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# Cost and usage report

## User Guide



## **Cost and usage report: User Guide**

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# What are AWS Cost and Usage Reports?

The AWS Cost and Usage Reports (AWS CUR) contains the most comprehensive set of cost and usage data available. You can use Cost and Usage Reports to publish your AWS billing reports to an Amazon Simple Storage Service (Amazon S3) bucket that you own. You can receive reports that break down your costs by the hour or day, by product or product resource, or by tags that you define yourself. AWS updates the report in your bucket once a day in comma-separated value (CSV) format. You can view the reports using spreadsheet software such as Microsoft Excel or Apache OpenOffice Calc, or access them from an application using the Amazon S3 API.

AWS Cost and Usage Reports tracks your AWS usage and provides estimated charges associated with your account. Each report contains line items for each unique combination of AWS products, usage type, and operation that you use in your AWS account. You can customize the AWS Cost and Usage Reports to aggregate the information either by the hour or by the day.

AWS Cost and Usage Reports can do the following:

- Deliver report files to your Amazon S3 bucket
- Update the report up to three times a day
- Create, retrieve, and delete your reports using the AWS CUR API Reference

## How Cost and Usage Reports work

Each update is cumulative, so each version of the Cost and Usage Reports includes all of the line items and information from the previous version. The reports generated throughout the month are estimated, and subject to change during the rest of the month as you continue to use your AWS services. AWS finalizes the report at the end of each month. Finalized reports have the calculations for your blended and unblended costs, and cover all of your usage for the month.

AWS might update reports after they have been finalized if AWS applies refunds, credits, or support fees to your usage for the month. You can set this as a preference when creating or editing your report. The report is available within 24 hours of the date that you create a report on the **Cost & Usage Reports** page of the Billing and Cost Management console.

## Using the data dictionary

You can analyze your usage and cost in detail once you've set up your report. We've provided a Data Dictionary that lists the columns you'll see in your report, along with definitions and examples.

To see a your line item definitions and download a full list of corresponding services, see [Data dictionary](#) (p. 19).

## Downloading AWS Cost and Usage Reports

You can download your report from the Amazon S3 console, query the report using Amazon Athena, or upload the report into Amazon Redshift or Amazon QuickSight.

- For more information about creating an Amazon S3 bucket and using Athena to query your data, see [Querying Cost and Usage Reports using Amazon Athena \(p. 11\)](#).
- For more information about uploading to Amazon Redshift, see [Loading report data to Amazon Redshift \(p. 17\)](#).
- For more information about uploading to Amazon QuickSight, see [Loading report data to Amazon QuickSight \(p. 17\)](#).

## Consolidated billing users

If you use the consolidated billing feature in AWS Organizations, the Amazon S3 bucket that you designate to receive the billing reports must be owned by the management account in your organization. You can't receive billing reports in a bucket that is owned by a member account. If you use consolidated billing, you can also have your costs broken down by member account.

For more information on consolidated billing, see [Consolidated Billing for Organizations](#) in the *AWS Billing and Cost Management User Guide*

# Creating Cost and Usage Reports

You can use the **Cost & Usage Reports** page in the Billing and Cost Management console to create Cost and Usage Reports. In the following section, you'll find information on how to get started with Cost and Usage Reports.

## Topics

- [Setting up an Amazon S3 bucket for Cost and Usage Reports \(p. 3\)](#)
- [Creating Cost and Usage Reports \(p. 4\)](#)

## Setting up an Amazon S3 bucket for Cost and Usage Reports

To receive billing reports, you must have an Amazon S3 bucket in your AWS account to store your reports. Reports show you which AWS services you used, the amount of time that you used them, the amount of data that you transferred in and out of storage, the average storage space that you used, and more. You can specify an existing bucket or create one.

Step 1: Create an Amazon S3 bucket. To create a bucket, see [Creating a Bucket](#) in the *Amazon Simple Storage Service Console User Guide*.

Step 2: Grant Billing and Cost Management permission to deliver reports to your Amazon S3 bucket

### To grant Billing and Cost Management permission to deliver reports to your Amazon S3 bucket

1. Open the Amazon S3 console at <https://console.aws.amazon.com/s3/>
2. From the list of buckets, choose the bucket that you want to receive reports in.
3. Choose **Permissions**.
4. Choose **Bucket Policy**.
5. Paste the following text into the bucket policy editor.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Principal": {
        "Service": "billingreports.amazonaws.com"
      },
      "Action": [
        "s3:GetBucketAcl",
        "s3:GetBucketPolicy"
      ],
      "Resource": "arn:aws:s3:::bucketname"
    },
    {
      "Effect": "Allow",
      "Principal": {
        "Service": "billingreports.amazonaws.com"
      },
    },
  ],
}
```

```
"Action": "s3:PutObject",  
  "Resource": "arn:aws:s3:::bucketname/*"  
}  
]  
}
```

6. Replace **bucketname** with the name of your bucket.
7. Choose **Save**.

## Rates

Storing the billing reports data in your Amazon S3 bucket is billed at standard Amazon S3 rates. For more information, see [Quotas and restrictions \(p. 75\)](#).

# Creating Cost and Usage Reports

You can use the **Cost & Usage Reports** page of the Billing and Cost Management console to create Cost and Usage Reports.

### Note

- It can take up to 24 hours for AWS to start delivering reports to your Amazon S3 bucket. After delivery starts, AWS updates the AWS Cost and Usage Reports files at least once a day.
- Detailed billing reports (DBRs) don't refresh automatically, whether you select **Data refresh settings** or not. To refresh a DBR, open a support case. For more information, see [Contacting Customer Support About Your Bill](#) in the *AWS Billing and Cost Management User Guide*.

### To create Cost and Usage Reports

1. Sign in to the Billing and Cost Management console at <https://console.aws.amazon.com/billing/home#/>
2. On the navigation pane, choose **Cost & Usage Reports**.
3. Choose **Create report**.
4. For **Report name**, enter a name for your report.
5. For **Additional report details**, select **Include resource IDs** to include the IDs of each individual resource in the report.

### Note

Including resource IDs will create individual line items for each of your resources. This can increase the size of your Cost and Usage Reports files significantly, based on your AWS usage.

6. For **Data refresh settings**, select whether you want the AWS Cost and Usage Reports to refresh if AWS applies refunds, credits, or support fees to your account after finalizing your bill. When a report refreshes, a new report is uploaded to Amazon S3.
7. Choose **Next**.
8. For **S3 bucket**, choose **Configure**.
9. In the **Configure S3 Bucket** dialog box, do one of the following:
  - Select an existing bucket from the drop down list and choose **Next**.
  - Enter a bucket name and the Region where you want to create a new bucket and choose **Next**.
10. Review the bucket policy, and select **I have confirmed that this policy is correct** and choose **Save**.

11. For **Report path prefix**, enter the report path prefix that you want prepended to the name of your report.
12. For **Time granularity**, choose one of the following:
  - **Hourly** if you want the line items in the report to be aggregated by the hour.
  - **Daily** if you want the line items in the report to be aggregated by the day.
  - **Monthly** if you want the line items in the report to be aggregated by month.
13. For **Report versioning**, choose whether you want each version of the report to overwrite the previous version of the report or to be delivered in addition to the previous versions.

Overwriting reports can save on Amazon S3 storage costs. Delivering new report versions can improve auditability of billing data over time.
14. For **Enable report data integration for**, select whether you want to enable your Cost and Usage Reports to integrate with Amazon Athena, Amazon Redshift, or Amazon QuickSight. The report is compressed in the following formats:
  - **Athena**: parquet format
  - **Amazon Redshift or Amazon QuickSight**: .gz compression
15. Choose **Next**.
16. After you have reviewed the settings for your report, choose **Review and Complete**.

You can always return to the Cost & Usage Reports section of your Billing and Cost Management console to see when your reports were last updated.

# Managing your Cost and Usage Reports

In the following section, you'll find information about managing your Cost and Usage Reports (AWS CUR).

## Topics

- [Viewing your Cost and Usage Reports details \(p. 6\)](#)
- [Accessing your Cost and Usage Reports in Amazon S3 \(p. 6\)](#)
- [Editing your Cost and Usage Reports configuration \(p. 10\)](#)

## Viewing your Cost and Usage Reports details

You can use the **Cost & Usage Reports** page in the Billing and Cost Management console to create Cost and Usage Reports, generated by AWS.

### To create Cost and Usage Reports

1. Sign in to the Billing and Cost Management console at <https://console.aws.amazon.com/billing/home#/>
2. On the navigation pane, choose **Cost & Usage Reports**.

You'll find a list of your Cost and Usage Reports listed on the page dashboard.

## Accessing your Cost and Usage Reports in Amazon S3

In the following sections, you'll find information on how you can access reports for various scenarios.

### Topics

- [Cost and Usage Reports delivery timeline \(p. 6\)](#)
- [Cost and Usage Reports formatting \(p. 7\)](#)
- [Keeping your previous Cost and Usage Reports \(p. 7\)](#)
- [Overwriting previous Cost and Usage Reports \(p. 7\)](#)
- [Cost and Usage Reports manifest files \(p. 8\)](#)

## Cost and Usage Reports delivery timeline

During the report period, AWS delivers a new report and a new manifest file each time AWS updates the report. AWS builds on previous reports until the end of the billing period. After the end of the report billing period, AWS generates a new report with none of the information from the previous report.

## Cost and Usage Reports formatting

The Cost and Usage Reports is a .csv file or a collection of .csv files that is stored in an Amazon S3 bucket. The size of an individual report can grow to more than a gigabyte and might exceed the capacity of desktop spreadsheet applications to display every line. If a report is larger than most applications can handle, AWS splits the report into multiple files that are stored in the same folder in the Amazon S3 bucket. The specific organization and naming conventions of your AWS CUR files depend on what parameters you chose when you created your report.

## Keeping your previous Cost and Usage Reports

When you choose to keep your previous Cost and Usage Reports, your AWS CUR uses the following Amazon S3 organization and naming conventions.

```
<example-report-prefix>/<example-report-name>/yyyymmdd-yyyymmdd/<assemblyId>/<example-report-name>-<file-number>.csv.<zip|gz>
```

- `report-prefix` = The prefix that you assign to the report.
- `report-name` = The name that you assign to the report.
- `yyyymmdd-yyyymmdd` = The range of dates that the report covers. Reports are finalized at the end of the date range.
- `assemblyId` = An ID that AWS creates each time that the report is updated.
- `file-number` = If the update includes a large file, AWS might split it into multiple files. The `file-number` tracks the different files in an update.
- `csv` = The format of the report files.
- `zip` or `gz` = The type of compression applied to the report files.

For example, your report could be delivered as a collection of the following files.

```
<example-report-prefix>/<example-report-name>/20160101-20160131/<123456789>/<example-report-name>-<1>.csv.<zip>  
<example-report-prefix>/<example-report-name>/20160101-20160131/<123456789>/<example-report-name>-<2>.csv.<zip>  
<example-report-prefix>/<example-report-name>/20160101-20160131/<123456789>/<example-report-name>-<3>.csv.<zip>  
<example-report-prefix>/<example-report-name>/20160101-20160131/<123456789>/<example-report-name>-Manifest.json  
<example-report-prefix>/<example-report-name>/20160101-20160131/<example-report-name>-Manifest.json
```

AWS delivers all reports in a report date range to the same `report-prefix/report-name/yyyymmdd-yyyymmdd` folder. AWS gives each report a unique ID and delivers it to the `assemblyId` subfolder in the date range folder. If the report is too large for a single file, the report is split into multiple files and delivered to the same `assemblyId` folder.

For more information on manifesting files when you keep a previous report, see [Cost and Usage Reports manifest files \(p. 8\)](#)

## Overwriting previous Cost and Usage Reports

When you choose to overwrite your previous Cost and Usage Reports, your AWS CUR uses the following Amazon S3 organization and naming conventions.

```
<example-report-prefix>/<example-report-name>/yyyymmdd-yyyymmdd/<example-report-name>-<file-number>.csv.<zip|gz>
```

- `report-prefix` = The prefix that you assign to the report.
- `report-name` = The name that you assign to the report.
- `yyyymmdd-yyyymmdd` = The range of dates that the report covers. AWS finalizes reports at the end of the date range.
- 
- `file-number` = If the update includes a large file, AWS might split it into multiple files. The `file-number` tracks the different files in an update.
- `csv` = The format of the report files.
- `zip` or `gz` = The type of compression applied to the report files.

For example, your report could be delivered as a collection of the following files.

```
<example-report-prefix>/<example-report-name>/yyyymmdd-yyyymmdd/<example-report-name>-<1>.csv.<zip>  
<example-report-prefix>/<example-report-name>/yyyymmdd-yyyymmdd/<example-report-name>-<2>.csv.<zip><example-report-prefix>/<example-report-name>/yyyymmdd-yyyymmdd/<example-report-name>-<3>.csv.<zip>  
<example-report-prefix>/<example-report-name>/yyyymmdd-yyyymmdd/<example-report-name>-Manifest.json
```

## Athena specifications

If you chose Athena support when you created your AWS CUR, the file naming conventions are the same as when you choose to overwrite your AWS CUR except for the format and compression. Athena AWS CUR files use `.parquet` instead. For example, your report could be delivered as a collection of the following files.

```
<example-report-prefix>/<example-report-name>/yyyymmdd-yyyymmdd/<example-report-name>.parquet  
<example-report-prefix>/<example-report-name>/yyyymmdd-yyyymmdd/  
<cost_and_usage_data_status>  
<example-report-prefix>/<example-report-name>/yyyymmdd-yyyymmdd/<example-report-name>-Manifest.json  
<example-report-prefix>/<example-report-name>/yyyymmdd-yyyymmdd/<example-report-name>-create-table.sql  
<example-report-prefix>/<example-report-name>/yyyymmdd-yyyymmdd/crawler-cfn.yml
```

## AWS CloudFormation specifications

In addition to the AWS CUR files, AWS also delivers an AWS CloudFormation template that you can use to set up an AWS CloudFormation stack that enables you to query Amazon S3 data using Athena. If you don't want to use the AWS CloudFormation template, you can use the provided SQL to create your own Athena tables. For more information, see [Querying Cost and Usage Reports using Amazon Athena](#) (p. 11).

## Cost and Usage Reports manifest files

When AWS updates AWS CUR, AWS also creates and delivers manifest files that you can use for Amazon Athena, Amazon Redshift, or Amazon QuickSight.

Manifest files use the naming conventions, and lists the following:

- All of the detail columns that are included in the report to date
- A list of report files if the report was split into multiple files
- The time period covered by the report, and other information.

```
<example-report-prefix>/<example-report-name>/yyyyymmdd-yyyyymmdd/<example-report-name>-Manifest.json  
<example-report-prefix>/<example-report-name>/yyyyymmdd-yyyyymmdd/<assemblyId>/<example-report-name>-Manifest.json  
<example-report-prefix>/<example-report-name>/<example-report-name>/year=2018/month=12/<example-report-name>-Manifest.json
```

## Keeping the previous Cost and Usage Reports

When you keep the previous Cost and Usage Reports, the manifest file is delivered to both the date range folder and the `assemblyId` folder. Each time AWS creates a new AWS CUR for a date range, it overwrites the manifest file stored in the date range folder with an updated manifest file. AWS delivers the same updated manifest file to the `assemblyId` folder along with the files for that update. Manifest files in the `assemblyId` folder aren't overwritten.

## Overwriting the previous Cost and Usage Reports

When you overwrite the previous AWS CUR, the manifest file is delivered to the `month=mm` folder. The manifest file is overwritten along with the report files.

## Amazon Redshift specifications

If you chose the option for Amazon Redshift support in your AWS CUR, AWS also creates and delivers a file with the SQL commands that you need to upload your report into Amazon Redshift. You can open the SQL file with a regular text editor. The SQL file uses the following naming convention.

```
<example-report-prefix>/<example-report-name>/yyyyymmdd-yyyyymmdd/<assemblyId>/<example-report-name>-RedshiftCommands.sql
```

If you use the commands in the `RedshiftCommands` file, you don't need to open the `RedshiftManifest` file.

### Important

The manifest file determines which report files the copy command in the `RedshiftCommands` file uploads. Deleting or removing the manifest file breaks the copy command in the `RedshiftCommands` file.

## Amazon Athena specifications

If you chose the option for Amazon Athena support in your AWS CUR, AWS also creates and delivers multiple files to help set up all of the resources that you need. AWS delivers a AWS CloudFormation template, a SQL file with the SQL to create your Athena table manually, and a file with the SQL to check your AWS CUR refresh status. These files use the following naming conventions.

```
<example-report-prefix>/<example-report-name>/<example-report-name>/yyyyymmdd-yyyyymmdd/crawler-cfn.yml  
<example-report-prefix>/<example-report-name>/<example-report-name>/yyyyymmdd-yyyyymmdd/<example-report-name>-create-table.sql  
<example-report-prefix>/<example-report-name>/<example-report-name>/yyyyymmdd-yyyyymmdd/<cost_and_usage_data_status>
```

## Editing your Cost and Usage Reports configuration

You can use the **Cost & Usage Reports** page in the Billing and Cost Management console to edit Cost and Usage Reports.

### Note

Report names can't be edited. If you chose **Overwrite** for **Report versioning**, you're unable to edit the report name, whether the report includes resource IDs, time granularity, or the report versioning. If you delete a report set to **Overwrite** and create a new report with the same name, Amazon S3 bucket, and path prefix, your data could corrupt and become inaccurate.

### To edit Cost and Usage Reports

1. Sign in to the Billing and Cost Management console at <https://console.aws.amazon.com/billing/home#/>
2. On the navigation pane, choose **Cost & Usage Reports**.
3. Select the report that you want to edit and choose **Edit report**.
4. (Versioned reports only) For **Additional report details**, select **include resource IDs** to add IDs for individual resources.
5. Select the **Data refresh settings** if you want AWS Cost and Usage Reports to refresh when AWS applies refunds, credits, or support fees to your account after your bill is finalized.

When a report refreshes, a new report is uploaded to Amazon S3.

6. Choose **Next**.
7. For **S3 bucket**, enter the name of the Amazon S3 bucket where you want the reports delivered.
8. Choose **Verify**.

### Note

The bucket must have appropriate permissions to be valid. For more information on adding permissions to the bucket, see [Setting Bucket and Object Access Permissions](#) in the *Amazon Simple Storage Service Console User Guide*.

9. For **Report path prefix**, enter the report path prefix that you want prepended to the name of your report.
10. (Versioned reports only) For **Time granularity**, choose one of the following:
  - **Hourly**: If you want the line items in the report to be aggregated by the hour.
  - **Daily**: If you want the line items in the report to be aggregated by the day.
  - **Monthly** if you want the line items in the report to be aggregated by month.
11. (Versioned reports only) For **Report versioning**, choose whether you want each version of the report to overwrite the previous version of the report, or to be delivered in addition to the previous versions.
12. For **Enable report data integration for**, select whether you want to enable your AWS CUR to integrate with Amazon Athena, Amazon Redshift, or Amazon QuickSight. The report is compressed in the following formats:
  - **Athena**: Parquet format
  - **Amazon Redshift or Amazon QuickSight**: .gz compression
13. Choose **Save**.

# Querying Cost and Usage Reports using Amazon Athena

Amazon Athena is a serverless query service that enables you to analyze the data from your AWS Cost and Usage Reports (AWS CUR) in Amazon S3 using standard SQL. This enables you to avoid creating your own data warehouse solutions to query AWS CUR data.

This section outlines how to use Athena with Cost and Usage Reports. For a full description of the Athena service, see [Amazon Athena User Guide](#).

## Topics

- [Setting up Amazon Athena integration \(p. 11\)](#)
- [Manually setting up Amazon Athena \(p. 14\)](#)
- [Running Amazon Athena queries \(p. 16\)](#)
- [Loading report data to other resources \(p. 17\)](#)

## Setting up Amazon Athena integration

We strongly recommend that you create both a new Amazon S3 bucket and a new Cost and Usage Reports to use with Athena. The following setup process removes any Amazon S3 events that your bucket might already have, which can negatively affect any existing event-based processes that you have for an existing AWS CUR. Setting up a new report can take up to 8 hours, so we recommend that you plan to do the last two setup steps the following day.

AWS CUR supports only the parquet compression format for Athena, and automatically overwrites previous reports stored in your Amazon S3 bucket.

### Important

AWS CloudFormation doesn't support cross-Region resources. If you plan to use a AWS CloudFormation template, you must create all resources in the same Region. The Region must support the following services:

- AWS Lambda
- Amazon Simple Storage Service
- AWS Glue
- Amazon Athena

The following are the steps you need to set up Athena.

- [the section called "Creating a new S3 Bucket for reports" \(p. 11\)](#)
- [Creating new Cost and Usage Reports \(p. 12\)](#)
- [Setting up Athena using AWS CloudFormation templates \(p. 13\)](#)

## Creating a new Amazon S3 bucket for your reports

This process shows how you create new Amazon S3 buckets for your cost and usage reports.

### Note

If you are part of AWS Organizations, only the management account can create this bucket. AWS CUR data can be only delivered to a bucket owned by the management account.

### To create a new Amazon S3 bucket for your AWS CUR reports

1. Open the Amazon S3 console at <https://console.aws.amazon.com/s3/>.
2. Choose **Create Bucket**.
3. In the dialog box, for **Bucket Name**, enter the name for your bucket.

Your bucket name must be all lowercase, 3 to 63 characters long, and can't contain spaces. You can also use numbers, hyphens (-), and periods (.).

4. Choose the Region that you want your Amazon S3 bucket to be in.
5. Choose **Next**.
6. Choose **Next**.
7. (Optional) If you choose **Grant Amazon Simple Storage Service Log Delivery group write access to this bucket**, you can enable access logs that track who accesses your Amazon S3 bucket. Choose the bucket that you want the access logs to be delivered to and the name of a folder that you want the logs to be stored in.
8. Choose **Next**.
9. Choose **Create bucket**.
10. From the list of buckets, choose the bucket that you want to receive reports in.
11. Choose **Permissions**.
12. Choose **Bucket Policy**.
13. Paste the following text into the bucket policy editor.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Principal": {
        "Service": "billingreports.amazonaws.com"
      },
      "Action": [
        "s3:GetBucketAcl",
        "s3:GetBucketPolicy"
      ],
      "Resource": "arn:aws:s3:::bucketname"
    },
    {
      "Effect": "Allow",
      "Principal": {
        "Service": "billingreports.amazonaws.com"
      },
      "Action": "s3:PutObject",
      "Resource": "arn:aws:s3:::bucketname/*"
    }
  ]
}
```

14. Replace *bucketname* with the name of your bucket.
15. Choose **Save**.

## Creating new Cost and Usage Reports

This process shows how you can create new AWS Cost and Usage Reports to use with Athena.

### To create new Cost and Usage Reports

1. Sign in to the Billing and Cost Management console at <https://console.aws.amazon.com/billing/home#/>
2. On the navigation pane, choose **Cost & Usage Reports**.
3. Choose **Create report**.
4. For **Report name**, enter a name for your report.
5. For **Additional report details**, select **Include resource IDs** to include the IDs of each individual resource in the report.
6. For **Data refresh settings**, select whether you want the Cost and Usage Reports to refresh if AWS applies refunds, credits, or support fees to your account after finalizing your bill. When a report refreshes, a new report is uploaded to Amazon S3.
7. Choose **Next**.
8. For **S3 bucket**, choose **Configure**.
9. In the **Configure S3 Bucket** dialog box, do one of the following:
  - Select an existing bucket from the drop down list and choose **Next**.
  - Enter a bucket name and the Region where you want to create a new bucket and choose **Next**.
10. Select **I have confirmed that this policy is correct** and choose **Save**.
11. For **Report path prefix**, enter the report path prefix that you want prepended to the name of your report. You must provide a report path prefix to use Athena with AWS CUR.
12. For **Time granularity**, choose **Hourly** if you want the line items in the report to be aggregated by the hour. Choose **Daily** if you want the line items in the report to be aggregated by the day.
13. For **Report versioning**, choose whether you want each version of the report to overwrite the previous version of the report or to be delivered in addition to the previous versions.
14. For **Enable report data integration for**, select whether you want to upload your AWS CUR to Amazon Athena, Amazon Redshift, or Amazon QuickSight. The report is compressed in the following formats:
  - **Athena**: parquet compression
  - **Amazon Redshift or Amazon QuickSight**: .gz compression
15. Choose **Next**.
16. After you have reviewed the settings for your report, choose **Review and Complete**.

Before moving on to the next procedure, you must wait for the first AWS CUR to be delivered to your Amazon S3 bucket. It might take up to 8 hours for AWS to deliver your first report.

## Setting up Athena using AWS CloudFormation templates

### Important

Before moving on to this procedure, you must wait for the first AWS CUR to be delivered to your Amazon S3 bucket. It might take up to 8 hours for AWS to deliver your first report.

To use Athena, you must set up an AWS Glue crawler, an AWS Glue database, and an AWS Lambda event. Billing and Cost Management provides an AWS CloudFormation template that does this setup for you. Be sure to align the Region when using the template. This process shows how to use the Athena AWS CloudFormation template.

### To use the Athena AWS CloudFormation template

1. Open the Amazon S3 console at <https://console.aws.amazon.com/s3/>.

2. From the list of buckets, choose your bucket name.
3. Navigate your folders until you find the `.yaml` template file.

The `.yaml` file is usually found in the prefix name folder, or report name folder. The location varies depending on how your report is formatted.

4. Select the `.yaml` template file.
5. Select **download**.
6. Open the AWS CloudFormation console at <https://console.aws.amazon.com/cloudformation>.
7. Choose **Create New Stack** if you have never used AWS CloudFormation before. Otherwise, choose **Create Stack**.
8. Under **Prepare template**, choose **Template is ready**.
9. Under **Template source**, choose **Upload a template file**.
10. Select **Choose file**.
11. Choose the downloaded `.yaml` template, and then choose **Open**.
12. Choose **Next**.
13. For **Stack name**, enter a name for your template and choose **Next**.
14. Choose **Next**.
15. At the bottom of the page, select **I acknowledge that AWS CloudFormation might create IAM resources**. This template creates the following resources:
  - Three IAM roles
  - An AWS Glue database
  - An AWS Glue crawler
  - Two Lambda functions
  - An Amazon S3 notification
16. Choose **Create**.

## Manually setting up Amazon Athena

We strongly recommend that you use the AWS CloudFormation template to create your table instead of creating it yourself. The provided SQL query creates a table that covers only a single month of data, but the AWS CloudFormation template creates a table that can include multiple months and that updates automatically. For more information on how to set up the AWS CloudFormation template, see [the section called "Setting up Athena integration" \(p. 11\)](#).

If you choose not to use the AWS CloudFormation template to set up your Athena table, manually follow the steps below. You need to create a table before you can run SQL queries on your AWS CUR data. You will need to do this step at least once a month and the table only includes data from the current AWS CUR.

As part of the table creation process, AWS transforms the AWS CUR column names. For more information about the transformation process, see [the section called "Column names" \(p. 16\)](#).

- [Creating an Athena table \(p. 14\)](#)
- [Creating a Cost and Usage Reports status table \(p. 15\)](#)
- [Uploading your report partitions \(p. 16\)](#)

## Creating an Athena table

AWS includes the SQL that you need to run to create this table in your AWS CUR bucket.

### To create your Athena table

1. Sign in to the AWS Management Console and open the Amazon S3 console at <https://console.aws.amazon.com/s3/>.
2. From the list of buckets, choose the bucket where you chose to receive your Cost and Usage Reports.
3. Navigate the path *your-report-prefix-your-report-name-path-to-report*.

The exact path depends on whether your AWS CUR is set to overwrite previous versions. For more information, see [Cost and Usage Reports delivery timeline \(p. 6\)](#).

4. Open the file *my-report-name-create-table.sql*.
5. Copy the SQL from the file, starting with CREATE and ending with LOCATION 's3://*your-report-prefix/your-report-name/the-rest-of-the=*path'. Take note of the first line, as you need the database name and table to create the Athena database.
6. Open the Athena console at <https://console.aws.amazon.com/athena/>.
7. In the **New query 1** query pane, paste the following SQL. For *<database name>.<table name>*, use the database and table name from the first line of the SQL that you copied.

```
CREATE DATABASE <database name>
```

8. Choose **Run query**.
9. In the dropdown menu, choose the database that you just created.
10. In the **New query 1** query pane, paste the rest of the SQL from the SQL file.
11. Choose **Run query**.

After you create your table, you need to load your partitions before you can run a query. For more information, see [the section called "Column names" \(p. 16\)](#).

## Creating a Cost and Usage Reports status table

AWS refreshes your AWS CUR multiple times a day. There isn't a way for Athena to tell when AWS is in the process of refreshing your report, which can lead to query results with a combination of old and new data. To mitigate this, create a table to track whether AWS is refreshing your Cost and Usage Reports and query that table to see if AWS is refreshing your data. You only need to create this table once. After that, AWS keeps the table up to date.

### To create your refresh table

1. Open the Athena console at <https://console.aws.amazon.com/athena/>.
2. In the **New query 1** query pane, paste the following SQL.

```
CREATE EXTERNAL TABLE IF NOT EXISTS cost_and_usage_data_status(  
  status STRING)  
ROW FORMAT SERDE  
  'org.apache.hadoop.hive.ql.io.parquet.serde.ParquetHiveSerDe'  
WITH SERDEPROPERTIES (  
  'serialization.format' = '1'  
)  
LOCATION 's3://{S3_Bucket_Name}/{Report_Key}/cost_and_usage_data_status/'
```

3. Choose **Run query**.

To check whether AWS is refreshing your data, use the Athena console to run the following SQL query.

```
select status from cost_and_usage_data_status
```

## Uploading your report partitions

To query your Cost and Usage Reports data, you need to upload the data into your Athena table. You must do this for each new AWS CUR report that AWS delivers to you.

### To upload your latest partitions

1. Open the Athena console at <https://console.aws.amazon.com/athena/>.
2. Choose the ... next to your table.
3. Choose **Load Partitions**.

If you don't upload your partitions, Athena returns either no results or an error message that indicates missing data.

## Running Amazon Athena queries

To run Athena queries on your data, first use the Athena console to check whether AWS is refreshing your data and then run your query on the Athena console. When you run your SQL, make sure that the correct database is selected from the dropdown list. You can use the following SQL to check the status.

```
select status from cost_and_usage_data_status
```

The two possible results are `READY` and `UPDATING`. If the status is `READY`, then you can query your Athena database. If the status is `UPDATING`, then Athena might return incomplete results.

After you've confirmed that AWS is refreshing your data, you can run your own queries. For example, the following query shows year-to-date costs by service for each month in the example database called `mycostandusage_parquet`.

```
SELECT line_item_product_code,  
sum(line_item_blended_cost) AS cost, month  
FROM mycostandusage_parquet  
WHERE year='2018'  
GROUP BY line_item_product_code, month  
HAVING sum(line_item_blended_cost) > 0  
ORDER BY line_item_product_code;
```

## Column names

Athena column name restrictions are different from the Cost and Usage Reports column name restrictions. This means that when your AWS CUR data is uploaded into an Athena table, the column names change. AWS makes the following changes:

- An underscore is added in front of uppercase letters
- Uppercase letters are replaced with lowercase letters
- Any non-alphanumeric characters are replaced with an underscore
- Duplicate underscores are removed
- Any leading and trailing underscores are removed
- If the column name is longer than the allowed length of column names, underscores are removed from left to right

### Note

After applying these rules, some of the resource tag columns will have duplicate names. AWS merges columns when there are more than one columns with the same name.

For example, the column name `ExampleColumnName : Example Column Name Continued` becomes `example_column_name_example_column_name_continued`.

## Loading report data to other resources

You can upload Cost and Usage Reports to Amazon Redshift and Amazon QuickSight to analyze your AWS cost and usage.

### Topics

- [Loading report data to Amazon QuickSight \(p. 17\)](#)
- [Loading report data to Amazon Redshift \(p. 17\)](#)

## Loading report data to Amazon QuickSight

You can upload your Cost and Usage Reports into Amazon QuickSight.

For more information about uploading to Amazon QuickSight, see [Creating a Data Set Using Amazon S3 Files](#) in the *Amazon QuickSight User Guide*.

## Loading report data to Amazon Redshift

This section shows how you can upload AWS CUR to Amazon Redshift to analyze your AWS costs and usage.

### Important

Amazon Redshift columns aren't case sensitive and has stricter character limitations than user-defined tags. To prevent conflicts between Amazon Redshift and user-defined tags, AWS replaces your tags with the tags `userTag0`, `userTag1`, `userTag2`, etc. After you create an Amazon Redshift table and upload your report into it, you can create an Amazon Redshift table that maps the AWS-defined tags to your user-defined tags. The tag table allows you to look up your original tags.

For example, if you have the tags `OWNER` and `Owner`, Amazon Redshift doesn't allow you to create a table with two columns named "owner". Instead, you create a report table with the columns `userTag0` and `userTag1` instead of `OWNER` and `Owner`, and then create a table with the columns `remappedUserTag` and `userTag`. The `remappedUserTag` column stores the AWS-defined tags `userTag0` and `userTag1`, and the `userTag` column stores your original tags, `OWNER` and `Owner`.

AWS provides the commands to create your Amazon Redshift table, upload your report, create your tag table, and insert all of the tag rows into your tag table. The commands are provided to you in the `RedshiftCommands.sql` file that is stored alongside your manifest file in S3, and in the **Redshift file Helper file** in the Billing and Cost Management console. AWS also provides a `RedshiftManifest` file, which controls which report the commands in the `RedshiftCommand` file uploads. Deleting or removing the `RedshiftManifest` file breaks the copy command in the `RedshiftCommands` file.

### To find the `RedshiftCommands.sql` file in the Billing and Cost Management console

1. Sign in to the Billing and Cost Management console at <https://console.aws.amazon.com/billing/home#/>
2. In the navigation pane, choose **Cost & Usage Reports**.

3. Choose the report that you want to upload to Amazon Redshift.
4. Next to **You have enabled viewing reports in the following service(s)**, choose **Amazon Redshift**.
5. Copy the commands from the dialog box and paste them into your SQL client.

The following procedure assumes familiarity with databases and Amazon Redshift.

### To upload an Cost and Usage Reports to Amazon Redshift

1. Create an Amazon Redshift cluster.

For more information, see [Creating a Cluster](#) in the *Amazon Redshift Cluster Management Guide*.

2. Sign in to the AWS Management Console and open the Amazon S3 console at <https://console.aws.amazon.com/s3/>.
3. Navigate to the Amazon S3 location where you store your AWS CUR.
4. Open the `RedshiftCommands.sql` file.

The file contains customized commands to create an Amazon Redshift table, upload the AWS CUR from Amazon S3, and create a tag table that allows user-defined tags to be imported into Amazon Redshift.

5. In the `copy` command, replace `<AWS_ROLE>` with the ARN of an IAM role that has permissions to access the Amazon S3 bucket where you store your AWS CUR.
6. Replace `<S3_BUCKET_REGION>` with the Region your Amazon S3 bucket is in. For example, `us-east-1`.
7. Use a SQL client to connect to the cluster.

For more information, see [Accessing Amazon Redshift Clusters and Databases](#) in the *Amazon Redshift Cluster Management Guide*.

8. Copy the SQL commands from the `RedshiftCommands.sql` file to your SQL client in the following order:
  - `create table` - This command creates an Amazon Redshift table with a schema customized to match your report.
  - `copy` - This command uses the provided IAM role to upload the AWS CUR files from S3 to Amazon Redshift.
  - `create tag table` - This command creates a table that allows you to map AWS-defined tags to your user-defined tags.
  - `insert` - These commands insert the user-defined tags into the tag table.
9. After you have copied all of the data from your AWS CUR into Amazon Redshift, you can query the data using SQL. For more information about querying data in Amazon Redshift, see [Amazon Redshift SQL](#) in the *Amazon Redshift Database Developer Guide*.

#### Note

The number of columns in Cost and Usage Reports can change from month to month, such as when a new cost allocation tag is created or a service adds a new product attribute. We recommend that you copy the data from your AWS CUR into a new table every month, and then copy the columns that interest you into a separate month-by-month table.

# Data dictionary

Cost and Usage Reports contain details about your usage. The following sections lists and describes a subset of columns you see in your report, and the corresponding definitions.

To download the full list of the columns that can appear in AWS CUR and the services that the columns apply to, choose [Column\\_Attribute\\_Service.zip](#). This csv list includes the columns Identity, Billing, Line Item, Reservation, Pricing, and Product.

## Topics

- [Identity details \(p. 19\)](#)
- [Billing details \(p. 20\)](#)
- [Line item details \(p. 21\)](#)
- [Reservation details \(p. 25\)](#)
- [Pricing details \(p. 32\)](#)
- [Product details \(p. 33\)](#)
- [Resource tags details \(p. 45\)](#)
- [Savings Plans details \(p. 45\)](#)
- [Cost Categories details \(p. 48\)](#)

## Identity details

Columns under the **identity** header are static fields that appear in every Cost and Usage Reports.

You can use the identity line items in the AWS CUR to find specific line items that have been split across multiple AWS CUR files. This includes the following columns:

### identity/LineItemId

- **Description:** An ID that identifies every line item in a single given version of the AWS CUR. The line item ID isn't consistent between different AWS CUR and can't be used to identify the same line item across different reports.
- **Example:** A AWS CUR created for November 29 can be large enough to require multiple files. The **LineItemId** is consistent between the November 29 AWS CUR files, but doesn't match the **LineItemId** for the same resource in the November 30 AWS CUR.

### identity/TimeInterval

- **Description:** The time interval that this line item applies to, in the following format: `YYYY-MM-DDTHH:mm:ssZ/YYYY-MM-DDTHH:mm:ssZ`. The time interval is in UTC and can be either daily or hourly, depending on the granularity of the report.
- **Example:** The **TimeInterval** `2017-11-01T00:00:00Z/2017-12-01T00:00:00Z` includes the entire month of November 2017.

## Billing details

Columns under the **bill** header are static fields that appear in every Cost and Usage Reports. You can use the billing line items in the AWS CUR to find details about the specific bill covered by the report, such as the charge type and the beginning and end of the billing period. This includes the following columns:

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | VWXYZ

### B

#### bill/BillingEntity

The AWS seller that your account is with. Possible values are the following:

- **AWS** – Amazon Web Services The entity that sells AWS services.
- **AISPL** – Amazon Internet Services Pvt. Ltd. The local Indian entity that acts as a reseller for AWS services in India.
- **AWS Marketplace** – The entity that supports the sale of solutions built on top of the AWS platform by third-party software providers.

#### bill/BillingPeriodEndDate

The end date of the billing period that is covered by this report, in UTC. The format is YYYY-MM-DDTHH:mm:ssZ.

#### bill/BillingPeriodStartDate

The start date of the billing period that is covered by this report, in UTC. The format is YYYY-MM-DDTHH:mm:ssZ.

#### bill/BillType

The type of bill that this report covers. There are three bill types:

- **Anniversary** – Line items for services that you used during the month
- **Purchase** – Line items for upfront service fees
- **Refund** – Line items for refunds

### I

#### bill/InvoiceId

The ID associated with a specific line item. Until the report is final, the **InvoiceId** is blank.

### P

#### bill/PayerAccountId

The account ID of the paying account. For an organization in AWS Organizations, this is the account ID of the management account.

## Line item details

Columns under the **lineItem** header are static fields that appear in every Cost and Usage Reports. They cover all of the cost and usage information for your usage. This includes the following columns:

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | VWXYZ

### A

#### lineItem/AvailabilityZone

The Availability Zone that hosts this line item. For example, us-east-1a or us-east-1b.

### B

#### lineItem/BlendedCost

The `BlendedRate` multiplied by the `UsageAmount`.

**Note**

**BlendedCost** is blank for line items that have a **LineItemType** of **Discount**. Discounts are calculated using only the unblended cost of a member account, aggregated by member account and SKU. As a result, **BlendedCost** is not available for discounts.

#### lineItem/BlendedRate

The `BlendedRate` is the average cost incurred for each SKU across an organization.

For example, the Amazon S3 blended rates are the total cost of storage divided by the amount of data stored per month. For accounts with RIs, the blended rates are calculated as the average costs of the RIs and the On-Demand Instances.

Blended rates are calculated at the management account level, and used to allocate costs to each member account. For more information, see [Blended Rates and Costs](#) in the *AWS Billing and Cost Management User Guide*.

### C

#### lineItem/CurrencyCode

The currency that this line item is shown in.

### L

#### lineItem/LegalEntity

The provider of your AWS services. Possible values are the following:

- **Amazon Web Services** – The entity that sells AWS services.
- **Amazon Internet Services Pvt. Ltd** – The local Indian entity that acts as a reseller for AWS services in India.

## lineItem/LineItemDescription

The description of the line item type. For example, the description of a usage line item summarizes what type of usage you incurred during a specific time period.

For size-flexible RIs, the description corresponds to the RI the benefit was applied to. For example, if a line item corresponds to a `t2.micro` and a `t2.small` RI was applied to the usage, the line **item/description** displays `t2.small`.

The description for a usage line item with an RI discount contains the pricing plan covered by the line item.

## lineItem/LineItemType

The type of charge covered by this line item. Possible types are the following:

- **Credit** – Any credits that AWS applied to your bill. See the **Description** column for details. AWS might update reports after they have been finalized if AWS applies a credit to your account for the month after finalizing your bill.
- **DiscountedUsage** – The rate for any instances for which you had Reserved Instance (RI) benefits.
- **Fee** – Any upfront annual fee that you paid for subscriptions. For example, the upfront fee that you paid for an **All Upfront RI** or a **Partial Upfront RI**.
- **Refund** – The negative charges that AWS refunded money for. Check the **Description** column for details. AWS might update reports after they have been finalized if AWS applies a refund to your account for the month after finalizing your bill.
- **RIFee** – The monthly recurring fee for subscriptions. For example, the recurring fee for **Partial Upfront RIs**, **No Upfront RIs**, and **All Upfronts** that you pay every month. While the RIFee may be \$0 for All Upfront Reservations, this line is still populated for those reservations types to provide other columns such as `reservation/AmortizedUpfrontFeeForBillingPeriod` and `reservation/ReservationARN`
- **Tax** – Any taxes that AWS applied to your bill. For example, VAT or US sales tax.
- **Usage** – Any usage that is charged at On-Demand Instance rates.
- **SavingsPlanUpfrontFee** – Any upfront fee you paid for your Savings Plans. For example, the upfront fee that you paid for an **All Upfront Savings Plan** or a **Partial Upfront Savings Plan**.
- **SavingsPlanRecurringFee** – The monthly recurring fee for your Savings Plans related subscriptions. For example, the recurring monthly fee for a **Partial Upfront Savings Plan** or **No Upfront Savings Plan**.
- **SavingsPlanCoveredUsage** – The instances that received benefits from a Savings Plan subscription.
- **SavingsPlanNegation** – The Savings Plans discount applied. The line item contains negative costs (discounts). This enables you to find the net cost after Savings Plans discounts, using the total sum of the **Unblended Cost**.

## N

### lineItem/NormalizationFactor

As long as the instance has shared tenancy, AWS can apply all regional Linux or Unix Amazon EC2 and Amazon RDS RI discounts to all instance sizes in an instance family and AWS Region. This also applies to RI discounts for member accounts in an organization. All new and existing Amazon EC2 and Amazon RDS size-flexible RIs are sized according to a normalization factor, based on the instance size. The following table shows the normalization factor that AWS applies to each instance size.

### Normalization Factors for Amazon EC2 Size-Flexible RIs

Instance Size	Normalization Factor
nano	0.25
micro	0.5
small	1
medium	2
large	4
xlarge	8
2xlarge	16
4xlarge	32
8xlarge	64
10xlarge	80
16xlarge	128
32xlarge	256

## lineItem/NormalizedUsageAmount

The amount of usage that you incurred, in normalized units, for size-flexible RIs. The **NormalizedUsageAmount** is equal to **UsageAmount** multiplied by **NormalizationFactor**.

## O

## lineItem/Operation

The specific AWS operation covered by this line item. This describes the specific usage of the line item. For example, a value of `RunInstances` indicates the operation of an Amazon EC2 instance.

## P

## lineItem/ProductCode

The code of the product measured. For example, Amazon EC2 is the product code for Amazon Elastic Compute Cloud.

## R

## lineItem/ResourceId

(Optional) If you chose to include individual resource IDs in your report, this column contains the ID of the resource that you provisioned. For example, an Amazon S3 storage bucket, an Amazon EC2 Compute Instance, or an Amazon RDS database can each have a resource ID. This field is blank for usage types that aren't associated with an instantiated host, such as data transfers and API requests, and line item types

such as discounts, credits, and taxes. The following table shows a list of resource identifiers for common AWS services.

### AWS Resource Identifiers

AWS Service	Resource Identifier
Amazon CloudFront	Distribution ID
Amazon CloudSearch	Search domain
Amazon DynamoDB	DynamoDB table
Amazon Elastic Compute Cloud - Amazon EBS	Amazon EBS volume
Amazon Elastic Compute Cloud	Instance ID
Amazon Elastic Compute Cloud - CloudWatch	CloudWatch charges for an instance ID
Amazon EMR	MapReduce cluster
Amazon ElastiCache	Cache cluster
Amazon Elasticsearch Service	Search domain
Amazon S3 Glacier	Vault
Amazon Relational Database Service	Database
Amazon Redshift	Amazon Redshift cluster
Amazon Simple Storage Service	Amazon S3 bucket
Amazon Virtual Private Cloud	VPN ID
AWS Lambda	Lambda function name

## T

### lineItem/TaxType

The type of tax that AWS applied to this line item.

## U

### lineItem/UnblendedCost

The `UnblendedCost` is the `UnblendedRate` multiplied by the `UsageAmount`.

### lineItem/UnblendedRate

The uncombined rate for specific usage. For line items that have an RI discount applied to them, the `UnblendedRate` is zero. Line items with an RI discount have a `UsageType` of `Discounted Usage`.

### lineItem/UsageAccountId

The ID of the account that used this line item. For organizations, this can be either the management account or a member account. You can use this field to track costs or usage by account.

## lineItem/UsageAmount

The amount of usage that you incurred during the specified time period. For size-flexible reserved instances, use the **reservation/TotalReservedUnits** column instead.

### Note

Certain subscription charges will have a **UsageAmount** of 0.

## lineItem/UsageEndDate

The end date and time for the corresponding line item in UTC, exclusive. The format is `YYYY-MM-DDTHH:mm:ssZ`.

## lineItem/UsageStartDate

The start date and time for the line item in UTC, inclusive. The format is `YYYY-MM-DDTHH:mm:ssZ`.

## lineItem/UsageType

The usage details of the line item. For example, `USW2-BoxUsage:m2.2xlarge` describes an M2 High Memory Double Extra Large instance in the US West (Oregon) Region.

# Reservation details

The reservation columns provide details about reserved resources.

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | VWXYZ

## A

### reservation/AmortizedUpfrontCostForUsage

- **Description:** The initial upfront payment for All Upfront RIs and Partial Upfront RIs amortized for usage time. Because there are no upfront payments for No Upfront RIs, the value for a No Upfront RI is 0. We do not provide this value for Dedicated Host Reservations at this time. The change will be made in a future update.
- **Line items applicable:** DiscountedUsage
- **Sample values:** 0.05, 0.17, 0.15
- **Services:**
  - Amazon EC2
  - Amazon ES
  - Amazon DynamoDB
  - Amazon Redshift
  - Amazon ElastiCache
  - Amazon RDS

### reservation/AmortizedUpfrontFeeForBillingPeriod

- **Description:** Describes how much of the upfront fee for this reservation is costing you for the billing period. The initial upfront payment for All Upfront RIs and Partial Upfront RIs, amortized over this month. Because there are no upfront fees for No Upfront RIs, the value for No Upfront RIs is 0. We

do not provide this value for Dedicated Host Reservations at this time. The change will be made in a future update.

- **Line items applicable:** RIFee
- **Sample values:** 29.15, 200.67, 214.43
- **Services:**
  - Amazon EC2
  - Amazon ES
  - Amazon DynamoDB
  - Amazon Redshift
  - Amazon ElastiCache
  - Amazon RDS

## reservation/AvailabilityZone

- **Description:** The availability zone of the resource that is associated with this line item.
- **Line items applicable:** Fee, Refund, RIFee
- **Sample values:** us-east-1, us-east-1b, eu-west-1b, ap-southeast-2a
- **Services:**
  - Amazon EC2

## E

### reservation/EffectiveCost

- **Description:** The sum of both the upfront and hourly rate of your RI, averaged into an effective hourly rate. `EffectiveCost` is calculated by taking the `amortizedUpfrontCostForUsage` and adding it to the `recurringFeeForUsage`. For more information, see [Amazon EC2 Reserved Instances Pricing](#).
- **Line items applicable:** DiscountedUsage
- **Sample values:** 0.23, 0.68, 0.10
- **Services:**
  - Amazon EC2
  - Amazon ES
  - Amazon DynamoDB
  - Amazon ElastiCache
  - Amazon RDS

### reservation/EndTime

- **Description:** The end date of the associated RI lease term.
- **Line items applicable:** RIFee
- **Sample values:** 2019-05-15T04:23:14.000Z, 2020-02-08T17:32:15.000Z, 2019-07-14T00:00:33.000Z
- **Services:**
  - Amazon EC2
  - Amazon ES
  - Amazon Redshift

- Amazon ElastiCache
- Amazon RDS

## M

### reservation/ModificationStatus

- **Description:** Shows whether the RI lease was modified or if it is unaltered.
  - **Original:** The purchased RI was never modified.
  - **System:** The purchased RI was modified using the console or API.
  - **Manual:** The purchased RI was modified using AWS Support assistance.
  - **ManualWithData:** The purchased RI was modified using AWS Support assistance, and AWS calculated estimates for the RI.
- **Line items applicable:** RIFee
- **Sample values:** Original, System, Manual, ManualWithData
- **Services:**
  - Amazon EC2
  - Amazon ES
  - Amazon DynamoDB
  - Amazon Redshift
  - Amazon ElastiCache
  - Amazon RDS

## N

### reservation/NormalizedUnitsPerReservation

- **Description:** The number of normalized units for each instance of a reservation subscription.
- **Line items applicable:** RIFee
- **Sample values:** 1316, 54.5, 319
- **Services:**
  - Amazon RDS

### reservation/NumberOfReservations

- **Description:** The number of reservations that are covered by this subscription. For example, one RI subscription might have four associated RI reservations.
- **Line items applicable:** Fee, RIFee, Refund, Credit
- **Sample values:** 5, 50, 500
- **Services:**
  - Amazon EC2
  - Amazon ES
  - Amazon DynamoDB
  - Amazon Redshift
  - Amazon ElastiCache

- Amazon RDS

## R

### reservation/RecurringFeeForUsage

- **Description:** The recurring fee amortized for usage time, for Partial Upfront RIs and No Upfront RIs. Because All Upfront RIs don't have recurring fee payments greater than 0, the value for All Upfront RIs is 0.
- **Line items applicable:** DiscountedUsage
- **Sample values:** 0.139, 0.729, 0.018
- **Services:**
  - Amazon EC2
  - Amazon ES
  - Amazon DynamoDB
  - Amazon ElastiCache
  - Amazon RDS

### reservation/ReservationARN

- **Description:** The Amazon Resource Name (ARN) of the RI that this line item benefited from. This is also called the "RI Lease ID". This is a unique identifier of this particular AWS Reserved Instance. The value string also contains the AWS service name and the Region where the RI was purchased.
- **Line items applicable:** Fee, RIFee, DiscountedUsage, Refund, Credit
- **Sample values:** arn:aws:ec2:us-east-1:074108124787:reserved-instances/1d3fbc13-f181-4c40-9dd6-12b345678de9, arn:aws:ec2:us-east-1:499958231354:reserved-instances/be41234c3-b5c0-403e-a80c-1cfd12345678
- **Services:**
  - Amazon EC2
  - Amazon ES
  - Amazon DynamoDB
  - Amazon Redshift
  - Amazon ElastiCache
  - Amazon RDS

## S

### reservation/StartTime

- **Description:** The start date of the term of the associated Reserved Instance.
- **Line items applicable:** RIFee
- **Sample values:** 2018-07-29T02:56:10.000Z, 2017-08-21T15:58:47.000Z, 2019-02-01T22:01:34.000Z
- **Services:**
  - Amazon EC2
  - Amazon ES

- Amazon Redshift
- Amazon ElastiCache
- Amazon RDS

## reservation/SubscriptionId

- **Description:** A unique identifier that maps a line item with the associated offer. We recommend you use the RI ARN as your identifier of an AWS Reserved Instance, but both can be used.
- **Line items applicable:** Fee, RIFee, DiscountedUsage, Refund, Credit and Usage
- **Sample values:** 123456789, 111122222, 333344444
- **Services:**
  - Amazon EC2
  - Amazon ES
  - Amazon DynamoDB
  - Amazon Redshift
  - Amazon ElastiCache
  - Amazon RDS

## T

## reservation/TotalReservedNormalizedUnits

- **Description:** The total number of reserved normalized units for all instances for a reservation subscription. AWS computes total normalized units by multiplying the `reservation/NormalizedUnitsPerReservation` with `reservation/NumberOfReservations`.
- **Line items applicable:** DiscountedUsage
- **Sample values:** 40320, 3647.99, 17928.77
- **Services:**
  - Amazon EC2
  - Amazon RDS

## reservation/TotalReservedUnits

- **Description:** `TotalReservedUnits` populates for both Fee and RIFee line items with distinct values.
  - Fee line items: The total number of units reserved, for the total quantity of leases purchased in your subscription for the entire term.

This is calculated by multiplying the `NumberOfReservations` with `UnitsPerReservation`. For example, 5 RIs x 744 hours per month x 12 months = 44,640.

- RIFee line items (monthly recurring costs): The total number of available units in your subscription, such as the total number of Amazon EC2 hours in a specific RI subscription.

For example, 5 RIs x 744 hours = 3,720.

- **Line items applicable:** Fee, RIFee, Refund, Credit
- **Sample values:** 26208, 98.19, 15796
- **Services:**
  - Amazon EC2

- Amazon ES
- Amazon DynamoDB
- Amazon Redshift
- Amazon ElastiCache
- Amazon RDS

## U

### reservation/UnitsPerReservation

- **Description:** `UnitsPerReservation` populates for both Fee and RIFee line items with distinct values.
  - Fee line items: The total number of units reserved for the subscription, such as the total number of RI hours purchased for the term of the subscription.

For example 744 hours per month x 12 months = 8,928 total hours/units.

- RIFee line items (monthly recurring costs): The total number of available units in your subscription, such as the total number of Amazon EC2 hours in a specific RI subscription.

For example, 1 unit x 744 hours = 744.

- **Line items applicable:** Fee, RIFee, Refund, Credit
- **Sample values:** 334.0, 486.72, 18455
- **Services:**
  - Amazon EC2
  - Amazon ES
  - Amazon DynamoDB
  - Amazon Redshift
  - Amazon ElastiCache
  - Amazon RDS

### reservation/UnusedAmortizedUpfrontFeeForBillingPeriod

- **Description:** The amortized-upfront-fee-for-billing-period-column amortized portion of the initial upfront fee for All Upfront RIs and Partial Upfront RIs. Because there are no upfront payments for No Upfront RIs, the value for No Upfront RIs is 0. We do not provide this value for Dedicated Host Reservations at this time. The change will be made in a future update.
- **Line items applicable:** RIFee
- **Sample values:** 6.05, 1.97, 0.17
- **Services:**
  - Amazon EC2
  - Amazon ES
  - Amazon Redshift
  - Amazon ElastiCache
  - Amazon RDS

## reservation/UnusedNormalizedUnitQuantity

- **Description:** The number of unused normalized units for a size-flexible regional RI that you didn't use during this billing period.
- **Line items applicable:** RIFee
- **Sample values:** 25.00, 3.50, 274.33
- **Services:**
  - Amazon RDS

## reservation/UnusedQuantity

- **Description:** The number of RI hours that you didn't use during this billing period.
- **Line items applicable:** RIFee line item
- **Sample values:** 209.65110408, 191.00000000, 176.00000000
- **Services:**
  - Amazon EC2
  - Amazon ES
  - Amazon Redshift
  - Amazon ElastiCache
  - Amazon RDS

## reservation/UnusedRecurringFee

- **Description:** The recurring fees associated with your unused reservation hours for Partial Upfront and No Upfront RIs. Because All Upfront RIs don't have recurring fees greater than 0, the value for All Upfront RIs is 0.
- **Line items applicable:** RIFee
- **Sample values:** 0.02971114, 0.19190000, 1.37280000
- **Services:**
  - Amazon EC2
  - Amazon ES
  - Amazon Redshift
  - Amazon ElastiCache
  - Amazon RDS

## reservation/UpfrontValue

- **Description:** The upfront price paid for your AWS Reserved Instance. For No Upfront RIs, this value is 0.
- **Line items applicable:** RIFee
- **Sample values:** 150.00, 1000.00, 2000.00
- **Services:**
  - Amazon EC2
  - Amazon ES
  - Amazon Redshift
  - Amazon ElastiCache

- Amazon RDS

## Pricing details

The prices for a line item. The pricing columns are based off of the AWS Price List Service API. AWS Price List Service API doesn't include Free Tier pricing, spot instances, products in AWS Marketplace, upfront annual subscription fees (Fee), and monthly recurring fees (RIFee). The columns include but are not limited to the following:

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z

### L

#### pricing/LeaseContractLength

The length of time that your RI is reserved for.

### P

#### pricing/publicOnDemandCost

The total cost for the line item based on public On-Demand Instance rates. If you have SKUs with multiple On-Demand public costs, the equivalent cost for the highest tier is displayed. For example, services offering free-tiers or tiered pricing.

#### pricing/publicOnDemandRate

The public On-Demand Instance rate in this billing period for the specific line item of usage. If you have SKUs with multiple On-Demand public rates, the equivalent rate for the highest tier is displayed. For example, services offering free-tiers or tiered pricing.

#### pricing/PurchaseOption

How you chose to pay for this line item. Valid values are All Upfront, Partial Upfront, and No Upfront.

### R

#### pricing/RateId

The ID of the rate for a line item.

### T

#### pricing/term

Whether your AWS usage is Reserved or On-Demand.

## U

### pricing/unit

The pricing unit that AWS used for calculating your usage cost. For example, the pricing unit for Amazon EC2 instance usage is in hours.

## Product details

The product columns provide metadata about the product that incurred the expense, and the line item. The product columns are dynamic, and their visibility in Cost and Usage Reports depends on the usage of product in the billing period. The pricing columns are based off of the AWS Price List Service API. AWS Price List Service API doesn't include Free Tier pricing, spot instances, products in AWS Marketplace, upfront annual subscription fees (Fee), and monthly recurring fees (RIFee).

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | WXYZ

## A

### product/availability

- **Description:** Describes the availability of your various AWS storage options.
- **Sample values:** 99.99%, 99.5%
- **Services:**
  - Amazon S3 Glacier
  - Amazon S3
  - AWS Elemental MediaStore
  - AWS RoboMaker

## C

### product/capacitystatus

- **Description:** Describes the status of your capacity reservations.
- **Sample values:** UnusedCapacityReservation, AllocatedCapacityReservation, Used
- **Services:**
  - Amazon EC2

### product/clockspeed

- **Description:** Describes the operating speed of your AWS instances.
- **Sample values:** 2.4 GHz, 2.6 GHz
- **Services:**
  - Amazon DocumentDB
  - Amazon EC2

- Amazon MQ
- Amazon Neptune
- Amazon RDS
- AWS Database Migration Service

## D

### product/dedicatedEbsThroughput

- **Description:** Describes the dedicated throughput between your instances (e.g., Amazon EC2 instances and Amazon EBS volumes), with options between 500 and 10,000 megabits per second (Mbps) depending on the instance type used. The dedicated throughput minimizes contention between Amazon EBS I/O and other traffic from your EC2 instance, providing the best performance for your Amazon EBS volumes.
- **Sample values:** 200 Mbps, Up to 5000 Mbps
- **Services:**
  - Amazon EC2
  - Amazon Neptune
  - Amazon RDS

### product/durability

- **Description:** Describes the durability of objects over a given year.
- **Sample values:** 99.999999999%, N/A, 99.99%
- **Services:**
  - Amazon S3 Glacier
  - Amazon S3
  - AWS Elemental MediaStore

## E

### product/ebsOptimized

- **Description:** Describes whether your Amazon EC2 instances are Amazon EBS-optimized.
- **Sample values:** Yes, No
- **Services:**
  - Amazon EC2

### product/ecu

- **Description:** Describes the EC2 Compute Unit (ECU) that provides the relative measure of the integer processing power of an Amazon EC2 instance.
- **Sample values:** 9, 100, variable
- **Services:**
  - Amazon EC2
  - Amazon ES

- Amazon GameLift
- Amazon Redshift

## product/enhancedNetworkingSupported

- **Description:** Describes whether your instance supports enhanced networking. Enhanced networking uses single root I/O virtualization (SR-IOV) to provide high-performance networking capabilities on supported instance types.
- **Sample values:** Yes, No
- **Services:**
  - Amazon DocumentDB
  - Amazon EC2
  - Amazon Neptune
  - Amazon RDS
  - AWS Database Migration Service

## F

### product/fromLocation

- **Description:** Describes the location where the usage originated from.
- **Sample values:** External, US East (N. Virginia), Global
- **Services:**
  - Amazon CloudFront
  - AWS DataTransfer

### product/fromLocationType

- **Description:** Describes the location type where the usage originated from.
- **Sample values:** AWS Region, AWS Edge Location
- **Services:**
  - AWS Direct Connect
  - AWS Elemental MediaConnect
  - Amazon CloudFront
  - Amazon Lightsail
  - AWS Shield

## G

### product/gpu

- **Description:** Describes the number of GPUs.
- **Sample values:** 16, 32
- **Services:**
  - Amazon SageMaker

- Amazon EC2

## product/gpuMemory

- **Description:** Describes your GPU memory details.
- **Sample values:** 16, 32
- **Services:**
  - Amazon SageMaker
  - Amazon EC2

## |

## product/instanceFamily

- **Description:** Describes your Amazon EC2 instance family. Amazon EC2 provides you with a large number of options across 10 different instance types, each with one or more size options, organized into distinct instance families optimized for different types of applications.
- **Sample values:** General Purpose, Memory Optimized, Accelerated Computing
- **Services:**
  - Amazon EC2
  - Amazon RDS
  - Amazon ES
  - Amazon ElastiCache
  - Amazon EMR

and more. For the full service list, download [Column\\_Attribute\\_Service.zip](#).

## product/instanceType

- **Description:** Describes the instance type, size, and family, which define the CPU, networking, and storage capacity of your instance.
- **Sample values:** t2.small, m4.xlarge, t2.micro, m4.large, t2.large
- **Services:**
  - Amazon EC2
  - Amazon RDS
  - Amazon ES
  - Amazon ElastiCache
  - Amazon EMR

and more. For the full service list, download [Column\\_Attribute\\_Service.zip](#).

## product/instanceTypeFamily

- **Description:** The instance family that is associated with the given usage.
- **Sample values:** t2, m4, m3
- **Services:**
  - Amazon DocumentDB

- Amazon RDS

## product/intelAvxAvailable

- **Description:** Describes whether your process has the Intel Advanced Vector Extension instruction set.
- **Sample values:** Yes, No.
- **Services:**
  - Amazon EC2

## product/intelAvx2Available

- **Description:** Describes whether your process has the Intel Advanced Vector Extension instruction set two.
- **Sample values:** Yes, No
- **Services:**
  - Amazon EC2

## product/intelTurboAvailable

- **Description:** Describes whether your core is allowed to use Intel Turbo Technology to increase frequency.
- **Sample values:** Yes, No
- **Services:**
  - Amazon EC2

## L

## product/licenseModel

- **Description:** Describes the license model for your instance.
- **Sample value:** license-included, bring-your-own-license, general-public-license
- **Services:**
  - Amazon AppStream
  - Amazon EC2
  - Amazon MQ
  - Amazon Neptune
  - Amazon RDS

## product/location

- **Description:** Describes the region that your Amazon S3 bucket resides in.
- **Sample values:** Asia Pacific (Mumbai), Asia Pacific (Seoul), Canada (Central), EU (London), US West (Oregon)
- **Services:**
  - Amazon EC2

- AWS Certificate Manager
- Amazon S3
- Amazon RDS
- Amazon DynamoDB

and more. For the full service list, download [Column\\_Attribute\\_Service.zip](#).

## product/locationType

- **Description:** Describes the end point of your task.
- **Sample values:** AWS Region, AWS Edge Location, Other
- **Services:**
  - Amazon EC2
  - AWS Certificate Manager
  - Amazon S3
  - Amazon RDS
  - Amazon DynamoDB

and more. For the full service list, download [Column\\_Attribute\\_Service.zip](#).

## M

### product/maxIopsBurstPerformance

- **Description:** Describes the max IOPS burst performance of your Amazon EBS volume.
- **Sample value:** 3000 IOPS for volumes <= 1TB
- **Services:**
  - Amazon EC2

### product/maxIopsVolume

- **Description:** Describes maximum input/output per second of your Amazon EBS volume.
- **Sample value:** 16,000 (maxIops for a General Purpose SSD (gp2))
- **Services:**
  - Amazon EC2

### product/maxThroughputVolume

- **Description:** Describes the max network throughput volume of your Amazon EBS volume.
- **Sample values:** 500 MiB/s, 250 MiB/s, 1000 MiB/s, 40 - 90 MB/sec
- **Services:**
  - Amazon EC2
  - Amazon SageMaker

## N

### product/networkPerformance

- **Description:** Describes the network throughput of your Amazon EC2 instances.
- **Sample values:** moderate, high, up to 10 GB
- **Services:**
  - Amazon EC2
  - Amazon RDS
  - Amazon ElastiCache
  - Amazon SageMaker
  - AWS Database Migration Service

and more. For the full service list, download [Column\\_Attribute\\_Service.zip](#).

### product/normalizationSizeFactor

- **Description:** Describes the normalization factor of the instance size.
- **Sample values:** nano - 0.25, micro - 0.5, medium - 2, xlarge - 8, 16xlarge - 128
- **Services:**
  - Amazon DocumentDB
  - Amazon EC2
  - Amazon MQ
  - Amazon Neptune
  - Amazon RDS

## O

### product/OfferingClass

- **Description:** Describes the type of Reserved Instances. When you purchase a Reserved Instance, you can choose between a Standard or Convertible offering class.
- **Sample values:** Standard, Convertible
- **Services:**
  - Amazon DynamoDB
  - Amazon EC2
  - Amazon ElastiCache
  - Amazon ES
  - Amazon RDS
  - Amazon Redshift

### product/operatingSystem

- **Description:** Describes the operating system of your Amazon EC2 instance.
- **Sample values:** Amazon Linux, Ubuntu, Windows Server, Oracle Linux, FreeBSD

- **Services:**
  - Amazon AppStream
  - Amazon EC2
  - Amazon GameLift
  - Amazon Lightsail
  - Amazon WorkSpaces
  - AWS CodeBuild

## product/operation

- **Description:** Describes the specific AWS operation that this line item covers.
- **Sample values:** `RunInstances` (indicates the operation of an Amazon EC2 instance)
- **Services:**
  - Amazon EC2
  - Amazon S3
  - Amazon RDS
  - Amazon DynamoDB
  - Amazon CloudWatch
  - Amazon Redshift

and more. For the full service list, download [Column\\_Attribute\\_Service.zip](#).

## P

### product/physicalCores

- **Description:** Describes the number of physical cores an instance provides.
- **Sample values:** 4, 8
- **Services:**
  - Amazon EC2

### product/physicalProcessor

- **Description:** Describes the processor on your Amazon EC2 instance.
- **Sample values:** High Frequency Intel Xeon E7-8880 v3 (Haswell), Intel Xeon E5-2670, AMD EPYC 7571
- **Services:**
  - Amazon DocumentDB
  - Amazon EC2
  - Amazon Neptune
  - Amazon RDS
  - AWS Database Migration Service

### product/processorArchitecture

- **Description:** Describes your processor architecture.

- **Sample values:** 32-bit, 64-bit
- **Services:**
  - Amazon DocumentDB
  - Amazon EC2
  - Amazon Neptune
  - Amazon RDS
  - AWS Database Migration Service

## product/processorFeatures

- **Description:** Describes the processor features of your instances.
- **Sample values:** Intel AVX, Intel AVX2, Intel AVX512, Intel Turbo
- **Services:**
  - AWS Database Migration Service
  - Amazon DocumentDB
  - Amazon EC2
  - Amazon Neptune
  - Amazon RDS

## product/ProductFamily

- **Description:** The category for the type of product.
- **Sample values:** Alarm, AWS Budgets, Stopped Instance, Storage Snapshot, Compute
- **Services:**
  - Amazon EC2
  - AWS Certificate Manager
  - Amazon S3
  - Amazon RDS
  - Amazon DynamoDB

and more. For the full service list, download [Column\\_Attribute\\_Service.zip](#).

## product/ProductName

- **Description:** The full name of the AWS service. Use this column to filter AWS usage by AWS service.
- **Sample values:** AWS Backup, AWS Config, Amazon Registrar, Amazon Elastic File System, Amazon Elastic Compute Cloud
- **Services:**
  -

## product/provisioned

- **Description:** Indicates whether Amazon EBS usage was related to provisioned Amazon EBS storage.
- **Sample values:** Yes, No
- **Services:**
  - Amazon EC2

- Amazon MQ

## R

### product/region

- **Description:** The geographical area that hosts your AWS services. Use this field to analyze spend across a particular Region.
- **Sample values:** eu-west-3, us-west-1, us-east-1, ap-northeast-2, sa-east-1
- **Services:**
  - Amazon EC2
  - AWS Certificate Manager
  - Amazon S3
  - Amazon RDS
  - Amazon DynamoDB

and more. For the full service list, download [Column\\_Attribute\\_Service.zip](#).

## S

### product/sku

- **Description:** A unique code for a product. The SKU is created by combining the `ProductCode`, `UsageType`, and `Operation`. For size-flexible RIs, the SKU uses the instance that was used. For example, if you used a `t2.micro` instance and AWS applied a `t2.small` RI discount to the usage, the line item SKU is created with the `t2.micro`.
- **Sample values:** FFNT87MQSCR328W6, VBYCEU494XUAHCA7
- **Services:**
  - Amazon EC2
  - AWS Certificate Manager
  - Amazon S3
  - Amazon RDS
  - Amazon DynamoDB

and more. For the full service list, download [Column\\_Attribute\\_Service.zip](#).

### product/storage

- **Description:** Describes the disk storage attached to your instance.
- **Sample values:** 60GB, True, EBS Only, 1 x 900 NVMe SSD, 1 x 150 NVMe SSD
- **Services:**
  - Amazon EC2
  - Amazon RDS
  - Amazon Redshift
  - Amazon ES
  - Amazon WorkSpaces

and more. For the full service list, download [Column\\_Attribute\\_Service.zip](#).

## product/storageclass

- **Description:** Describes the storage class of your Amazon S3 bucket.
- **Sample values:** Archive, General Purpose, Infrequent Access, Intelligent-Tiering, Non-Critical Data
- **Services:**
  - AWS Elemental MediaStore
  - AWS Storage Gateway
  - Amazon Cloud Directory
  - Amazon EFS
  - Amazon MQ
  - Amazon S3

## T

### product/tenancy

- **Description:** The type of tenancy allowed on the Amazon EC2 instance.
- **Sample values:** Dedicated, Reserved, Shared, NA, Host
- **Services:**
  - Amazon EC2
  - Amazon ECS

### product/toLocation

- **Description:** Describes the location usage destination.
- **Sample values:** External, US East (N. Virginia)
- **Services:**
  - Amazon CloudFront
  - AWS DataTransfer

### product/toLocationType

- **Description:** Describes the destination location of the service usage.
- **Sample values:** AWS Region, AWS Edge Location
- **Services:**
  - AWS Direct Connect
  - AWS Elemental MediaConnect
  - AWS Shield
  - Amazon CloudFront
  - Amazon Lightsail

and more. For the full service list, download [Column\\_Attribute\\_Service.zip](#).

## U

### product/usagetype

- **Description:** Describes the usage details of the line item.
- **Sample values:** EU-BoxUsage:c5d.9xlarge, EU-BoxUsage:m4.16xlarge, SAE1-InstanceUsage:db.t2.medium, USW2-AW-SW-19, SAE1-BoxUsage:c4.large,
- **Services:**
  - Amazon EC2
  - AWS Certificate Manager
  - Amazon S3
  - Amazon RDS
  - Amazon DynamoDB

and more. For the full service list, download [Column\\_Attribute\\_Service.zip](#).

## V

### product/vcpu

- **Description:** Describes the number of threads concurrently running on a single CPU core. Amazon EC2 instances support multithreading, which enables multiple threads to run concurrently on a single CPU core. Each thread is represented as a virtual CPU (vCPU) on the instance.
- **Sample values:** 8, 16, 36, 72, 128
- **Services:**
  - Amazon EC2
  - Amazon RDS
  - Amazon Redshift
  - Amazon ES
  - Amazon ElastiCache

and more. For the full service list, download [Column\\_Attribute\\_Service.zip](#).

### product/volumeType

- **Description:** Describes your Amazon EBS volume types.
- **Sample values:** Standard, General Purpose, General Purpose-Aurora, Amazon Glacier, Amazon SimpleDB - Standard,
- **Services:**
  - Amazon EC2
  - Amazon S3
  - Amazon RDS
  - Amazon DynamoDB
  - Amazon S3 Glacier

and more. For the full service list, download [Column\\_Attribute\\_Service.zip](#).

## Resource tags details

You can use the Resource columns to find information about the specific resources covered by a line item. These columns include user-defined cost allocation tags. Examples include the following:

### resourceTags/user:creator

Use a **user:Creator** tag to track which user created a resource.

### resourceTags/user:name

Use a **user:Name** tag to track which resources are associated with a specific user.

### resourceTags/user:owner

Use a **user:Owner** tag to track which user owns a resource.

### resourceTags/user:purpose

Use a **user:Purpose** tag to track why a resource was created.

## Savings Plans details

The SavingsPlan columns provide details about the ComputeSavingsPlans. SavingsPlan columns are visible if you have purchased Savings Plans. For more information about Savings Plans, see [What are Savings Plans?](#) in the *Savings Plans User Guide*.

[A](#) | [B](#) | [C](#) | [D](#) | [E](#) | [F](#) | [G](#) | [H](#) | [I](#) | [J](#) | [K](#) | [L](#) | [M](#) | [N](#) | [O](#) | [P](#) | [Q](#) | [R](#) | [S](#) | [T](#) | [U](#) | [VWXYZ](#)

### A

#### savingsPlan/AmortizedUpfrontCommitmentForBillingPeriod

- **Description:** The amount of upfront fee a Savings Plan subscription is costing you for the billing period. The initial upfront payment for **All Upfront Savings Plan** and **Partial Upfront Savings Plan** amortized over the current month. For **No Upfront Savings Plan**, the value is 0.
- **Line items applicable:** SavingsPlanRecurringFee
- **Services:**
  - Amazon EC2
  - Fargate

### E

#### savingsPlan/EndTime

- **Description:** The expiration date for the Savings Plan agreement.

- **Line items applicable:** SavingsPlanCoveredUsage, SavingsPlanNegation, SavingsPlanUpfrontFee, SavingsPlanRecurringFee
- **Services:**
  - Amazon EC2
  - Fargate

## I

## savingsPlan/InstanceTypeFamily

- **Description:** The instance family that is associated with the specified usage.
- **Line items applicable:** SavingsPlanCoveredUsage
- **Sample values:** m4, g2
- **Services:**
  - Amazon EC2
  - Fargate

## O

## savingsPlan/OfferingType

- **Description:** Describes the type of Savings Plan purchased.
- **Line items applicable:** SavingsPlanCoveredUsage, SavingsPlanNegation, SavingsPlanUpfrontFee, SavingsPlanRecurringFee
- **Sample values:** ComputeSavingsPlan, EC2InstanceSavingsPlan
- **Services:**
  - Amazon EC2
  - Fargate

## P

## savingsPlan/PaymentOption

- **Description:** The payment options available for your Savings Plan.
- **Line items applicable:** SavingsPlanCoveredUsage, SavingsPlanNegation, SavingsPlanUpfrontFee, SavingsPlanRecurringFee
- **Sample values:** Partial Upfront, All Upfront, No Upfront
- **Services:**
  - Amazon EC2
  - Fargate

## savingsPlan/PurchaseTerm

- **Description:** Describes the duration, or term, of the Savings Plan.

- **Line items applicable:** SavingsPlanCoveredUsage, SavingsPlanNegation, SavingsPlanUpfrontFee, SavingsPlanRecurringFee
- **Sample values:** 1yr, 3yr
- **Services:**
  - Amazon EC2
  - Fargate

## R

### savingsPlan/RecurringCommitmentForBillingPeriod

- **Description:** The monthly recurring fee for your Savings Plan subscriptions. For example, the recurring monthly fee for a **Partial Upfront Savings Plan** or **No Upfront Savings Plan**.
- **Line items applicable:** SavingsPlanRecurringFee
- **Services:**
  - Amazon EC2
  - Fargate

### savingsPlan/Region

- **Description:** The AWS Region (geographic area) that hosts your AWS services. You can use this field to analyze spend across a particular AWS Region.
- **Line items applicable:** SavingsPlanCoveredUsage, SavingsPlanNegation, SavingsPlanUpfrontFee, SavingsPlanRecurringFee
- **Sample values:** eu-west-3, us-west-1, us-east-1, ap-northeast-2, sa-east-1
- **Services:**
  - Amazon EC2
  - Fargate

## S

### savingsPlan/SavingsPlanArn

- **Description:** The unique Savings Plan identifier.
- **Line items applicable:** SavingsPlanUpfrontFee
- **Services:**
  - Amazon EC2
  - Fargate

### savingsPlan/SavingsPlanEffectiveCost

- **Description:** The proportion of the Savings Plan monthly commitment amount (Upfront and recurring) that is allocated to each usage line.
- **Line items applicable:** SavingsPlanCoveredUsage
- **Services:**
  - Amazon EC2

- Fargate

## savingsPlan/SavingsPlanRate

- **Description:** The Savings Plan rate for the usage.
- **Line items applicable:** SavingsPlanCoveredUsage
- **Services:**
  - Amazon EC2
  - Fargate

## savingsPlan/StartTime

- **Description:** The start date of the Savings Plan agreement.
- **Line items applicable:** SavingsPlanCoveredUsage, SavingsPlanNegation, SavingsPlanUpfrontFee, SavingsPlanRecurringFee
- **Services:**
  - Amazon EC2
  - Fargate

## T

## savingsPlan/TotalCommitmentToDate

- **Description:** The total amortized upfront commitment and recurring commitment to date, for that hour.
- **Line items applicable:** SavingsPlanRecurringFee
- **Services:**
  - Amazon EC2
  - Fargate

## U

## savingsPlan/UsedCommitment

- **Description:** The total dollar amount of the Savings Plan commitment used. (SavingsPlanRate multiplied by usage)
- **Line items applicable:** SavingsPlanRecurringFee
- **Services:**
  - Amazon EC2

## Cost Categories details

You can use the Cost Category columns to find information about the specific line items categorized by the Cost Categories feature. Cost Category columns are automatically populated when you create a

Cost Category and categorization rule. These columns include user-defined Cost Category names as the column headers, and corresponding Cost Category values. Examples include the following:

## costCategory/Project

Use a **Project** Cost Category to categorize cost and usage information associated with the project. Project names such as "alpha" or "beta" will show as values under **costCategory/Project**.

## costCategory/Team

Use a **Team** Cost Category to categorize cost and usage information associated with the team. Team names such as "Marketing" will show as values under **costCategory/Team**.

## costCategory/Environment

Use a **Environment** Cost Category to categorize cost and usage information associated with the environment. Environment names such as "Development" will show as values under **costCategory/Environment**.

# Use cases

You can use the AWS Cost and Usage Reports (AWS CUR) to suit your reports management needs. This section goes in-depth to help you understand use cases such as tracking your Savings Plans and Reserved Instance (RI) utilization, charges, and allocations.

## Topics

- [Understanding Savings Plans \(p. 50\)](#)
- [Understanding your reservations \(p. 52\)](#)

## Understanding Savings Plans

You can use Cost and Usage Reports (AWS CUR) to track your Savings Plans utilization, charges, and allocations.

### Savings Plans line items

Savings Plans is a flexible pricing model that offers low prices on Amazon EC2 and AWS Fargate, in exchange for a commitment to a consistent amount of usage (measured in \$/hour) for a one-year or three-year term.

The following line items in AWS CUR helps you track and manage your spend with Savings Plans.

#### Upfront fee

The **SavingsPlanUpfrontFee** line item is added to your bill when you purchase an All Upfront or Partial Upfront Savings Plan. The following table shows how this one-time fee appears in AWS CUR (some columns were omitted for clarity).

**Table 1**

lineltem/ LineltemType	lineltem/ ProductCode	lineltem/ UsageStartDate	lineltem/ LineltemDescri	lineltem/ UnblendedCost	savingsPlan/ SavingsPlanARN
SavingsPlanUpfrontFee	ComputeSavingsPlan	2019-10-10T00:00:00Z	USD\$43.80 one-time fee for 1 year All Upfront Compute Savings Plan ID: 70352035	43.8	arn:aws:savingsplans::555555555555:savingsplan:bc1d08fd-d97c-44e2-bcfa-f8bb5312e48a
SavingsPlanUpfrontFee	ComputeSavingsPlan	2019-10-10T00:00:00Z	USD\$43.80 one-time fee for 3 year Partial Upfront Any Region M5 Instance Type EC2 Savings Plan ID: 12355516	43.8	arn:aws:savingsplans::555555555555:savingsplan:bc7d-46c0-8a55-9c083bca11



Zone. Therefore, one **SavingsPlanNegation** line item may correspond to multiple **SavingsPlanCoveredUsage** line items.

The following table shows how the covered usage and the negation line items appear in the report (some columns were omitted for clarity).

**Table 3**

lineltem Lineltem	lineltem UsageSt	lineltem UsageE	lineltem Product	lineltem UsageTy	lineltem UsageA	lineltem Unblenc	lineltem Lineltem	Savings SavingP	savingsI SavingsI	savingsPlan/ SavingsPlanEffective
SavingsPlanCoveredUsage	2019-10-01T00:00:00Z	2019-10-01T00:00:00Z	Linux t3.nano	Usage	0.0052	0.0052	\$0.0052 per On Demand Linux t3.nano Instance Hour	arn:aws:savingsplans::555555555555:bc1d08fd-d97c-44e2-bcfa-f8bb5312e48a	0.0026	savingsplan/
SavingsPlanCoveredUsage	2019-10-01T00:00:00Z	2019-10-01T00:00:00Z	Linux t3.nano	Usage	0.0052	0.0052	\$0.0052 per On Demand Linux t3.nano Instance Hour	arn:aws:savingsplans::555555555555:bc1d08fd-d97c-44e2-bcfa-f8bb5312e48a	0.0026	savingsplan/
SavingsPlanCoveredUsage	2019-10-01T00:00:00Z	2019-10-01T00:00:00Z	Linux t3.nano	Usage	0.0026	0.0026	\$0.0052 per On Demand Linux t3.nano Instance Hour	arn:aws:savingsplans::555555555555:bc1d08fd-d97c-44e2-bcfa-f8bb5312e48a	0.0013	savingsplan/
SavingsPlanNegation	2019-10-01T00:00:00Z	2019-10-01T00:00:00Z	Linux t3.nano	Usage	-0.013	-0.013	SavingsPlanNegation used by AccountId: 555555555555 and UsageSku : K7ERD2Q28HHU97DT	arn:aws:savingsplans::555555555555:bc1d08fd-d97c-44e2-bcfa-f8bb5312e48a	0.013	savingsplan/

When you have more usage than your Savings Plans commitment can cover, your uncovered usage will still appear as a Usage Line Item and the covered usage will appear as **SavingsPlanCoveredUsage** with the corresponding **SavingsPlanNegation** line items.

## Understanding your reservations

You can use the AWS Cost and Usage Reports (AWS CUR) to track your Reserved Instance (RI) utilization, charges, and allocations. This section is an in-depth description to understand your reservations.

### Topics

- [Understanding your reservation line items \(p. 53\)](#)
- [Understanding your amortized reservation data \(p. 55\)](#)
- [Monitoring your size flexible reservations \(p. 56\)](#)
- [Monitoring your On-Demand capacity reservations \(p. 58\)](#)

## Understanding your reservation line items

RIs provide you a significant discount compared to On-Demand Instance pricing. RIs aren't physical instances. They're a billing discount applied to the use of On-Demand Instances in your account. These On-Demand Instances must match certain attributes to benefit from the billing discount.

### Topics

- [Upfront fee \(p. 53\)](#)
- [Recurring monthly RI fee \(p. 53\)](#)
- [RI discount benefits \(p. 54\)](#)

## Upfront fee

The **Fee** line item is added to your bill when you purchase an `All Upfront` or `Partial Upfront` RI.

The following table shows how this one-time fee appears in AWS CUR (some columns were omitted for clarity).

lineltem/ LineltemType	lineltem/ ProductCode	lineltem/ UsageStartDate	lineltem/ description	lineltem/ UnblendedCost	Reservation/ ReservationARN
Fee	AmazonEC2	2016-01-01T00:00:00Z	One-time charge for subscription: 363836886, planId: 1026576	68	arn:aws:ec2:us-east-1:572481847476:reservation/instances/f8c204c1-dd48-43f1-adb8-f88aa61e0dea

## Recurring monthly RI fee

The **RI Fee** line item describes the recurring monthly charges that are associated RIs applied that month. The **RI Fee** initially is added to your bill on the day of purchase and on the first day of each billing period thereafter.

The **RI Fee** is calculated by multiplying your discounted hourly rate and the number of hours in the month.

The following table shows how the recurring monthly charges appear in the report.

lineltem Lineltem	lineltem Product	lineltem UsageSt	lineltem UsageTy	lineltem descript	lineltem normali: factor	lineltem Unblend	Reserva Availabi	Reserva Reserva	Reserva TotalRes units	Reservation/ TotalReserved NormalizedUnits
RI fee	AmazonEC2	2016-01-01T00:00:00Z	OnDemand	m4.large	0.0309	4	23		arn:aws:ec2:us-east-1:572481847476:reservation-	2976

lineitem LineItem	lineitem Product	lineitem UsageSt	lineitem UsageTy	lineitem descript	lineitem normali: factor	lineitem Unblend	Reservat Availabi	Reservat Reservat	Reservat TotalRes units	Reservation/ TotalReserved NormalizedUnits
				hourly fee per Linux/ UNIX (Amazon VPC), m4.large instance				instances/ f8c204c1- dd48-43f1- adb8- f88aa61e0dea		

**Note**

Recurring monthly charges are recorded differently for RIs that have an Availability Zone or Region scope. For RIs that have an Availability Zone scope, the corresponding Availability Zone is shown in the **reservation/AvailabilityZone** column. For RIs that have a Region scope, the **reservation/AvailabilityZone** column is empty. RIs with a Region scope have values for the **lineitem/NormalizationFactor** and **reservation/TotalReservedNormalizedUnits** columns that show the instance size.

## RI discount benefits

The **Discounted Usage** line item describes the instance usage that received a matching RI discount benefit, and is added to your bill when you have usage that matches one of your RIs. AWS calculates RI discount benefits based on matching usage: for example, the use of an instance that matches the instance reservation. If you have matching usage, the cost associated with the usage line item is always zero because the charges associated with RIs are already accounted for in the two other line items (the upfront fee and the recurring monthly charges).

The following table shows an example of usage that received an RI discount benefit.

lineitem LineItem	lineitem Product	lineitem UsageSt	lineitem UsageTy	lineitem descript	lineitem Resource	lineitem Availab	lineitem normal factor	lineitem Normal	lineitem Unblend	lineitem Unblend	Reservation/ ReservationARN
Discounted Usage	Amazon	EC2	16-01	hourly fee per Linux/ UNIX (Amazon VPC), m4.large reserved instance applied	m4.large	us-east-1b	4	4	0	0	arn:aws:ec2:us-east-1:57248184747 instances/ f8c204c1- dd48-43f1- adb8- f88aa61e0dea

**Note**

The value for **UsageAmount** in the Amazon EC2 **DiscountedUsage** line is the actual number of hours used. The value for **NormalizedUsageAmount** is the value for **UsageAmount** multiplied by the value for **NormalizationFactor**. The value for **NormalizationFactor** is determined by the instance size. When an RI benefit discount is applied to a matching line item of usage, the Amazon Resource Name (ARN) value in the **reservation/ReservationARN** column for the initial upfront fees and recurring monthly charges matches the ARN value in the discounted usage line items.

For more information about mapping instance size to normalization factor, see [Modifying the Instance Size of Your Reservations](#) in the *Amazon EC2 User Guide for Linux Instances*.

## Understanding your amortized reservation data

Amortizing is when you distribute one-time reservation costs across the billing period that is affected by that cost. Amortizing enables you to see your costs in accrual-based accounting as opposed to cash-based accounting. For example, if you pay \$365 for an All Upfront RI for one year and you have a matching instance that uses that RI, that instance costs you \$1 a day, amortized.

You can see the data that Billing and Cost Management uses to calculate your amortized costs in the following Cost and Usage Reports columns.

### Topics

- [Reserved Instance inventory \(p. 55\)](#)
- [Amortization data for the billing period \(p. 55\)](#)
- [Reserved Instance effective costs \(p. 55\)](#)

## Reserved Instance inventory

You can use the following columns to track your RI inventory. The values for these columns appear only for RI subscription line items (also known as RI Fee line items) and not for the actual instances using the RIs.

For more information about column descriptions and sample values, see [the section called "Reservation details" \(p. 25\)](#).

- reservation/UpfrontValue
- reservation/startTime
- reservation/endTime
- reservation/modificationStatus

## Amortization data for the billing period

You can use the following columns to understand the amortized costs of your RIs for the billing period. The values for these columns appear only for RI subscription line items (also known as RI Fee line items) and not for the actual instances using the RIs.

For more information about column descriptions and sample values, see [the section called "Reservation details" \(p. 25\)](#).

- reservation/amortizedUpfrontFeeForBillingPeriod
- reservation/unusedQuantity
- reservation/unusedNormalizedUnitQuantity
- reservation/unusedRecurringFee
- reservation/unusedAmortizedUpfrontFeeForBillingPeriod

## Reserved Instance effective costs

You can use the following columns to understand your effective cost at the instance level. The values for these columns appear only for instance usage line items (also known as Discounted Usage boxUsage line items).

For more information about column descriptions and sample values, see [the section called “Reservation details”](#) (p. 25).

- reservation/amortizedUpfrontCostForUsage
- reservation/recurringFeeForUsage
- reservation/effectiveCost

## Monitoring your size flexible reservations

Amazon EC2 RIs that apply to a Region provide Availability Zone flexibility and instance size flexibility. RIs that provide Availability Zone flexibility provide a discount on usage in any Availability Zone in the Region. RIs that provide instance size flexibility provide a discount on usage, regardless of instance size in that family. To understand how instance size flexibility provided by your RI is applied to your usage, refer to the **lineItem/NormalizationFactor** and **lineItem/NormalizedUsageAmount** columns.

**Note**

Instance size flexibility is supported only by Linux or Unix RIs with default tenancy that are assigned to a Region.

### Example 1

You purchase one `m4.xlarge` RI in a given Region. This `m4.xlarge` RI can be applied automatically to all `m4` instance usage in the same Region. In the following table, AWS applied the `m4.xlarge` to two separate `m4.large` instances.

lineItem/LineItem	lineItem/Product	lineItem/Usage	lineItem/Usage	lineItem/description	lineItem/Resource	lineItem/Usage	lineItem/normalization factor	lineItem/Normalized	lineItem/Unble	lineItem/Unble	Reserv Reserv	Reserv TotalR	Reservation/ TotalR	Reservation/ Unble
RIFee	Amazon	EC2	0.0618	Hourly usage for m4.large instance			4			46	arn:aws:ec2:us-east-1:572481847476:reserved-instances/f8c204c1-dd48-43f1-adb8-f88aa61e0dea			
Discount Usage	Amazon	EC2	0.0618	Hourly usage for m4.large instance		250bc	4	4	0	0	arn:aws:ec2:us-east-1:572481847476:reserved-instances/f8c204c1-dd48-43f1-adb8-f88aa61e0dea			
Discount Usage	Amazon	EC2	0.0618	Hourly usage for m4.large instance		340ed	4	4	0	0	arn:aws:ec2:us-east-1:572481847476:reserved-instances/f8c204c1-dd48-43f1-			

lineitem LineItem	lineitem Product	lineitem Usage	lineitem Usage	lineitem description	lineitem Resource	lineitem Usage	lineitem normal factor	lineitem Normal	lineitem Unble	lineitem Unble	Reserv Reserv	Reserv TotalR	Reservation/ TotalR	Reservation/ Unit	Normalized
				instance applied							adb8- f88aa61e0dea				

The two m4.large usage line items have different **ResourceIDs**, and both received a discount benefit from the single m4.xlarge RI. This is shown by matching the **reservationARN** value across the usage and recurring monthly charge line items.

## Example 2

The following table shows an account that has subscriptions for two m4.large RIs, with one RI in each subscription. In this example, the account uses a single instance of m4.xlarge for an hour and receives a separate discount benefit from each of the two m4.large RIs.

lineitem LineItem	lineitem Product	lineitem Usage	lineitem Usage	lineitem description	lineitem Resource	lineitem Usage	lineitem normal factor	lineitem Normal	lineitem Unble	lineitem Unble	Reserv Reserv	Reserv TotalR	Reservation/ TotalR	Reservation/ Unit	Normalized
RIFee	Amazon	EC2	HourlyUsage	0.0309 hourly fee per Linux/ UNIX (Amazon VPC), m4.large instance	m4.large	4				23	arn:aws:ec2:us-east-1:572481847476:reserved-instances/f8c204c1-dd48-43f1-adb8-f88aa61e0dea	742	2976	742:reserved-	
RIFee	Amazon	EC2	HourlyUsage	0.0309 hourly fee per Linux/ UNIX (Amazon VPC), m4.large instance	m4.large	4				23	arn:aws:ec2:us-east-1:572481847476:reserved-instances/f8c204c1-dd48-43f1-adb8-f88aa61e0dea	742	2976	742:reserved-	
Discount Usage	Amazon	EC2	HourlyUsage	0.0309 hourly fee per Linux/ UNIX (Amazon VPC), m4.large reserved instance applied	m4.xlarge	2505	8	4	0	0	arn:aws:ec2:us-east-1:572481847476:reserved-instances/f8c204c1-dd48-43f1-adb8-f88aa61e0dea	742	2976	742:reserved-	
Discount Usage	Amazon	EC2	HourlyUsage	0.0309 hourly fee per Linux/ UNIX (Amazon	m4.xlarge	2505	8	4	0	0	arn:aws:ec2:us-east-1:572481847476:reserved-instances/	742	2976	742:reserved-	

lineItem/LineItem	lineItem/Product	lineItem/Usage	lineItem/Usage	lineItem/description	lineItem/Resource	lineItem/Usage	lineItem/normalization factor	lineItem/Normalized	lineItem/Unblended	lineItem/Unblended	Reservation/ReservationID	Reservation/TotalR	Reservation/TotalR	Reservation/Normalized
				VPC), m4.xlarge reserved instance applied							f8c204c1-dd48-43f1-adb8-f88aa61e0dea			

The single hour of `m4.xlarge` usage is split into two lines of 0.5 hours (both usage lines still retain the same **ResourceID**) because different RI subscriptions were applied to each portion of that single hour. The **reservationARN** for each 0.5 hour matches the corresponding RI subscription.

For more information about RI purchase options, see [Billing Benefits and Payment Options](#) in the *Amazon EC2 User Guide for Linux Instances*.

## Monitoring your On-Demand capacity reservations

Capacity Reservations enable you to reserve capacity for your Amazon EC2 instances for any duration in a specific Availability Zone. This enables you to create and manage Capacity Reservations separately from the billing discounts offered by Regional Reserved Instances (RI). To benefit from billing discounts, you can use Regional RIs in combination with Capacity Reservations.

### Capacity reservation line items

You can use some columns defined in the AWS CUR data dictionary to track your Capacity Reservations. The following columns are also used for Capacity Reservations.

This section defines these line items with supplementary definitions specific to Capacity Reservations.

For more information about Cost and Usage Reports column descriptions, see [the section called "Line item details"](#) (p. 21).

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z

#### B

##### lineItem/BlendedRate

For Capacity Reservations with a **UsageType** of **Reservation** or **DedicatedRes**, the **BlendedRate** is 0. This is because the Capacity Reservation costs are associated with the instance that provides the capacity, instead of with the Capacity Reservation itself.

#### R

##### lineItem/ResourceId

If you included `lineItem/ResourceId` when you created your Cost and Usage Reports, you can identify and track your Capacity Reservations using the **ResourceId** column. The Capacity Reservation **ResourceId** is captured only for the **UnusedBox**, **UnusedDed**, **Reservation**, and **DedicatedRes** **UsageTypes**.

Capacity Reservations always include a `cr-` in their resource ID, and the resource ID has the following format:

```
arn:aws:ec2:<region>:<account id>:<capacity-reservation>/cr-0be443example1db6f
```

## U

### lineItem/UnblendedCost

The `BlendedRate` multiplied by the `UsageAmount`.

### lineItem/UnblendedRate

For Capacity Reservations with a **UsageType** of **Reservation** or **DedicatedRes**, the **UnblendedRate** is 0. This is because the costs for Capacity Reservations are associated with the instance that provides the capacity, instead of with the Capacity Reservation itself.

### lineItem/UsageAmount

How much of a Capacity Reservation you've used. Each Capacity Reservation can have multiple slots for an hour, enabling you to run more than one instance that uses the reservation during an hour. Therefore, it's possible to use more than one instance-hour in an hour. **UsageAmount** is calculated by multiplying the number of instance slots covered by the line item with the number of hours covered by the line item.

### lineItem/UsageType

How much of a specific reservation you've used. For Amazon EC2, the options are as follows:

#### lineItem/BoxUsage

For this `UsageType`, the `UsageAmount` column is the amount of instance-hours of an instance you've used.

For example, a report covers 1 hour and has a Capacity Reservation line item that can cover 10 instances. If you use two instance-slots during the time period covered by the report, the **BoxUsage UsageAmount** covers the number of instance hours that you reserved and used. In this case, this is two (the number of used instance slots) multiplied by 1 hour (the time covered by the report) for a total of two. For a report that covers 1 day, the **UsageAmount** is two multiplied by 24, for a total of 48.

#### DedicatedRes

For a **UsageType** of **DedicatedRes**, the **UsageAmount** column describes how many instance-hours of a dedicated Capacity Reservation you reserved.

#### Reservation

For a **UsageType** of **Reservation**, the **UsageAmount** column describes how many instance-hours of a Capacity Reservation you reserved.

For example, if a report covers one hour and has a Capacity Reservation line item that can cover ten instances, the **Reservation UsageAmount** covers the number of instance slots that you reserved. In this case, that's 10 (the number of available instance slots) multiplied by 1 hour (the time covered by the report) for a total of 10. For a report that covers 1 day, the **UsageAmount** would be 10 multiplied by 24, for a total of 240.

#### UnusedBox

For a **UsageType** of **UnusedBox**, the **UsageAmount** column describes how many instance-hours of a Capacity Reservation you reserved, but didn't use.

For example, a report covers 1 hour and has a Capacity Reservation line item that can cover 10 instances. If you didn't use eight instance-slots during the time period covered by the report, the **UnusedBox UsageAmount** covers the number of instance hours that you reserved but didn't use. In this case, that's eight (the number of unused instance slots) multiplied by 1 hour (the time covered by the report) for a

total of eight. For a report that covers 1 day, the **UsageAmount** is eight multiplied by 24, for a total of 192.

#### UnusedDed

For a **UsageType** of **UnusedDed**, the **UsageAmount** column describes how many instance-hours of a dedicated Capacity Reservation that you reserved, but didn't use.

# Legacy reports

This section describes legacy billing reports offered outside of AWS Cost and Usage Reports. These pages are available for reference, but we strongly recommend you use AWS Cost and Usage Reports since these reporting methods will be unavailable at a later date.

## Topics

- [Detailed Billing Reports \(p. 61\)](#)
- [Monthly Report \(p. 72\)](#)
- [Monthly cost allocation \(p. 72\)](#)
- [AWS Usage Report \(p. 72\)](#)

## Detailed Billing Reports

### Important

The Detailed Billing Report feature is unavailable for new customers as of 07/08/2019.

Detailed Billing Reports (DBR) contain similar information as AWS CUR regarding your charges, but calculates the individual line items differently. If you've signed up for both the DBR and AWS CUR, the line items will not match. However, when the reports are finalized at the end of the month, the total cost will align.

AWS stores the DBR in Amazon S3 as csv files, using the following naming convention:

```
AWS account number-aws-billing-detailed-line-items-yyyy-mm.csv.zip
```

AWS recreates the DBR multiple times a day, overwriting the report. When AWS overwrites a report, the line items might be in a different order than they were in the previous report. A final report is created at the end of the month. For the following month, AWS creates a new report file instead of overwriting the final report from the previous month. Reports for previous months remain in your S3 bucket until you delete them.

For information on how to migrate your DBR to AWS CUR, see [the section called "Migrating From DBR to AWS CUR" \(p. 61\)](#).

## Migrating from Detailed Billing Reports to Cost and Usage Reports

The Detailed Billing Report (DBR) and AWS Cost and Usage Reports (CUR) both provide information about your charges. If you are using a legacy DBR, we strongly recommend you transfer your report to Cost and Usage Reports.

## Topics

- [Comparing benefits of the Cost and Usage Reports \(AWS CUR\) \(p. 62\)](#)
- [Key differences between the Detailed Billing Report and the Cost and Usage Reports \(p. 63\)](#)

- [Reporting on advanced charge types \(p. 65\)](#)

## Comparing benefits of the Cost and Usage Reports (AWS CUR)

AWS CUR provides the most comprehensive source of information. It allows you to understand individual costs in depth, and to analyze them in greater detail, which is especially useful at an enterprise scale. AWS CUR is best suited for customers with complex cost management needs, for example, those with dedicated query or analytic-based systems. AWS CUR is also your best source for Reserved Instance (RI) information, especially if you want to view amortized costs.

### Comprehensive reservation information

Reserved Instances (RI), or reservations, offer a discounted hourly rate compared to On-Demand usage in exchange for committing to a one- or three-year term of service. This can result in significant savings. AWS CUR helps you monitor and manage your reservation portfolio by providing comprehensive information like reservation Amazon Resource Numbers (ARNs), numbers of reservations, and total RIs. You can track your reservation-related discounts to specific resources, which help you better understand your savings.

DBR provides a subset of this metadata, but work is required to transform the required columns.

AWS CUR provides additional columns not available in DBR, such as information regarding your amortized reservation costs. For more information, see [the section called "Understanding your amortized reservation data" \(p. 55\)](#).

### On-Demand pricing availability

AWS CUR provides information regarding the On-Demand rates for each individual line item of usage. This information enables you to quantify your savings by subtracting the amount you paid from the On-Demand rate, enabling you to compute your savings as compared to On-Demand prices. This also gives you the flexibility of choosing to allocate your costs using public On-Demand rates.

DBR doesn't contain information for On-Demand rates, but only the billed amount. This makes it difficult to calculate your overall savings or to allocate costs using On-Demand rates.

### Granular breakdown of discounts

AWS CUR can access a granular view of the usage-based discounts. If discounts were applied, you can use AWS CUR to view the following:

- Cost prior to being discounted
- Discounted amount
- Total cost after the discount was applied at the line item level

DBR does not contain a granular breakdown of your discounts.

### Automated data ingestion at scale

When you use AWS CUR, you can easily configure an event to trigger an automated data ingestion process, streamlining the process of refreshing the billing data in your in-house systems. AWS CUR data can automatically be refreshed when charges related to previous months are detected.

Additionally, AWS CUR is generated as multiple files, providing the added benefit of segmenting the data into smaller pieces. This makes it easier to ingest the data according to the processes used by multiple workers. It also allows you to retry data downloads in smaller pieces.

AWS CUR is formatted in a way that enables you to locate and extract data quickly. This report is modeled from a manifest file that contains information for the overall structure of the data, including a list of every column that is contained in the report. This enables you to extend the report and include new information regarding your usage when it becomes available.

## Cross-product integration

AWS CUR supports integration with Amazon Redshift, Amazon QuickSight, and Amazon Athena, making it easy to quickly build out an AWS based cost management solution. AWS CUR also provides data in Parquet format, broadening your options when it comes to building out your own cost and usage reporting system. For more information, see [AWS Cost and Usage Report Manifest Files](#) in the *AWS Billing and Cost Management User Guide*.

## Key differences between the Detailed Billing Report and the Cost and Usage Reports

There are a few differences between DBR and AWS CUR that you should be aware of after you migrate to using AWS CUR. You may need to adjust how you ingest the data into your systems accordingly.

### File structure

DBR is delivered as a single file, while AWS CUR provides as a consolidated set of files. In AWS CUR, you can view the following files in your Amazon S3 bucket:

- Set of data files containing all of your usage line items
- Separate data file containing all of your discounts (if applicable)
- Manifest file that lists all of the data files that belong to a single report

### Column structure

DBR has a fixed list of columns, limiting its flexibility. AWS CUR does not have a fixed column structure, and instead allows you to freely add or remove columns as needed. When you begin using a new AWS service, AWS CUR can dynamically start to include new data in the report that may be useful in your case. The manifest file provides a map of all columns present in the report.

### Equivalent Column Names for DBR and AWS CUR

DBR Column Name	AWS CUR Column Name
InvoiceId	bill/InvoiceId
PayerAccountId	bill/PayerAccountId
LinkedAccountId	lineItem/UsageAccountId
ProductName	product/ProductName
SubscriptionId	reservation/subscriptionid
UsageType	lineItem/UsageType
Operation	lineItem/Operation
AvailabilityZone	lineItem/AvailabilityZone
ReservedInstance	Not Supported

DBR Column Name	AWS CUR Column Name
ItemDescription	lineItem/LineItemDescription
UsageStartDate	lineItem/UsageStartDate
UsageEndDate	lineItem/UsageEndDate
UsageQuantity	lineItem/UsageAmount
BlendedRate	lineItem/BlendedRate
BlendedCost	lineItem/BlendedCost
UnBlendedRate	lineItem/UnblendedRate
UnBlendedCost	lineItem/UnblendedCost
ResourceId	lineItem/ResourceId
RecordType	Not Supported
PricingPlanId	Not Supported
RateID	pricing/RateID

**Note**

There is no equivalent for RecordId in AWS CUR, but you can gather this information by combining identity/LineItemId, identity/TimeInterval, and bill/BillType.

**Retrieving DBR RecordType Values Through AWS CUR**

RecordType values in DBR	Syntax to Retrieve RecordType Through AWS CUR	Use Case
LineItem	SELECT SUM(line_item_unblended_cost) FROM [CUR] WHERE line_item_line_item_type = 'Usage'	Usage line item partitions out usage costs from one-time charges. For example: upfront RI payment
InvoiceTotal	SELECT (bill_invoice_id), sum(line_item_unblended_cost) FROM [CUR] GROUP BY bill_invoice_id	Invoice total helps you reconcile your costs between Invoices and the Cost and Usage Report.
AccountTotal	SELECT line_item_usage_account_id, sum(line_item_unblended_cost) FROM [CUR] GROUP BY line_item_usage_account_id	Account total helps you isolate costs related to your member accounts for charge back purposes.
StatementTotal	SELECT SUM(line_item_unblended_cost) FROM [CUR]	Statement total helps you understand your costs for the billing period.
Discount	SELECT SUM(line_item_unblended_cost) FROM [CUR] WHERE	Discount line items helps you identify all of your discount-related line items.

RecordType values in DBR	Syntax to Retrieve RecordType Through AWS CUR	Use Case
	<code>line_item_line_item_type = 'Discount'</code>	
Rounding	Not yet supported	Not yet supported

## Reporting on advanced charge types

### Refunds

AWS CUR: Refunds are identified by filtering for the `lineitem/lineitemtype = 'Refund'` string.

DBR: Credits can be identified by parsing the `ItemDescription` column for the `'Credit'` substring.

### Credits

AWS CUR: Refunds are identified by filtering for the `lineitem/lineitemtype = 'Credit'` string.

DBR: Refunds are identified through parsing the `ItemDescription` column for the `'Refund'` substring.

### Taxes

AWS CUR: Taxes are identified by filtering the `lineitem/lineitemtype = 'Tax'` string.

DBR: Taxes are identified by parsing the `ItemDescription` column for the `'Tax'` substring.

### Identifying reservation-related upfront costs

AWS CUR: Reservation-related upfront fees can be identified by filtering `"lineitem/lineitemtype" = 'Fee'`.

DBR: Reservation-related upfront costs can be identified by examining the `Usagetype` column for the `'HeavyUsage'` substring, and whether the `'SubscriptionId'` is null.

### Identifying reservation-related monthly fee

AWS CUR: Reservation-related monthly fees can be identified by filtering `"lineitem/lineitemtype" = 'RIfee'`.

DBR: Reservation-related monthly fees can be identified by examining the `Usagetype` column for the `'HeavyUsage'` substring.

### Identifying instances that received reserved instance benefits

AWS CUR: Reservation-related upfront fees can be identified by filtering `"lineitem/lineitemtype" = 'DiscountedUsage'`.

DBR: Reservation-related upfront fees can be identified by filtering `'ReservedInstance' = 'Y'`.

## Understanding unused reservation costs

AWS Cost and Usage Reports (AWS CUR) can be leveraged to better understand unused RI costs. Here's four scenarios showing how.

### Scenario 1: RI usage is 100%

RI Fee line item has \$0 unused cost and 0 usage hours.

Using the DBR/DBR-RT, you can understand your unused RI usage and costs by referring to the fields UsageQuantity and UnblendedCosts for RI Fee line items. RI Fee line items can be identified by the existence of 'purchased hours' information in the ItemDescription field. Table 1 illustrates the columns and information used to manage unused RI costs in the DBR and DBR-RT report.

**Table 1 – Unused RI costs for a 100% RI usage in DBR and DBR-RT prior to June 17, 2019**

ProductName	UsageType	Operation	Availability Zone	Reserved Instance	ItemDescription	Usage Quantity	Unblended Rate	Unblended Cost
Amazon Elastic Compute Cloud	HeavyUsage	RunInstances	us-east-1a	Y	USD 0.10 hourly fee per Linux/UNIX (Amazon VPC), c3:8xlarge (744 hours purchased, 744 hours used)	0	0.1	0
Amazon Elastic Compute Cloud	HeavyUsage	RunInstances	us-east-1a	Y	USD 0.10 hourly fee per Linux/UNIX (Amazon VPC), c3:8xlarge	744	0.1	74.4

Using AWS CUR, you can understand your unused RI usage and costs by referring to the fields 'reservation/ UnusedQuantity' and 'reservation/ UnusedRecurringFee' for RI Fee line items. Table 4 below illustrates the current columns and information utilized to manage unused RI costs in AWS CUR.

**Table 2 – Unused RI costs for a 100% RI usage in AWS CUR**

lineitem Product	Usage	lineitem LineItem	lineitem LineItem	lineitem Usage	lineitem Normal	lineitem Unblended	lineitem Unblended	reserv Unuse	reserv Unuse	reserv Unuse	reserv Recurr	reserv Amort	reservation/ Effective	reservation/ Effective
Amazon EC2	HeavyUsage	Usage Fee	Usage Fee	USD 0.10 hourly fee per Linux/UNIX (Amazon VPC), c3:8xlarge	47,616	0.1	74.4	0	0	0				

lineitem Product	Usage	lineitem LineItem	lineitem LineItem	lineitem Usage	lineitem Normal	lineitem Unblended	lineitem Unblended	reserv Unuse	reserv Unuse	reserv Unuse	reserv Recurr	reserv Amort	reservation/ EffectiveCost	reservation/ EffectiveCost
Amazon EC2	USW2- BoxUsage	DiscountedUsage	DiscountedUsage	c3:8xlarge	47,6160	0					74.4	5	79.4	

In addition to matching the current functionality supported by DBR/DBR-RT, AWS CUR has the following advantages:

- Using AWS CUR, you are able to access information regarding the EffectiveCost for the DiscountedUsage line item, which includes both the recurring and upfront fees. The DBR only accounts for recurring fees.
- In AWS CUR, the UsageType field is not transformed for the DiscountedUsage line items whereas DBR replaces the information with RI Fee line item information. This is because the user can group line items in AWS CUR by ReservationARN in order to understand what usage was discounted by which RI.
- In AWS CUR, the LineItemDescription field is not transformed for the RI Fee line item. DBR appends the hours purchased and hours used.

## Scenario 2: Partial RI usage

RI Fee line item has unused cost and usage.

Using the DBR/DBR-RT, you can understand your unused RI usage and costs by referring to fields UsageQuantity and UnblendedCosts for RI Fee line items. Table 3 illustrates the columns and information used to manage unused RI costs in the DBR and DBR-RT report.

**Table 3 – Unused RI costs for a partial RI usage in DBR and DBR-RT prior to June 17, 2019**

ProductName	UsageType	Operation	Availability Zone	Reserved Instance	ItemDescription	Usage Quantity	Unblended Rate	Unblended Cost
Amazon Elastic Compute Cloud	HeavyUsage	RunInstances	us-east-1a	Y	USD 0.10 hourly fee per Linux/ UNIX (Amazon VPC), c3:8xlarge (744 hours purchased, 644 hours used)	100	0.1	10

Product Name	Usage Type	Operation	Availability Zone	Reserved Instance	Item Description	Usage Quantity	Unblended Rate	Unblended Cost
Amazon Elastic Compute Cloud	HeavyUsage	RunInstances	us-east-1a	Y	USD 0.10 hourly fee per Linux/UNIX (Amazon VPC), c3:8xlarge	644	0.1	64.4

Using AWS CUR, you can understand your unused RI usage and costs by referring to fields 'reservation/UnusedQuantity' and 'reservation/UnusedRecurringFee' for RI Fee line items. Table 4 illustrates the current columns and information utilized to manage unused RI costs in AWS CUR.

**Table 4 – Unused RI costs for a partial RI usage in AWS CUR**

lineitem Product	Usage	lineitem LineItem	lineitem LineItem	lineitem Usage	lineitem Normal	lineitem Unblended	lineitem Unblended	reserv Unused	reserv Unused	reserv Unused	reserv Recurr	reserv Amort	reservation/Effective	reservation/Effective
Amazon EC2	HeavyUsage	Usage: c3:8xlarge	USD 0.10 hourly fee per Linux/UNIX (Amazon VPC), c3:8xlarge	47,616	0.1	74.4	100	0	10					
Amazon EC2	USW2-DiscountBoxUsage	Usage: c3:8xlarge	USD 0.10 hourly fee per Linux/UNIX (Amazon VPC), c3:8xlarge	47,216	0	0					64.4	5	69.4	

In addition to matching the current functionality supported by DBR/DBR-RT, AWS CUR has the following advantages:

- AWS CUR has a separate column representing UnusedQuantity for the RI Fee line item vs. DBR / DBR-RT which overloads the UsageQuantity column with the unused hours

### Scenario 3: Capacity reservation

DBR/DBR-RT filters out Capacity Reservations related UnusedBox and UnusedDed usage type line items when covered by an RI because the RI Fee line item already covers the unused amount in the

UsageQuantity and UnblendedCost fields. Table 5 illustrates the columns and information utilized to manage unused RI costs in the DBR and DBR-RT report.

**Table 5 – Unused RI costs for Capacity Reservation scenario in DBR and DBR-RT prior to June 17 2019**

ProductName	UsageType	Operation	Availability Zone	Reserved Instance	ItemDescription	Usage Quantity	Unblended Rate	Unblended Cost
Amazon Elastic Compute Cloud	HeavyUsage	RunInstances	us-east-1a	Y	USD 0.10 hourly fee per Linux/UNIX (Amazon VPC), c3:8xlarge (744 hours purchased, 734 hours used)	10	0.1	1
Amazon Elastic Compute Cloud	HeavyUsage	RunInstances	us-east-1a	Y	USD 0.10 hourly fee per Linux/UNIX (Amazon VPC), c3:8xlarge	734	0.1	73.4

AWS CUR shows these line items as DiscountedUsage. Table 6 illustrates the current columns and information utilized to manage unused RI costs in AWS CUR.

**Table 6 – Unused RI costs for the Capacity Reservation scenario in AWS CUR**

lineitem Product	UsageType	lineitem Lineltern	lineitem Lineltern	lineitem UsageAr	lineitem Normali	lineitem Unblend	lineitem Unblend	reservat Recurrin	reservat Amortiz	reservation/ EffectiveCost	CostForUsage
Amazon EC2	HeavyUsage	Usage: c3:8xlarge Fee	USD 0.10 hourly fee per Linux/UNIX (Amazon VPC), c3:8xlarge	744	47,616	0.1	74.4				
Amazon EC2	USW2-Reservation	Usage: c3:8xlarge	USD 0.10 hourly fee per	744		0	0				

lineitem Product	UsageType	lineitem Lineltern	lineitem Lineltern	lineitem UsageAr	lineitem Normali	lineitem Unblend	lineitem Unblend	reservat Recurrin	reservat Amortiz	reservation/ EffectiveCost	CostForUsa
			Reservation Linux/ UNIX (Amazon VPC), c3:8xlarge Instance Hour								
Amazon EC2	USW2- BoxUsage	Discount	USD Usage c3.8xlarge hourly fee per Linux/ UNIX (Amazon VPC), c3:8xlarge	644	47,216	0	0	64.4	5	69.4	
Amazon EC2	USW2- UnusedBox	Discount	USD Usage c3.8xlarge used Reservation Linux/ UNIX (Amazon VPC), c3:8xlarge Instance Hour	100	6,500	0	0	10	1	11	

## Scenario 4: Size flexible reservations

Utilizing the DBR/DBR-RT, you can understand your unused RI usage and costs by referring to fields UsageQuantity and UnblendedCosts for RI Fee line items. RI Fee line items can be identified by the existence of 'purchased hours' information in the ItemDescription field. Table 9 illustrates the columns and information utilized to manage unused RI costs in the DBR and DBR-RT report.

**Table 7 – Unused RI costs for a size flex RI scenario in DBR and DBR-RT prior to June 17, 2019**

ProductName	UsageType	Operation	Availability Zone	Reserved Instance	ItemDescription	Usage Quantity	Unblended Rate	Unblended Cost
Amazon Elastic Compute Cloud	HeavyUsage	RunInstances	east-1a	Y	USD 0.10 hourly fee per Linux/UNIX (Amazon VPC), c3:8xlarge	100	0.1	10

Product Name	Usage Type	Operation	Availability Zone	Reserved Instance	Item Description	Usage Quantity	Unblended Rate	Unblended Cost
					(744 hours purchased, 644 hours used)			
Amazon Elastic Compute Cloud	HeavyUsage	RunInstances	east-1a	Y	USD 0.10 hourly fee per Linux/UNIX (Amazon VPC), c3:8xlarge; UsageType: BoxUsage:c3.large	644	0.1	64.4

Using AWS CUR, you can understand your unused RI usage and costs by referring to fields 'reservation/UnusedQuantity' and 'reservation/UnusedRecurringFee' for RI Fee line items. Table 8 illustrates the current columns and information utilized to manage unused RI costs in the AWS CUR.

**Table 10 – Unused RI costs for a size flex RI scenario in AWS CUR**

lineitem Product	Usage	lineitem LineItem	lineitem LineItem	lineitem Usage	lineitem Normal	lineitem Unblended	lineitem Unblended	reserv Unused	reserv Unused	reserv Unused	reserv Recurr	reserv Amort	reservation/Effective	reservation/Effective
Amazon EC2	HeavyUsage	Usage:Fee	USD 0.10 hourly fee per Linux/UNIX (Amazon VPC), c3:8xlarge	47,614	60.1	74.4	100	70.37	5.5					
Amazon EC2	USW2-BoxUsage	DiscountedUsage	USD 0.10 hourly fee per Linux/UNIX (Amazon VPC), c3:8xlarge	2,576	0	0				4.03	0.5	4.53		

In addition to matching the current functionality supported by DBR/DBR-RT, AWS CUR has the following advantages:

- AWS CUR has the NormalizedUsageAmount and quantity. The DBR / DBR-RT do not have columns representing this.
- AWS CUR UsageType and Operation are not transformed for the DiscountedUsage lineitem. The DBR / DBR-RT replaces these values with the RI Fee line item.
- AWS CUR LineItemDescription is not transformed for the DiscountedUsage line item. In DBR / DBR-RT, which replaces with the RI Fee line item description and appends the DiscountedUsage line item Usage Type to the end of the string i.e. "USD 0.10 hourly fee per Linux/UNIX (Amazon VPC), c3:8xlarge; UsageType: BoxUsage:c3.large"

## Monthly Report

You can download a Monthly Report of your estimated AWS charges from the **Bills** page of the Billing and Cost Management console.

If you use the consolidated billing feature in AWS Organizations, this report is available only for a management account, and includes activity for all the member accounts. Member account owners can obtain the monthly report only from the management account. For more information, see [Consolidated Billing for Organizations](#) in the *AWS Billing and Cost Management User Guide*.

The report contains line items for each unique combination of AWS product, usage type, and operation that the account uses. The estimated report is updated up to several times per day. You can get reports for previous months by selecting the statement period, starting with the report for the month when you signed up for monthly reports. Reports from before you signed up are not available.

## Monthly cost allocation

### Important

The Monthly Cost Allocation Report feature will be unavailable at a later date. We strongly recommend that you use the AWS Cost and Usage Reports instead.

You can create custom cost allocation tag sets for your AWS resources that can describe the business dimensions of your AWS usage. These tag sets enable you to organize and track your AWS costs. Many AWS services expose tagging in their feature sets. You create the tags within those services by using the console, API, or the AWS command line interface (CLI). For more information, see [Using Cost Allocation Tags](#) in the *AWS Billing and Cost Management User Guide*.

After you create your tags, you can obtain a monthly cost allocation report/. This is essentially the Monthly Report including your cost allocation tag sets.

## AWS Usage Report

### Important

The AWS Usage Report feature will be unavailable at a later date. We strongly recommend that you use the AWS Cost and Usage Reports instead.

You can download dynamically generated AWS usage reports. Each report covers a single service, and you can choose which usage type, operation, and time period to include. You can also choose how the data is aggregated.

# Contacting customer support

Use the following resources to get help with your AWS Billing and Cost Management and AWS Cost and Usage Reports questions.

- [AWS Knowledge Center](#): This is the quickest way to find answers to questions about your AWS CUR or bill. We recommend you start here.
- **Account and Billing Support**: If you're an AWS account owner, you have access to account and billing support free of charge. Only personalized technical support requires a support plan. For more information, visit the [AWS Support web site](#).
- **Opening a Support Case**: You can contact AWS Support and open a support case for your inquiry. This is the most direct method for communicating with AWS Support. AWS Support does not publish a direct phone number to reach representatives, but instead will call you through the following procedure.

## Note

To open an AWS Support case and specify *Regarding: Account and Billing Support*, you must either be signed into AWS as the root account owner, or have IAM permissions to open a support case. For more information, see [Accessing AWS Support](#) in the AWS Support User Guide.

## To contact AWS Support

1. Sign in and navigate to the [AWS Support Center](#). If prompted, enter the email address and password for your account.
2. Choose **Open a new case**.
3. On the **Open a new case** page, select **Account and Billing Support** and fill in the required fields on the form.
4. Choose your response preference:
  - **Web**: You'll receive an email response from an AWS Support representative.
  - **Phone**: You'll receive a telephone call from an AWS Support representative.

## Note

Instant messaging support is not available for billing inquiries. If you've closed your AWS account, you can still sign in to contact Customer Support and view past bills.

# Security in AWS Cost and Usage Reports

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

AWS Cost and Usage Reports is a feature in the AWS Billing and Cost Management console. For details about security considerations, see [Security in AWS Billing and Cost Management](#) in the *AWS Billing and Cost Management User Guide*.

For more information on access control and IAM permissions to use AWS CUR, see [Overview of Managing Access Permissions](#).

# Quotas and restrictions

The following table describes the current quotas and restrictions within AWS Cost and Usage Reports.

## Cost and Usage Reports

Number of Cost and Usage Reports	10 per account
Rates	Cost and Usage Reports are free of charge, but standard Amazon S3 rates apply.
Number of Free Tier AWS Cost and Usage Reports	10

# Document history for AWS Cost and Usage Reports User Guide

The following table describes the documentation for this release of AWS Cost and Usage Reports.

**Latest documentation update:** February 10, 2020

update-history-change	update-history-description	update-history-date
<a href="#">New security chapter</a>	Added a new security chapter that provides information about various security controls. Former "Controlling Access" chapter contents have been migrated here.	February 10, 2020
<a href="#">Initial launch (p. 76)</a>	Migrated and reorganized all AWS CUR content from Billing and Cost Management guide.	January 21, 2020

# AWS glossary

For the latest AWS terminology, see the [AWS glossary](#) in the *AWS General Reference*.