

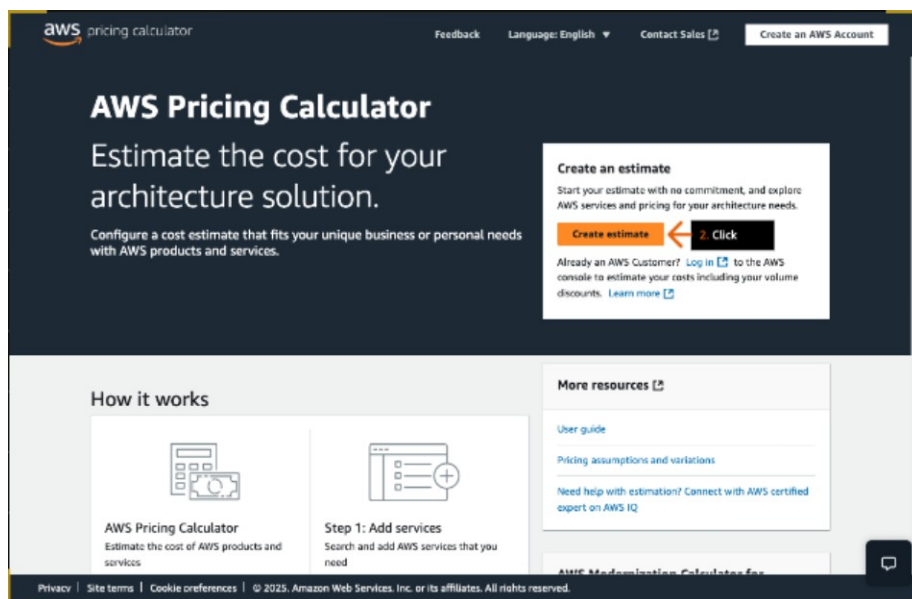
EC2 COST ESTIMATION FOR VARIABLE WORKLOADS

Objectives:

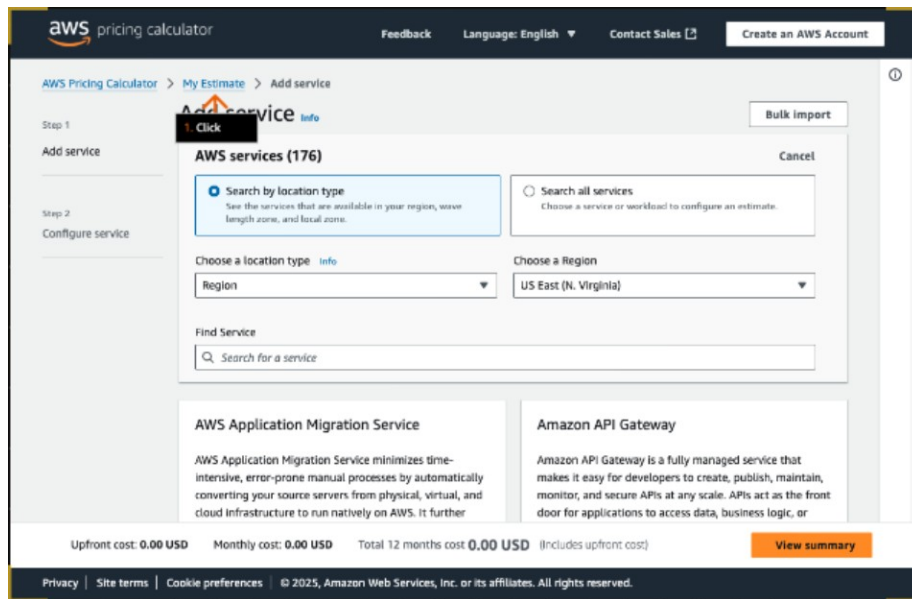
- Create logical pricing groups.
- Create an estimate for Amazon EC2 usage.

Steps / Procedures / Instructions:

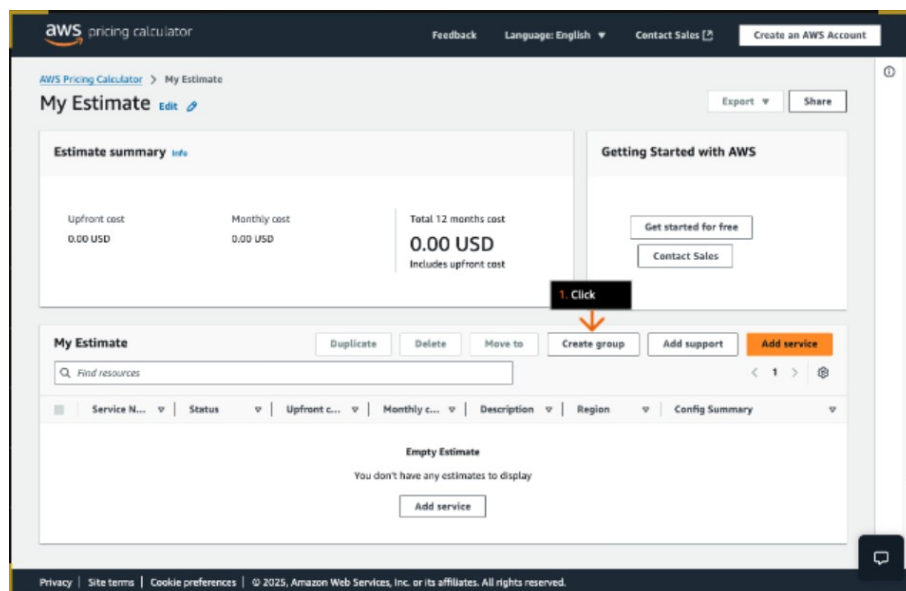
- In a new browser tab (or window) address bar (not shown), type: `https://calculator.aws`
- Press Enter.
- On the AWS Pricing Calculator home page, click Create estimate.



- On the top breadcrumb menu, click My Estimate.



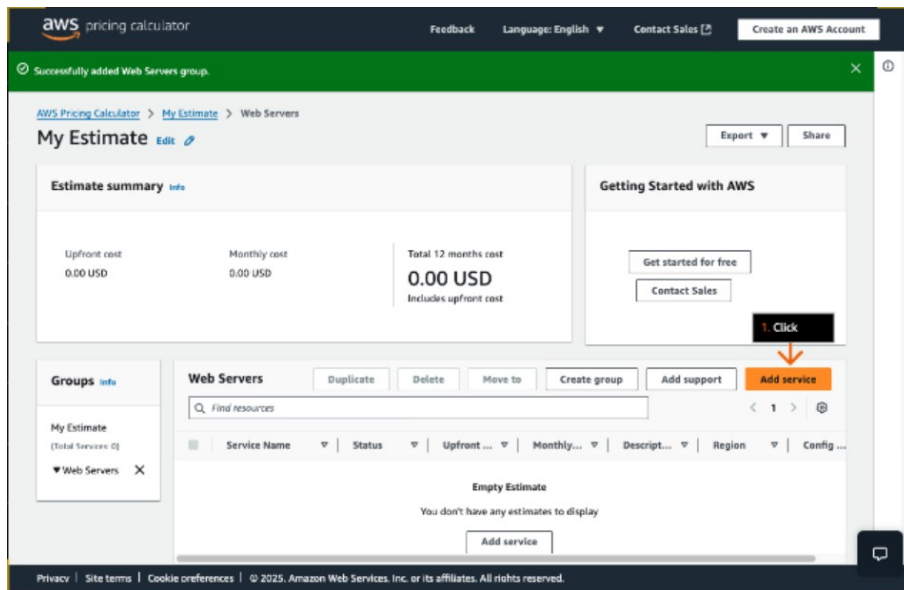
- In the My Estimate section, click Create group.



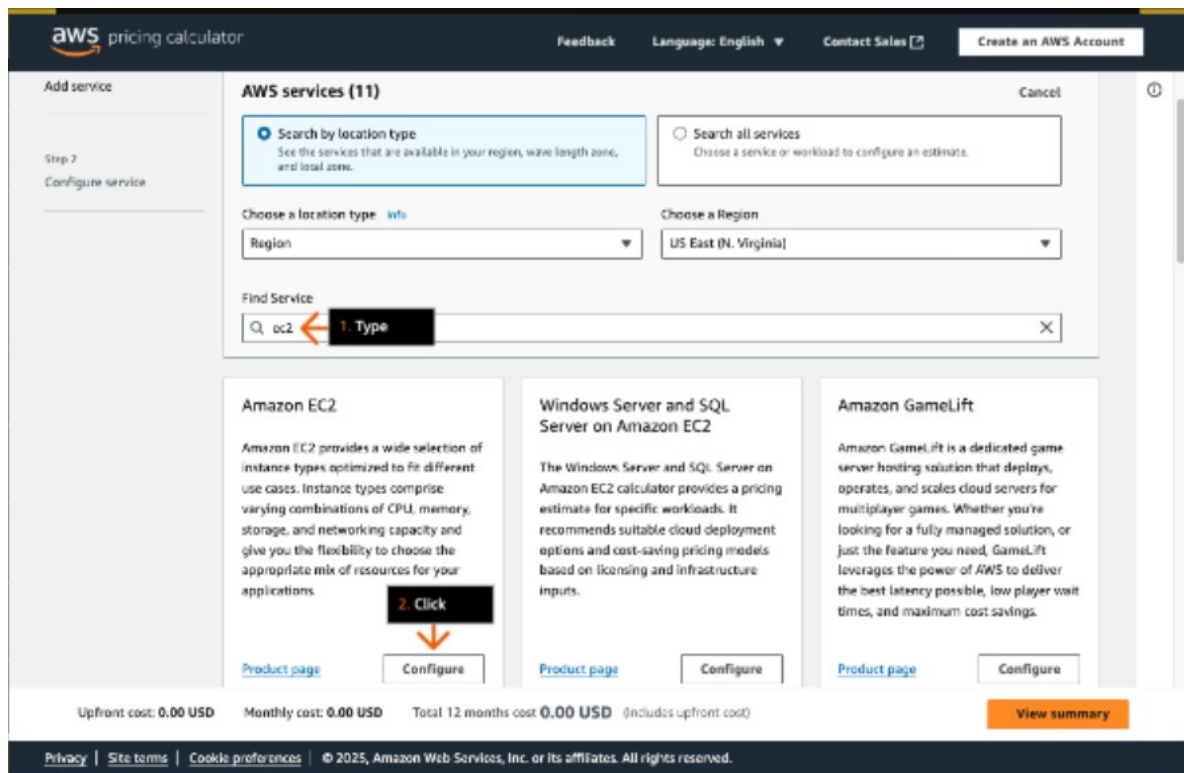
- In the pop-up box, for Group name, type: Web Servers
- Click Create group.



- Click Add service.



- In the AWS services section, for Find Service, type: ec2
- On the Amazon EC2 card, click Configure.



- In the Add service step, for Description, type: Web Server Estimate
- For Choose a location type, on the dropdown list, choose Region.
- For Choose a Region, choose US East (N. Virginia).

The screenshot shows the AWS Pricing Calculator interface for configuring an Amazon EC2 estimate. It includes a sidebar with 'Step 1: Add service' and 'Step 2: Configure service'. The main area has a 'Description' field with 'Web Server Estimate', a 'Region' dropdown, and a 'Choose a Region' dropdown. Below these are sections for 'Tenancy' (Shared Instances), 'Operating system' (Linux), 'Workloads' (Constant usage selected), and 'Number of instances'. The bottom summary shows a total monthly cost of 1.53 USD.

Service pricing can differ between AWS Regions, so choosing the correct Region is important for an accurate pricing estimate.

- Scroll down to EC2 specifications.
- For Tenancy, choose Shared Instances.
 - By default, EC2 instances run on shared tenancy hardware. This means that multiple AWS accounts might share the same physical hardware. Choosing a dedicated option increases instance pricing.
- For Operating system, choose Linux.
 - Operating system licensing can affect instance pricing. Some operating systems and databases allow you to bring your own license (BYOL) while others have licensing costs built into the hourly rates.
- For Workloads, review each usage type.
 - To see use case details, you can click each usage type.

aws pricing calculator Feedback Language: English Contact Sales Create an AWS Account

EC2 specifications

Tenancy
Choose the tenancy type to run your Amazon EC2 instance on.
Shared Instances **1. Choose**

Operating system
Choose the operating system to run your Amazon EC2 instance on.
Linux **2. Choose**

Workloads
Choose the graph that best represents your monthly workload.
☒ Constant usage ☐ Daily spike traffic ☐ Weekly spike traffic ☐ Monthly spike traffic

Number of instances
Please specify the total number of instances that you need each month.
1

EC2 Instances (826)
Based on your inputs, this is the lowest-cost EC2 instance: **t4g.nano**
Chosen instance: t4g.nano | Family: t4g | 2vCPU | 0.5 GiB Memory
Search instance type
Search by instance name or filter by keyword

Total Upfront cost: 0.00 USD
Total Monthly cost: 1.53 USD
Show Details Cancel Save and view summary Save and add service

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Workloads are the patterns that match your Amazon Elastic Compute Cloud (Amazon EC2) usage. Choosing the workload that most closely matches your usage will optimize your cloud costs.

- Choose the radio button to select Daily spike traffic.
- For Workload days, choose the seven check boxes to select all days (Sunday through Saturday).

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EC2 specifications

Tenancy
Choose the tenancy type to run your Amazon EC2 instance on.
Shared Instances

Operating system
Choose the operating system to run your Amazon EC2 instance on.
Linux

Workloads
Choose the graph that best represents your monthly workload.
☐ Constant usage
☒ Daily spike traffic
☐ Weekly spike traffic
☐ Monthly spike traffic

Daily spike pattern
Remove pattern

Workload days
Select days for your workload pattern.
☒ Sunday
☒ Monday
☒ Tuesday
☒ Wednesday
☒ Thursday
☒ Friday
☒ Saturday

Baseline

2. Choose

Total Upfront cost: 0.00 USD
Total Monthly cost: 2.62 USD

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- For Baseline, type: 2
- For Peak, type: 4
- For Duration of peak, in the two text boxes, type: 8 (for hours) and 0 (for minutes)

1

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Baseline
Enter the minimum number of instances for your workload.
2 1. Type

Peak
Enter the maximum number of instances for your workload.
4 2. Type

Duration of peak (hours, minutes)
Enter the amount of days, hours, and minutes your instances are running at peak.
Hours: 8 3. Type Minutes: 0

EC2 Instances (826)
Based on your inputs, this is the lowest-cost EC2 instance: t4g.nano
Chosen instance: t4g.nano | Family: t4g | 2vCPU | 0.5 GiB Memory

Search instance type
Search by instance name or filter by keyword

Instance family: Any Instance family vCPUs: Any vCPUs Memory (GiB): Any Memory (GiB) Network performance: Any Network Perform...

☒ Show only current generation instances

Total Upfront cost: 0.00 USD
Total Monthly cost: 5.11 USD

Show Details Cancel Save and view summary Save and add service

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Baseline usage refers to the minimum amount of servers during nonpeak time. Conversely, peak usage represents the amount of servers required at peak periods.

- In the EC2 Instances section, for Any Instance family, under vCPUs, choose 2.
- Under Memory (GiB), choose 4 GiB.
- Under Network performance, choose Any Network Performance.
- Below that, under Instance name, choose the radio button to select t3.medium.

EC2 Instances (790)
Based on your inputs, this is the lowest-cost EC2 instance: **t4g.medium**
Chosen instance: **t3.medium** | Family: **t3** | **2vCPU** | **4 GiB Memory**

Search instance type
Search by instance name or filter

1. Choose 2. Choose 3. Choose

Instance family **Any Instance family** vCPUs **2** Memory (GiB) **4 GiB** Network performance **Any Network Perform...**

☒ Show only current generation instances.

Instance name	vCPUs	Memory	Network Performance	Storage	On-Demand Hour
<input type="radio"/> t4g.medium	2	4 GiB	Up to 5 Gigabit	EBS only	0.0336
<input type="radio"/> t3a.medium	2	4 GiB	Up to 5 Gigabit	EBS only	0.0376
<input checked="" type="radio"/> t3.medium	2	4 GiB	Up to 5 Gigabit	EBS only	0.0416
<input type="radio"/> t2.medium	2	4 GiB	Low to Moderate	EBS only	0.0464
<input type="radio"/> t2.xlarge	8	16 GiB	Up to 10 Gigabit	EBS only	0.0914

4. Choose

Total Upfront cost: 0.00 USD
Total Monthly cost: 50.32 USD

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When creating estimates, right sizing instances is important. Right sizing is the process of looking at instance resources and identifying opportunities to remove or downsize without compromising capacity or other requirements, which results in lower costs.

- In the Payment options section, choose On-Demand.
 - Using On-Demand Instances, you can pay for compute capacity by the hour or second with no long-term commitments.
- Review the two Savings Plan options.
 - Savings Plans provide savings beyond On-Demand rates in exchange for a commitment of using a specified amount of compute power (measured per hour) for a 1-year or 3-year period.

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Payment options

Estimated commitment price based on the following selections:
Instance type: **t2.medium** Operating system: **Linux**

Select the container and options to find your best price

☐ Compute Savings Plans

One plan that automatically applies to all usage on EC2, Fargate, and Lambda. Up to 66% discount. [Learn more](#)

Reservation term

☐ 1 year

☒ 3 year

Payment Options

☒ No upfront

☐ Partial upfront

☐ All upfront

Upfront: 0.00

Monthly: 16.86/Month

☐ EC2 Instance Savings Plans

Get deeper discount when you only need one instance family and region. Up to 72% discount. [Learn more](#)

Reservation term

☐ 1 year

☒ 3 year

Payment Options

☒ No upfront

☐ Partial upfront

☐ All upfront

Upfront: 0.00

Monthly: 14.60/Month

1. Choose **2. Review**

☒ On-Demand

Maximize flexibility. [Learn more](#)

☐ Spot Instances

Minimize cost by leveraging EC2's spare capacity. Recommended for fault-tolerant and interruption-tolerant applications. [Learn more](#)

The historical on-demand discount for t2.medium is 50%.

Total Upfront cost: 0.00 USD
Total Monthly cost: 90.33 USD

Show Details

Cancel Save and view summary Save and add service

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Amazon EC2 offers several pricing models to help customers optimize their compute costs and capacity needs.

- Click to expand other purchasing options.
- Review the two Reserved Instances options.
 - A Standard Reserved Instance offers a higher discount, but allows modifications only within the same instance family; for example, t3.medium to t2.large. A Convertible Reserved Instance provides a lower discount, but allows modifications across different instance families, operating systems, and tenancy configurations.
- Click to expand Show calculations.
- Click estimated workload hours.

aws pricing calculator

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1. Click Other purchasing options

Standard Reserved Instances
Learn about [Standard Reserved Instances](#)

Reservation term
☐ 1 year
☒ 3 year

Payment Options
☒ No upfront
☐ Partial upfront
☐ All upfront

Upfront: 0.00
Monthly: 13.14/Month

2. Review

Convertible Reserved Instances
Learn more

Reservation term
☐ 1 year
☒ 3 year

Payment Options
☒ No upfront
☐ Partial upfront
☐ All upfront

Upfront: 0.00
Monthly: 15.04/Month

3. Click Show calculations

[Utilization summary](#)

View a complete calculation of your [estimated workload hours](#).

4. Click

On-Demand instance hours: 1946.6665
 $1946.6665 \text{ On-Demand Instance hours} \times 0.0416 \text{ USD} = 80.981331 \text{ USD}$
 On-Demand instances (monthly): 80.981331 USD

Total Upfront cost: 0.00 USD
 Total Monthly cost: 80.98 USD

Show Details Cancel Save and view summary Save and add service

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A Reserved Instance commits you to a 1-year or 3-year term, during which you receive billing benefits for each of the 24 billable hours in a day for specific instance parameters, such as instance type, Region, operating system, and tenancy.

- In the pop-up box, scroll down to Workload hours per month.
- Review how your workload hours are broken down per day.
- Review to see that instances 3 and 4 are being charged for only 8 hours per day while instances 1 and 2 are being charged for 24 hours per day.
- Under Utilization summary, review the Total On-Demand instance hours per month.
- Click Close.

1. Scroll

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Baseline (count)	2	2	2	2	2	2	2
Peak (count)	4	4	4	4	4	4	4
Minutes	0	0	0	0	0	0	0
Hours	8	8	8	8	8	8	8
Total duration in hours	8	8	8	8	8	8	8
Baseline	4	4	4	4	4	4	4

Workload hours per month

This table calculates the total instance utilization hours per month for your estimated daily workload.

2. Review

Instance c...	Sunday h...	Monday ...	Tuesday ...	Wednesd...	Thursday ...	Friday Ho...	Saturday ...	Total hours pe...
1	24	24	24	24	24	24	24	168
2	24	24	24	24	24	24	24	168
3	8	8	8	8	8	8	8	56
4	8	8	8	8	8	8	8	56

3. Review

Utilization summary

Total On-Demand instance hours: 1946.6566

4. Review

5. Click

Close

- Click to expand Amazon Elastic Block Store (EBS).
- For Storage for each EC2 Instance, choose General Purpose SSD (gp3).
- For General Purpose SSD (gp3) - IOPS, type:30
 - Inputs/outputs per second (IOPS) is a unit of measurement that represents the number of input/output operations that can be performed per second on an EBS volume.
- For Storage amount, type:10
- For Unit, choose GB.

Amazon Elastic Block Storage (Amazon EBS) offers various storage types based on your workloads. For basic web servers, General Purpose SSDs might suffice. However, for more specialized workloads, involving large data transfer or high input-output operations, other storage types might be appropriate.

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1. Click → Amazon Elastic Block Store (EBS) - optional [info](#)

Calculating EBS snapshots
[Learn more](#) on how EBS snapshot prices are calculated.

Storage for each EC2 instance
 Choose EBS volume storage type:
 General Purpose SSD (gp3) ← 2. Choose

General Purpose SSD (gp3) - IOPS
 gp3 supports a max of 16,000 IOPS per volume
 30 ← 3. Type

General Purpose SSD (gp3) - Throughput
 gp3 supports a max of 1000 MBps per volume
 Value: Unit: MBps

Storage amount: 10 Unit: GB ← 5. Choose

Snapshot Frequency
 No snapshot storage

Total Upfront cost: 0.00 USD
 Total Monthly cost: 83.12 USD

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- For Snapshot Frequency, choose Weekly.
- For Amount changed per shapshot, type: 1
- For Unit, choose GB.
- Click to expand Data transfer.

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Storage amount: 10 Unit: GB

Snapshot Frequency: Weekly ← 1. Choose

Amount changed per snapshot: 1 Unit: GB ← 2. Type

► Show calculations 3. Choose

► Detailed monitoring - optional [info](#)

4. Click → Data transfer - optional

Inbound Data Transfer
 Enter the data you expect to transfer into US East (N. Virginia)

Data transfer from: Enter Amount: Data amount:

TB per month

Add inbound data transfer

Total Upfront cost: 0.00 USD
 Total Monthly cost: 84.66 USD

Show Details Cancel Save and view summary Save and add service

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You can back up the data on your Amazon EBS volumes by making point-in-time copies, known as Amazon EBS snapshots. A snapshot is an incremental backup, which means that we save only the blocks on the volume that have changed since the most recent snapshot. This minimizes the time required to create the snapshot and saves on storage costs by not duplicating data.

- For Data transfer from, choose Internet (free).
- For Enter amount, type: 1
- For Data amount, choose TB per month.
- For Data transfer to, click to expand the menu.
- Review the outbound transfer options.
- Choose Internet.

The screenshot displays the AWS Pricing Calculator interface for the 'Data transfer - optional' section. It features a form with the following elements:

- Data transfer from:** A dropdown menu with 'Internet (free)' selected. An arrow labeled '1. Choose' points to this dropdown.
- Enter Amount:** A text input field containing the number '1'. An arrow labeled '2. Type' points to this field.
- Data amount:** A dropdown menu with 'TB per month' selected. An arrow labeled '3. Choose' points to this dropdown.
- Add inbound data transfer:** A button located below the inbound transfer fields.
- Data transfer to:** An expanded dropdown menu showing various options with their respective costs per GB. An arrow labeled '4. Click' points to the 'Data transfer to' dropdown.
- Enter amount:** A text input field for the outbound transfer amount.
- Data amount:** A dropdown menu for the outbound transfer amount, currently set to 'TB per month'.
- Add outbound data transfer:** A button located below the outbound transfer fields.
- Show calculations:** A link to view the detailed cost breakdown.
- Summary:** At the bottom, it shows 'Total Upfront cost: 0.00 USD' and 'Total Monthly cost: 84.66 USD'. There are buttons for 'Show Details', 'Cancel', 'Save and view summary', and 'Save and add service'.

There is no charge for all data transfer into the AWS network from the outside internet.

- For Enter amount, type: 100
- For Data amount, choose GB per month.
- Click to expand Show calculations.
- Go to the next step.

When transferring data from AWS to the internet, the costs vary based on the Region where AWS resources are located, with Region-specific pricing structures. Data transfer between AWS Regions follows a specific cost structure in which inbound transfer to a Region is generally free and outbound transfer from one Region to another incurs charges that depend on the originating Region.

aws pricing calculator Feedback Language: English Contact Sales Create an AWS Account

▼ Data transfer - optional

Inbound Data Transfer
Enter the data you expect to transfer into US East (N. Virginia)

Data transfer from: Enter Amount: Data amount:

Intra-Region Data Transfer
Enter the data you expect to transfer between Availability Zones or VPC Peering connections in US East (N. Virginia)

Enter Amount: Data amount:

Outbound Data Transfer
Enter the data you expect to transfer out of US East (N. Virginia)

Data transfer to: Enter Amount: Data amount:

3. Click

1. Type **2. Choose**

Total Upfront cost: 0.00 USD
Total Monthly cost: 93.66 USD Show Details Cancel Save and view summary Save and add service

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- Review to see how your data transfer rates are calculated.
- At the bottom of the page, click Save and add service.

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▼ Show calculations

Unit conversions

Inbound:
Internet: 1 TB per month x 1024 GB in a TB = 1024 GB per month

Pricing calculations

Inbound:
Internet: 1024 GB x 0 USD per GB = 0.00 USD

Intra region:
(0 GB x 0.01 USD per GB outbound) + (0 GB x 0.01 USD per GB inbound) = 0.00 USD

Outbound:
Internet: 100 GB x 0.09 USD per GB = 9.00 USD

1. Review

Data Transfer cost (monthly): 9.00 USD

► Additional costs - optional

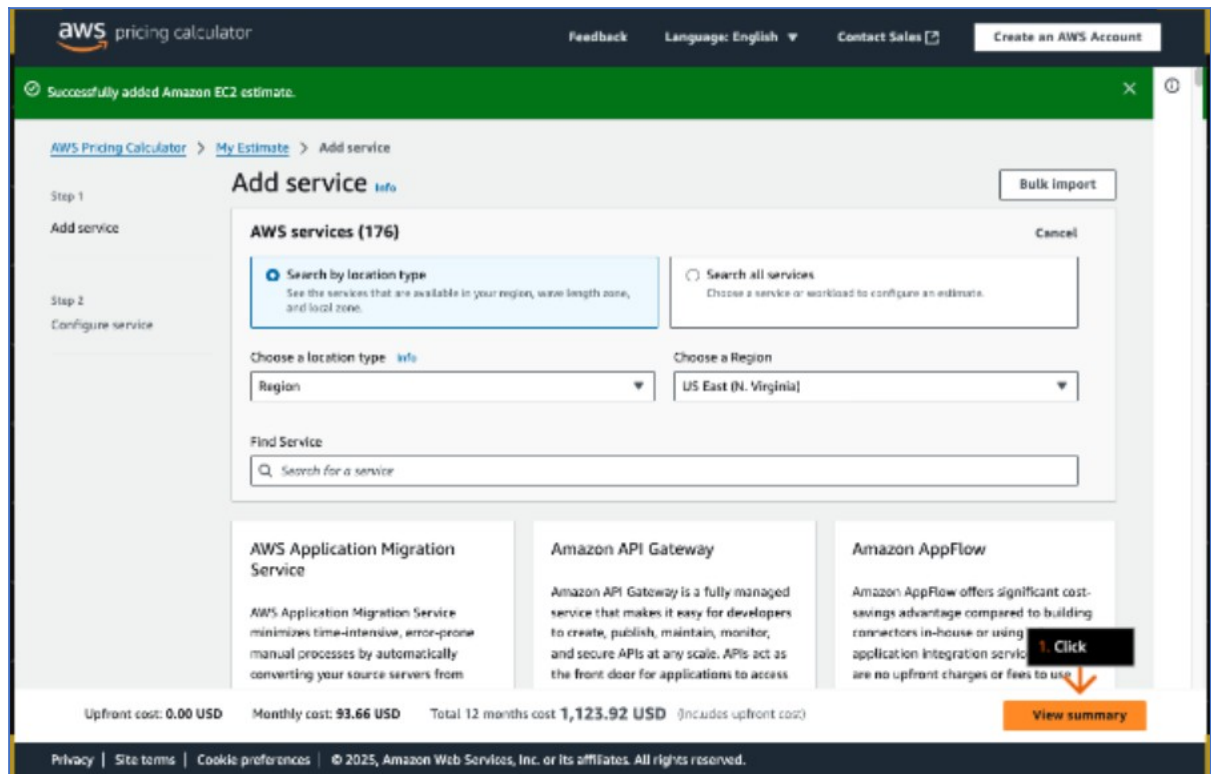
Acknowledgement
AWS Pricing Calculator provides only an estimate of your AWS fees and doesn't include any taxes that might apply. Your actual fees depend on a variety of factors, including your actual usage of services. [Learn more](#)

2. Click

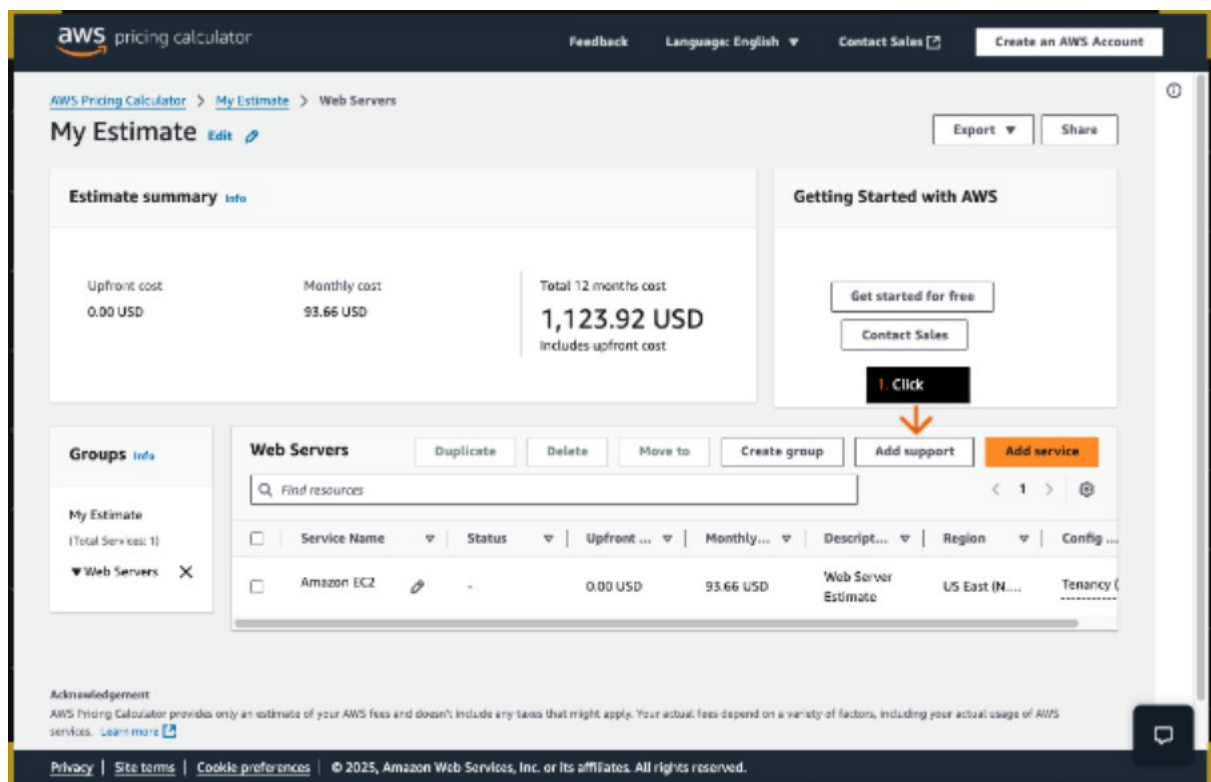
Total Upfront cost: 0.00 USD
Total Monthly cost: 93.66 USD Show Details Cancel Save and view summary Save and add service

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- Click View summary.



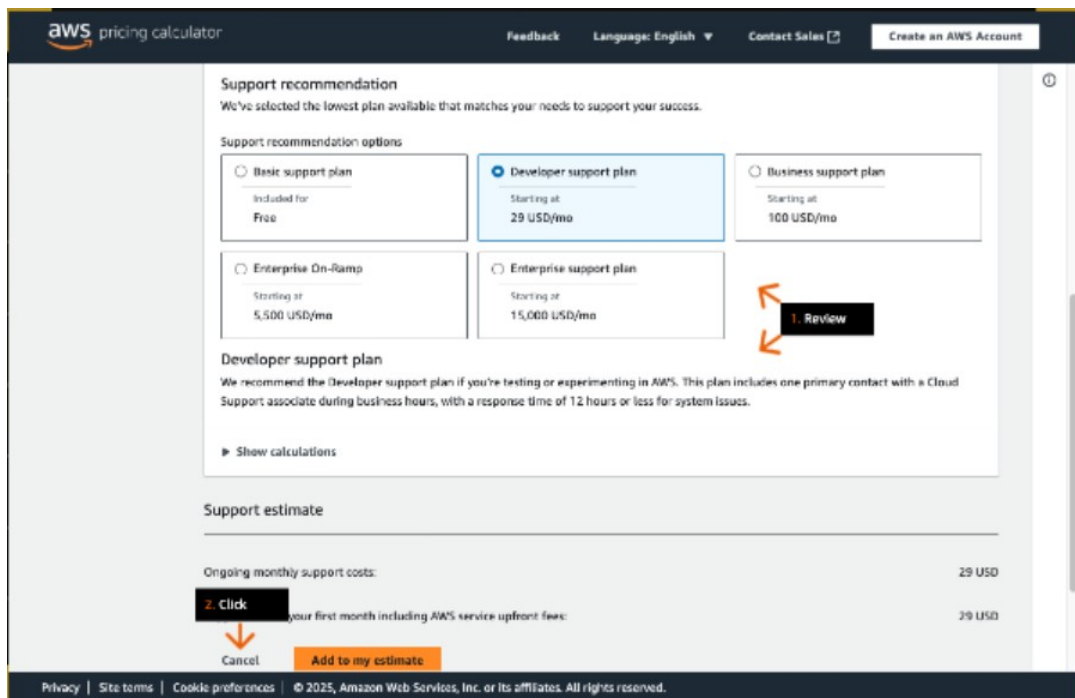
- In the Web Servers section, click Add support.



AWS Support helps with technical issues and additional guidance to operate infrastructures in the AWS cloud.

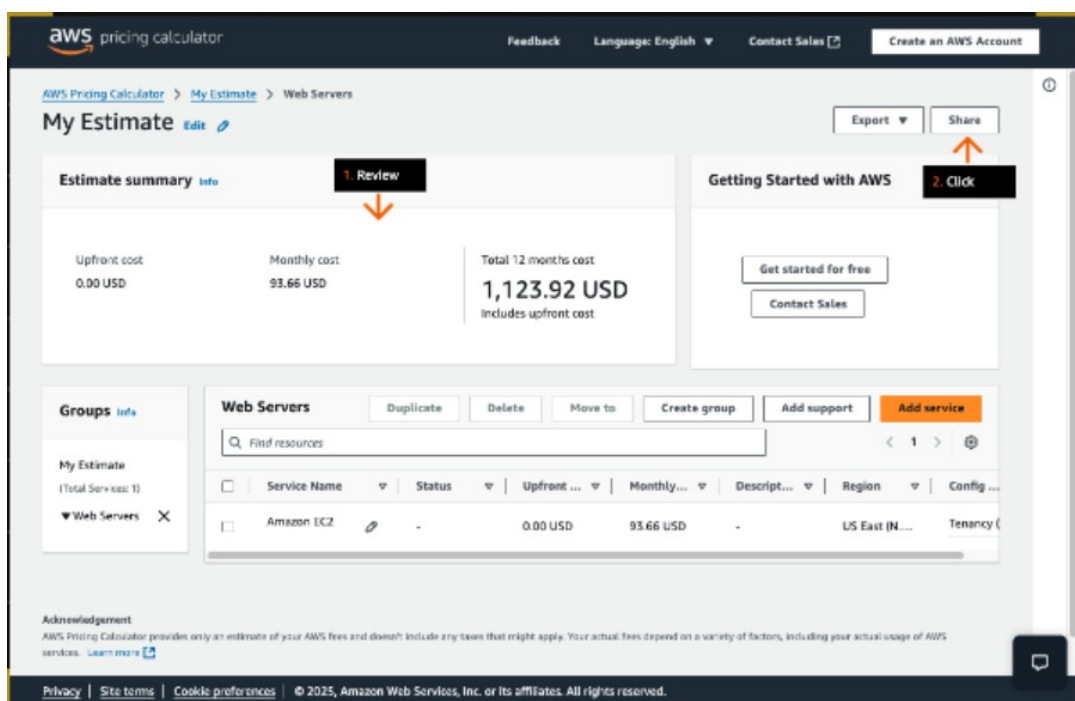
- For Support recommendation options, review each option.

- To see details, you can choose each option.
- Click Cancel.



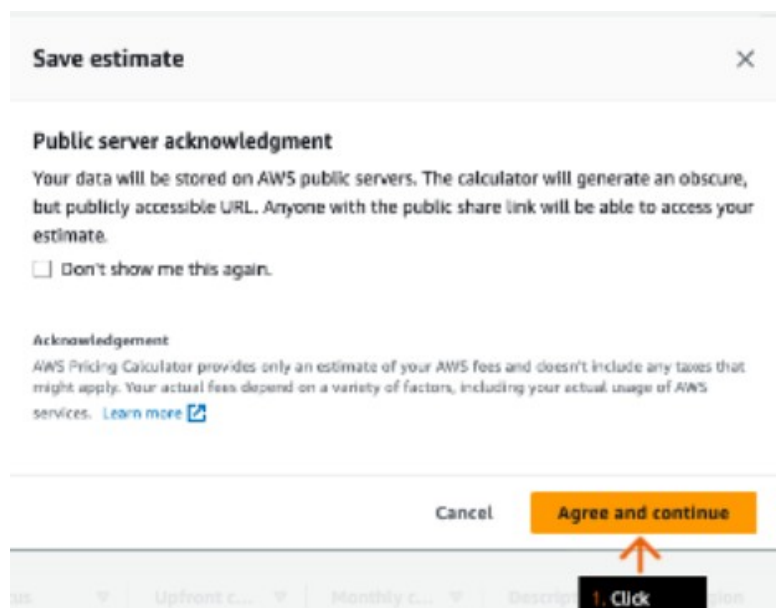
AWS Support plans are designed to give you the right mix of tools and access to expertise so that you can be successful with AWS while optimizing performance, managing risk, and keeping costs under control.

- Review the Estimate summary section.
- Click Share.

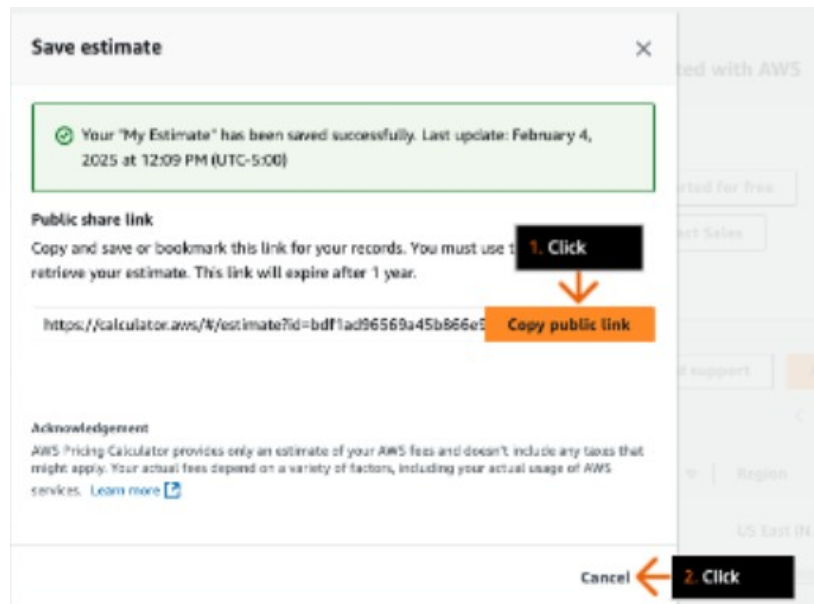


You can create a unique, public link for each estimate that you create.

- In the pop-up box, click Agree and continue.



- Click Copy public link.
 - You can paste this link in a text editor for future reference.
- If the pop-up does not close automatically, click Cancel.



Use the generated link to share the estimate with stakeholders or access the estimate again at a later time. Estimates are saved to AWS public servers.