

How to Manage and Optimize Software and Infrastructure Costs on AWS

Best Practices and Practical Guidance Achieving Cost Optimization Across Your AWS Footprint



Table of Contents

AWS Marketplace Introduction.....	3
How to Optimize Cost Savings in AWS Marketplace.....	5
You Can Now Analyze AWS Marketplace AMI Software Spend Using Cost Allocation Tags.....	8
Determining When to Buy Annual Licenses in AWS Marketplace.....	12
How to Subscribe to AWS Marketplace Seller Private Offers.....	18
Centralizing Payments in AWS Marketplace with Consolidated Billing.....	23
AWS Marketplace Use Cases.....	31
Contributors.....	34

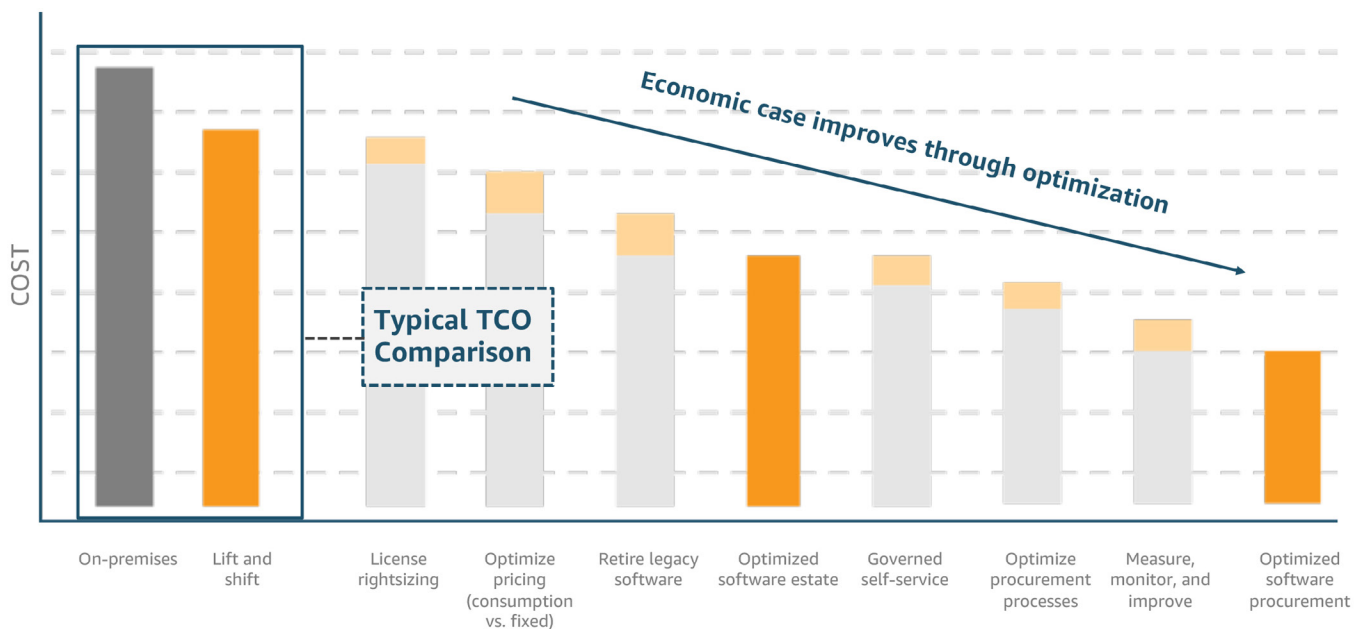
AWS Marketplace Introduction

When implementing new operating models, it is important for organizations to control and optimize spend across software and infrastructure without compromising employee access to necessary tools.

Using AWS Marketplace enables you to lower the cost of your software sourcing and procurement, in much the same way as your move to the cloud.

AWS Marketplace allows you to reduce costs initially through right-sizing your license spend. Some AWS customers estimate that they are up to 30% overprovisioned or overcommitted to licensing in areas of their software estate. This is due to traditional licensing models requiring organizations to commit to what is needed at the peak of demand to get the optimal discount. When you move to a consumption licensing model, you get benefits from committing to a minimum demand, but there is no incentive to overcommit. You also gain benefits with right-sizing in other ways. For example, you will no longer need extra licenses for failover. That is because you would use the same licensing you use for production if you do failover to another AWS instance or region.

As you can see in the journey mapped below, you will start to retire your legacy software as you adopt more flexible licensing models. As these are retired, you will then have an optimized software estate for your infrastructure footprint. And by monitoring costs and adjusting as you go, you will see continuous improvement and control over your IT budget.



AWS Marketplace Introduction

In this ebook, we will offer prescriptive guidance on cost management features such as flexible billing, cost tagging, and services such as AWS Budgets and AWS Cost Explorer. Additionally, AWS Marketplace seller solutions will be featured as available options for optimizing your spend in AWS.

The featured solutions for this use case that can be accessed in AWS Marketplace:

[Spot.io](#)

[CloudZero Cost Management](#)

[CloudHealth Cloud Service Management](#)

[Apptio Cloudability](#)

How to Optimize Cost Savings in AWS Marketplace



Introduction

AWS Marketplace is a curated digital catalog that provides a range of subscription and pricing options to help ensure you only pay for what you use on the software solutions you need. This article explains the cost-saving opportunities of pay-as-you-go pricing as well as free trials and annual subscriptions. These pricing models offer savings for a wide range of use cases for both new AWS Marketplace customers and long-term users.

Pay-as-you-go pricing

AWS offers [pay-as-you-go pricing](#), which enables you to pay only for what you use. Once you stop your usage, there is no fee to terminate, and billing stops immediately. Pay-as-you-go pricing offers you the chance to save over on-premises infrastructure without buying a perpetual software license. With services like [Amazon Elastic Compute Cloud \(EC2\)](#), this means you can be flexible with your server allocation by scaling up during peak traffic and scaling back down during periods of lesser need. Since Amazon Machine Image (AMI) products in AWS Marketplace run on Amazon EC2, you get the same flexibility with preconfigured software applications. You can use our [Total Cost of Ownership Calculator](#) to learn how much you can save with this pricing model.

Free trials

Free Trials give you the opportunity to try AMI products in AWS Marketplace without making long-term commitments. AMI products that are launched through AWS Marketplace have two charges associated with them: a software charge from AWS Marketplace and an Amazon EC2 charge for the instance used to run the product. You can find the breakdown of these charges in the pricing section of the product page, as seen in the image below.

<input checked="" type="radio"/> t2.medium ★Vendor Recommended	\$0.27	\$0.046	\$0.316
<input type="radio"/> m3.medium	\$0.50	\$0.067	\$0.567
<input type="radio"/> m3.large	\$0.55	\$0.133	\$0.683
<input type="radio"/> m3.xlarge	\$0.60	\$0.266	\$0.866
<input type="radio"/> m3.2xlarge	\$0.65	\$0.532	\$1.182
<input type="radio"/> c3.large	\$0.90	\$0.105	\$1.005

Many AMI products offer a free trial period, which allows you to experience the full version of the product and test one instance without the associated software charge. You can easily find the products that offer free trials by looking for this banner on the product page:



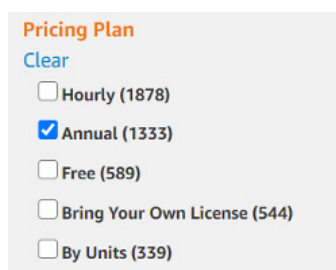
The length of the trial is determined by the seller and will be identified on the product page. Free trials are usually between 5 and 31 days in length and begin at the time you subscribe to the product. About three days before the end of your free trial, you'll receive a reminder email letting you know that your trial is almost up. If you like the product and want to continue using it, there's nothing you need to do; the product will keep running as normal and will convert to a paid offer when the free trial expires. If you want to cancel the product, you can easily do so from your [AWS Marketplace console](#).

Annual subscriptions

Another way to save on AWS Marketplace software is by committing to long-term usage through an annual subscription. This option provides a discount over hourly software rates for products that you need to run 24/7. In some cases, customers have saved up to 90 percent. Products that offer annual subscriptions will show you the savings in the pricing section of the product page, as seen in the image below:

<input checked="" type="radio"/> t2.medium ★Vendor Recommended	\$1,200.00	\$0.046	49%
<input type="radio"/> m3.medium	\$1,200.00	\$0.067	73%
<input type="radio"/> m3.large	\$1,200.00	\$0.133	75%
<input type="radio"/> m3.xlarge	\$1,200.00	\$0.266	77%
<input type="radio"/> m3.2xlarge	\$1,200.00	\$0.532	79%
<input type="radio"/> c3.large	\$1,200.00	\$0.105	85%

You can buy an annual subscription when first launching the product, or you can apply it to an instance of a product that is already running. To apply an annual subscription to your running instance, all you need to do is purchase the subscription that matches the size of your instance. The discount will take effect automatically. You can easily find annual subscription products by using the filters on the left-hand side of the search page in AWS Marketplace. See the image below for the annual filter applied to a product search.



While annual subscriptions don't apply to AWS Infrastructure charges, you can pair your subscription with an [Amazon EC2 Reserved Instance](#) for even greater savings. Similar to annual subscriptions, Reserved Instances provide discounts on Amazon EC2 instances running 24/7 for a year-long term. As long as the instance size of the annual subscription and Reserved Instance match, you'll save cost on both.

Conclusion

Free trials in AWS Marketplace provide you with the flexibility to try new products. The pay-as-you-go pricing model in AWS Marketplace offers the same flexibility for your core infrastructure, and you will only pay for what you use. Annual subscriptions and Reserved Instances provide greater savings when you're ready to make a long-term commitment.

Author: Andre Bishai, Technical Account Manager

You Can Now Analyze AWS Marketplace AMI Software Spend Using Cost Allocation Tags



Introduction

AMIs deployed on AWS Marketplace will now inherit tags from their corresponding Amazon EC2 instances. This update provides greater spend management visibility into your AWS Marketplace software costs. Additionally, it will not impact your billing process or invoiced amount. You can use tags to categorize, allocate, and perform cost reporting on AWS Marketplace usage-based AMI spend. Existing and new Amazon EC2 instance tags will now automatically populate against corresponding AWS Marketplace AMI usage.

Once activated, you can use [Cost Allocation Tags](#) to identify and track AWS Marketplace AMI usage. You can use the tools accessible via [AWS Cost Management](#) or your preferred cloud spend analysis tool.

This article shows the key spend management features you can now enable, showing how to do the following through [AWS Cost Explorer](#), [AWS Budgets](#), and [AWS Cost and Usage Report](#) (CUR):

1. Use tags to identify your AWS Marketplace AMI software usage in AWS Cost Explorer
2. Use tags to set AWS Budgets for AWS Marketplace AMI software usage or spend
3. Use tags to identify and categorize AWS Marketplace AMI software usage line items in the AWS CUR

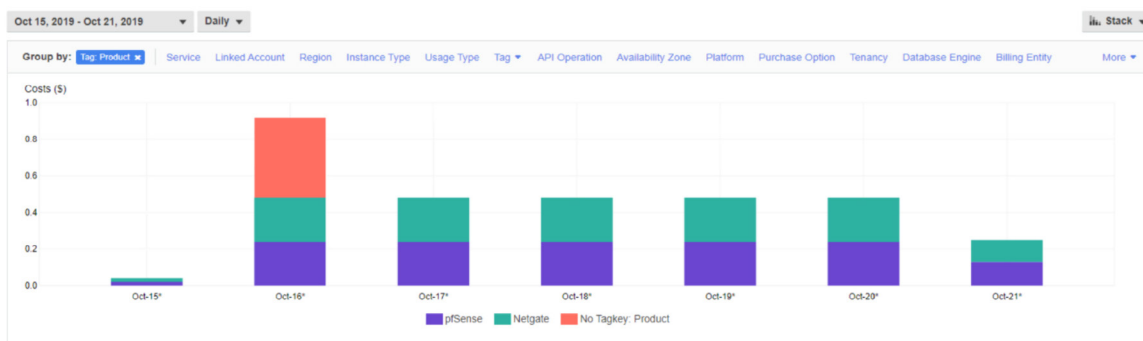
Prerequisites

It's important to have some familiarity with AWS cost management tools. If you are new to cost management for AWS Marketplace, start by reading [this blog post](#).

Use tags to identify your AWS Marketplace AMI software usage in AWS Cost Explorer

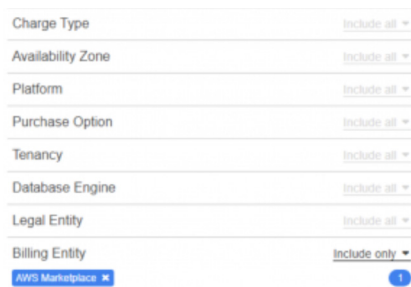
In AWS Cost Explorer, you can filter and group your AWS Marketplace AMI-based usage spend by cost allocation tags. The following image shows the three AWS Marketplace AMIs purchased on my account in a stacked bar chart view, denoted by different colored sections. The pfSense pay-as-you-go (PAYG) AMI is in purple, the Netgate PAYG AMI is in green, and the pre-paid AMI is in pink.

Note the pink section that shows “No Tagkey” on October 16. This denotes the upfront charge on my pre-paid AWS Marketplace AMI. Tagging upfront charges is not supported by AWS. It will continue to show up in Cost Explorer without an associated cost allocation tag.



To filter and group your AWS Marketplace AMI-based usage spend by cost allocation tags, do the following:

- At the bottom of the right sidebar, for the Billing Entity filter dimension, select Include only and select AWS Marketplace from the drop-down menu. This narrows down your AWS Cost Explorer view to only show your AWS Marketplace charges. See the following screenshot showing this Billing Entity selection.



- In the upper left, set your grouping dimension by selecting Group by and choose your Tag Key. In this example, my Tag Key is 'Product.' The green and purple column sections now show the newly-available tag values on two of my products accruing PAYG AWS Marketplace AMI-usage spend.

You can customize your own views and create reports for cost analysis using tags in combinations of grouping and filtering dimensions. For example:

- To analyze total AWS Marketplace charges by software service, adjust the Group by dimension and select the Service To isolates costs for a specific software service use the Service filter on the right side.
- To analyze total AWS Marketplace costs by linked accounts in your AWS Organization, navigate to the Group by dimension and select the Linked Account To isolate costs for a specific linked account, use the Linked Account filter on the right side.

Use tags to set AWS Budgets for AWS Marketplace AMI software usage or spend

Using AWS Budgets, you can create a budget by filtering on both Billing Entity and Tag. This enables a more granular way to monitor and track your AWS Marketplace AMI software usage and spend. Create this AWS Budget using the following steps:

- In the AWS Billing Console, select Budgets and choose the Create budget
- Enter your budget type and select dates and amounts. Then select a fixed or monthly budgeted amount.
- To isolate budgeted spend based on AWS Marketplace as billing entity, select the Billing Entity filter option.
- Select the Tag filter and choose the tag key and values you want to budget against. From the products I'm running, I've chosen the Tag Key: Product and Tag Values: Netgate and pfSense. See the following screenshot.



- At the last step, enter your email and customize your budget alerts to notify you when you've reached certain thresholds of your budgeted amount. You can also use [Amazon Simple Notification Service](#), or [AWS Chatbot](#) to create budget alerts.

Alternatively, you can also create an AWS Budget by only filtering on specific tag values without specifying Billing Entity. This will capture and track all usage-based spend under those tag values inclusive of AWS Marketplace AMI software usage charges.

Use tags to identify and categorize AWS Marketplace AMI software usage line items in the AWS Cost and Usage Report

The AWS Cost and Usage Report (CUR) is a more granular tool to track your AWS usage and charges. This report is often the source of data for third-party cost management tools. The following screenshot shows a subset of the columns and line items available in the AWS CUR. This CUR provides both infrastructure and AWS Marketplace software charges associated with Amazon EC2 tags, shown on separate line items.

identity/TimeInterval	bill/BillingEntity	lineItem/Operation	lineItem/ResourceId	resourceTags/user:department	resourceTags/user:software	resourceTags/user:type
			arn:aws:ec2:us-east-1:667689228844:instance/i-00049e2afb37e0a			
2019-09-25T15:00:00Z/2019-09-25T16:00:00Z	AWS Marketplace	Usage			data-sunrise	fcp
2019-09-25T15:00:00Z/2019-09-25T16:00:00Z	AWS	RunInstances	i-00049e2afb37e0a		data-sunrise	fcp
2019-09-25T15:00:00Z/2019-09-25T16:00:00Z	AWS	RunInstances	i-00049e2afb37e0a		data-sunrise	fcp
			arn:aws:ec2:sa-east-1:667689228844:instance/i-0aa75f3f7ec2e9f3d	demo	ubuntu	software-paid
2019-09-25T15:00:00Z/2019-09-25T16:00:00Z	AWS Marketplace	Hourly		demo	ubuntu	software-paid
2019-09-25T15:00:00Z/2019-09-25T16:00:00Z	AWS	RunInstances	i-0aa75f3f7ec2e9f3d	demo	ubuntu	software-paid
2019-09-25T15:00:00Z/2019-09-25T16:00:00Z	AWS	RunInstances	i-0aa75f3f7ec2e9f3d	demo	ubuntu	software-paid
2019-09-25T15:00:00Z/2019-09-25T16:00:00Z	AWS	RunInstances	i-0aa75f3f7ec2e9f3d	demo	ubuntu	software-paid

Conclusion

This article explained the updates we have made to AWS Marketplace AMI software usage tagging. It also showed how you can use them to get more spend visibility using AWS Cost Explorer, AWS Budgets, and the AWS CUR.

Author: Shu He, Senior Product Manager

Determining When to Buy Annual Licenses in AWS Marketplace



Introduction

Almost half of the AMI products in AWS Marketplace offer annual subscription options, so customers often ask me how to know when it's best to purchase an annual license. In certain cases, using annual licenses to procure AMI products in AWS Marketplace can be a significant cost-saving mechanism for your business. However, it is important to understand the annual pricing model and the various factors that need to be considered before you make the jump. In this article, I will offer an approach for determining when it's best to buy annual licenses for products in AWS Marketplace.

How do annual licenses work for software products in AWS Marketplace?

Certain software products in AWS Marketplace offer an annual subscription pricing model. An annual license enables you to make a one-time, upfront payment for the following year on a per-instance basis. For each annual license you purchase, you don't pay any hourly usage fees for the next year for a single Amazon EC2 instance with the associated instance type. However, note that an annual license applies only to that single instance; any additional instances launched for that AWS Marketplace software product will be billed hourly.

Please note that the annual license costs discussed are related to AWS Marketplace software only. The AWS infrastructure costs associated with the products you launch are billed separately.

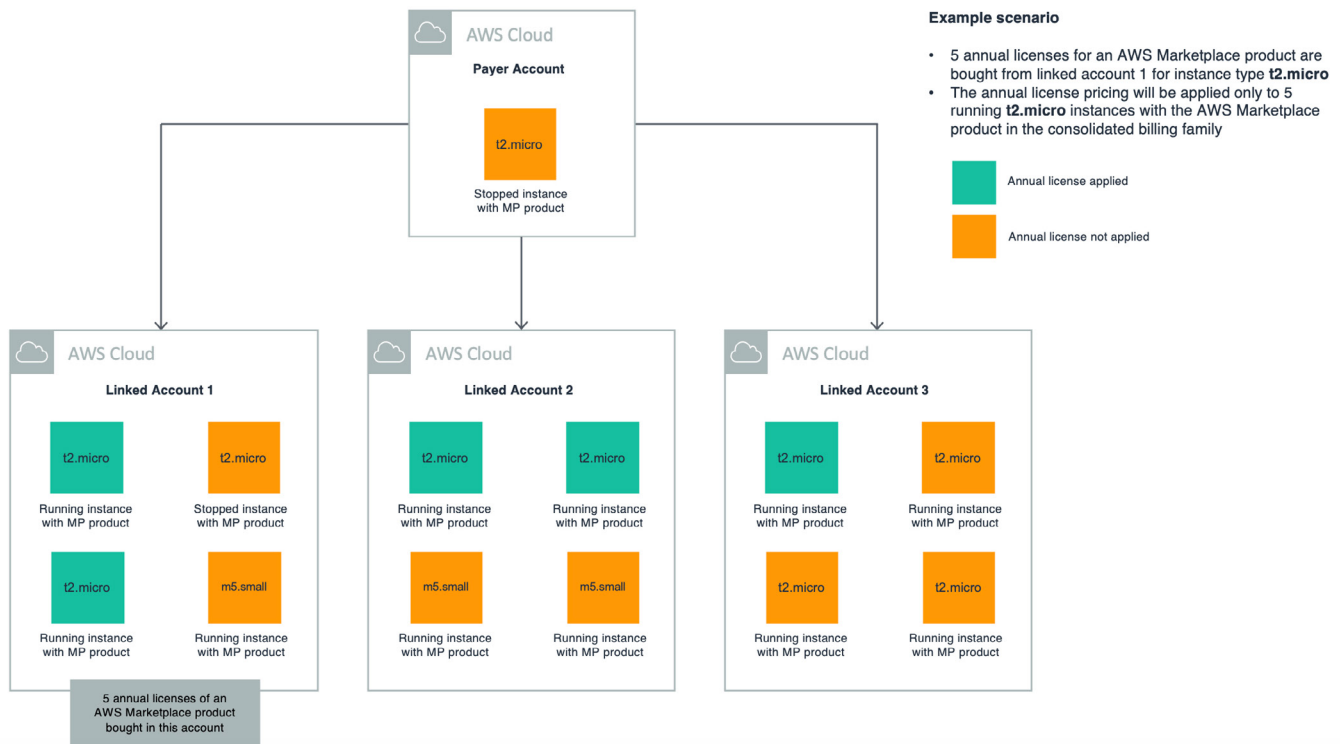
Annual licenses with Consolidated Billing for AWS Organizations

A vast majority of enterprises using AWS products prefer to use an [AWS Organizations](#) setup to maintain account structure and receive consolidated billing benefits. The following are key points that will help you understand how annual licenses and consolidated billing work together for different use cases in AWS Marketplace:

- Annual license tied to EC2 instance type
 - Annual license pricing is tied to an EC2 instance type and billed upfront.

- Annual license with multiple accounts
 - The annual license(s) can be used by any account in the consolidated billing family, provided they have Identity and Access Management (IAM) permissions to use the products in AWS Marketplace, for the given duration of the subscription.
- Annual license benefit allocation
 - AWS Marketplace will try to apply the annual pricing to the account, owning the annual license first.
 - If the owner account does not have a running EC2 instance with the product from AWS Marketplace, annual pricing is applied to a running EC2 instance in one of the other accounts in your AWS Organization.
 - Additionally, a discounted price is applied to as many concurrent instances with the associated instance type as the number of annual licenses purchased, launched across availability zones and regions. This will help you maximize your annual license usage in your consolidated billing family if you have a multi-region setup.
 - Note: If your AWS Organizations has multiple organizational units (OUs), it's important to consider that you cannot restrict annual license benefits to a particular OU in your organization.

In the diagram below, I have provided an AWS Organizations view to describe how an annual license purchased from AWS Marketplace would be applied within a consolidated billing family.

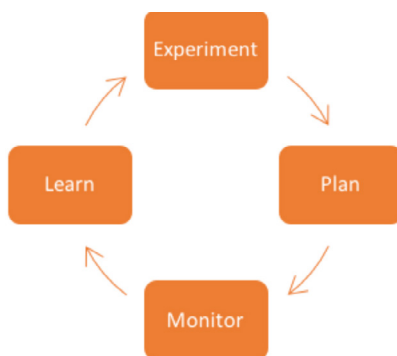


How is annual license pricing applied in this scenario?

- Let's assume that there is one product from AWS Marketplace with five annual licenses for 't2.micro' sized EC2 instances purchased in the Linked Account 1 of the AWS Organizations shown in the diagram above. Also, all the EC2 instances launched in this scenario will be running on the purchased AWS Marketplace product AMI.
- In the payer account, annual license is not applied to the EC2 instance of the size 't2.micro', since it is in the stopped state.
- In the Linked Account 1 above, annual license is applied to the two running EC2 instances of the size 't2.micro'. The annual license is not applied to a running EC2 instance of the size 'm5.small' because it is not the correct instance type, or to the 't2.micro' instance because it is stopped.
- In the Linked Account 2 above, annual license is applied to the two running EC2 instances of the size 't2.micro'. The annual license is not applied to the two running EC2 instances of the size 'm5.small' because they are not the correct instance type.
- At this point, four instances are utilizing the annual pricing licenses for the selected AWS Marketplace product, leaving us with one remaining license.
- The Linked Account 3 above receives annual license pricing for only one of the running EC2 instances of the size 't2.micro'. No other running EC2 instances of the size 't2.micro' in this account will receive annual license pricing, since the five annual licenses are exhausted in the consolidated billing family.
- If one of the t2.micro instances is stopped, any one of the other t2.micro instances in the other accounts may pick up the annual license. This is not deterministic and depends on which instance next sends a metering record to the AWS Commerce Platform.

Overall approach for annual license selection

As an organization, it is ideal to have a well-defined process for your procurement strategy for buying annual licenses in AWS Marketplace. The following diagram provides you a model approach for purchasing annual licenses in AWS Marketplace:



1. Experiment on a small scale

Spending time experimenting with products in AWS Marketplace during the planning phase can help ensure that you don't end up with excess licenses. Here are my tips for the experiment phase:

- Buy small to estimate usage

Before you commit to an annual license for any product in AWS Marketplace, consider trying out a product of your interest with a small instance type (e.g. [t2.micro](#)), with hourly billing to forecast your production capacity requirements to avoid incurring significant charges. This will help you right-size your instance size while buying an annual license, since you cannot change it after purchase to another instance size.

You can also take advantage of free trials offered by several products. Your findings in the experimentation phase will allow you to reduce final operating cost by right-sizing your annual license purchases.

- Buy high-confidence products

Buy annual licenses for products that you think you will be running continuously through the year so that you reap the cost-benefit of annual licensing. For instance, if you buy an annual license that is 25 percent cheaper than the hourly price for a year, then it makes sense to buy the annual license if you have confidence that the product will run for more than nine months in a year, i.e., for more than 75 percent of the year. This will help you focus on products in which you have a high degree of confidence from an operational perspective and gain savings from the annual licenses that you purchase.

- Choose products with high dollar savings

After you've determined high-confidence products that match your requirements and offer the support level that you desire, you should target buying annual licenses for products with the highest annual cost savings compared to the hourly rate. You can find out the price comparison between the annual and hourly rates in the pricing section of supported products in AWS Marketplace. You can see a sample product listing with annual pricing below:

The table shows current software and infrastructure pricing for services hosted in US East (N. Virginia). Additional taxes or fees may apply.

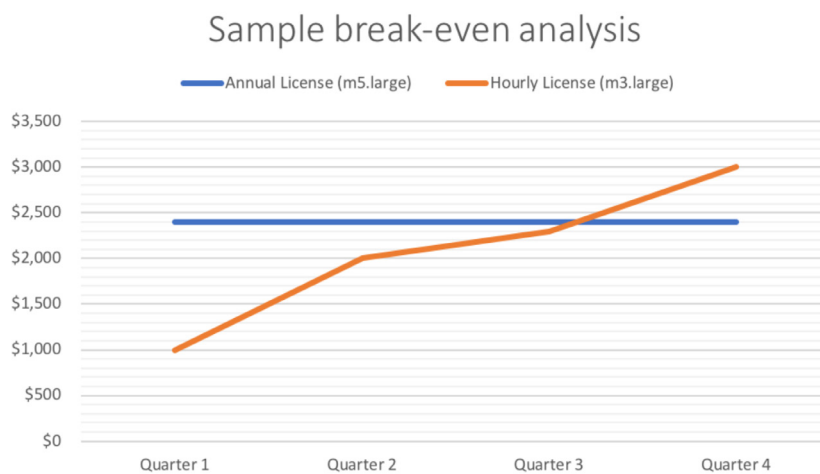
VM-Series Next-Generation Firewall Bundle 2
Switch to annual pricing for savings up to 60%

	Hourly	Annual	
EC2 Instance type	Software/yr	EC2/hr	Percent Savings (%)
<input type="radio"/> m3.xlarge	\$4,500	\$0.266	60%
<input type="radio"/> m3.2xlarge	\$4,500	\$0.532	60%
<input checked="" type="radio"/> m4.xlarge ★ <i>Vendor Recommended</i>	\$4,500	\$0.2	60%
<input type="radio"/> m4.2xlarge	\$4,500	\$0.4	60%
<input type="radio"/> m4.4xlarge	\$4,500	\$0.8	60%
<input type="radio"/> c3.2xlarge	\$4,500	\$0.42	60%

2. Planning for finances and instance type

Once you shortlist the most suitable products and instance types in the experimentation phase, meet with your business stakeholders to review the financial commitment and a break-even analysis for the selected products. Additionally, you should obtain a commitment from the technical stakeholders on the use of the proposed instance types for the annual licenses to be obtained.

I have provided a sample break-even analysis below, where an annual license for an m5.large instance costs \$2,400 annually, while an hourly license for the same instance would cost \$3,000 for 12 months of continuous use. The break-even point for this annual license with an [m5.large](#) instance type is 9.6 months of continuous use.



3. Regular monitoring

After purchasing annual licenses from AWS Marketplace, monitor metrics around your annual license utilization as well as unused annual licenses. This will provide you a clear picture on your AWS Marketplace spend and help you maximize annual license usage across your consolidated billing family.

4. Continuous learning

Your AWS usage will vary every month, and you will eventually see an upward or a downward trend for your usage and cost. To account for these changes, you will need to set up mechanisms to continuously learn from your AWS Marketplace spend metrics. The following tips will help you stay on top of your AWS spend:

- Regularly monitor reservation usage to aid decision making during renewals

Before the end of every annual license term, assess your yearly metrics and decide if that annual license provides the intended cost benefits. Your renewal decision should be based on your findings from this exercise.

- Monitor expiration dates

Since every annual license has a different start/end date, have a process around actively monitoring these dates.

- Re-analyze annual license candidates

Your metrics around hourly AWS Marketplace products will help you determine if there are any candidates that can boost your cost savings. Once you perform that analysis, I recommend repeating steps 1-4 for all your new annual licensing product candidates.

Additional saving opportunities

Once you have purchased your annual license for a product in AWS Marketplace, you can combine your annual license commitment with infrastructure pricing discounts by using [Amazon Reserved Instances](#). The combination of annual pricing for AWS Marketplace and discounted pricing for Amazon Reserved Instances will provide you with the highest overall cost savings for your total yearly commitment.

If you are considering the purchase of large volumes of annual licenses, you can check if the product ISV provides an option of [private offer pricing](#). This will allow you to negotiate custom price and End User License Agreement (EULA) terms for your software purchases.

Conclusion

This article explained a methodology for the selection of annual licenses using a four-step approach. You can follow these steps to define your AWS Marketplace procurement strategy and utilize the cost benefits offered by the annual licensing model.

Author: Sagar Khasnis, Partner Solutions Architect

How to Subscribe to AWS Marketplace Seller Private Offers



Introduction

AWS Marketplace Seller Private Offers is a purchasing program. It enables customers and third-party sellers in AWS Marketplace to negotiate custom prices, payment schedules, and end user licensing agreement (EULA) terms for software purchases.

This article shows how you as a customer subscribe to a Seller Private Offer in AWS Marketplace. I cover the following product types in this post: SaaS Contract, SaaS Subscription, AMI Hourly/Annual, and AMI Contracts.

Accessing your Seller Private Offers

You can access your Private Offers in two ways:

1. When a seller makes you a Private Offer, you receive a Seller Private Offers link and instructions directly from the seller or the AWS Marketplace customer desk via email. Select the offer link to get to the fulfillment page.
2. If your account is one the seller has specified for the Private Offer, you can subscribe directly from the product detail page. To do this, do the following:
 1. Go to [AWS Marketplace](#).
 2. Sign in to your AWS account. This must be the account you specified with the third-party seller to create your offer. After you have successfully logged in, you are redirected to the AWS Marketplace home page.
 3. At the top of the page, enter the product name into the search bar. Select the magnifying glass icon to the right of the search box to search.
 4. Select the product you are searching for from the list of search results. Scroll down to the Product Overview section and review the fulfillment or delivery method. SaaS products appear as a fulfillment method, while Amazon Machine Image (AMI) products appear as a delivery method.
 5. At the upper right of the page, select Continue to Subscribe. The next screen you see varies on the fulfillment or delivery method of the product you are purchasing.

Reviewing and confirming AMI and SaaS subscription Seller Private Offers

Private Offers for AMI and SaaS subscriptions give you custom pricing for pay-as-you-go billing. To review and confirm your Private Offers:

1. Locate the desired Private Offer. Private Offers are indicated on the subscription page with a green Private Offer flag just under the Terms and Conditions
2. Review the terms of the Private Offer. In the upper right-hand corner, select Accept Terms. This confirms your subscription and enables you to receive the corresponding entitlements.
3. Review the confirmation.

Reviewing and confirming your AMI annual subscription Private Offer

To review and confirm your Private Offer for an Amazon Machine Image (AMI) annual product:

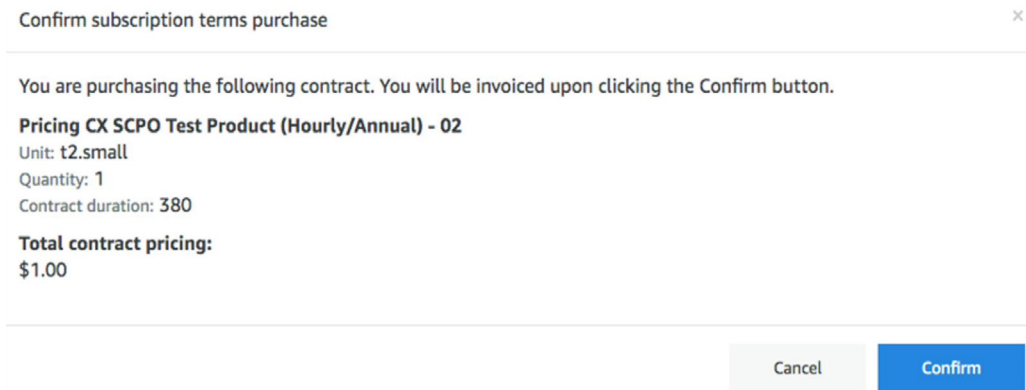
1. Review the details of your Private Offer.
2. Select the Accept Terms button.
3. Following Save money by purchasing an annual subscription, select the radio button next to View options.
4. To purchase additional licenses for offers without a flexible payment schedule, select Add Another License.
5. Select your desired instance type, and then enter the desired number of subscriptions.
6. Select Add and then Purchase.
7. When finished, select Pay Now.

Reviewing and confirming your AMI contracts without Flexible Payment Scheduler

To review and confirm your AMI contracts without Flexible Payment Scheduler:

1. Select Accept Terms.
2. Select your desired instance type using the drop-down menu following Instance Type.
3. In the How Many Licenses(s) box, enter the number of licenses you want. At this stage, you may also purchase licenses for additional instance types.

- Once you've added all your desired instances, select Create Contract. A confirmation screen similar to the following screenshot will appear. Review the specifications and select the blue Confirm button in the lower right.



- Your contract for your software has completed successfully. Select Continue to Configuration.

Reviewing and confirming your AMI contracts with Flexible Payment Scheduler

For AMI contracts with Flexible Payment Scheduler, do the following:

- Review the private offer details, including the flexible payment schedule. When ready, select Accept Terms to proceed to the next screen. Your acceptance will show as pending.
- To the right of the details box, select the yellow Accept Contract button.
- Review the details listed in the confirmation window. When ready, select the blue Confirm button in the lower right.
- Your contract for your software has completed successfully. Select Continue to Configuration.

Reviewing and confirming your SaaS contracts Seller Private Offers

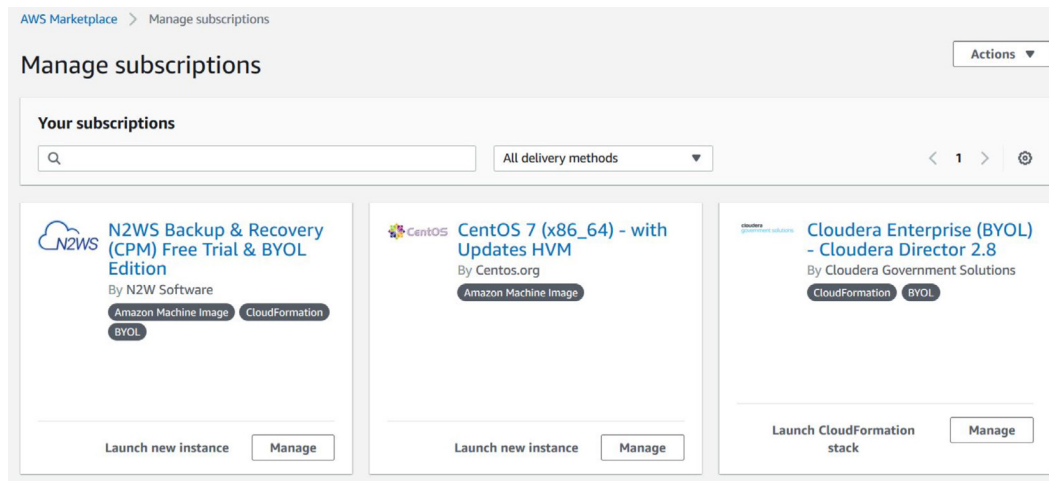
For SaaS contracts, you either commit to an upfront payment or pay in installments with a flexible payment schedule.

- Review the details of the Private Offer and payment schedule (if applicable). Select or confirm your desired units and contract duration. When ready, choose the orange Create Contract This takes you to a confirmation page.
- On the confirmation page, select the orange Pay Now button in the lower right corner

To complete the registration directly on the seller's website, select the orange Setup your account button at the bottom of the page.

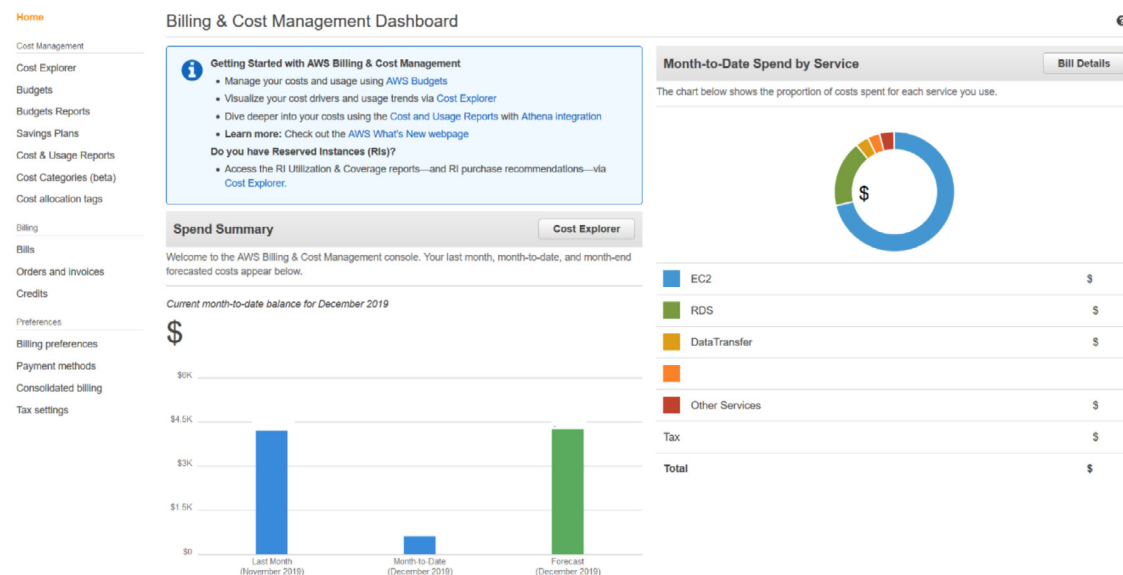
Viewing subscription details, billing, and invoicing

You can access and review all your AWS Marketplace purchases by visiting Your Marketplace Software. To access this, you must be logged in to your AWS account. Navigate to AWS Marketplace. In the upper right corner, select your logged-in identity. From the drop-down menu, select Your Marketplace Software. This redirects you to the AWS Marketplace Console, as shown in the following screenshot.



Billing and invoicing for your Seller Private Offers purchases populate in the same format as all your other purchases from AWS Marketplace. You receive AWS invoices monthly for usage charges and recurring fees. For one-time fees, such as the upfront fee for an AMI annual without a flexible payment schedule, you are charged immediately. At any time, you can view estimated charges for the current month and final charges for previous months.

To open the Billing and Cost Management Dashboard, first sign into the AWS Management Console. Then open the [Billing and Cost Management](#) console, as shown in the following screenshot.



Conclusion

This article showed how to subscribe to private offers of various product types, including SaaS Contracts, SaaS Metered, AMI Hourly/Annual and AMI Contracts. It also showed where you can view and manage your subscriptions and how to navigate to your billing console to access your billing and invoices.

Authors: Carmin Covarrubias, Sales Operations Specialist
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Centralizing Payments in AWS Marketplace with Consolidated Billing

Introduction

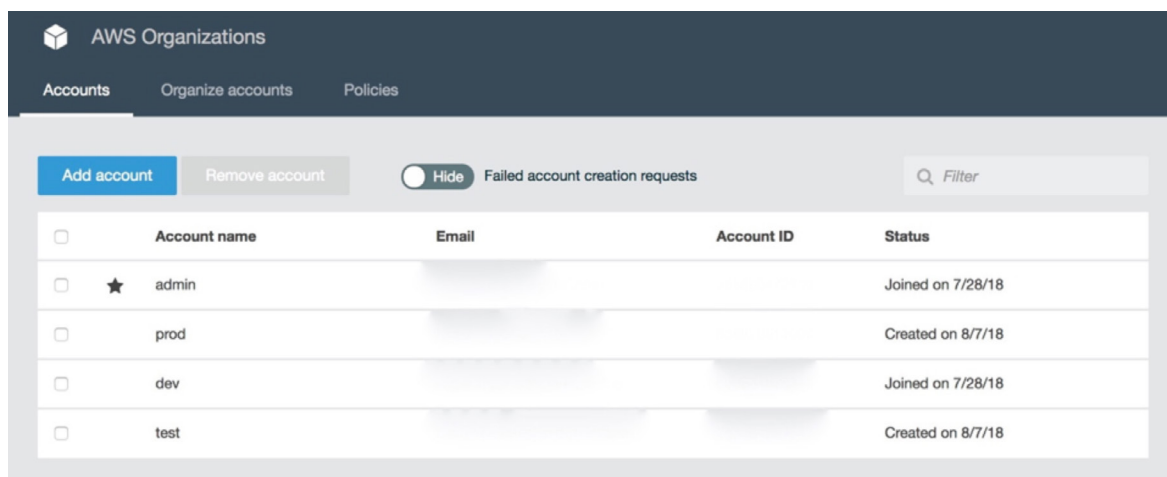
This section will take you through the pricing models in AWS Marketplace and give you a simple mechanism to maintain your billing information from one central account using [AWS Organizations](#).

This article assumes a working knowledge of AWS Organizations. You can either [create new accounts](#) or use [existing accounts](#) so that you are able to set up a hierarchy of master and linked member accounts.

How do I set up my accounts with AWS Organizations?

First, log in to the account you'd like to appoint as the master account. This is the account for which you'll receive a single bill for all your accounts. Then use the AWS Organizations console to set up [consolidated billing](#). This feature enables you to receive one bill for multiple accounts, easily track charges on each account, and combine usage from multiple accounts for volume pricing discounts. Before you get started, read the best practices for setting up a [multi-account billing strategy](#).

This sample scenario uses one master account and three member accounts in AWS Organizations. The setup should look like the following image.



The screenshot shows the AWS Organizations console interface. At the top, there are navigation tabs for 'Accounts', 'Organize accounts', and 'Policies'. Below the tabs, there are buttons for 'Add account', 'Remove account', and a toggle for 'Hide Failed account creation requests'. A search bar labeled 'Filter' is also present. The main content is a table with the following columns: 'Account name', 'Email', 'Account ID', and 'Status'. The table lists five accounts: 'admin' (marked with a star), 'prod', 'dev', and 'test'. The 'Status' column shows 'Joined on 7/28/18' for 'admin' and 'dev', and 'Created on 8/7/18' for 'prod' and 'test'.

	Account name	Email	Account ID	Status
<input type="checkbox"/>	★ admin			Joined on 7/28/18
<input type="checkbox"/>	prod			Created on 8/7/18
<input type="checkbox"/>	dev			Joined on 7/28/18
<input type="checkbox"/>	test			Created on 8/7/18

What are the pricing options available for software solutions in AWS Marketplace?

Before beginning to select and deploy software solutions from AWS Marketplace in the provisioned accounts, let us review the different pricing models available in AWS Marketplace.

The following table lists the pricing models available in AWS Marketplace. A pricing model consists of two main pricing components: software cost and infrastructure cost. The software seller controls the software pricing, and AWS defines the infrastructure cost.

Pricing Model	Software Billing Frequency
Amazon Machine Image (AMI) Pricing	
Bring Your Own License (BYOL)	Free
Free	Free
Hourly	Hourly
Hourly with Free Trial (up to 31 days)	Free for the most expensive instance, all other instances will be charged at an hourly rate
Hourly with Monthly	The monthly fee is charged every month regardless of usage, while the hourly fee is applied for additional consumption
Hourly with Annual	Annual charges are applied for number of subscriptions purchased, hourly fee is applied for additional consumption
Hourly with Free Trial (up to 31 days) combined with Annual	Free for 1 instance type, annual for number of subscriptions purchased, hourly for overage consumption
Monthly (Free Trial and Annual pricing cannot be combined with Monthly pricing)	Monthly fixed, pro-rated
Usage Based (Free Trial and Annual pricing cannot be combined with Usage pricing)	Hourly, but varies based on users, data, bandwidth, or hosts
SaaS Pricing	
SaaS Subscriptions	Hourly, but varies based on units, hosts, data, requests, or users. The metering information is sent by the seller to AWS every hour.
SaaS Contracts	Upfront billing, based on usage dimension defined by seller, and quantity selected by customer. No metering, but entitlement verification by AWS Marketplace
Other Options	
Seller Private Offers	Custom, based on the negotiation between seller and buyer

Note: AWS infrastructure cost is priced by the hour, based on the instance type. You're charged once a month for \$0.10 per GB-month of provisioned storage. The estimated cost assumes [Amazon EC2 On-Demand Instances](#) but doesn't include [data transfer fees](#). For lower prices, you can use [Reserved Instances](#) or [Spot Instances](#).

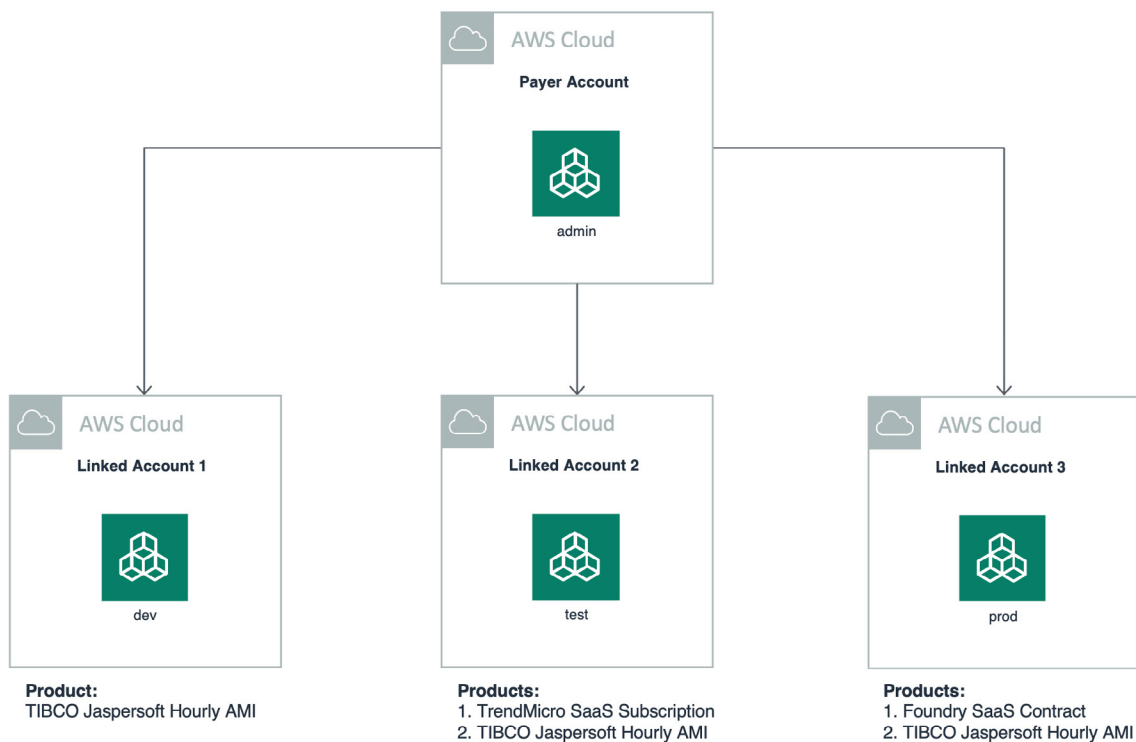
This is a brief summary of the pricing models available. For more information, see details on [product pricing](#).

Walkthrough

This scenario uses a combination of one master account and three member accounts. The following three products have been chosen with different pricing models:

- Master Account: No deployments
- Member Account 1: TIBCO Jaspersoft Reporting and Analytics for AWS (hourly)
- Member Account 2: Trend Micro Deep Security as a Service (SaaS subscription), TIBCO Jaspersoft Reporting and Analytics for AWS (hourly)
- Member Account 3: Foundry (SaaS contract), TIBCO Jaspersoft Reporting and Analytics for AWS (hourly)

The following image shows these details in the hierarchy of the master and member accounts.



Step 1: Grant appropriate permissions to the member account users

I used the AWS managed policy `AWSMarketplaceFullAccess` to subscribe and deploy AWS Marketplace products in their environments.

Note: We advise that your procurement team accepts the end-user license agreement (EULA) on behalf of your organization only after legal review.

For more information about how to create an Identity and Access Management (IAM) policy and attach it to a principal, see [Creating IAM Policies](#) and [Adding and Removing IAM Policies](#).

Step 2: Subscribe to and deploy products in AWS Marketplace from the member accounts

In this case, the user from your procurement team needs to subscribe to an AWS Marketplace product from the AWS Management Console.

Important: For pricing and consolidated billing for Seller Private Offers, the procurement team must first subscribe to the product with your master account. All subscriptions for member accounts are blocked, pending the master account subscriptions.

To subscribe to the product:

1. Sign in to the [AWS Management Console](#) and open the AWS Marketplace Console at <https://aws.amazon.com/marketplace/>.
2. In the Search text field, enter the product name (for example, Trend Micro Deep Security) and select the product from the search results.
3. Choose Continue to Subscribe, which takes you to the Terms and Conditions page.
4. For the dev, test, and prod account users, the procurement team should subscribe to [TIBCO Jaspersoft Reporting and Analytics for AWS \(Hourly\)](#), which provides you with an AMI pricing model of per host per hour. Choose any of the pricing options listed.
5. Review and accept terms specified in the seller's EULA and the AWS Customer Agreement.

- On the product pricing page, select the desired pricing model and click Continue to Subscribe.

The table shows current software and infrastructure pricing for services hosted in US West (Oregon). Additional taxes or fees may apply.

EC2 Instance type	Software/hr	EC2/hr	Total/hr
m3.medium	\$0.61	\$0.067	\$0.677
m3.large	\$1.24	\$0.133	\$1.373
m3.xlarge	\$2.54	\$0.266	\$2.806
m4.large * Vendor Recommended	\$1.14	\$0.1	\$1.24
m4.xlarge	\$2.28	\$0.2	\$2.48
m4.2xlarge	\$4	\$0.4	\$4.4

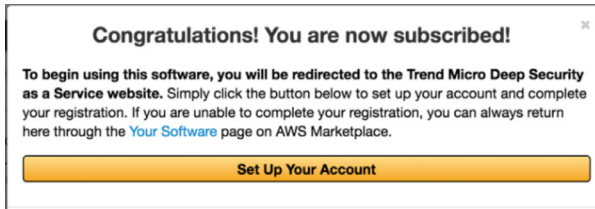
- Users with access to launch this AMI can choose Continue to Configuration and launch the AMI in the region of their choice. For alternative deployment options, see [Launching JasperSoft for AWS](#) and use an [AWS CloudFormation](#) template provided by the seller.

- For the test account user, the procurement team should subscribe to [Trend Micro Deep Security as a Service](#), which provides you with a SaaS subscription pricing model. To subscribe to the product, click Subscribe.

Usage	Cost
Any Micro, Small or Medium EC2 instance types	\$0.01 / host / hour
Any Large EC2 instance types	\$0.03 / host / hour
Any Xlarge or larger EC2 instance types	\$0.06 / host / hour
Other Cloud - 1 Core	\$0.01 / host / hour
Other Cloud - 2 Cores	\$0.03 / host / hour
Other Cloud - 4+ Cores	\$0.06 / host / hour
Data Center / Not Cloud	\$0.06 / host / hour
Amazon WorkSpaces	\$0.01 / host / hour

Note: This software is priced along a consumption dimension. Your bill will be determined by the number of hosts you use per hour.

- To set up your account with the software seller, click Set up your account, and you'll be redirected to the appropriate set up page on the seller's website.



- For the prod account user, the procurement team should subscribe to [Foundry SaaS Contract](#), which provides you with a SaaS contract pricing model. Once you click Continue to Subscribe, provide the quantity you need and your preferred contract length. You can also select the check box to opt in for automatic contract renewal. Once you're ready, click Create Contract.

Foundry SaaS Contract

You currently do not have a contract for this software. If you would like to purchase access, please select the level of access and contract duration below. After creating a contract you will be redirected to the vendor's site to setup and begin using this software.

How many units would you like to add to your contract?
Please conform to any quantity or region guidance from the seller for this product.

20,000 Foundry Events

How long do you want your contract to run?

1 month

12 months

I want to opt-in for automatic renewal. I understand that at the end of each term my then current contract configuration will be renewed at the then current prices for the software, which may be found in the pricing section of this page.

You may increase your contract at any time. Changes will be billed on a pro-rated basis. If you have opted in for automatic renewal, your contracts will automatically renew at the end of each term until you change your automatic renewal selection. You may change your automatic renewal selection at any time.

CREATE CONTRACT

You will be subscribed to this software and agree that your use of this software is subject to the pricing terms, your automatic renewal selection and the seller's [End User License Agreement \(EULA\)](#) and your use of AWS services is subject to the [AWS Customer Agreement](#).

Price today \$1.00

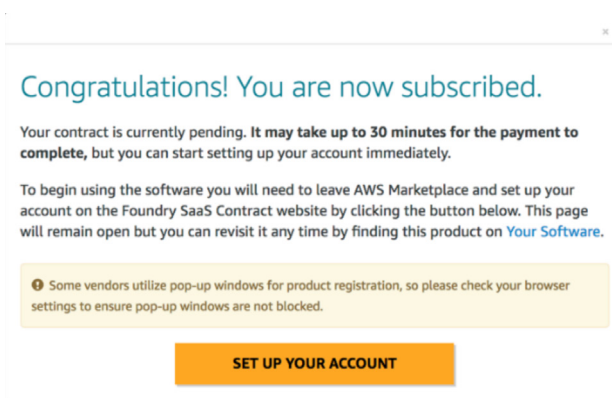
This configuration of Foundry SaaS Contract includes:

1	20,000 Foundry Events	\$1.00
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Below are the total costs for each unit type at each duration.
Additional taxes may apply.

	1MONTHS	12MONTHS
20,000 Foundry Events	\$1	\$1

- Similar to the previous product, to set up your account with the software seller, click Set Up Your Account and you'll be redirected to the appropriate set up page on the seller's website.



Step 3: Review your consolidated bill in the billing dashboard of the master account

Once your products are set up and running for at least one hour in the member accounts, you can see the billing information start flowing into the master account. To access the billing dashboard, choose Billing Dashboard under your account name. The following image shows the bill details consolidated by service in the payment summary.

Estimated Total	\$41.07
Invoiced Total	\$1.10
▼ AWS Marketplace Charges	\$1.10
Invoice 146268414 - AWS Service: Subscription charge 2018-08-09	\$1.10
Payment Summary	
▶ Payment Summary	
Bill details by service	+ Expand All
AWS Marketplace Charges	\$22.91
▶ Foundry SaaS Contract (sold by Thinglogix)	\$1.00
▶ TIBCO Jaspersoft Reporting and Analytics for AWS (Hourly) (sold by TIBCO Software, Inc.)	\$15.92
▶ Trend Micro Deep Security as a Service (sold by Trend Micro)	\$3.87
Taxes	
US Sales Tax to be collected	\$2.12

The following image shows the details of the bill broken out by admin, dev, prod, and test.

Bill details by service	Bill details by account	+ Expand All
Details By Account		Total
▶ admin		\$0.55
▶ dev		\$10.95
▶ prod		\$7.12
▶ test		\$22.38

You'll also be able to see details for the dev, prod, and test accounts and the software deployed under each account.

The following image shows the bill details for the dev account, which is running the hourly AMI with TIBCO Jaspersoft Reporting and Analytics for AWS.

▼ dev	\$10.95
AWS Marketplace Charges	\$8.09
▼ TIBCO Jaspersoft Reporting and Analytics for AWS (Hourly) (sold by TIBCO Software, Inc.)	\$7.34
▼ US West (Oregon)	\$7.34
TIBCO Jaspersoft Reporting and Analytics for AWS (Hourly) Hourly	\$7.34
AWS Marketplace Hourly Fee us-west-2 m3.large 5 Hrs	\$6.20
AWS Marketplace Hourly Fee us-west-2 m4.large 1 Hrs	\$1.14
Taxes	
US Sales Tax to be collected	\$0.75
AWS Service Charges	\$2.86

The following image shows the bill details for the prod account, which is running both TIBCO JasperSoft Reporting and Analytics for AWS and Foundry SaaS Contract.

▼ prod		\$7.12
AWS Marketplace Charges		\$6.46
▼ Foundry SaaS Contract (sold by Thinglogix)		\$1.00
▼ Global		\$1.00
Foundry SaaS Contract AWSMPOCB		\$1.00
AWS Marketplace Contract Creation	1 Months	\$1.00
▼ TIBCO JasperSoft Reporting and Analytics for AWS (Hourly) (sold by TIBCO Software, Inc.)		\$4.86
▼ US West (Oregon)		\$4.86
TIBCO JasperSoft Reporting and Analytics for AWS (Hourly) Hourly		\$4.86
AWS Marketplace Hourly Fee us-west-2 m3.large	3 Hrs	\$3.72
AWS Marketplace Hourly Fee us-west-2 m4.large	1 Hrs	\$1.14
Taxes		
US Sales Tax to be collected		\$0.60
AWS Service Charges		\$0.66

The following image shows the bill details for the test account, which is running both TIBCO JasperSoft Reporting and Analytics for AWS and Trend Micro Deep Security as a Service.

▼ test		\$22.38
AWS Marketplace Charges		\$8.36
▼ TIBCO JasperSoft Reporting and Analytics for AWS (Hourly) (sold by TIBCO Software, Inc.)		\$3.72
▼ US West (Oregon)		\$3.72
TIBCO JasperSoft Reporting and Analytics for AWS (Hourly) Hourly		\$3.72
AWS Marketplace Hourly Fee us-west-2 m3.large	3 Hrs	\$3.72
▼ Trend Micro Deep Security as a Service (sold by Trend Micro)		\$3.87
▼ US East (N. Virginia)		\$3.87
Trend Micro Deep Security as a Service Usage		\$3.87
AWS Marketplace Usage Fee us-east-1 Any Large EC2 instance types	129 HostHrs	\$3.87
Taxes		
US Sales Tax to be collected		\$0.77
AWS Service Charges		\$14.02

Conclusion

This article provided step-by-step instructions on how to set up consolidated billing through AWS Organizations. Now, you can easily manage with one bill, keep track of multiple accounts, and choose a pricing option that fits the need for each account.

Author: Sagar Khasnis, Partner Solutions Architect

AWS Marketplace Use Cases



Introduction

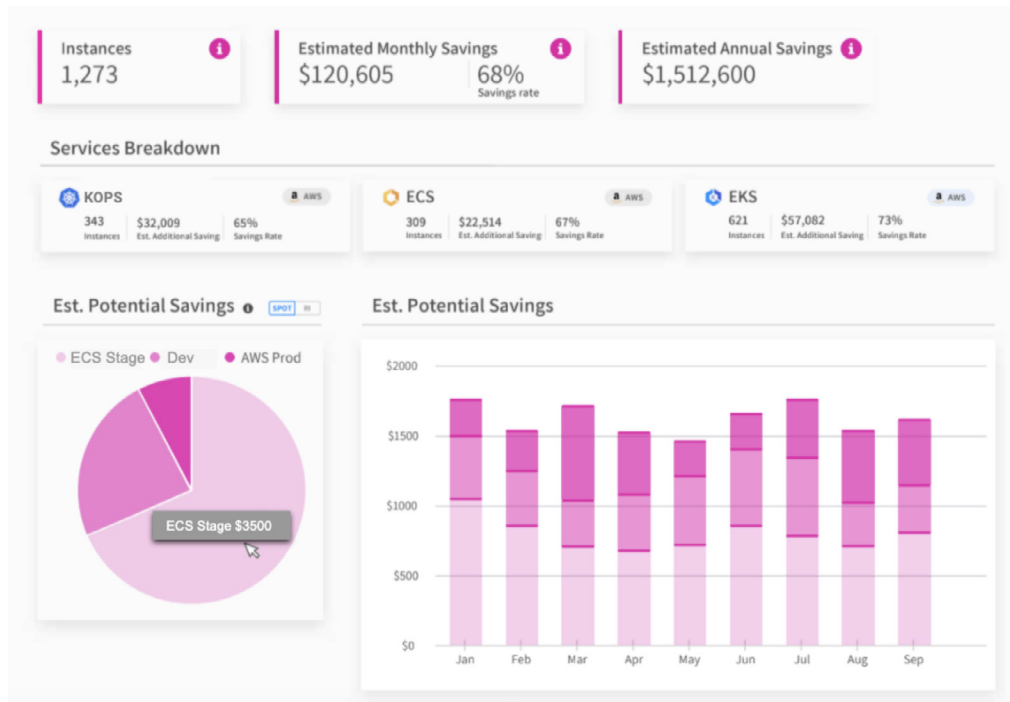
AWS Marketplace is a digital catalog of software solutions from independent software vendors (ISVs) that enables simplified procurement and helps customers better control software spend.

In addition to services and features available from AWS and AWS Marketplace that were discussed in this eBook, there are ISVs in AWS Marketplace that provide solutions to help you keep costs in check while expanding your cloud operations. For example, Spot.io provides insights, guidance, and automation for cloud infrastructure, enabling users to continuously optimize cost, utilization, and availability of cloud resources.

How AWS customers are leveraging Spot.io to manage their software costs

[Spot.io](#) provides an integrated suite of products that use predictive analytics and automation to remove the need to manually manage infrastructure while delivering cost savings. Some of the ways that customers are using them to reduce their AWS spend include:

- **Optimize Amazon EC2 costs:** AWS customers can use Spot.io to make cloud deployments more efficient and reduce costs by up to 90%. They enable users to automatically deploy the optimal blend of spot, reserved, and on-demand compute instances for auto-scaling applications, all while ensuring performance, scalability, and availability.
- **Enhance container efficiency:** Spot.io provides intelligent, container-driven autoscaling, and resource optimization for containers. This allows you to manage infrastructure for Amazon ECS, Amazon EKS, or your Kubernetes deployment.
- **Fully utilize Reserved Instances:** With Spot.io, you can maximize the value of Reserved Instances and Savings Plans with lifecycle management that is powered by advanced analytics and machine learning. This lets you understand, predict, and automate utilization of commitment purchases as well as optimize buying and selling Reserved Instances in AWS Marketplace.



CloudZero, CloudHealth, and Apptio Cloudability are other solutions available in AWS Marketplace that can help you save on cloud infrastructure spend. [CloudZero Cloud Cost Management](#) enables you to optimize cloud costs and prevent accidental over-expenditure through real-time cost anomaly and waste detection. [CloudHealth Cloud Service Management](#) provides centralized analysis of resource utilization across your infrastructure, allowing you to automatically provision Reserved Instances and maximize workload efficiency. With [Apptio Cloudability](#), you can develop fast, comprehensive reporting and analysis of AWS costs across all accounts, creating better visibility into, and optimization of, your spending.

Case Study: MovieStarPlanet’s search for better hosting yields “huge cost savings” by using AWS and AWS Marketplace

Managed hosting—at first, it can feel like a good fit. Then it starts to feel like a straitjacket. That was the experience of MovieStarPlanet, a Danish company founded in 2009 to develop and market interactive social games aimed at children and tweens. The company’s catalog includes the games MovieStarPlanet, BooniePlanet, and BlockStarPlanet.

“We were using Adobe Media Server, Tableau Server, and OpenVPN in a hosted environment,” says Caspar Strandbygaard, the chief technology officer for MovieStarPlanet. “There were several incidents when the provider was down for hours, which cost us a huge amount of money, and the provider wouldn’t let us access and fix our servers ourselves.”

The young, entrepreneurial company started looking for a different managed hosting provider, only to find what Strandbygaard describes as a better overall option through Amazon Web Services (AWS) Marketplace.

“While searching for alternative hosting, we stumbled onto the AWS Marketplace,” says Strandbygaard. “We found we could deploy Adobe Media Server, Tableau Server, and OpenVPN in just a few clicks, so we decided to try this approach.”

The new solution worked well. By deploying its mission-critical, line-of-business applications on AWS, MovieStarPlanet not only immediately solved the availability problem that had inspired its search, it also saved money in the bargain. “We were looking for better-quality hosting but we ended up with huge cost savings,” says Strandbygaard, explaining that Auto Scaling helps MovieStarPlanet avoid the cost of provisioning against spiky traffic and AWS Marketplace offerings help the company save “at least 25 percent on software procurements.”

Why stop there? After this initial positive experience with AWS Marketplace, MovieStarPlanet decided to expand its use of AWS. “We started shifting development workloads, staging workloads, and DevOps tools onto AWS,” says Strandbygaard. “Today, we actually have all our infrastructure hosted on AWS.”

Operating on AWS is helping MovieStarPlanet stay true to its roots as a creative, agile company. “It’s important to MovieStarPlanet not to be burdened by outdated traditions and processes,” says Strandbygaard. “One of the biggest benefits of using AWS Marketplace and AWS services is having access to preconfigured, easy-to-install software packages, which make it incredibly easy to test new technology without having to first learn about the nuts and bolts. AWS and AWS Marketplace really help our team to push boundaries and grow our products and company.”

How to get started with cost optimization solutions in AWS Marketplace

Organizations are using AWS native services and seller solutions in AWS Marketplace to help minimize cloud spend while innovating to solve business challenges. The following solutions can help you get started:



Spot.io

Automatically manages infrastructure while delivering up to 90% cost savings.



CloudZero Cloud Cost Management

Provides real-time cost anomaly and waste detection to optimize cloud costs and prevent accidental overspend.



CloudHealth Cloud Service Management

Automatically analyze, plan, and modify Reserved Instances.



Apptio Cloudability

A flexible data platform that enables cost optimization and communication of cloud business value.

Contributors

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Andre Bishai is a Technical Account Manager for AWS Marketplace. In his free time, he enjoys playing drums, cooking, and learning about new technology.

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Carmin Covarrubias is a Sales Operations Specialist for the AWS Marketplace Customer Desk team supporting the Private Offers Program. Outside of work, she loves spending time reading, baking, painting, playing sports, and trying new activities with her family.

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