



Calcular precios en la nube

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AWS pricing model

Three fundamental drivers of cost with AWS

Compute

- Charged per hour/second*
- Varies by instance type

*Linux only

Storage

- Charged typically per GB

Data transfer

- Outbound is aggregated and charged
- Inbound has no charge (with some exceptions)
- Charged typically per GB

How do you pay for AWS?

Pay for what you use



Pay less when you reserve

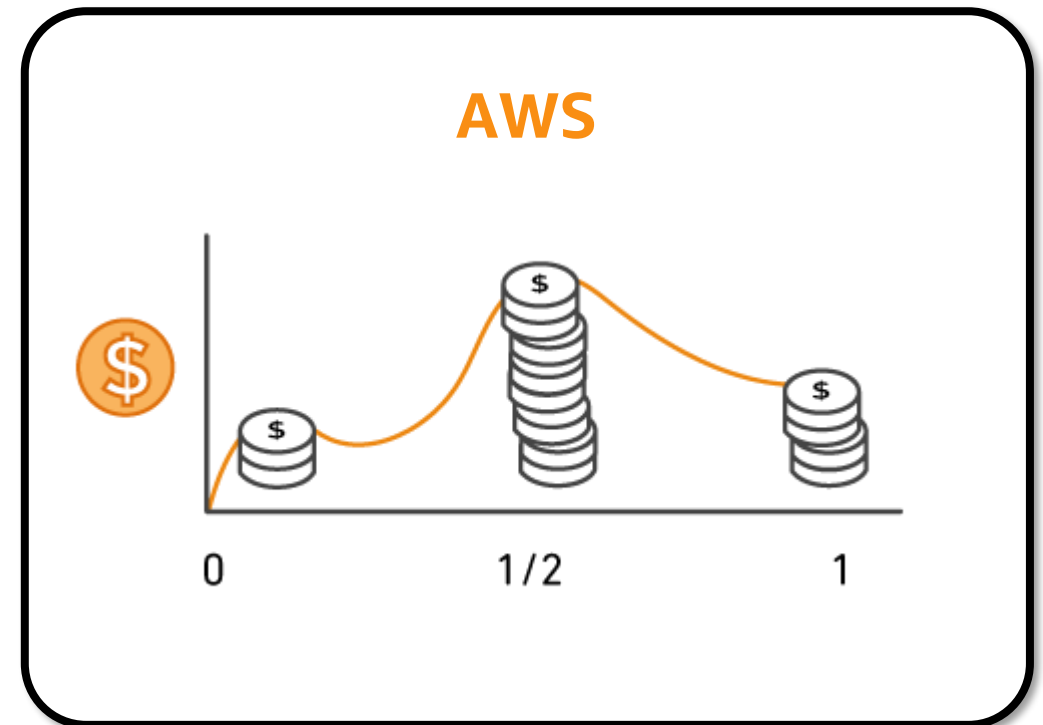
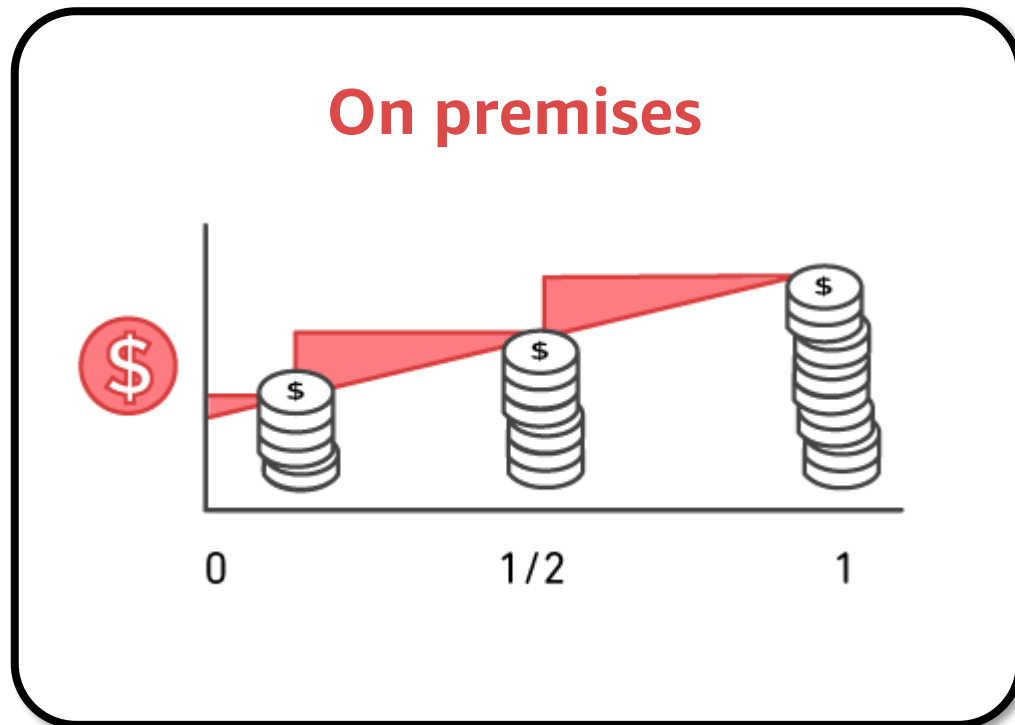


Pay less when you use more and as AWS grows



Pay for what you use

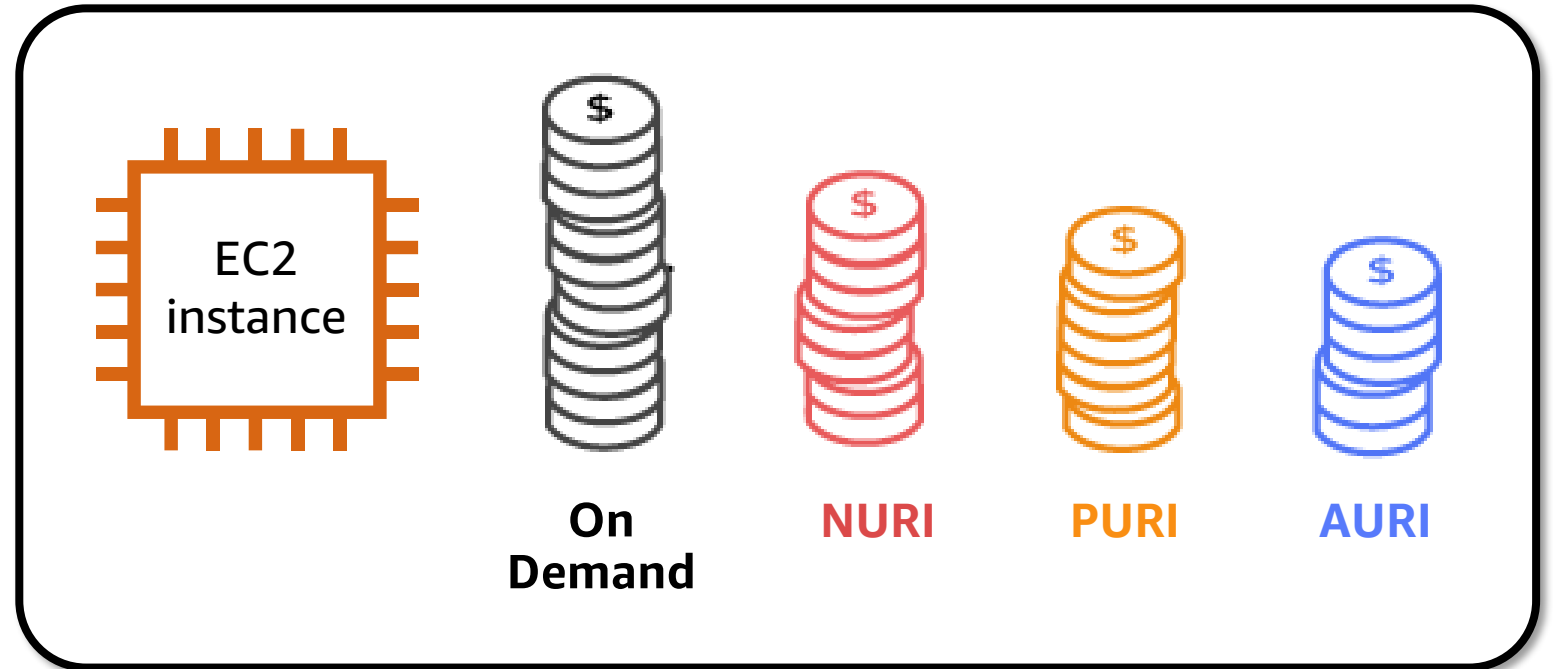
Pay only for the services that you consume, with no large upfront expenses.



Pay less when you reserve

Invest in Reserved Instances (RIs):

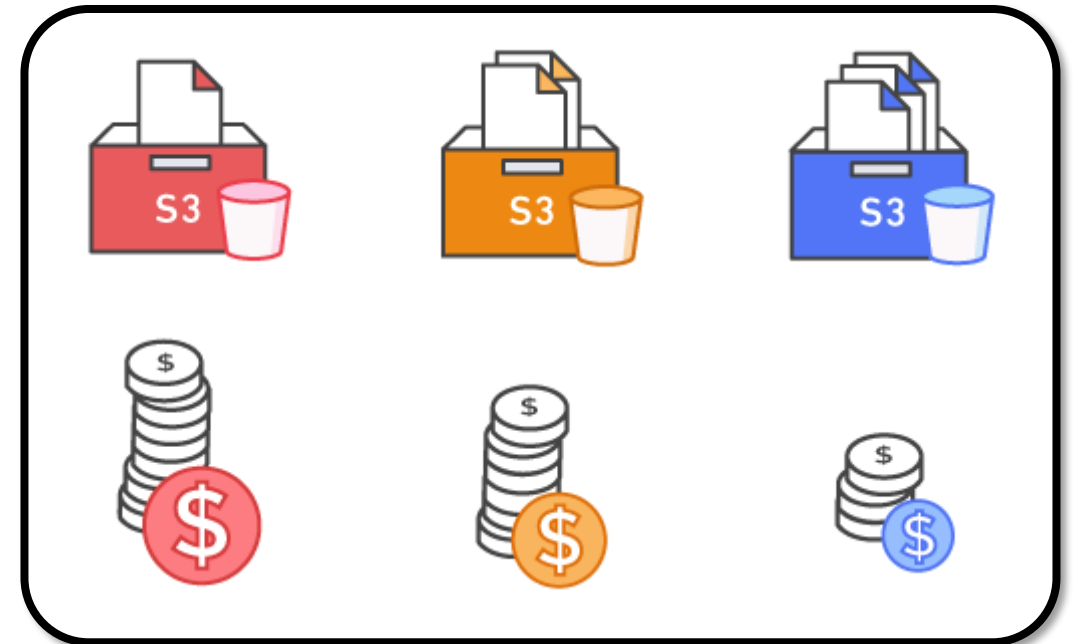
- Save up to 75 percent
- Options:
 - All Upfront Reserved Instance (**AURI**) → **largest discount**
 - Partial Upfront Reserved Instance (**PURI**) → **lower discounts**
 - No Upfront Payments Reserved Instance (**NURI**) → **smaller discount**



Pay less by using more

Realize volume-based discounts:

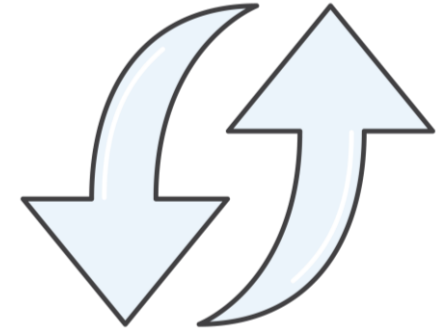
- **Savings** as usage increases.
- **Tiered pricing** for services like Amazon Simple Storage Service (Amazon S3), Amazon Elastic Block Store (Amazon EBS), or Amazon Elastic File System (Amazon EFS) → the more you use, the less you pay per GB.
- Multiple storage services deliver **lower** storage costs based on needs.



Pay even less as AWS grows

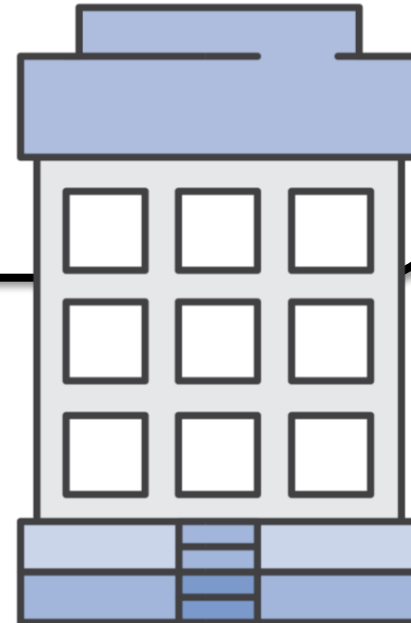
As AWS grows:

- AWS focuses on lowering cost of doing business.
- This practice results in AWS passing savings from economies of scale to you.
- Since 2006, AWS has **lowered pricing 75** times (as of September 2019).
- Future higher-performing resources replace current resources for no extra charge.



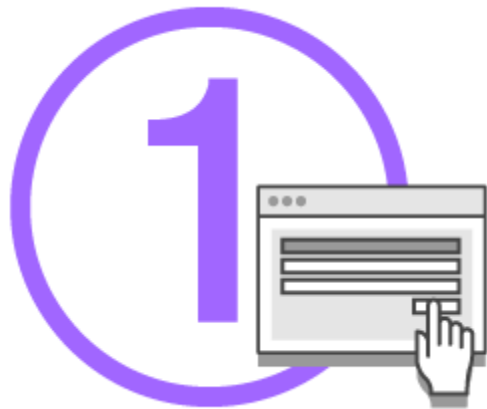
Custom pricing

- Meet varying needs through custom pricing.
- Available for high-volume projects with unique requirements.



AWS Free Tier

Enables you to gain free hands-on experience with the AWS platform, products, and services. Free for 1 year for new customers.



**Sign up for an
AWS account**

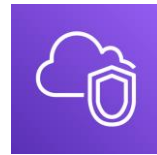


**Learn with 10-
minute tutorials**



**Start building
with AWS**

Services with no charge



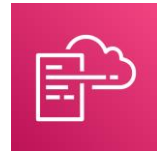
Amazon VPC



Elastic Beanstalk**



Auto Scaling**



AWS CloudFormation**



AWS Identity and Access Management (IAM)

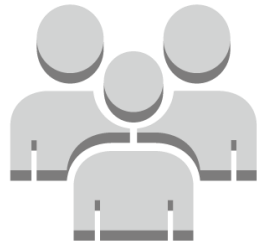
****Note:** There might be charges associated with other AWS services that are used with these services.

On-premises versus cloud

Traditional Infrastructure



Equipment



Resources and administration



Contracts



Cost



AWS Cloud



No upfront expense—pay for what you use



Improve time to market and agility



Scale up and down



Self-service infrastructure

What is Total cost of Ownership (TCO)?

Total Cost of Ownership (TCO) is the financial estimate to help identify direct and indirect costs of a system.

Why use TCO?

- To compare the costs of running an **entire infrastructure environment or specific workload** on-premises versus on AWS
- To budget and **build the business case** for moving to the cloud



TCO considerations

1 Server Costs

Hardware: Server, rack chassis power distribution units (PDUs), top-of-rack (TOR) switches (and maintenance)

Software: Operating system (OS), virtualization licenses (and maintenance)

Facilities cost

Space

Power

Cooling

2 Storage Costs

Hardware: Storage disks, storage area network (SAN) or Fibre Channel (FC) switches

Storage administration costs

Facilities cost

Space

Power

Cooling

3 Network Costs

Network hardware: Local area network (LAN) switches, load balancer bandwidth costs

Network administration costs

Facilities cost

Space

Power

Cooling

4 IT Labor Costs

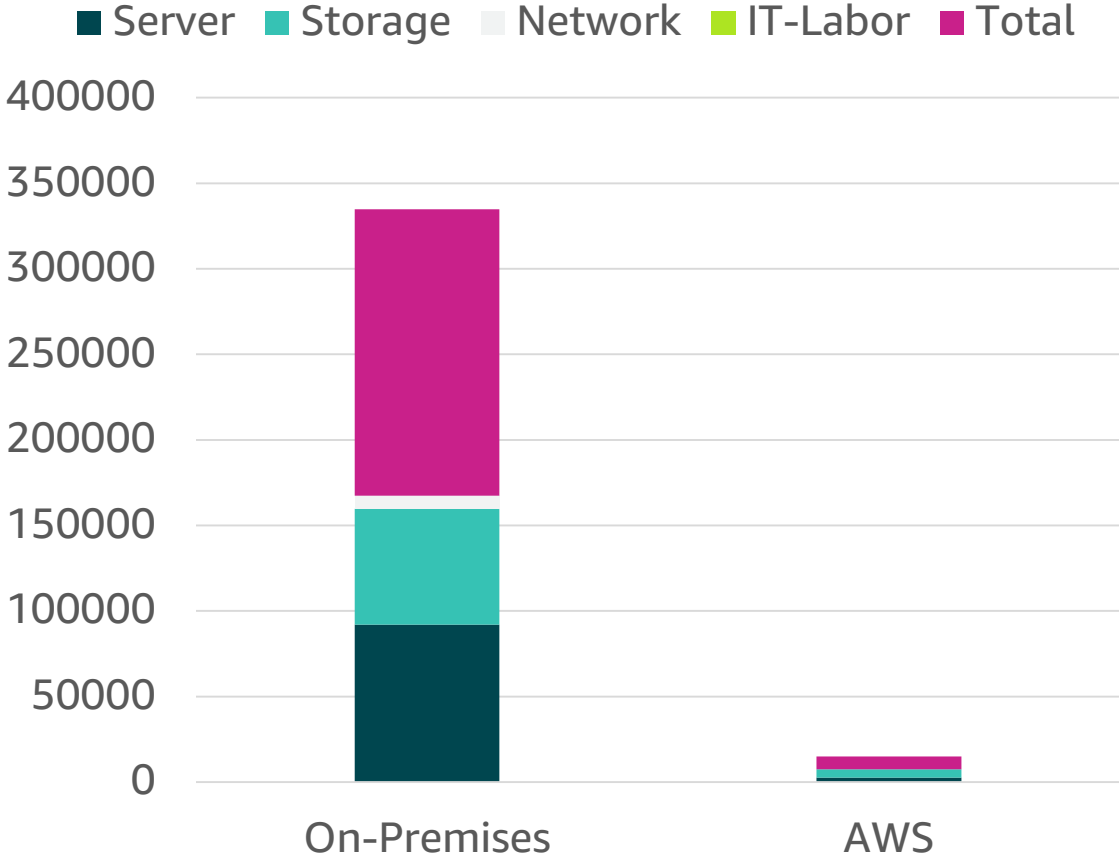
Server administration costs

On-premises versus all-in-cloud

You could save up to **96 percent** a year by moving your infrastructure to AWS.
 Your 3-year total savings would be **\$159,913**.

3-Year Total Cost of Ownership		
	On-Premises	AWS
Server	\$91,922	\$2,547
Storage	\$67,840	\$4,963
Network	\$7,660	\$-----
IT – Labor	\$ -----	\$-----
	--	
Total	\$167,422	\$7,509

AWS cost includes business-level support and a 3-year PURI EC2 instance



AWS Pricing Calculator

Use the [AWS Pricing Calculator](#) to:

- Estimate monthly costs
- Identify opportunities to reduce monthly costs
- Model your solutions before building them
- Explore price points and calculations behind your estimate
- Find the available instance types and contract terms that meet your needs
- Name your estimate and create and name [groups](#) of services

The screenshot displays the AWS Pricing Calculator interface. At the top, it says "AWS Pricing Calculator" and "Estimate the cost for your architecture solution." Below this, it states "Configure a cost estimate that fits your unique business or personal needs with AWS products and services." On the right side, there is a "Create an estimate" section with a "Create estimate" button. Below that is a "Getting started" section with links for "What is the AWS Pricing Calculator?", "Getting started", and "Generating estimates". At the bottom right, there is a "More resources" section with links for "User guide", "FAQs", "Pricing assumptions and variations", and "Need help with estimation? Connect with AWS certified expert on AWS IQ".

AWS Pricing Calculator
Estimate the cost for your architecture solution.
Configure a cost estimate that fits your unique business or personal needs with AWS products and services.

Create an estimate
Start your estimate with no commitment, and explore AWS services and pricing for your architecture needs.
[Create estimate](#)

Getting started
[What is the AWS Pricing Calculator?](#)
[Getting started](#)
[Generating estimates](#)

More resources
[User guide](#)
[FAQs](#)
[Pricing assumptions and variations](#)
Need help with estimation? [Connect with AWS certified expert on AWS IQ](#)

How it works

The "How it works" section contains a flow diagram with four steps:

- AWS Pricing Calculator**: Estimate the cost of AWS products and services.
- Add services**: Search and add AWS services that you need.
- Configure service**: Enter the details of your usage to see service costs.
- View estimate totals**: See estimated costs per service, service group, and totals.

Access the [AWS Pricing Calculator](#)

Reading an estimate

Your estimate is broken into: first 12 months total, total upfront, and total monthly.

[AWS Pricing Calculator](#) > My Estimate

My Estimate [Info](#)

[Add service](#) [Add support](#) [Add group](#) [Clear estimate](#) [Action](#) [Save and share](#)

First 12 months total 886.92 USD	Total upfront 0.00 USD	Total monthly 73.91 USD
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Services (2)

Amazon Simple Storage Service (S3) Region: US East (Ohio) Edit Action		
S3 Standard storage (100 GB per month)	Monthly:	2.37 USD

Amazon EC2 Region: US East (Ohio) Edit Action		
Quick estimate Operating system (Linux), Quantity (1), Pricing strategy (EC2 Instance Savings Plans 1 Year No Upfront), Storage for each EC2 instance (General Purpose SSD (gp2)), Storage amount (100 GB), Instance type (t4g.xlarge)	Monthly:	71.54 USD



Additional benefit considerations

Hard benefits

- Reduced spending on compute, storage, networking, security
- Reductions in hardware and software purchases (capex)
- Reductions in operational costs, backup, and disaster recovery
- Reduction in operations personnel



Soft Benefits

- Reuse of service and applications that enable you to define (and redefine solutions) by using the same cloud service
- Increased developer productivity
- Improved customer satisfaction
- Agile business processes that can quickly respond to new and emerging opportunities
- Increase in global reach

Case study: Total Cost Of Ownership (1 of 6)



Background:

- Growing global company with over 200 locations
- 500 million customers, \$3 billion annual revenue

Case study: Total Cost of Ownership (2 of 6)



Background:

- Growing global company with over 200 locations
- 500 million customers, \$3 billion annual revenue

Challenge:

- Meet demand to rapidly deploy new solutions
- Constantly upgrade aging equipment

Case study: Total Cost of Ownership (3 of 6)



Background:

- Growing global company with over 200 locations
- 500 million customers, \$3 billion annual revenue

Challenge:

- Meet demand to rapidly deploy new solutions
- Constantly upgrade aging equipment

Criteria:

- Broad solution to handle all workloads
- Ability to modify processes to improve efficiency and lower costs
- Eliminate busy work (such as patching software)
- Achieve a positive return on investment (ROI)

Case study: Total Cost of Ownership (4 of 6)



Background:

- Is a growing global company with over 200 locations
- Have 500 million customers, \$3 billion (USD) annual revenue

Challenge:

- Meet demand to rapidly deploy new solutions
- Constantly upgrade aging equipment

Criteria:

- Have a broad solution to handle all workloads
- Be able to modify processes to improve efficiency and lower costs
- Eliminate busy work (such as patching software)
- Achieve a positive return on investment (ROI)

Solution:

- Moved their on-premises data center to AWS
 - Eliminated 205 servers (90 percent)
 - Moved nearly all applications to AWS
- Used 3-year Amazon EC2 Reserved Instances

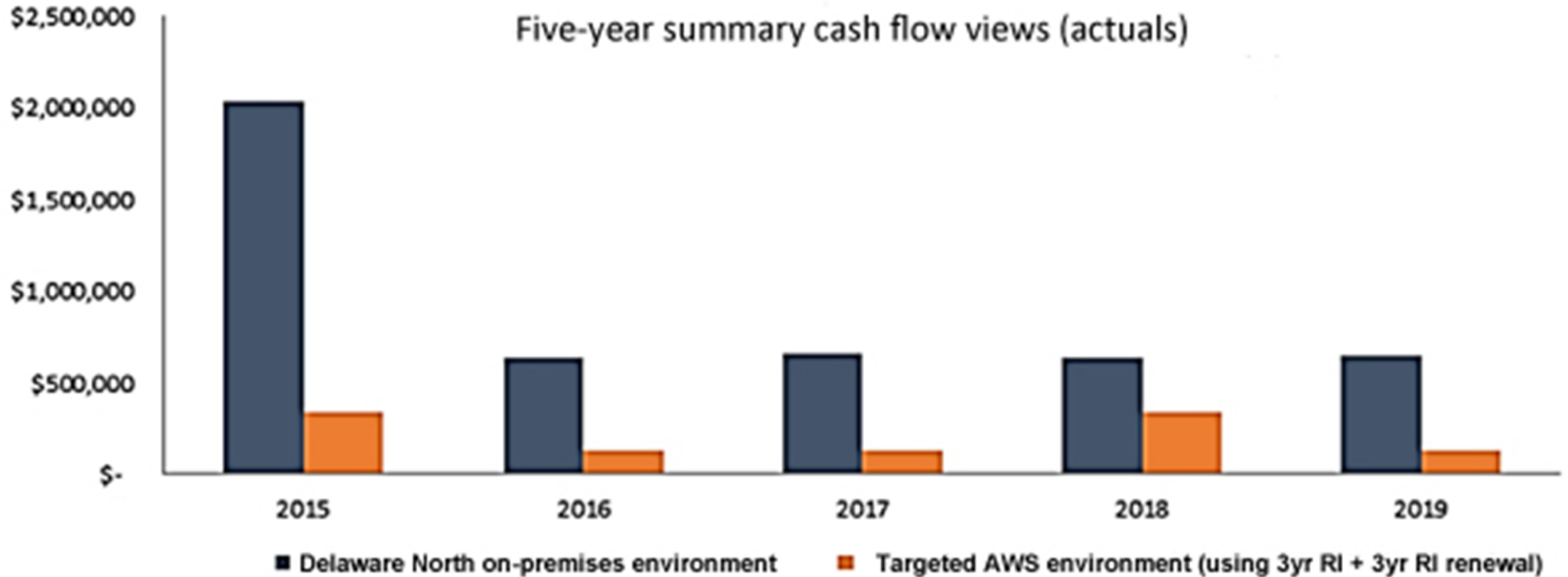
Case study: Total Cost of Ownership (5 of 6)



Delaware North.

Cost comparison: On-premises data center vs. AWS

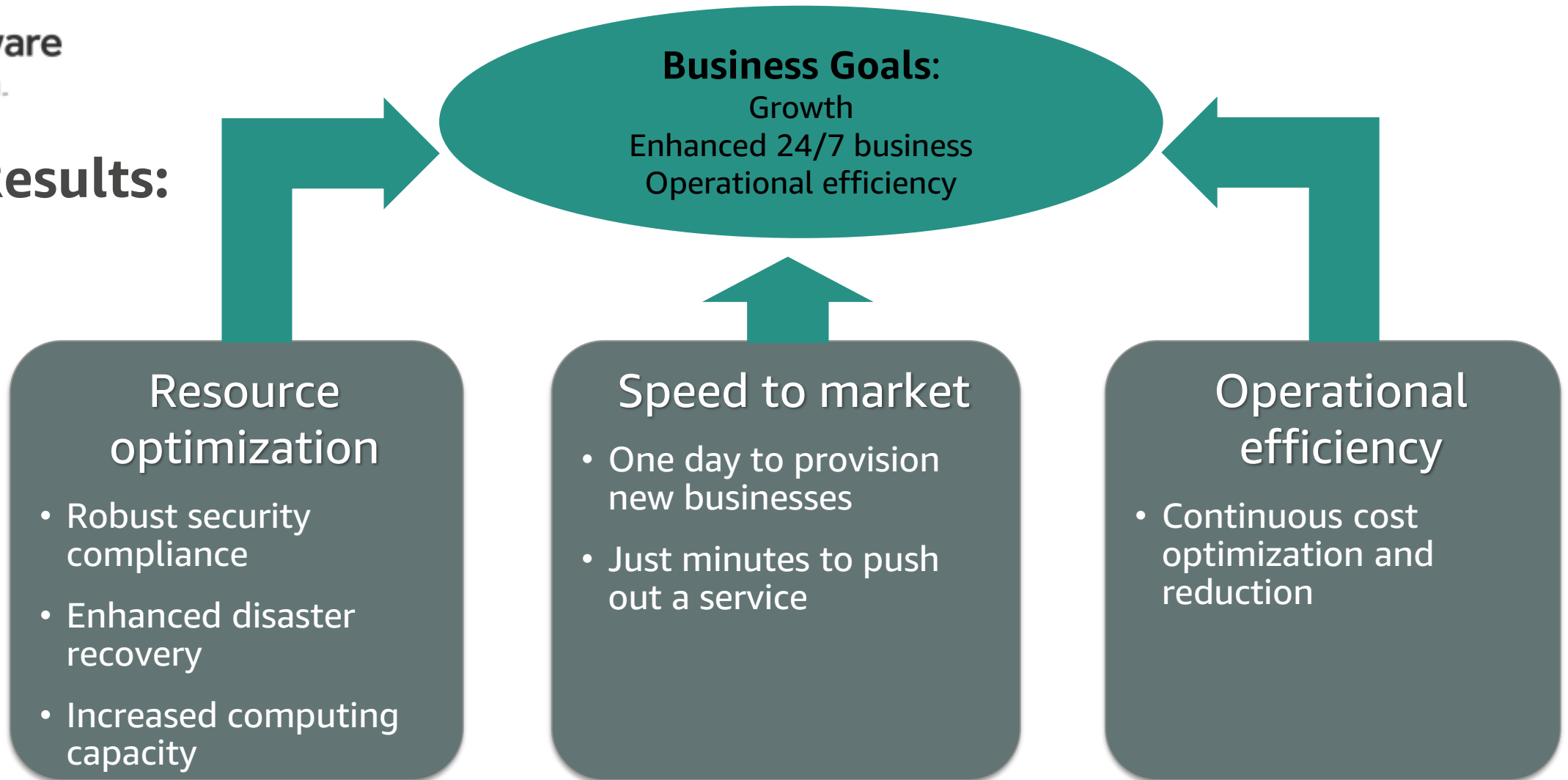
Five-year summary cash flow views (actuals)



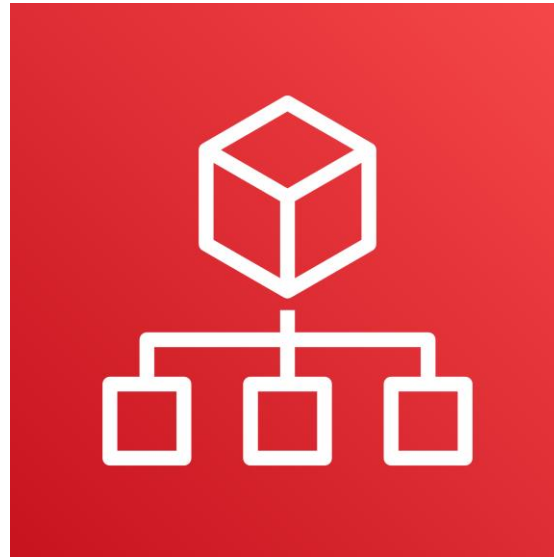
Case study: Total Cost of Ownership (6 of 6)



Results:

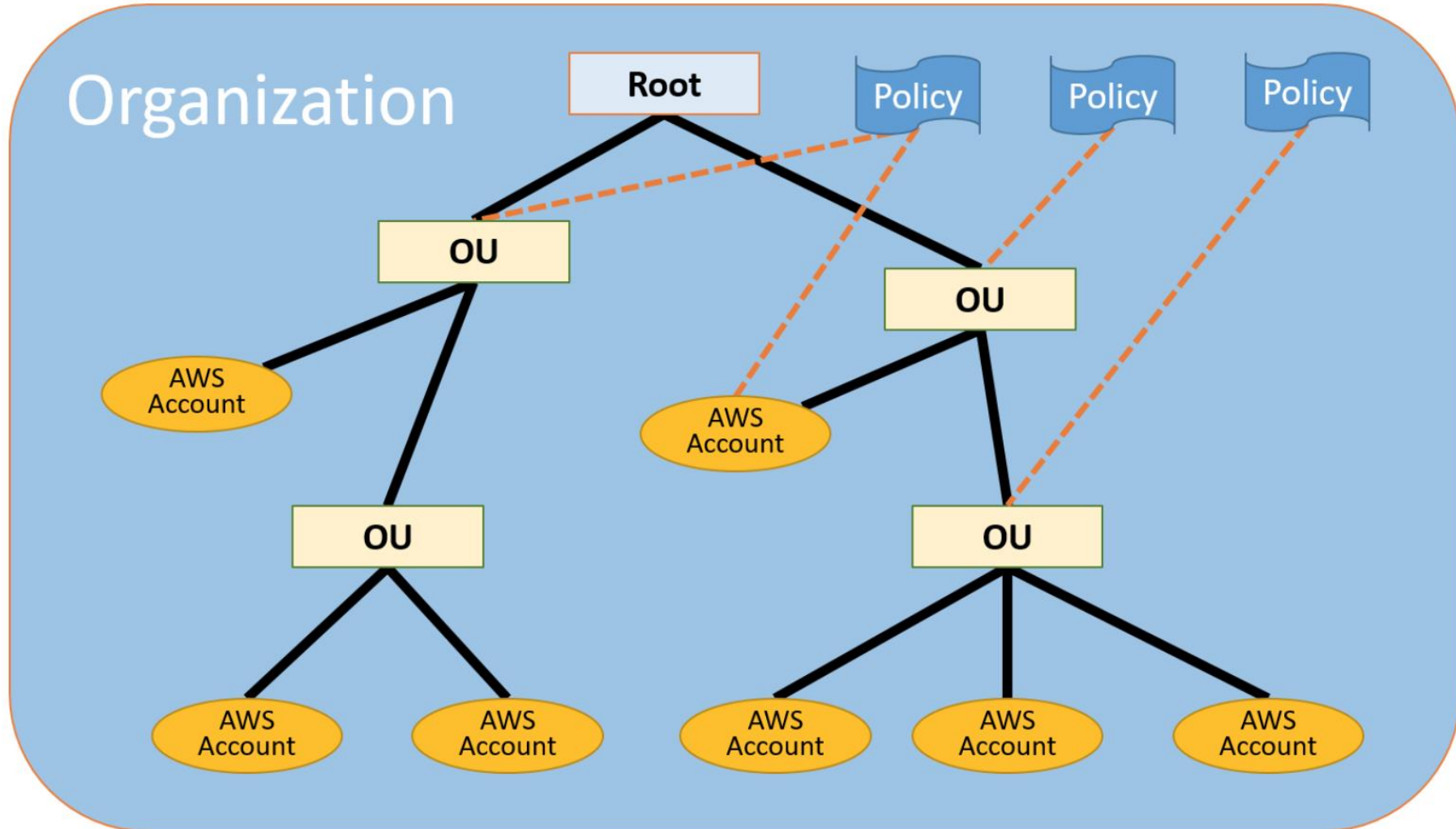


Introduction to AWS Organizations

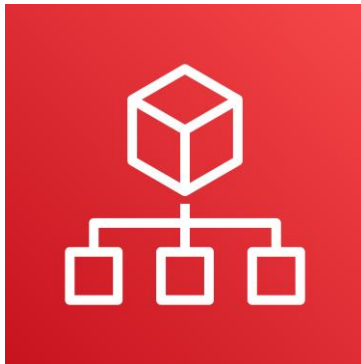


AWS Organizations

AWS Organizations terminology



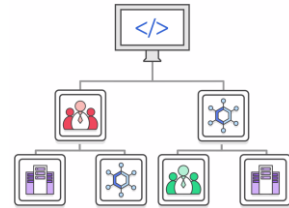
Key features and benefits



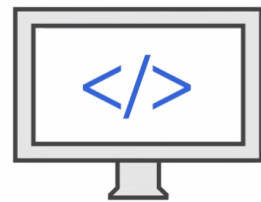
AWS
Organizations



Policy-based account management



Group based account management

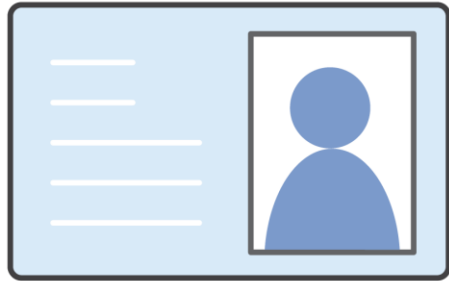


Application programming interfaces (APIs) that automate account management



Consolidated billing

Security with AWS Organizations



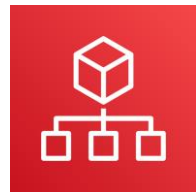
Control access with AWS Identity and Access Management (IAM).

IAM policies enable you to allow or deny access to AWS services for users, groups, and roles.



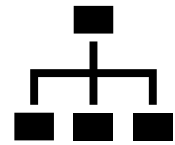
Service control policies (SCPs) enable you to allow or deny access to AWS services for individuals or group accounts in an organizational unit (OU).

Organizations setup



Step 1

Create
Organization



Step 2

Create
organizational
units



Step 3

Create
service
control
policies



Step 4

Test
restrictions

Introducing AWS Billing and Cost Management



AWS Billing Dashboard

Billing & Cost Management Dashboard

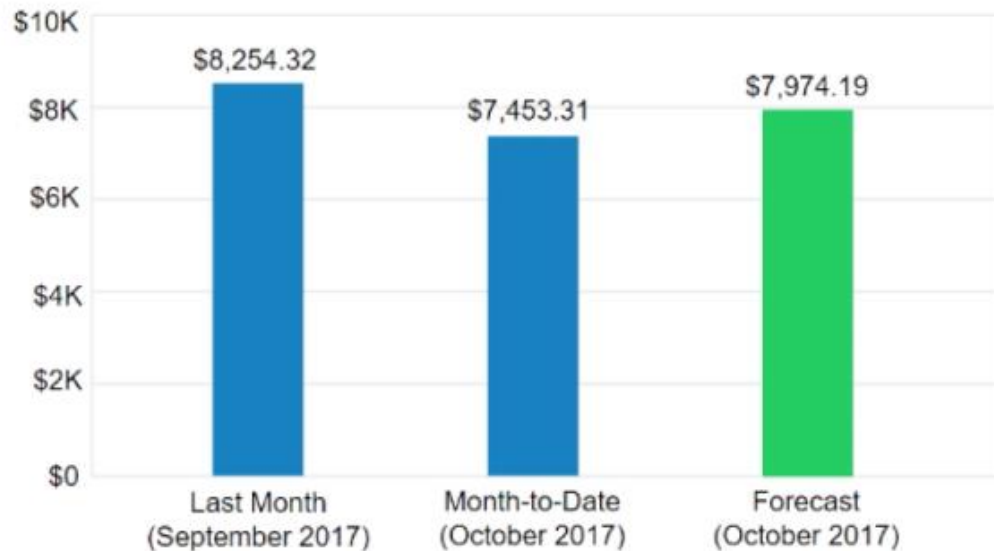
Spend Summary

Cost Explorer

Welcome to the AWS Account Billing console. Your last month, month-to-date, and month-end forecasted costs appear below.

Current month-to-date balance for October 2017

\$7,453.41



Monthly-to-Date Spend by Service

Bill Details

The chart below shows the proportion of costs spent for each service you use.

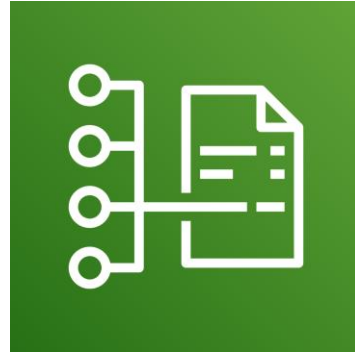


EC2	\$3,700.71
RDS	\$1,876.36
ElastiCache	\$938.18
DynamoDB	\$625.44
Other Services	\$312.57
Tax	\$0.16

Tools



AWS Budgets



AWS Cost and Usage Report



AWS Cost Explorer

Monthly bills

BILLS | COST EXPLORER | BUDGETS | REPORTS

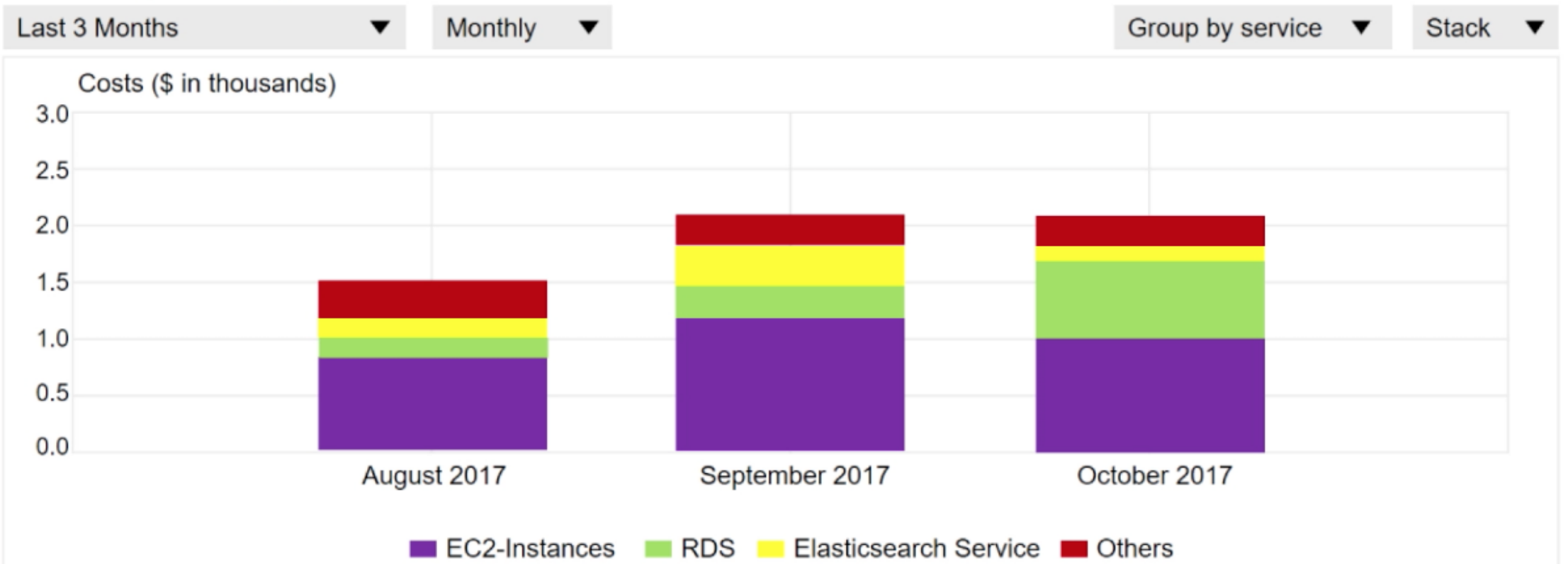
Total		\$7,453.41 USD
AWS Marketplace Charges		\$15.00
▼ Usage Charges and Recurring Fees		\$15.00
Invoice 32342548 – AWS Service Charges: Usage charge for this statement period	2017-10-10	\$15.00
AWS Service Charges		\$7,438.41
▼ Usage Charges and Recurring Fees		\$7,414.41
Invoice 32342513 – AWS Service Charges: Usage charge for this statement period	2017-10-10	\$7,414.41
▼ Usage Charges and Recurring Fees		\$24.00
Invoice 32342507 – AWS Service Charges: Subscription charge	2017-10-10	\$24.00



Cost Explorer

BILLS | **COST EXPLORER** | BUDGETS | REPORTS

Monthly costs by service



Forecast and track costs

BILLS | COST EXPLORER | **BUDGETS** | REPORTS

Buttons: Create budget, Copy, Edit, Delete, Download CSV, Settings

Filter by budget name

	Budget name	Current	Forecasted	Budgeted	Current vs. budgeted	Forecasted vs. budgeted
<input type="checkbox"/>	▶ Total Monthly Cost	\$760.27	\$787.44	\$1,000.00		
<input type="checkbox"/>	▼ S3 Usage Bucket	2978.00 Req	3650.16 Req	3000.00 Req		

Budget details

Start date 10/01/17

End date -

Budget Period Monthly

Variance analysis



Cost and usage reporting

BILLS | COST EXPLORER | BUDGETS | **REPORTS**

Product Code	Usage Type	Operation	Availability Zone	Usage Amount	Currency Code	Line Item Description
Amazon S3	Requests – Tier 1	ListAllMyBuckets		2	USD	\$0.00 per request – PUT, COPY, POST, LIST under the global free tier
Amazon EC2	USW2-Boxusage:t2.micro	Runinstnaces:0002	us-west-2a	1	USD	\$0.00 per Windows t2.micro instance-hour under monthly free tier
Amazon S3	Requests – Tier 1	ListAllMyBuckets		2	USD	\$0.00 per request – PUT, COPY, POST, LIST under the global free tier
Amazon EC2	USW2-Boxusage:t2.micro	Runinstnaces:0002	us-west-2a	1	USD	\$0.00 per Windows t2.micro instance-hour under monthly free tier
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Billing dashboard demonstration



Getting Started with AWS Billing & Cost Management

- Manage your costs and usage using [AWS Budgets](#)
- Visualize your cost drivers and usage trends via [Cost Explorer](#)
- Dive deeper into your costs using the [Cost and Usage Reports with Athena integration](#)
- **Learn more:** Check out the [AWS What's New webpage](#)

Do you have Reserved Instances (RIs)?

- Access the RI Utilization & Coverage reports—and RI purchase recommendations—via [Cost Explorer](#).

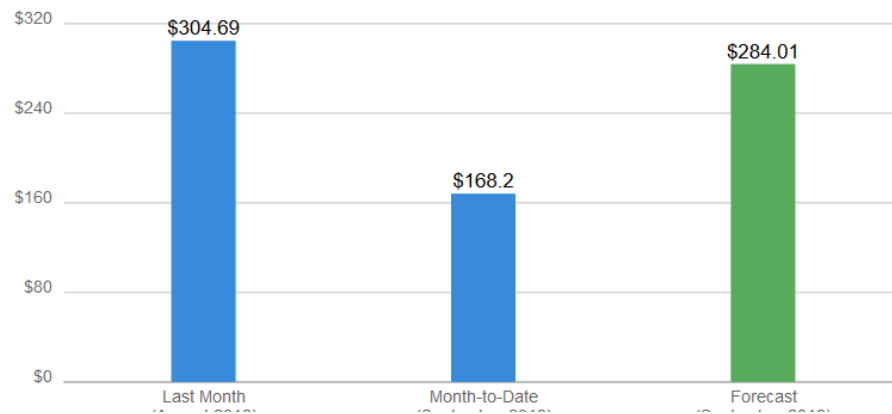
Spend Summary

[Cost Explorer](#)

Welcome to the AWS Billing & Cost Management console. Your last month, month-to-date, and month-end forecasted costs appear below.

Current month-to-date balance for September 2019

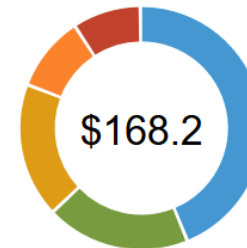
\$168.20



Month-to-Date Spend by Service

[Bill Details](#)

The chart below shows the proportion of costs spent for each service you use.



ES	\$74.52
DatabaseMigrationSvc	\$32.12
SageMaker	\$29.99
EC2	\$16.59
Other Services	\$14.98
Tax	\$0.00
Total	\$168.20

AWS Pricing Calculator

DEMO

AWS Pricing Calculator

Estimate the cost for your architecture solution.

Configure a cost estimate that fits your unique business or personal needs with AWS products and services.

Create an estimate

Start your estimate with no commitment, and explore AWS services and pricing for your architecture needs.

[Create estimate](#)

Getting started

[What is the AWS Pricing Calculator?](#)

[Getting started](#)

[Generating estimates](#)

More resources

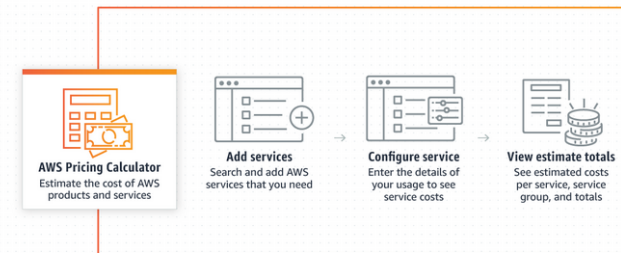
[User guide](#)

[FAQs](#)

[Pricing assumptions and variations](#)

Need help with estimation? Connect with AWS certified expert on AWS IQ

How it works



Access the [AWS Pricing Calculator](#)

Thank you



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