

User Guide

Amazon Pricing Calculator





Table of Contents

What is Amazon Pricing Calculator?	1
Features of Amazon Pricing Calculator	1
Pricing for Amazon Pricing Calculator	2
Setting up	3
Prerequisites for using Amazon Pricing Calculator	3
Accessing Amazon Pricing Calculator	3
Getting started	4
Using the console	4
Create and configure an estimate	5
Create an estimate	5
Configure a service	6
Add more services	7
Edit your inputs	8
Best practice	9
Using groups	9
Create a group	10
Moving groups	10
Add Amazon Web Services Support costs	11
Generating Amazon Web Services Support estimates	11
Sharing your estimate	13
Creating an estimate link	13
Updating an existing estimate	14
Exporting your estimates	15
Service examples	17
Generating Amazon Elastic Compute Cloud (Amazon EC2) estimates	17
Amazon EC2 instance specifications	18
Pricing options	19
Adding an Amazon EBS estimate	20
Adding detailed monitoring costs	21
Adding data transfer estimates	21
Adding Elastic IP costs	21
Adding additional costs	22
Generating Microsoft workload estimates with Amazon Modernization Calculator	22
Step 1: Select current architecture pattern	23

	Step 2: Select an architecture size	24
	Step 3: Select modernized architecture pattern	24
	Step 4: Edit service configuration	24
	My Estimate	25
Secu	rity	26
Da	ata protection	26
Co	ompliance validation	27
Reso	urces	29
Se	ervice-specific resources	29
	eneral Amazon resources	
Docu	ıment history	31
	zon Glossary	

What is Amazon Pricing Calculator?

Amazon Pricing Calculator is a free web-based planning tool that you can use to create cost estimates for using Amazon services. You can use Amazon Pricing Calculator for the following use cases:

- Model your solutions before building them
- Explore Amazon service price points
- Review the calculations behind your estimates
- Plan your Amazon spend
- Find cost saving opportunities

For example, if you are an existing Amazon customer and you want to add another EC2 instance to handle to your weekly spike traffic. You can specify your weekly peak information, then choose your EC2 instance and payment options. Amazon Pricing Calculator generates an estimate that includes the upfront, monthly, annual costs. You can use the estimate to make an informed decision before using Amazon services.



Note

You don't need any experience with cloud computing or Amazon to use Amazon Pricing Calculator. The tool is useful for those you never used Amazon before, and for those who want to reorganize or expand their Amazon usage.

You can access Amazon Pricing Calculator through a web-based console at https:// calculator.amazonaws.cn/.

Features of Amazon Pricing Calculator

With Amazon Pricing Calculator, you can do the following tasks:

• View transparent prices – View the calculations behind the estimated prices for your service configurations. You can view price estimates by service or by groups of services to analyze your architecture costs.

 Use groups for hierarchical estimates – Sort your estimates into groups to align with your architecture for clear service cost analysis.

- **Save your estimates** Save the link to each estimate to share or revisit at a later time. Estimates are saved to the Amazon public servers.
- Export your estimates Export your estimates in CSV or PDF format to share locally with your stakeholders.

Pricing for Amazon Pricing Calculator

Amazon Pricing Calculator is a free tool to use. It provides an estimate of your Amazon fees and charges, but the estimate doesn't include any taxes that might apply. Amazon Pricing Calculator provides pricing details for only the information you enter. If the prices on the marketing pages are different from the prices on Amazon Pricing Calculator, Amazon uses the prices from the marketing pages when generating your estimates. For more information about Amazon service pricing, see Cloud Services Pricing.

The prices on Amazon Pricing Calculator for the estimates come from the Amazon Price List API. For more information about the Amazon Price List API, see <u>Using the Amazon Price List API</u> in the Amazon Billing User Guide.

Setting up Amazon Pricing Calculator

Here is some general information about how to get started with Amazon Pricing Calculator.

Prerequisites for using Amazon Pricing Calculator

You don't need an Amazon account or in-depth knowledge of Amazon to use Amazon Pricing Calculator.

For best results, we recommend that you have a plan for how you want to use Amazon before starting your estimate. For example, decide whether you want to break out your estimate by cost center, by products to run on Amazon, or by Regional stacks. Then, you can use the **Group** feature to organize your estimates.

Accessing Amazon Pricing Calculator

Amazon Pricing Calculator is available through a web-based console at https://calculator.amazonaws.cn/. Currently, there are no APIs available.

You can use the Amazon Pricing Calculator to generate monthly cost estimates for all Amazon Web Services Regions that are supported by your preferred services. To see which Regions are available for each service, see the corresponding service user guide documentation.

Getting started

This chapter gives a walk-through of the Amazon Pricing Calculator feature to help you understand how to use Amazon Pricing Calculator to generate estimates for your use cases.

Topics

- Using the Amazon Pricing Calculator console
- · Create and configure an estimate

Using the Amazon Pricing Calculator console

The Amazon Pricing Calculator consists of four major console pages.

Landing page

This page provides an overview of how the tool works and a link to create your estimate. It also provides links to key resources, such as marketing FAQs, and pricing assumptions.

Direct link: https://calculator.amazonaws.cn/#/

Add Service page

When you select the **Create estimate** button, you are navigated to the **Add service page**. This page provides a list of all the Amazon services that Amazon Pricing Calculator supports. You can filter services by location types, and search for services by entering keywords or service names. You can also use the product page links to find more information about each service.

Direct link: https://calculator.amazonaws.cn/#/addService

Configure service page

After you select the **Configure** link of a service, you are navigated to the configure service page. You can use this page to choose the Amazon Web Services Region you want to create the estimate for and input service specific details based on your use case. When you input your use case specifications, you can add these to your estimate.

This page displays your estimate summary in upfront, monthly, 12-month costs. The 12-month
cost is the sum of all estimates and groups. The Groups and My estimate sections display the list
of services within your estimate. In this section you can add new services, support, and create
new groups.

Using the console 4

Additionally, you can use the My estimate page to export your estimates to CSV or PDF files, save your estimate links, and navigate to the Amazon console to sign in or create an account.

Direct link: https://calculator.amazonaws.cn/#/estimate



Note

Amazon provides the Free Tier that you can use to try some Amazon services for free. The Free Tier only covers certain instances or usage for a limited amount of time. Free Tier isn't included in your Amazon Pricing Calculator estimates unless it's specifically called out otherwise. Amazon Pricing Calculator assumes that you aren't using the Free Tier and doesn't include any expiring Free Tier in your estimates.

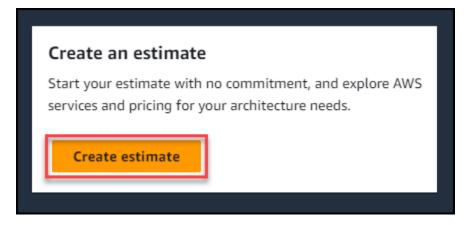
Create and configure an estimate

When you generate an estimate, you can either add services directly to your estimate or create a group and add the services to your group. This section shows how to set up a group with an Amazon EC2 instance that you can use to perform tasks such as run a small program or host a website. To get started, create your estimate using the following steps.

Create an estimate

To create your estimate

- 1. Open Amazon Pricing Calculator at https://calculator.amazonaws.cn/.
- Choose Create estimate.



3. On the **Add service** page, find the service that you want. Then, choose **Configure**. For more information, see ???.

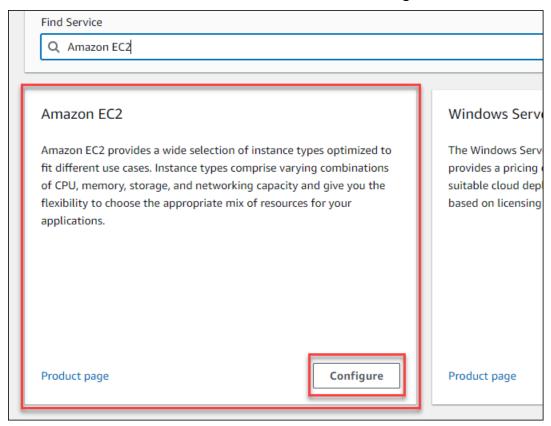
- 4. Add a **Description** for the estimated service.
- 5. Select a Region.
- 6. Enter your sevice specifications.
- 7. Choose Save and add service.
- 8. To view the estimate you created, choose **View summary**.

Configure a service

This section shows how to configure a service you're creating an estimate for. In this example, we're adding Amazon EC2 using the Amazon EC2 **Quick estimate** option.

To configure a service for your estimate

- 1. Open the **Add service** page at https://calculator.amazonaws.cn/#/addService.
- 2. Enter Amazon EC2 in the search bar and choose Configure.



3. In the **Description** field, enter a description for your estimate.

Configure a service

- 4. Choose a Region.
- 5. In the EC2 specifications section, update the parameters based on your use case requirements.
- 6. At this stage you can view the total upfront and monthly costs. These costs are based on the current EC2 parameters you selected.



- 7. (Optional) Choose **Show calculations** to view the breakeven analysis and utilization summary of your estimate.
- 8. (Optional) In the **Amazon EBS** section, choose the storage for each Amazon EC2 instance, and enter the storage amount.



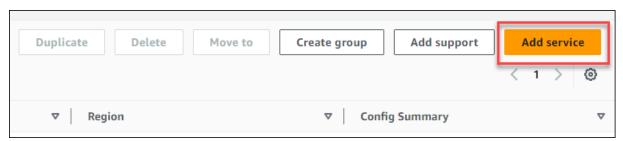
Choose Save and add service.

Add more services

You can add more services to generate a complete estimate for your architecture. For process examples and tutorials that show estimates for specific services, see Estimate examples for services.

To add more services to your estimate

- 1. Open the **My estimate** page at https://calculator.amazonaws.cn/#/estimate.
- 2. Choose Add Service.



Add more services 7

- 3. Search for a service and choose **Configure**.
- 4. Enter the service parameters. Then, choose **Save and add service**.
- 5. Repeat this process as needed.

Edit your inputs

You can edit the inputs for a service added to your estimate.

To edit the inputs for a service

- 1. Open the **My estimate** page at https://calculator.amazonaws.cn/#/estimate.
- 2. In the My Estimate section, locate the service you want to update. Then, choose the Edit icon.



3. Edit your service inputs. Then, choose **Save** to return to your **My Estimate** page.

Edit your inputs 8

Best practice for generating estimates

This chapter outlines some best practices for generating your Amazon Pricing Calculator estimates.

To get the most out of your estimates, make sure you have a good understanding of your base requirements. For example, if you want to try Amazon Elastic Compute Cloud (Amazon EC2), we recommended that you know the type of operating system you need, your memory requirements, and how much I/O you need.

Additionally, you should determine whether you need storage. For example, decide if you want to run a database and for how long you intend to use the servers you need. You can use the Amazon Pricing Calculator service configuration and parameters to see which option meets your specific use case and budget.

When you generate your estimates, it's recommended you consider the following:

- How do you want to organize your estimates?
- Do you want to add an Amazon Web Services Support plan?
- Will you need to access your estimates at a later time?

Topics

- Using groups to organize your estimates
- Add Amazon Web Services Support costs to your estimates
- Sharing your estimate
- Exporting your estimates

Using groups to organize your estimates

You can organize your Amazon estimates by defining groups. A group can reflect how your company is organized, such as by providing estimates for each cost center.

A group can reflect other organization methods, such as by product stack or product architecture. For example, if you want to price out different ways to build your Amazon setup, you can use different groups for each variation of your setup and compare the estimates. You can generate one estimate to view the costs of running a website. Then, you can generate another estimate to view

Using groups 9

the costs of running a machine learning process. You can then view the combined estimate for your Amazon usage.

Groups are also useful to compare Amazon Web Services Regions. If you create a group for each Region, you can compare the cost to run servers in two different locations. For example, you can generate an estimate for US East (N. Virginia) in one group and Asia Pacific (Seoul) for another. Then, you can compare your two estimates to meet your specific use case and budget.

Create a group

Use groups to organize services together. You can add one or more services to each group. You can also use groups to organize your estimate in different ways. For example, you can organize your estimate by cost center, service stack, product architecture, or client.

To add a group to your estimate

- 1. Open the **My estimate** page at https://calculator.amazonaws.cn/#/estimate.
- 2. Choose **Create group**.



- 3. In the prompt that appears, enter a group name.
- 4. Choose Create group.

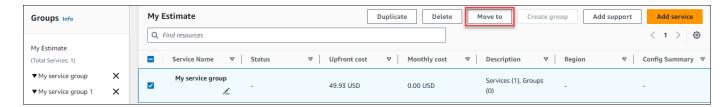
Moving groups

You can move your groups and services to organize your estimate. All sub-groups and services are moved as a part of your action. You can move single or multiple groups using this process.

To move a group

- 1. Open the **My estimate** page at https://calculator.amazonaws.cn/#/estimate.
- 2. Select the check box of the groups and services you want to move.
- 3. Choose Move to.

Create a group 10



- 4. Choose the destination group from the dropdown.
- Choose Move.



You can't move Amazon Web Services Support calculator into a group because estimates for your chosen support plans aren't specific to a group.

Add Amazon Web Services Support costs to your estimates

You can add Amazon Web Services Support costs to your estimates using the Amazon Pricing Calculator. You can either directly choose your preferred support plan, or complete the recommendations that match your usage needs. You can change your Amazon Web Services Support within the calculator at any time.

Generating Amazon Web Services Support estimates

You can use the provided questions to narrow your Amazon Web Services Support plan to match your needs.

To generate Amazon Web Services Support estimates using recommendations

- Open Amazon Pricing Calculator at https://calculator.amazonaws.cn/.
- Choose Create estimate.
- 3. Add a service to your estimate. For more information, see Create and configure an estimate
- In your My Estimate page, choose Add support.



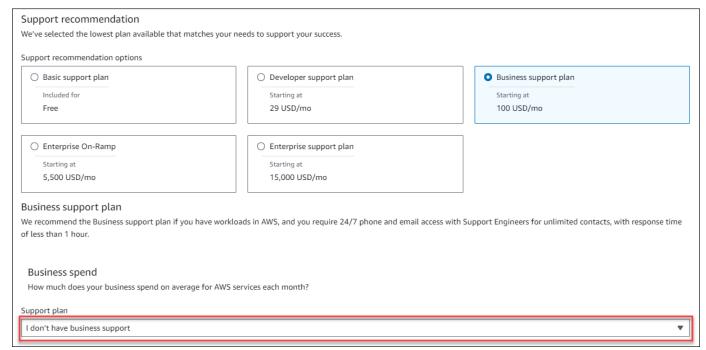
- (Optional) Enter a description for your support plan estimate. 5.
- 6. (Optional) Choose an **Enhanced technical support** level from the dropdown list that appears.
- (Optional) Choose a **High severity response** time from the dropdown list that appears... 7.



Note

Some of the Support recommendation options might not be available. This depends on the Enhanced technical support level and High severity response times you selected.

- 8. Choose a **Support recommendation** option.
- 9. If you chose a **Business support plan** or **Enterprise support plan**, choose the range of how much your business or enterprise spends on average for Amazon services each month.



- 10. (Optional) Choose **Show calculations** to review the calculations behind the estimates.
- 11. Choose **Add to my estimate**.
- 12. If you chose a Business support plan or Enterprise support plan, choose Confirm in the prompt that appears. Then, choose Add to my estimate.

Sharing your estimate

You can create a unique, public link for each estimate that you create. Use this link to share the estimate with stakeholders or access the estimate again at a later time. Estimates are saved to Amazon public servers.

Any changes you make to an estimate requires you to save again. Amazon Pricing Calculator doesn't automatically save to the same link to prevent unwanted overwrites. Alternatively, you can use the shared link as a template for common use cases, and use it as a starting point to build complex estimates.

Note

 Make sure that you save your estimate links because your estimates can't be accessed without them.

• Estimate links aren't auto-saved with updates. If you make changes to an estimate, generate a new estimate link.

• Estimate links created on or after May 31, 2023, remain valid for one year. Estimate links created before this date remain valid for three years.

Topics

- · Creating an estimate link
- Updating an existing estimate

Creating an estimate link

To create an estimate and generate a public share link

- Open Amazon Pricing Calculator at https://calculator.amazonaws.cn/.
- 2. Create an estimate by adding one or more services. For more information, see <u>Create and</u> configure an estimate.
- 3. Open the My Estimate page at https://calculator.amazonaws.cn/#/estimate .
- 4. Choose Share.

Sharing your estimate 13

5. Read the **Public server acknowledgment** and choose **Agree and Continue**.

(Optional) You can select Don't show me this again for future visits.

6. Choose **Copy public link** to copy your generated link.

We recommend you document your shared links with a brief description of the estimate.

Updating an existing estimate

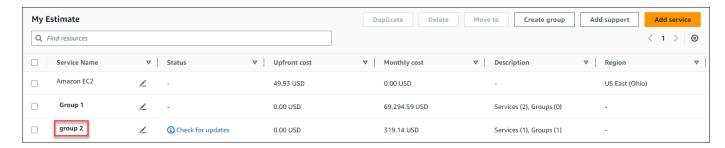
The total cost of your previously saved estimates can become out of date over time. This is because of pricing changes or updates to services within the Amazon Pricing Calculator. You can update your estimates to reflect the latest costs and keep them updated.

To update a previously saved estimate

- 1. Open your saved estimate in Amazon Pricing Calculator. To do this, copy your unique link into your browser's navigation bar.
- 2. In the banner that shows when your estimate was last updated, choose **Update estimate**.



- 3. In the **My Estimate** section, check the **Status** column for updates. There are four types of status values:
 - Required inputs an update was made to a service within the estimate. This means that your current estimate is out of date and requires action. If you have services with a Required inputs status, skip to step 4.
 - Cost updated a pricing model or a cost calculation change occurred to a service that
 impacts your estimate total. No action is required because Pricing Calculator automatically
 updates your estimate with these changes.
 - **Read-only** an update was made to a service within the estimate. However, direct updates to that service estimate isn't supported. To view an up-to-date estimate that contains the latest service changes, re-create the service estimate. For more information about how to create a new estimate, see Creating an estimate link.
 - Check for updates an update was made to a service within a group. Your current estimate is out of date and requires action. If you have groups with a **Check for updates** status, select the group name to view the service impacted. Then, skip to step 4.



- If you have services with a **Required inputs** status or you want to modify a specific service, select the edit icon beside the service name.
- Make your changes to the service. Then, choose **Update**. 5.
- 6. Choose **Share** to save your changes.

Note

- When you save your estimate, a new estimate link is generated. The updates aren't saved to the original shared link.
- For more information about updates to services in Amazon Pricing Calculator, see Service Updates.

Exporting your estimates

You can export your Amazon Pricing Calculator estimate as a PDF or a CSV file. By doing this, you can save the parameters that Amazon Pricing Calculator used to create your estimate so that you can revisit them if you set up Amazon services in the console.



Note

Your PDF contains a share link to your estimate.

To export an Amazon Pricing Calculator estimate

Open Amazon Pricing Calculator at https://calculator.amazonaws.cn/.

15 Exporting your estimates

2. Create an estimate by adding one or more services. For more information, see <u>Create and</u> configure an estimate.

- 3. Open the My estimate page at https://calculator.amazonaws.cn/#/estimate
- 4. Use the **Export** dropdown and choose CSV or PDF.
- 5. Read the acknowledgement and choose **OK**.
- 6. In the dialog box, choose **Save File** and choose **OK**.

Exporting your estimates 16

Estimate examples for services

This section provides examples and tutorials that show how you can use Amazon Pricing Calculator to generate estimates for certain services.

Topics

- Generating Amazon Elastic Compute Cloud (Amazon EC2) estimates
- Generating Microsoft workload estimates with Amazon Modernization Calculator

Generating Amazon Elastic Compute Cloud (Amazon EC2) estimates

You can use the Amazon EC2 pricing calculator to estimate costs for Amazon EC2 instances and dedicated hosts.

To start an Amazon EC2 estimate

- 1. Open the **Amazon EC2 estimate** page at https://calculator.amazonaws.cn/#/createCalculator/ec2-enhancement.
- 2. Enter the description for your Amazon EC2 estimate.
- Choose the Location type and Region from the dropdown.

The calculator view is preloaded with default values so you can see a starting estimate without adding or changing any information. You can change any of the values for the following parameters. Otherwise, you can also keep the defaults when they're applicable.

The Amazon EC2 instance estimate path has the following sections and parameters:

Topics

- Amazon EC2 instance specifications
- Pricing options
- Adding an Amazon EBS estimate
- Adding detailed monitoring costs

- Adding data transfer estimates
- Adding Elastic IP costs
- Adding additional costs



Note

For a tutorial on how to generate an Amazon EC2 estimate, see Getting started.

Amazon EC2 instance specifications

These settings determine the Amazon EC2 instance that Amazon Pricing Calculator uses to generate an estimate for you.

Select your tenancy

The default value for tenancy is Shared Instances.

Select your operating system

The operating system on an Amazon EC2 instance. Amazon Pricing Calculator generates your estimate using Amazon Machine Images (AMIs) that match the OS you choose. Choose the operating system (OS) that best matches your needs. The default value for the OS is Linux.

Choose your instance type

Amazon Pricing Calculator lists all available instance types. Use the search bar to filter the instances.

Search for an instance type by name

If you know the instance family or instance size that you want, it's efficient to search for the instance name. For example, you can search for a t2.medium instance.

Search for an instance type based on minimum requirements

Minimum requirements are most useful when you know the specifications of the instances that you want. For example, you can search either for an instance with a minimum of four vCPUs and 16 GB of memory for any network performance.

For information about the available Amazon EC2 instance families, see <u>Amazon EC2 Instance</u> Types.

Number of EC2 instances

The default value is one. Amazon Pricing Calculator uses this default because it's the minimum number that you might need.

Workloads

Workloads are the usage patterns that match your Amazon EC2 usage. Choosing the workload that most closely matches what you use reduces the number of On-Demand and unused RI hours that you might purchase. It does this by covering your usage with the most appropriate combination of RIs and On-Demand Instances for you. You can define more than one workload for your estimate.

Constant usage

This workload is suitable for use cases that have a constant, predicable load. This includes use cases such as logging traffic to a website or running processes in the background.

Daily spike

This workload is best for usage patterns that peak once a day. This is suitable for scenarios where, for example, you need to run several jobs at midnight or have a morning news spike.

Weekly spike

This workload is best for patterns that peak once a week. This is suitable for scenarios such as blogs that post once a week and weekly television shows.

Monthly spike

This workload is best for traffic that spikes once a month, such as monthly invoices, payroll, or other monthly reports.

Pricing options

These settings determine the pricing strategy that Amazon Pricing Calculator uses to generate your estimate.

Pricing options 19

Pricing model

The pricing model determines whether you're searching for a pay-as-you-use instance or an instance that you can reserve in advance. Reserving an instance isn't the same as paying for the use of an instance.

Reservation terms

When you reserve a Reserved Instance (RI), you purchase a reservation for the period of your contract. Contracts can be for either one or three years.

The default value is one year. Amazon Pricing Calculator uses this default because it's the least costly option for trying out Amazon.

Payment options

For RIs, payment options determine when you pay for your reservation. You can pay for the entire reservation upfront, which is a hefty single-time payment but you have no monthly payments. You can pay for the RI with a partial upfront payment and a monthly payment. This gives you a smaller upfront cost but accrues monthly costs. You can also pay with no upfront payment. This means you pay only on a monthly basis. All upfront gives you the best discount, but no upfront and partial upfront spread your costs out over a greater period of time.

The default value for the payment options is No Upfront. Amazon Pricing Calculator uses this default because it gives you the least expensive start-up price.

Expected utilization of EC2 instances

Enter the expected usage of Amazon EC2 instances. The feature is only applicable when you select the On-Demand pricing strategy.

Spot

The calculator shows the historical average discount percentage for the instance chosen. You can enter a percentage discount for creating estimates.

Adding an Amazon EBS estimate

These settings determine the Amazon EBS settings that Amazon Pricing Calculator uses to generate an estimate for you. Amazon Elastic Block Store (Amazon EBS) is a type of storage that you can connect to your Amazon EC2 instance. You can use it to do things such as backing up your

instance, creating a boot volume, or running a database on your instance. For more information about Amazon EBS, see the Amazon Elastic Block Store documentation.

Storage volume

The storage volume determines what kind of storage that Amazon EBS assigns to your instance. Different types have different capabilities. For example, you can choose better I/O and faster calculations, or slower, less expensive options for your specific use cases such as boot volumes and backups.

Storage amount

The storage amount determines how much storage your Amazon EBS volume has.

The default value is 30 GB. You can enter 0 GB if you don't attach Amazon EBS volumes to your Amazon EC2 instance. You can also estimate additional Amazon EBS volumes by configuring and adding a standalone Amazon EBS calculator into your estimate at https://calculator.amazonaws.cn/#/createCalculator/EBS.

Adding detailed monitoring costs

Your instances are turned on for basic monitoring by default. You can optionally turn on detailed monitoring. Once detailed monitoring is turned on, the Amazon EC2 console shows monitoring graphs with a one minute period for the instance. For more information, see <u>Detailed monitoring</u>.

Adding data transfer estimates

You can accrue additional costs by transferring data in and out of Amazon EC2. If you know how much data you can expect to upload or download in a month, you can add these costs to your estimate. For more information, see the Data transfer section on the *On-Demand Pricing* page.

Adding Elastic IP costs

You can have one Elastic IP (EIP) address associated with a running instance at no charge. If you associate additional EIPs with that instance, you will be charged for each additional EIP associated with that instance per hour on a pro rata basis. A small hourly charge applies when EIPs are not associated with a running instance or when they are associated with a stopped instance or unattached network interface. For more information, see <u>Elastic IP Addresses</u> section on the *On-Demand Pricing* page.

Adding additional costs

You can add a custom cost to your Amazon EC2 pricing estimates. You can use this to add any placeholder costs you'd like to include in your estimates.

Generating Microsoft workload estimates with Amazon Modernization Calculator

Amazon Modernization Calculator for Microsoft workloads provides a pricing estimate for modernizing your Microsoft workloads using open source and Amazon cloud-native services deployed on Amazon.

The calculator creates an estimate total cost of ownership for transforming your Windows and SQL server applications into a modern architecture. To use the calculator, you don't need an Amazon Web Services account.

Amazon Modernization Calculator for Microsoft workloads recommends modernized architecture for application patterns such as multi-tier, batch processing, CI/CD, or containerization. These recommendations are based on commonly adopted architectures by the Amazon customer community. The calculator offers a reliable way to get modernization cost estimates without indepth assessments. Using this information, you can conduct an in-depth assessment with Migration Hub Strategy Recommendations. For more information, see What is Migration Hub Strategy Recommendations?

You can create an estimate with Amazon Modernization Calculator for Microsoft workloads at https://modernization.calculator.aws/microsoft/workload.

To save, export, and share your estimate, make selections and provide inputs in the four steps.

Topics

- Step 1: Select current architecture pattern
- Step 2: Select an architecture size
- Step 3: Select modernized architecture pattern
- Step 4: Edit service configuration
- My Estimate

Adding additional costs 22

Step 1: Select current architecture pattern

Provide details about the current architecture of your application in this step, and start creating your estimate.

New estimate

Add a description for this estimate (for example, App1 modernization).

Current application/workload location

To specify the current location of where your application is deployed, select from Amazon, onpremises, or other cloud.

Architecture category

Specify the architecture category of your application by choosing from architecture pattern, use case or custom. The category selection provides further options to analyze your application.

- Architecture pattern refers to a fundamental schema for software systems in an organization. It defines the structural composition of the program and the interactions between the elements. In most enterprises, some of the commonly found patterns include the following.
 - Multi-tier pattern has been a cornerstone architecture pattern for decades, and remains a
 popular pattern for user-facing applications. Multi-tier generally consists of a presentation
 tier, data tier, and logic tier. These three tiers can be hosted on the same or separate servers.
 This pattern provides a general framework to ensure decoupled and independently scalable
 application components can be separately developed, managed, and maintained.
 - Batch processing is the method computers periodically use to complete high-volume and
 repetitive data jobs. Certain data processing tasks, such as backups, filtering, and sorting,
 can be compute intensive and inefficient to run on individual data transactions. Instead, data
 systems process such tasks in batches. These tasks are processed during off-peak times such as
 the evening and overnight.
- **Use case** includes grouped architecture patterns. This grouping represents a collaboration by different teams on performing tasks. Use cases are further categorized into the following.
 - **Software development** involves several steps including creating, testing, staging, and deploying software. In an organization, multiple teams collaborate as a group to create software.
 - **Container** provides a standard way to package your application's code, configurations, and dependencies into a single object. Containers share an operating system that's installed on

the server and run as resource-isolated processes. This ensures quick, reliable, and consistent deployments, regardless of the environment. Containers are lightweight and provide a consistent and portable software environment for applications to run and scale virtually anywhere. Building and deploying microservices, running batch jobs for machine learning applications, and moving existing applications into the cloud are some of common use cases.

• **Custom** category provides you with the option to build any custom architectures by selecting the relevant Amazon Web Services from the list. This is a suitable option if you're familiar with Amazon Web Services and their role in your application's architecture pattern.

Step 2: Select an architecture size

This step includes a short questionnaire about the specifics of your application's architecture. All questions are optional. The calculator provides a sizing recommendation based on your answers. The default recommendation is **Small**.

If you choose to answer the questions, the calculator recommends a size. You can proceed with the recommended size or select any size that meets your business requirements.

Step 3: Select modernized architecture pattern

In this step, the calculator provides modernized architecture pattern options based on your inputs in preceding steps. You can download the pattern diagram to learn more.

If you see more than one option, you can choose the recommended or another pattern. If you have one recommendation without options, choose the recommended pattern to proceed to the next step.

Step 4: Edit service configuration

You can see a summary of recommendations in this step. You can see a list of recommended Amazon Web Services. You can add or remove any service, and change the recommended settings of each service.

Amazon Web Services Region has a drop-down list that you can select the Region where you
want to host your modernized application from. The pricing of Amazon Web Services can differ
by Region.

• **Estimated cost** provides the total monthly cost of running a modernized application on Amazon. The cost isn't intended as an actual price quote. It doesn't account for data transfer charges or any additional configurations offered by Amazon Web Services.

- Amazon Web Services lists the recommended services for your modernized application. You
 can add or delete any service from this list. You can expand each service card to modify size
 and parameters for that service. You can also see the breakdown of cost for each service by
 expanding Show calculation, which is located in each service card.
- Select **Save** to see a graphical presentation of estimate on **My Estimate** page.

My Estimate

This page provides the estimate for your modernized application. You can do the following with this page:

- Clone the same or add new workload to your estimate.
- Increase or decrease the number of applications in a workload.
- Change the recommended Amazon Web Services by editing a workload.
- Add the cost of accessing Amazon Web Services Support to your estimate.
- Export to an excel file or share your estimate by using a unique URL.

If you retrieve and modify a shared estimate, you must save and share the modified version. The modifications aren't automatically added to your original estimate.

My Estimate 25

Security in Amazon Pricing Calculator

Cloud security at Amazon is the highest priority. As an Amazon customer, you benefit from a data center and network architecture that is built to meet the requirements of the most security-sensitive organizations.

Security is a shared responsibility between Amazon and you. The shared responsibility model describes this as security *of* the cloud and security *in* the cloud:

- Security of the cloud Amazon is responsible for protecting the infrastructure that runs
 Amazon services in the Amazon Cloud. Amazon also provides you with services that you can use
 securely. Third-party auditors regularly test and verify the effectiveness of our security as part of
 the Amazon Compliance Programs.
- **Security in the cloud** Your responsibility is determined by the Amazon service that you use. You are also responsible for other factors including the sensitivity of your data, your company's requirements, and applicable laws and regulations.

Amazon Pricing Calculator is a public interface. The information you provide isn't stored, and Amazon does not collect your input or associate your input with an Amazon account.

Topics

- Data protection in Amazon Pricing Calculator
- Compliance validation for Amazon Pricing Calculator

Data protection in Amazon Pricing Calculator

The Amazon shared responsibility model applies to data protection in Amazon Pricing Calculator. As described in this model, Amazon is responsible for protecting the global infrastructure that runs all of the Amazon Web Services Cloud. You are responsible for maintaining control over your content that is hosted on this infrastructure. This content includes the security configuration and management tasks for the Amazon services that you use. For more information about data privacy, see the Data Privacy section.

For data protection purposes, we recommend that you protect Amazon Web Services account credentials and set up individual user accounts with Amazon Identity and Access Management

Data protection 26

(IAM). That way each user is given only the permissions necessary to fulfill their job duties. We also recommend that you secure your data in the following ways:

- Use multi-factor authentication (MFA) with each account.
- Use SSL/TLS to communicate with Amazon resources. We recommend TLS 1.2 or later.
- Set up API and user activity logging with Amazon CloudTrail.
- Use Amazon encryption solutions, along with all default security controls within Amazon services.
- Use advanced managed security services such as Amazon Macie, which assists in discovering and securing personal data that is stored in Amazon S3.
- If you require FIPS 140-2 validated cryptographic modules when accessing Amazon through a command line interface or an API, use a FIPS endpoint.

We strongly recommend that you never put confidential or sensitive information, such as your customers' email addresses, into tags or free-form fields such as a **Name** field. This includes when you work with Amazon Pricing Calculator or other Amazon services using the console, API, Amazon CLI, or Amazon SDKs. Any data that you enter into tags or free-form fields used for names may be used for billing or diagnostic logs. If you provide a URL to an external server, we strongly recommend that you do not include credentials information in the URL to validate your request to that server.

Compliance validation for Amazon Pricing Calculator

Third-party auditors assess the security and compliance of Amazon Pricing Calculator as part of multiple Amazon compliance programs. Amazon Pricing Calculator is not in scope of any Amazon compliance programs.

For a list of Amazon services in scope of specific compliance programs, see <u>Amazon Services in Scope by Compliance Program</u>. For general information, see <u>Amazon Compliance Programs</u>.

Your compliance responsibility when using Amazon Pricing Calculator is determined by the sensitivity of your data, your company's compliance objectives, and applicable laws and regulations. Amazon provides the following resources to help with compliance:

 <u>Amazon Compliance Resources</u> – This collection of workbooks and guides might apply to your industry and location.

Compliance validation 27

• <u>Evaluating Resources with Rules</u> in the *Amazon Config Developer Guide* – The Amazon Config service assesses how well your resource configurations comply with internal practices, industry guidelines, and regulations.

• <u>Amazon Security Hub</u> – This Amazon service provides a comprehensive view of your security state within Amazon that helps you check your compliance with security industry standards and best practices.

Compliance validation 28

Resources

The following related resources can help you as you work with this service.

Service-specific resources

Each Amazon service has its own documentation that you can use to help understand the service.

- <u>Amazon Pricing Calculator Frequently Asked Questions</u> Explore the FAQs that are listed in the Amazon Marketing pages
- <u>Amazon Pricing Calculator pricing assumptions</u> Understand the disclaimers for Amazon Pricing Calculator prices.
- <u>Amazon Elastic Compute Cloud documentation</u> Provides the documentation for using Amazon Elastic Compute Cloud (Amazon EC2).
- <u>Elastic Load Balancing documentation</u> Provides the documentation for using Elastic Load Balancing.
- <u>Amazon Elastic Block Store documentation</u> Provides the documentation for using Amazon Elastic Block Store.

General Amazon resources

Amazon provides several helpful guides, forums, contact info, and other resources for you.

- <u>Amazon Developer Resource Center</u> Provides a central starting point to find documentation, code samples, release notes, and other information to help you build innovative applications with Amazon.
- <u>Amazon Training and Courses</u> Links to role-based and specialty courses and self-paced labs to help sharpen your Amazon skills and gain practical experience.
- <u>Amazon Developer Tools</u> Links to developer tools and resources that provide documentation, code samples, release notes, and other information to help you build innovative applications with Amazon.
- <u>Amazon Web Services Support Center</u> The hub where you can create and manage your Amazon Web Services Support cases. It also includes links to other helpful resources, such as forums, technical FAQs, service health status, and Amazon Trusted Advisor.

Service-specific resources 29

 <u>Amazon Web Services Support</u> – The primary web page for information about Amazon Web Services Support, a one-on-one, fast-response support channel to help you build and run applications in the cloud.

- <u>Contact Us</u> A central contact point for inquiries that concern Amazon billing, your account, events, abuse, and other issues.
- <u>Amazon Site Terms</u> Detailed information about our copyright and trademark; your account, license, and site access; and other topics.

General Amazon resources 30

Document history for User Guide

The following table describes the documentation for this release of Amazon Pricing Calculator.

• Latest documentation update: Dec 16, 2019

Change	Description	Date
New save and share feature	Added the Saving and Sharing Your Estimate section.	December 16, 2019
<u>UI update</u>	Updated the UI to enable nested groups.	December 17, 2018
<u>Initial launch</u>	First publication of the documentation.	October 23, 2018

Amazon Glossary

For the latest Amazon terminology, see the <u>Amazon glossary</u> in the *Amazon Web Services Glossary Reference*.