see [Amazon Web Services Penetration Testing](#) (includes a penetration testing request form).
- Be aware of the top 10 vulnerabilities for web applications and build your applications accordingly. To learn more, visit [Open Web Application Security Project (OWASP) - Top 10 Web Application Security Risks](#). When new Internet vulnerabilities are discovered, promptly update any web applications that ship in your AMI.
- **Resources**
  - o [Amazon Web Services Security Center](#)
  - o [The Center for Internet Security (CIS): Security Benchmarks](#)
  - o [The Open Web Application Security Project (OWASP): Secure Coding Practices Quick Reference Guide](#)
  - o [OWASP Top 10 Web Application Security Risks](#)

- o [SANS (SysAdmin, Audit, Networking, and Security) Common Weakness Enumeration (CWE) Top 25 Most Dangerous Software Errors](#)
- o [Security Focus](#)
- o [NIST National Vulnerability Database](#)

Regions and Instance Types

For the most current list of EC2 instance types, see [EC2 Instance Types.](#) All the supported instance types and regions are listed in the Product Load Form.

Security groups

When setting up security groups for your AMI product, keep the following in mind:

- Add ingress rules only for ports required for the product to function.
- Limit broad ranges of IP addresses to reduce security risk.
- Ingress rules currently only support TCP and UDP

AMI Product Policies

These policies exist to ensure that the products and offerings in Amazon Web Services Marketplace China contribute to a safe, secure and trusted source for customers. All products and metadata will be reviewed to ensure they meet or exceed current Amazon Web Services Marketplace China policies. Product policies are always being reviewed and adjusted to meet current security guidelines and it is possible for products to no longer be compliant with current policy.

Security

Keep the following security requirements in mind:

- AMIs must not contain any known vulnerabilities, malware or viruses.
- AMIs must not contain default passwords, authorization keys, key pairs, security keys or other credentials for any reason. All instance authentication must use key pair access rather than password based authorization, even if the password is generated, reset or defined by the user at launch.
- AMIs must not request or use access /secret keys from users to access Amazon Web Services resources. Instead they should use IAM roles and policies.
- Amazon Web Services Marketplace China AMIs must not allow password authentication. Disable password authentication via your sshd_config file by setting the PasswordAuthentication to NO.

Accessibility

Keep the following AMI access requirements in mind:

- Linux-based AMIs must [lock/disable root login](#) and allow only sudo access through a user account (not "root"). Using sudo allows you to control which users are allowed to perform root functions and logs the activity so that there is an audit trail.
- AMIs must allow OS-level administration capabilities to allow for compliance requirements, vulnerability updates and log file access. For Linux-based AMIs this is through SSH, and for Windows-based AMIs this is normally through RDP.
- Linux-based AMIs must not have blank or null root passwords.

- AMIs must not contain Authorized Passwords or Authorization Keys
- AMIs must not use default passwords for user interface access. It is recommended to use a randomization process such as using the instance_id from the Amazon Web Services EC2 Metadata Service.
- Windows-based AMIs must:
    - Use the most recent version of Ec2ConfigService
    - ENABLE "Ec2SetPassword", "Ec2WindowsActivate" and "Ec2HandleUserData"
    - Remove Guest Accounts or Remote Desktop Users (none are allowed)
- You must not maintain access to the customer's running instances. The customer has to explicitly enable any outside access, and any accessibility built into the AMI must be off by default.

Customer Information

When providing an AMI product on Amazon Web Services Marketplace China, you must be a good steward of customer information. In that regard, keep the following in mind:

- All AMI non-BYOL products must not require customer registration with the seller, or require customer information to use the product (i.e. email address required).
- Software must not require, collect or export customer data without the customer's knowledge and express consent.
- Amazon Web Services Marketplace China will not share private or personally identifying customer information (name, email, contact info, etc.) with any seller or outside party without the consent of the customer.

AMI Usage

The following requirements outline how you can and cannot restrict access to AMI products on Amazon Web Services Marketplace China

- Products must not restrict access to the product or product functionality by time or other restrictions; "Trial", "Beta", or "Evaluation" products are not supported.
- All AMIs must be compatible with either the Amazon Web Services 1-click fulfillment experience or the Clusters and Amazon Web Services Resources Feature. For 1-click, the AMI cannot require customer or user data at instance creation in order to function correctly. Master/Slave (Head/Worker) launches are not currently supported or allowed as part of usage instructions.
- Each AMI must contain everything a subscriber needs to use the software, including any client applications.
- The fulfillment process must not require the customer to leave the Amazon Web Services Marketplace China.
- AMIs must not require a subscription API or launches from outside the Amazon Web Services Marketplace China.
- Products must not use copyrighted material you do not have the rights to use.
- Product software and metadata must not contain language that redirects users to other cloud platforms, additional products or upsell services not available in Amazon Web Services Marketplace China.
- Private products are not supported. Each listing must be publicly available.

Architecture

When architecting your AMI product, keep the following requirements in mind:

- Source AMIs for Amazon Web Services Marketplace China must be provided in the Amazon Web Services China (Ningxia) Region. Or in certain cases, source AMIs for Amazon Web Services Marketplace China can be provided in the Amazon Web Services East (N. Virginia) Region.
- AMIs must use Hardware Virtual Machine (HVM) virtualization
- AMIs must use 64-bit architecture
- AMIs must be EBS-backed AMIs; we do not currently support S3-backed AMIs.
- AMIs must use a supported file system; Ext2, Ext3, Ext4, Xfs, Vfat, Lvm, and NTFS. Encrypted file systems are not supported.
- FreeBSD products must be built from Linux-based OS.
- AMIs must be built such that they can run in all regions and is region agnostic. AMIs built differently for regions are not allowed.

AMI product pricing

AMI pricing models

The following table provides general information about pricing models for AMI-based products.

Pricing model	Description
Free	Customers can run as many instances as Amazon Elastic Compute Cloud (Amazon EC2) supports with no additional software charges incurred.
Bring your own license (BYOL)	Amazon Web Services Marketplace China doesn't charge customers for usage of the software, but customers must supply a license key to activate the product. This key is purchased outside of Amazon Web Services Marketplace China. The entitlement and licensing enforcement, in addition to all pricing and billing, are handled by you.
Paid hourly or hourly-annual	**Hourly** – Software is charged by the hour. Each instance type can be priced differently (but it isn't required to be), and usage is rounded up to the nearest whole hour. **Hourly with Annual** – Customers have the option to purchase a year's worth of usage upfront for one Amazon EC2 instance of one instance type. You set the pricing for each instance type and can offer net savings over the hourly price. Any customer usage above the number of annual subscriptions purchased is billed at the hourly rate you set for that instance type.

Amazon Web Services' service charges and software charges

Amazon Machine Image (AMI)-based product charges fall into two categories:

- **Infrastructure Pricing Details** – All AMI-based products incur associated Amazon Web Services infrastructure charges depending on the services and infrastructure used. These rates and fees are defined and controlled by the respective operators of Amazon Web Services (China) Regions, and can vary between Amazon Web Services Regions. For more information, see Amazon EC2 Pricing

- **Software Pricing Details** – For Paid products, the seller defines the charges for using the software.

These two product charge categories are displayed separately on the Amazon Web Services Marketplace China detail pages to help buyers understand the potential cost of using the products.

AMI Preparation Checklist

This checklist can help you quickly create your AMI product in accordance to the Amazon Web Services Marketplace China best practices:

Product usage

☐ Production-ready
☐ Does not restrict product usage by time or other restrictions
☐ Compatible with 1-click fulfillment experience
☐ Everything required to utilize the product is contained within the software including client applications
☐ Default user utilizes a randomized password and/or creation of initial user requires verification that the subscriber is authorized to use the instance using a value unique to the instance such as instance ID

AMI preparation

☐ Utilizes hardware virtual machine (HVM) virtualization and 64-bit architecture
☐ Does not contain any known vulnerabilities, malware or viruses
☐ Subscribers have OS-level administration access to the AMI

For Windows AMIs:

☐ Utilizes the most recent version of Ec2Config Service
☐ Ec2SetPassword, Ec2WindowsActiviate and Ec2HandleUserData are enabled
☐ No Guest Accounts or Remote Desktop Users are present

Note

EC2Launch replaced EC2Config on Windows AMIs for Windows Server 2016 and later. For more information, see Configure a Windows instance using EC2Launch. The latest launch service for all supported Windows Server versions is EC2Launch v2, which replaces both EC2Config and EC2Launch.

For Linux AMIs:

☐ Root login is locked/disabled
☐ No authorization keys, default passwords or other credentials are included

Load form preparation

☐ All required fields are completed
☐ All values are within specified character limits
☐ All URLs load without error
☐ Product image is at least 110px wide and between a 1:1 and 2:1 ratio

Submitting AMI-based Product to Amazon Web Services Marketplace China

Product submission is the process to make your products available to Amazon Web Services Marketplace China customers. Once you have completed the seller registration, Amazon Web Services Marketplace China Seller Operations team will guide you through the process of product submission.

We recommend that you do the following checks before submitting your AMI product:

- Remove all user credentials from the system; all default passwords, authorization keys, key pairs, security keys or other credentials.
- Ensure that root login is disabled / locked; only sudo access accounts are allowed.

Software as a service (SaaS)–based products

With software as a service (SaaS) products, you deploy software hosted on Amazon Web Services infrastructure and grant buyers access to the software in your Amazon Web Services environment. You are responsible for managing customer access, account creation, resource provisioning, and account management within your software.

Plan your SaaS product

Before you add your SaaS product to Amazon Web Services Marketplace China, you must first do some planning. This step is critical to the success of your product. A lack of planning can result in billing issues or you might have to re-create your product in Amazon Web Services Marketplace China.

> **!Important**
>
> Most of your product's settings can't be changed after you've configured them. If you need to change them after the product is created in Amazon Web Services Marketplace China, you probably need to create a new product with the correct settings.

Plan your pricing

There are two pricing options for SaaS products on Amazon Web Services Marketplace China. Choosing the right pricing model for your product is the most important decision you will make. Choosing the wrong pricing model can set you back by weeks, because it determines the payment options for your customers and the billing integration code you'll need to write, test, and deploy.

- **SaaS subscriptions** – A pay-as-you-go model where buyers are billed for their hourly usage of your SaaS product.
- **SaaS contracts** – Buyers are either billed in advance for the use of your software, or you can offer them a flexible payment schedule.

For more information on pricing, see Pricing SaaS products.

Plan your billing integration

One of the benefits of having a SaaS product on Amazon Web Services Marketplace China is consolidating billing. In order to take advantage of this benefit, you must integrate with the Amazon Web Services Marketplace China Metering Service if you choose SaaS subscription model. The Amazon Web Services Marketplace China Metering Service helps you ensure that your billing and usage reporting is accurate.

After you plan your integration, you must test the integration with your product before it goes live. For more information about integration and testing, see Accessing the Amazon Web Services Marketplace China Metering Service API.

Plan your Amazon SNS integration

There are two Amazon SNS topics that you can subscribe to for your SaaS product. These messages can help you programmatically handle changes to subscriptions and contracts initiated by Amazon Web Services or by your customers. You can use these Amazon SNS notifications as programmatic triggers to enable a customer to register for a new account in on your product registration website, to deny customers with expired subscriptions from accessing your product, depending on how you program the handling of these notifications.

Plan how customers will access your product

This section describes how to make your product accessible to buyers.

Plan your SaaS product registration Website

Customers who buy your SaaS product need to access to it. You must plan and implement how you want your customers to access the product. SaaS products support access through "Your own product website"

Using your own registration website

Your SaaS product is hosted in your environment and it must be accessed over the internet through a public endpoint that you manage and maintain, like a website. Typically, you have a website that customers use to register for your product, sign in to use the product, and access support for your product. For the sake of simplicity, this endpoint will be referred to as your *registration website*.

If you choose this access option and your product doesn't already have a registration website, you need to create one. After you have a registration website, your website must be programmed to validated customers whenever they access your registration page.

To validate customers using your registration website

1. Accept POST requests that includes the temporary token x-amzn-marketplace-token.

2. Exchange the token for a customerID by calling [ResolveCustomer](#) in the Amazon Web Services Marketplace China Metering Service.
3. After obtaining a customerID, persist it in your application for future calls.

SaaS product guidelines

Amazon Web Services Marketplace China maintains these guidelines for all SaaS products and offerings on Amazon Web Services Marketplace China to promote a safe, secure, and trustworthy platform for our customers.

All products and their related metadata are reviewed when submitted to ensure that they meet or exceed current Amazon Web Services Marketplace China guidelines. These guidelines are reviewed and adjusted to meet our evolving security requirements. In addition, Amazon Web Services Marketplace China continuously reviews products to verify that they meet any changes to these guidelines. If products fall out of compliance, we might require that you update your product and in some cases your product might temporarily be unavailable to new subscribers until issues are resolved.

Product setup guidelines

All SaaS products must adhere to the following product setup guidelines:

- At least one pricing dimension must have a price greater than $0.00.
- All pricing dimensions must relate to actual software and cannot include any other products or services unrelated to the software.

Customer information requirements

All SaaS products must adhere to the following customer information requirements:

- SaaS products must be billed entirely through the listed dimensions on Amazon Web Services Marketplace China.
- You cannot collect customer payment information for your SaaS product at any time, including credit card and bank account information.

Product usage guidelines

All SaaS products must adhere to the following product usage guidelines:

- After subscribing to the product in Amazon Web Services Marketplace China, customers should be able to create an account within your SaaS application and gain access to a web console. If the customer cannot gain access to the application, you must provide a message with specific instructions on when they will gain access. When an account has been created, the customer must be sent a notification confirming that their account has been created along with clear next steps.
- If a customer already has an account in the SaaS application, they must have the ability to log in from the fulfillment landing page.
- Customers must be able to see the status of their subscription within the SaaS application, including any relevant contract or subscription usage information.

- Customers must be able to easily get help with issues such as: using the application, troubleshooting, and requesting refunds (if applicable). Support contact options must be specified on the fulfillment landing page.

Architecture guidelines

All SaaS products must adhere to the following architecture guidelines:

- A portion of your application must be hosted in an Amazon Web Services account that you own.
- All application components should be hosted in infrastructure you manage. Applications that require additional resources in the customer's infrastructure must follow these guidelines:
    - Provision resources in a secure way, such as using the Amazon Web Services Security Token Service (Amazon Web Services STS) or Amazon Web Services Identity and Access Management (IAM).
    - Provide additional documentation including a description of all provisioned Amazon Web Services services, IAM policy statements, and how an IAM role or user is deployed and used in the customer's account.
    - Include a notification in the product description that explains that if the customer incurs additional Amazon Web Services infrastructure charges separate from their Amazon Web Services Marketplace China transaction, they're responsible for paying the additional infrastructure charges.
    - If your product deploys an agent, you must provide instructions to the customer that describe how to deploy it in their Amazon Web Services account.
    - Applications that require resources running in the customer's infrastructure will have an additional review by Amazon Web Services Marketplace China, which can take 2-4 weeks.
- Successfully call the Amazon Web Services Marketplace China APIs from the Amazon Web Services account that registered as a provider and submitted the SaaS publishing request. The SaaS subscription pricing model should call the [BatchMeterUsage](#) in the Amazon Web Services Marketplace China Metering Service.

Pricing SaaS products

After a buyer gets your SaaS product on Amazon Web Services Marketplace China, Amazon Web Services Marketplace China passes along their billing identifier. Customers access the product in your Amazon Web Services environment or through a VPC endpoint connection you create. Amazon Web Services Marketplace China offers the following pricing models for SaaS products:

- **SaaS subscriptions** – A pay-as-you-go model where we bill buyers for their hourly usage of your SaaS product.
- **SaaS contracts** – Buyers are either billed in advance for the use of your software, or you can offer them a flexible payment schedule.

To make your SaaS product available on Amazon Web Services Marketplace China, decide whether you want to offer the SaaS subscriptions pricing model or the SaaS contracts pricing model.

Pricing for SaaS subscriptions

For SaaS subscriptions, Amazon Web Services Marketplace China bills your customers based on the metering records that you send to us.

To set your pricing, select the category that best describes your product's pricing. You can choose from bandwidth (GBps, MBps), data (GB, MB, TB), hosts, requests, tiers, or users. If none of the predefined categories fit your needs, you can choose the more generic **units** category.

Next, define your pricing dimensions. Each pricing dimension represents a feature or service that you can set a per-unit price for. Examples of dimensions include users, hosts scanned, and GB of logs ingested. You can define up to 24 dimensions. For each dimension you define, you must add the following information:

- **Dimension API Name** – The API name used when sending metering records to the Amazon Web Services Marketplace China Metering Service. This name indicates which dimension your customer used. This name is visible in billing reports. The name doesn't need to be reader-friendly because you're the only one with access to your reports. After you set the name, you can't change it.
- **Dimension Description** – The customer-facing statement that describes the dimension for the product. The description (administrators per hour, per Mbps bandwidth provisioned, etc.) can be no more than 70 characters and should be user-friendly. After the product is published, you can't change this description.
- **Dimension Price** – The software charge per unit for this product, in RMB. This field supports three decimal places.

When a SaaS subscription ends

A customer can unsubscribe from your SaaS subscription product through the Amazon Web Services Management Console.

1. Your SaaS product is sent an unsubscribe-pending notification through the Amazon SNS topic for that customer.
2. You have one hour to meter any remaining usage for the customer.
3. After this hour, you receive an unsubscribe-success notification. At this point, you can no longer send metering records for this customer.

It's up to you to decide how you want to disable functionality in your SaaS product for unsubscribed customers. For example, your product might complete the customer's existing work, but prevent them from creating work. You might want to display a message to the customer that their usage has been disabled. Customers can resubscribe to your product through Amazon Web Services Marketplace China.

Subscription Cancellations

Customers cancel SaaS subscription products through the **Your Marketplace Software** page of the Amazon Web Services Marketplace China website. When a customer cancels a subscription, you receive a notification, and you have 1 hour to send a final metering record for the customer. You notify the

customer from your product that the cancellation is in progress. If a customer indicates that they want to cancel through your product, direct the customer to Amazon Web Services Marketplace China. To guarantee that there will be no future charges, customers should confirm the cancellation with Amazon Web Services Marketplace China.

SaaS customer onboarding

With SaaS subscriptions and SaaS contracts, your customers subscribe to your products through Amazon Web Services Marketplace China, but access the product in your Amazon Web Services environment. After subscribing to the product, your customer is directed to a website you create and manage as a part of your SaaS product to register their account and configure the product.

When creating your product, you provide a URL to your registration landing page. We use that URL to redirect customers to your registration landing page after they subscribe. On your software's registration URL, you collect whatever information is required to create an account for the customer. We recommend collecting your customer's email addresses if you plan to contact them through email for usage notifications according to your agreement with the customer.

The registration landing page needs to be able to identify and accept the `x-amzn-marketplace-token` token in the form data from Amazon Web Services Marketplace China the customer's identifier for billing. It should then pass that token value to the Amazon Web Services Marketplace China Metering Service APIs to resolve for the unique customer identifier and corresponding product code. For a code example, see [ResolveCustomer code example](#).

Configuring your SaaS product to accept new buyers

You're responsible for correctly configuring your SaaS software to accept new customers and meter them appropriately. The following process outlines one recommended way of identifying, implementing, and metering a new customer's access to your software:

1. When a customer visits your product page on the Amazon Web Services Marketplace China website, they choose to subscribe to your product.
2. The customer's Amazon Web Services account is subscribed to your product. This means metering records sent from your product become part of the customer's Amazon Web Services bill.
3. A registration token is generated for the customer that contains their customer identifier to your website.
4. The customer is redirected to your software's registration URL. This page must be able to accept the token with the customer's identifier.
5. The customer's browser sends a POST request to your SaaS registration URL. The request contains one POST parameter, *x-amzn-marketplace-token*, containing the customer's registration token. From the perspective of your registration website, the customer has submitted a form with this parameter. The registration token is an opaque string.
6. To redeem this token for a customer identifier and a product code, your website must call [ResolveCustomer](#) on the Amazon Web Services Marketplace China Metering Service. The customer identifier isn't the customer's Amazon Web Services account ID, but it's universal between products. The product code is a unique string for your SaaS product that Amazon Web

Services provides to you. Each Amazon Web Services Marketplace China product has one unique product code, which is assigned to you during registration.

The following is an example of a ResolveCustomer call.

```
##### Resolving Customer Registration Token #####
   formFields = urlparse.parse_qs(postBody):
   if formFields.has_key('x-amzn-marketplace-token'):
   marketplaceClient = boto3.client('meteringmarketplace')
   customerData = marketplaceClient.resolve_customer(
   RegistrationToken=formFields['x-amzn-marketplace-
   token']) productCode = customerData['ProductCode']
   customerId = customerData['CustomerIdentifier']
   # TODO: Store information away with your customer record
   # TODO: Validate no other accounts share this identifier
```

7. Your website validates that the product code matches your SaaS product identity. Your website must keep this customer identifier in the customer's session. It can be stored temporarily on your server, or it can be part of a signed session cookie on the customer's browser.
8. The customer is instructed to either create an account in your product or sign in to an existing account.
9. The customer is now signed in to your website using credentials specific to that SaaS product. In your accounts database, you can have a row for each customer. Your accounts database must have a column for the Amazon Web Services customer identifier, which you populate with the customer identifier that you obtained in step 2. Verify that no other accounts in your system share this customer identifier. Otherwise, you might send conflicting metering records.
10. During your seller registration process, you are assigned an Amazon SNS topic that notifies you when customers subscribe or unsubscribe to your product. The notification is an Amazon SNS notification in JSON format that informs you of customer actions.

    We recommend that you use Amazon Simple Queue Service (Amazon SQS) to capture these messages. After you receive a subscription notification with subscribe-success, the customer account is ready for metering. Records that you send before this notification aren't metered. For information about how to do this, see Step 2: Give Permission to the Amazon SNS Topic to Send Messages to the Amazon SQS Queue in the *Amazon Simple Notification Service Developer Guide*.

    Note

    Do not activate a product subscription unless you receive a SUBSCRIPTION_SUCCESSFUL notification.

11. Use the customer identifier stored in your database to meter for usage through the Amazon Web Services Marketplace China Metering Service for SaaS subscriptions.

Security and ordering

As a seller, it's your responsibility to trust only customer identifiers that are immediately returned from Amazon Web Services or those that your system has signed. We recommend that you resolve the registration token immediately because it expires after 1 hour. After you resolve the registration token,

store the customer identifier as a signed attribute on the customer's browser session until the registration is complete.

Amazon SNS notifications for SaaS products

To receive notifications, you subscribe to the Amazon Web Services Marketplace China Amazon Simple Notification Service (Amazon SNS) topic provided to you during product creation. The topic provides notifications about changes to customers' subscription statuses. This enables you to know when to provide and revoke access for specific customers.

The following Amazon SNS topics are specific to SaaS subscription products:

- aws-mp-subscription-notification – This Amazon SNS topic is for SaaS subscriptions and contracts with additional consumption.

SaaS product Amazon SNS message body

Each message for the SaaS product Amazon SNS notifications has the following format.

```
{
    "action": "action-name",
    "CustomerIdentifier": " X01EXAMPLEX",
    "ProductCode": "n0123EXAMPLEXXXXXXXXXXXX"
}
```

The action-name will vary depending on the message. Possible actions are listed in the following topic.

SaaS product Amazon SNS actions

If you provide a SaaS subscription product, you'll receive messages with the following actions:

- subscribe-success
- subscribe-fail
- unsubscribe-pending
- unsubscribe-success

Subscribing an SQS queue to the SNS topic

We recommend subscribing an Amazon SQS queue to the provided SNS topic. For detailed instructions on creating an SQS queue and subscribing the queue to the provided topic, see Subscribing an Amazon SQS queue to an Amazon SNS topic in the *Amazon Simple Notification Service Developer Guide*.

Polling the SQS queue for notifications

Finally, you need to define a service that continually polls the queue, looks for messages, and handles them accordingly.

Accessing the Amazon Web Services Marketplace China Metering Service APIs

This section outlines the process of integrating with the Amazon Web Services Marketplace China Metering Service, used to ensure your billing and reporting of customer usage of your SaaS subscription products is accurate. It's assumed that you've submitted a SaaS subscriptions product that has been published to a limited state. In a limited state, you can use your test accounts to verify proper configuration and function but your product is not available publicly.

For information about setting up the Amazon Web Services CLI, along with credentials, see Configuring the Amazon Web Services CLI in the *Amazon Web Services Command Line Interface User Guide*. If you're new to the Amazon Web Services Python SDK, see the Boto 3 Quickstart

Metering for usage

For software as a service (SaaS) subscriptions, you meter for all usage, and then customers are billed by Amazon Web Services based on the metering records that you provide. When your application meters usage for a customer, your application is providing Amazon Web Services with a quantity of usage accrued. Your application meters for the pricing dimensions that you defined when you created your product, such as gigabytes transferred or hosts scanned in a given hour. For example, if you charge based on the amount of data sent into your application, you can measure the amount of data and send a corresponding metering record once an hour. Amazon Web Services calculates a customer's bill using the metering data along with the prices that you provided when you created your product.

Note

Optionally, you can split the usage across properties that you track. These properties are exposed to the buyer as tags. These tags allow the buyer to view their costs split into usage by the tag values. For example, if you charge by the user, and users have a "Department" property, you could create a usage allocations with tags that have a key of "Department", and one allocation per value. This does not change the price, dimensions, or the total usage that you report, but allows your customer to view their costs by categories appropriate to your product.

We recommend that you send a metering record every hour to give customers as much granular visibility into their usage and costs as possible. If you aggregate usage in time periods greater than an hour (for example, one day), continue sending metering records every hour and record a quantity of 0 if there is no usage to report for that hour. Report usage to Amazon Web Services on an hourly basis for all of your customers, in batches of up to 25 at a time.

Amazon Web Services can only bill customers for usage of your product upon receiving metering records from you. You're responsible for ensuring that your product's metering records are successfully transmitted and received. You can use Amazon Web Services CloudTrail to verify the record or records that you send are accurate. You can also use the information to perform audits over time. For more information, see Logging Amazon Web Services Marketplace API calls with Amazon Web Services CloudTrail.

Configure your product to meter usage

You use the `BatchMeterUsage` operation in the Amazon Web Services Marketplace China Metering Service to deliver metering records to Amazon Web Services. Keep the following in mind:

- We require sellers to use batching by using the BatchMeterUsage operation.
- We deduplicate metering requests on the hour.
  - Requests are deduplicated per product/customer/hour/dimension.
  - You can always retry any request, but if you meter for a different quantity, the original quantity is billed.
  - If you send multiple requests for the same customer/dimension/hour, the records are not aggregated.
- Your metering records contain a timestamp that can't be later than 1 hour in the past.
- BatchMeterUsage payloads must not exceed 1MB. Choose the number of usage records to send in a BatchMeterUsage request so that you don't exceed the size of the payload.

- The Amazon Web Services Marketplace China Metering Service is available in 2 Amazon Web Services China Regions. By default, the ZHY (Ningxia) Region is enabled for SaaS metering products when you request your product. For more information, see [BatchMeterUsage](#).

For code examples, see [Code examples](#).

Example: Host scanning
Your product analyzes computing hardware for known security vulnerabilities. Customers manually initiate or schedule these scans of their Amazon Elastic Compute Cloud (Amazon EC2) instances. As your product performs these scans, it tallies the number of unique hosts scanned every hour. In this example, your product uses the **Hosts** category. You can declare multiple dimensions for the types of hosts scanned. For example, you can charge different prices for small, medium, and large hosts.

Example: Log analysis
Your SaaS product digests logs that are generated by customer products, reporting trends, and anomalies. As customers upload logs to your product, you measure the quantity of data received in megabytes, gigabytes, or terabytes. On the tenth minute of every hour, a cron job reads this usage for each customer for the previous hour. The job builds a batch report and uses the `BatchMeterUsage` operation to send it to Amazon Web Services. In this example, your product uses the **Data** category. Your product can also meter for the amount of log data stored for any given hour. In this case, your product can meter along two dimensions: data received in the hour and total data stored in the hour. You can continue to meter for data stored until the customer deletes this data or it expires.

SaaS product integration checklist

Category	Requirements
Access	Submitted a seller registration form with the desired Amazon Web Services account for Amazon Web Services Marketplace China usage.
Access	Configured cross-account roles for the registered Amazon Web Services Marketplace China account.
Product	Completed the product request loadform.
Product	Provided Amazon Web Services account IDs for testing.
Product	Provided a URL of the EULA in .txt format.
Product	Received your product code and Amazon SNS topic information from Amazon Web Services Marketplace China.

Product	Subscribed to the Amazon SNS topic and created an Amazon SQS queue to subscribe to the Amazon SNS topic.
Billing Solution	Validated you can send metering records to the BatchMeterUsage operation each hour for each customer for SaaS subscriptions products.
Billing Solution	Validated that the costs appear as expected on bills generated for test accounts.
Billing Solution	Tested for situations such as invalid customer IDs and canceled subscriptions.
Product	Submitted the product request back to Amazon Web Services Marketplace China for publishing.
Registration	Implemented an HTTPS registration page that can accept HTTP POST requests.
Registration	Validated you can accept new customer registrations.
Registration	Validated you are *not* storing the registration token in a cookie.
Registration	Validated you are using ResolveCustomer to obtain the ProductCode and CustomerIdentifier from the Amazon Web Services token.
Registration	Validated you can resolve the registration token received from Amazon Web Services with no delays.
Registration	Tested that you aren't blocked from registering with email services addresses such as Gmail.
Registration	Tested that you can accept incomplete registrations and multiple registration attempts.
Subscription	Test that you can handle unsubscribe-pending and unsubscribe-success messages.
Subscription	Validated that you send final metering records within an hour of receiving an unsubscribe-pending message.
Security	Validated all administrative access is through identities created with Amazon Web Services Identity and Access Management (IAM). No shared accounts.
Security	Validated that IAM roles are used for all programmatic Amazon Elastic Compute Cloud (Amazon EC2) access. Credentials aren't hard-coded into scripts, headers, or source code.
Security	Validated you maintain comprehensive logging and log consolidation.
Security	Verified you have well-defined public and private subnet boundaries that isolate application services and access to database and file systems. Distinct data class definitions that demarcate sensitive data and segregate public and private data.
Security	Verified you have private data encryption in transit and at rest with scheduled key rotation.
Security	Validated you have security incident tools and access in place and routinely scheduled incident response exercises that accommodate timely investigation and recovery.
Reliability	Verified the system adapts to changes in demand, scaling up and down as required, and employs load balancing to ensure high performance. The system also provides edge-based caching as required.

Reliability	Validated recovery time and point objectives are specified, and disaster recovery is scheduled at regular intervals. Component failure is self-healing via automated triggers and notifications.

Reporting

Amazon Web Services Marketplace China produces reports for your SaaS products that include data on subscribers, financials, usage, and taxes. The following table summarizes how financials for SaaS products are reported.

Report	SaaS content
Monthly business report	Metered usage charges, such as account ID, product title, product code, usage dimension, and usage quantity, etc.
Monthly revenue report	Metered usage charges, such as account ID, product title, product ID, product code, and subscription time, etc.

Code examples

The following code examples are provided to help you integrate your SaaS product with the Amazon Web Services Marketplace China APIs required for publishing and maintaining your product.

ResolveCustomer code example

The following code example is relevant for all pricing models. The Python example exchanges a `x-amzn-marketplace-token` token for a `customerID`. This code would run in an application on your registration website.

For more information on `ResolveCustomer`, see [ResolveCustomer](#) in the *Amazon Web Services Marketplace China Metering Service API Reference*.

```python
# Import Amazon Web Services Python SDK and urllib.parse
import boto3
import urllib.parse as urlparse

# Resolving Customer Registration Token
formFields = urlparse.parse_qs(postBody)
regToken = formFields['x-amzn-marketplace-token']

# If regToken present in POST request, exchange for customerID
if (regToken):
    marketplaceClient = boto3.client('meteringmarketplace')
    customerData = marketplaceClient.resolve_customer(regToken)
    productCode = customerData['ProductCode']
    customerID = customerData['CustomerIdentifier']

    # TODO: Store customer information
    # TODO: Validate no other accounts share the same customerID
```

Example response

```
{

    'CustomerIdentifier': 'string',

    'ProductCode': 'string'

}
```

BatchMeterUsage code example

The following code example is relevant for SaaS subscription and contract with consumption pricing models, but not for SaaS contract products without consumption. The Python example sends a metering record to Amazon Web Services Marketplace China to charge your customers for pay-as-you-go fees.

```python
# NOTE: Your application will need to aggregate usage for the
#     customer for the hour and set the quantity as seen below.
#     Amazon Web Services Marketplace China can only accept records for up to an hour in the past.
#
# productCode is supplied after the Amazon Web Services Marketplace China Ops team has
# published the product to limited
#
# customerID is obtained from the ResolveCustomer response

# Import Amazon Web Services Python SDK
import boto3

usageRecord = [
  {
     'Timestamp': datetime(2015, 1, 1),
     'CustomerIdentifier': 'customerID',
     'Dimension': 'string',
     'Quantity': 123
  }
]

marketplaceClient = boto3.client('meteringmarketplace')

response = marketplaceClient.batch_meter_usage(usageRecord, productCode)
```

For more information on `BatchMeterUsage`, see BatchMeterUsage in the *Amazon Web Services Marketplace Metering Service API Reference*.

Example response

```
{
   'Results': [
      {
         'UsageRecord': {
            'Timestamp': datetime(2015, 1, 1),
            'CustomerIdentifier': 'string',
            'Dimension': 'string',
            'Quantity': 123
         },
         'MeteringRecordId': 'string',
         'Status': 'Success' | 'CustomerNotSubscribed' | 'DuplicateRecord'
      },
   ],
   'UnprocessedRecords': [
      {
         'Timestamp': datetime(2015, 1, 1),
         'CustomerIdentifier': 'string',
         'Dimension': 'string',
         'Quantity': 123
      }
   ]
}
```

Managing Your Listings

Once your product is published, you can sunset (unpublish) the product. Once you request to unpublish your product, new customers will no longer be able to subscribe. You are required to support any existing customers for a minimum of 90 days or until the expiration of their subscription. Requests for a product to be removed from Amazon Web Services Marketplace China will be processed with the following conditions:

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