
AWS Compute Optimizer

API Reference

API Version 2019-11-01



AWS Compute Optimizer: API Reference

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Welcome

AWS Compute Optimizer is a service that analyzes the configuration and utilization metrics of your AWS resources, such as EC2 instances and Auto Scaling groups. It reports whether your resources are optimal, and generates optimization recommendations to reduce the cost and improve the performance of your workloads. Compute Optimizer also provides recent utilization metric data, as well as projected utilization metric data for the recommendations, which you can use to evaluate which recommendation provides the best price-performance trade-off. The analysis of your usage patterns can help you decide when to move or resize your running resources, and still meet your performance and capacity requirements. For more information about Compute Optimizer, including the required permissions to use the service, see the [AWS Compute Optimizer User Guide](#).

This document was last published on September 24, 2020.

Actions

The following actions are supported:

- [DescribeRecommendationExportJobs](#) (p. 3)
- [ExportAutoScalingGroupRecommendations](#) (p. 6)
- [ExportEC2InstanceRecommendations](#) (p. 10)
- [GetAutoScalingGroupRecommendations](#) (p. 14)
- [GetEC2InstanceRecommendations](#) (p. 18)
- [GetEC2RecommendationProjectedMetrics](#) (p. 22)
- [GetEnrollmentStatus](#) (p. 25)
- [GetRecommendationSummaries](#) (p. 27)
- [UpdateEnrollmentStatus](#) (p. 30)

DescribeRecommendationExportJobs

Describes recommendation export jobs created in the last seven days.

Use the `ExportAutoScalingGroupRecommendations` or `ExportEC2InstanceRecommendations` actions to request an export of your recommendations. Then use the `DescribeRecommendationExportJobs` action to view your export jobs.

Request Syntax

```
{
  "filters": [
    {
      "name": "string",
      "values": [ "string" ]
    }
  ],
  "jobIds": [ "string" ],
  "maxResults": number,
  "nextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 55\)](#).

The request accepts the following data in JSON format.

filters (p. 3)

An array of objects that describe a filter to return a more specific list of export jobs.

Type: Array of [JobFilter \(p. 44\)](#) objects

Required: No

jobIds (p. 3)

The identification numbers of the export jobs to return.

An export job ID is returned when you create an export using the `ExportAutoScalingGroupRecommendations` or `ExportEC2InstanceRecommendations` actions.

All export jobs created in the last seven days are returned if this parameter is omitted.

Type: Array of strings

Required: No

maxResults (p. 3)

The maximum number of export jobs to return with a single request.

To retrieve the remaining results, make another request with the returned `NextToken` value.

Type: Integer

Required: No

[nextToken \(p. 3\)](#)

The token to advance to the next page of export jobs.

Type: String

Required: No

Response Syntax

```
{
  "nextToken": "string",
  "recommendationExportJobs": [
    {
      "creationTimestamp": number,
      "destination": {
        "s3": {
          "bucket": "string",
          "key": "string",
          "metadataKey": "string"
        }
      },
      "failureReason": "string",
      "jobId": "string",
      "lastUpdatedTimestamp": number,
      "resourceType": "string",
      "status": "string"
    }
  ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

[nextToken \(p. 4\)](#)

The token to use to advance to the next page of export jobs.

This value is null when there are no more pages of export jobs to return.

Type: String

[recommendationExportJobs \(p. 4\)](#)

An array of objects that describe recommendation export jobs.

Type: Array of [RecommendationExportJob \(p. 46\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 57\)](#).

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

InternalServerErrorException

An internal error has occurred. Try your call again.

HTTP Status Code: 500

InvalidParameterValueException

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 400

OptInRequiredException

The account is not opted in to AWS Compute Optimizer.

HTTP Status Code: 400

ResourceNotFoundException

A resource that is required for the action doesn't exist.

HTTP Status Code: 400

ServiceUnavailableException

The request has failed due to a temporary failure of the server.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

ExportAutoScalingGroupRecommendations

Exports optimization recommendations for Auto Scaling groups.

Recommendations are exported in a comma-separated values (.csv) file, and its metadata in a JavaScript Object Notation (.json) file, to an existing Amazon Simple Storage Service (Amazon S3) bucket that you specify. For more information, see [Exporting Recommendations](#) in the *Compute Optimizer User Guide*.

You can have only one Auto Scaling group export job in progress per AWS Region.

Request Syntax

```
{
  "accountIds": [ "string" ],
  "fieldsToExport": [ "string" ],
  "fileFormat": "string",
  "filters": [
    {
      "name": "string",
      "values": [ "string" ]
    }
  ],
  "includeMemberAccounts": boolean,
  "s3DestinationConfig": {
    "bucket": "string",
    "keyPrefix": "string"
  }
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 55).

The request accepts the following data in JSON format.

[accountIds](#) (p. 6)

The IDs of the AWS accounts for which to export Auto Scaling group recommendations.

If your account is the master account of an organization, use this parameter to specify the member accounts for which you want to export recommendations.

This parameter cannot be specified together with the include member accounts parameter. The parameters are mutually exclusive.

Recommendations for member accounts are not included in the export if this parameter, or the include member accounts parameter, is omitted.

You can specify multiple account IDs per request.

Type: Array of strings

Required: No

[fieldsToExport](#) (p. 6)

The recommendations data to include in the export file.

Type: Array of strings

Valid Values: AccountId | AutoScalingGroupArn | AutoScalingGroupName | Finding | UtilizationMetricsCpuMaximum | UtilizationMetricsMemoryMaximum | LookbackPeriodInDays | CurrentConfigurationInstanceType | CurrentConfigurationDesiredCapacity | CurrentConfigurationMinSize | CurrentConfigurationMaxSize | CurrentOnDemandPrice | CurrentStandardOneYearNoUpfrontReservedPrice | CurrentStandardThreeYearNoUpfrontReservedPrice | CurrentVCpus | CurrentMemory | CurrentStorage | CurrentNetwork | RecommendationOptionsConfigurationInstanceType | RecommendationOptionsConfigurationDesiredCapacity | RecommendationOptionsConfigurationMinSize | RecommendationOptionsConfigurationMaxSize | RecommendationOptionsProjectedUtilizationMetricsCpuMaximum | RecommendationOptionsProjectedUtilizationMetricsMemoryMaximum | RecommendationOptionsPerformanceRisk | RecommendationOptionsOnDemandPrice | RecommendationOptionsStandardOneYearNoUpfrontReservedPrice | RecommendationOptionsStandardThreeYearNoUpfrontReservedPrice | RecommendationOptionsVcpus | RecommendationOptionsMemory | RecommendationOptionsStorage | RecommendationOptionsNetwork | LastRefreshTimestamp

Required: No

[fileFormat \(p. 6\)](#)

The format of the export file.

The only export file format currently supported is Csv.

Type: String

Valid Values: Csv

Required: No

[filters \(p. 6\)](#)

An array of objects that describe a filter to export a more specific set of Auto Scaling group recommendations.

Type: Array of [Filter \(p. 39\)](#) objects

Required: No

[includeMemberAccounts \(p. 6\)](#)

Indicates whether to include recommendations for resources in all member accounts of the organization if your account is the master account of an organization.

The member accounts must also be opted in to Compute Optimizer.

Recommendations for member accounts of the organization are not included in the export file if this parameter is omitted.

This parameter cannot be specified together with the account IDs parameter. The parameters are mutually exclusive.

Recommendations for member accounts are not included in the export if this parameter, or the account IDs parameter, is omitted.

Type: Boolean

Required: No

s3DestinationConfig (p. 6)

An object to specify the destination Amazon Simple Storage Service (Amazon S3) bucket name and key prefix for the export job.

You must create the destination Amazon S3 bucket for your recommendations export before you create the export job. Compute Optimizer does not create the S3 bucket for you. After you create the S3 bucket, ensure that it has the required permission policy to allow Compute Optimizer to write the export file to it. If you plan to specify an object prefix when you create the export job, you must include the object prefix in the policy that you add to the S3 bucket. For more information, see [Amazon S3 Bucket Policy for Compute Optimizer](#) in the *Compute Optimizer user guide*.

Type: [S3DestinationConfig](#) (p. 52) object

Required: Yes

Response Syntax

```
{
  "jobId": "string",
  "s3Destination": {
    "bucket": "string",
    "key": "string",
    "metadataKey": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

jobId (p. 8)

The identification number of the export job.

Use the `DescribeRecommendationExportJobs` action, and specify the job ID to view the status of an export job.

Type: String

s3Destination (p. 8)

An object that describes the destination Amazon S3 bucket of a recommendations export file.

Type: [S3Destination](#) (p. 51) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 57).

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

InternalServerErrorException

An internal error has occurred. Try your call again.

HTTP Status Code: 500

InvalidParameterValueException

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

LimitExceededException

The request exceeds a limit of the service.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 400

OptInRequiredException

The account is not opted in to AWS Compute Optimizer.

HTTP Status Code: 400

ServiceUnavailableException

The request has failed due to a temporary failure of the server.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

ExportEC2InstanceRecommendations

Exports optimization recommendations for Amazon EC2 instances.

Recommendations are exported in a comma-separated values (.csv) file, and its metadata in a JavaScript Object Notation (.json) file, to an existing Amazon Simple Storage Service (Amazon S3) bucket that you specify. For more information, see [Exporting Recommendations](#) in the *Compute Optimizer User Guide*.

You can have only one Amazon EC2 instance export job in progress per AWS Region.

Request Syntax

```
{
  "accountIds": [ "string" ],
  "fieldsToExport": [ "string" ],
  "fileFormat": "string",
  "filters": [
    {
      "name": "string",
      "values": [ "string" ]
    }
  ],
  "includeMemberAccounts": boolean,
  "s3DestinationConfig": {
    "bucket": "string",
    "keyPrefix": "string"
  }
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 55).

The request accepts the following data in JSON format.

[accountIds](#) (p. 10)

The IDs of the AWS accounts for which to export instance recommendations.

If your account is the master account of an organization, use this parameter to specify the member accounts for which you want to export recommendations.

This parameter cannot be specified together with the include member accounts parameter. The parameters are mutually exclusive.

Recommendations for member accounts are not included in the export if this parameter, or the include member accounts parameter, is omitted.

You can specify multiple account IDs per request.

Type: Array of strings

Required: No

[fieldsToExport](#) (p. 10)

The recommendations data to include in the export file.

Type: Array of strings

Valid Values: AccountId | InstanceArn | InstanceName | Finding | LookbackPeriodInDays | CurrentInstanceType | UtilizationMetricsCpuMaximum | UtilizationMetricsMemoryMaximum | CurrentOnDemandPrice | CurrentStandardOneYearNoUpfrontReservedPrice | CurrentStandardThreeYearNoUpfrontReservedPrice | CurrentVCpus | CurrentMemory | CurrentStorage | CurrentNetwork | RecommendationOptionsInstanceType | RecommendationOptionsProjectedUtilizationMetricsCpuMaximum | RecommendationOptionsProjectedUtilizationMetricsMemoryMaximum | RecommendationOptionsPerformanceRisk | RecommendationOptionsVcpus | RecommendationOptionsMemory | RecommendationOptionsStorage | RecommendationOptionsNetwork | RecommendationOptionsOnDemandPrice | RecommendationOptionsStandardOneYearNoUpfrontReservedPrice | RecommendationOptionsStandardThreeYearNoUpfrontReservedPrice | RecommendationsSourcesRecommendationSourceArn | RecommendationsSourcesRecommendationSourceType | LastRefreshTimestamp

Required: No

fileFormat (p. 10)

The format of the export file.

The only export file format currently supported is `Csv`.

Type: String

Valid Values: `Csv`

Required: No

filters (p. 10)

An array of objects that describe a filter to export a more specific set of instance recommendations.

Type: Array of [Filter \(p. 39\)](#) objects

Required: No

includeMemberAccounts (p. 10)

Indicates whether to include recommendations for resources in all member accounts of the organization if your account is the master account of an organization.

The member accounts must also be opted in to Compute Optimizer.

Recommendations for member accounts of the organization are not included in the export file if this parameter is omitted.

Recommendations for member accounts are not included in the export if this parameter, or the account IDs parameter, is omitted.

Type: Boolean

Required: No

s3DestinationConfig (p. 10)

An object to specify the destination Amazon Simple Storage Service (Amazon S3) bucket name and key prefix for the export job.

You must create the destination Amazon S3 bucket for your recommendations export before you create the export job. Compute Optimizer does not create the S3 bucket for you. After you create the S3 bucket, ensure that it has the required permission policy to allow Compute Optimizer to write the export file to it. If you plan to specify an object prefix when you create the export job, you must include the object prefix in the policy that you add to the S3 bucket. For more information, see [Amazon S3 Bucket Policy for Compute Optimizer](#) in the *Compute Optimizer user guide*.

Type: [S3DestinationConfig](#) (p. 52) object

Required: Yes

Response Syntax

```
{
  "jobId": "string",
  "s3Destination": {
    "bucket": "string",
    "key": "string",
    "metadataKey": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

jobId (p. 12)

The identification number of the export job.

Use the `DescribeRecommendationExportJobs` action, and specify the job ID to view the status of an export job.

Type: String

s3Destination (p. 12)

An object that describes the destination Amazon S3 bucket of a recommendations export file.

Type: [S3Destination](#) (p. 51) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 57).

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

InternalServerErrorException

An internal error has occurred. Try your call again.

HTTP Status Code: 500

InvalidParameterValueException

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

LimitExceededException

The request exceeds a limit of the service.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 400

OptInRequiredException

The account is not opted in to AWS Compute Optimizer.

HTTP Status Code: 400

ServiceUnavailableException

The request has failed due to a temporary failure of the server.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

GetAutoScalingGroupRecommendations

Returns Auto Scaling group recommendations.

AWS Compute Optimizer currently generates recommendations for Auto Scaling groups that are configured to run instances of the M, C, R, T, and X instance families. The service does not generate recommendations for Auto Scaling groups that have a scaling policy attached to them, or that do not have the same values for desired, minimum, and maximum capacity. In order for Compute Optimizer to analyze your Auto Scaling groups, they must be of a fixed size. For more information, see the [AWS Compute Optimizer User Guide](#).

Request Syntax

```
{
  "accountIds": [ "string" ],
  "autoScalingGroupArns": [ "string" ],
  "filters": [
    {
      "name": "string",
      "values": [ "string" ]
    }
  ],
  "maxResults": number,
  "nextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 55\)](#).

The request accepts the following data in JSON format.

accountIds (p. 14)

The IDs of the AWS accounts for which to return Auto Scaling group recommendations.

If your account is the master account of an organization, use this parameter to specify the member accounts for which you want to return Auto Scaling group recommendations.

Only one account ID can be specified per request.

Type: Array of strings

Required: No

autoScalingGroupArns (p. 14)

The Amazon Resource Name (ARN) of the Auto Scaling groups for which to return recommendations.

Type: Array of strings

Required: No

filters (p. 14)

An array of objects that describe a filter that returns a more specific list of Auto Scaling group recommendations.

Type: Array of [Filter \(p. 39\)](#) objects

Required: No

maxResults (p. 14)

The maximum number of Auto Scaling group recommendations to return with a single request.

To retrieve the remaining results, make another request with the returned `NextToken` value.

Type: Integer

Required: No

nextToken (p. 14)

The token to advance to the next page of Auto Scaling group recommendations.

Type: String

Required: No

Response Syntax

```
{
  "autoScalingGroupRecommendations": [
    {
      "accountId": "string",
      "autoScalingGroupArn": "string",
      "autoScalingGroupName": "string",
      "currentConfiguration": {
        "desiredCapacity": number,
        "instanceType": "string",
        "maxSize": number,
        "minSize": number
      },
      "finding": "string",
      "lastRefreshTimestamp": number,
      "lookBackPeriodInDays": number,
      "recommendationOptions": [
        {
          "configuration": {
            "desiredCapacity": number,
            "instanceType": "string",
            "maxSize": number,
            "minSize": number
          },
          "performanceRisk": number,
          "projectedUtilizationMetrics": [
            {
              "name": "string",
              "statistic": "string",
              "value": number
            }
          ],
          "rank": number
        }
      ],
      "utilizationMetrics": [
        {
          "name": "string",
          "statistic": "string",
          "value": number
        }
      ]
    }
  ]
}
```

```
    }  
  ],  
  "errors": [  
    {  
      "code": "string",  
      "identifier": "string",  
      "message": "string"  
    }  
  ],  
  "nextToken": "string"  
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

autoScalingGroupRecommendations (p. 15)

An array of objects that describe Auto Scaling group recommendations.

Type: Array of [AutoScalingGroupRecommendation \(p. 35\)](#) objects

errors (p. 15)

An array of objects that describe errors of the request.

For example, an error is returned if you request recommendations for an unsupported Auto Scaling group.

Type: Array of [GetRecommendationError \(p. 40\)](#) objects

nextToken (p. 15)

The token to use to advance to the next page of Auto Scaling group recommendations.

This value is null when there are no more pages of Auto Scaling group recommendations to return.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 57\)](#).

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

InternalServerError

An internal error has occurred. Try your call again.

HTTP Status Code: 500

InvalidParameterValueException

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 400

OptInRequiredException

The account is not opted in to AWS Compute Optimizer.

HTTP Status Code: 400

ResourceNotFoundException

A resource that is required for the action doesn't exist.

HTTP Status Code: 400

ServiceUnavailableException

The request has failed due to a temporary failure of the server.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

GetEC2InstanceRecommendations

Returns Amazon EC2 instance recommendations.

AWS Compute Optimizer currently generates recommendations for Amazon Elastic Compute Cloud (Amazon EC2) and Amazon EC2 Auto Scaling. It generates recommendations for M, C, R, T, and X instance families. For more information, see the [AWS Compute Optimizer User Guide](#).

Request Syntax

```
{
  "accountIds": [ "string" ],
  "filters": [
    {
      "name": "string",
      "values": [ "string" ]
    }
  ],
  "instanceArns": [ "string" ],
  "maxResults": number,
  "nextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 55).

The request accepts the following data in JSON format.

accountIds (p. 18)

The IDs of the AWS accounts for which to return instance recommendations.

If your account is the master account of an organization, use this parameter to specify the member accounts for which you want to return instance recommendations.

Only one account ID can be specified per request.

Type: Array of strings

Required: No

filters (p. 18)

An array of objects that describe a filter that returns a more specific list of instance recommendations.

Type: Array of [Filter](#) (p. 39) objects

Required: No

instanceArns (p. 18)

The Amazon Resource Name (ARN) of the instances for which to return recommendations.

Type: Array of strings

Required: No

maxResults (p. 18)

The maximum number of instance recommendations to return with a single request.

To retrieve the remaining results, make another request with the returned `NextToken` value.

Type: Integer

Required: No

nextToken (p. 18)

The token to advance to the next page of instance recommendations.

Type: String

Required: No

Response Syntax

```
{
  "errors": [
    {
      "code": "string",
      "identifier": "string",
      "message": "string"
    }
  ],
  "instanceRecommendations": [
    {
      "accountId": "string",
      "currentInstanceType": "string",
      "finding": "string",
      "instanceArn": "string",
      "instanceName": "string",
      "lastRefreshTimestamp": number,
      "lookBackPeriodInDays": number,
      "recommendationOptions": [
        {
          "instanceType": "string",
          "performanceRisk": number,
          "projectedUtilizationMetrics": [
            {
              "name": "string",
              "statistic": "string",
              "value": number
            }
          ],
          "rank": number
        }
      ],
      "recommendationSources": [
        {
          "recommendationSourceArn": "string",
          "recommendationSourceType": "string"
        }
      ],
      "utilizationMetrics": [
        {
          "name": "string",
          "statistic": "string",
          "value": number
        }
      ]
    }
  ]
}
```



```
    ]  
  }  
],  
"nextToken": "string"  
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

errors (p. 19)

An array of objects that describe errors of the request.

For example, an error is returned if you request recommendations for an instance of an unsupported instance family.

Type: Array of [GetRecommendationError \(p. 40\)](#) objects

instanceRecommendations (p. 19)

An array of objects that describe instance recommendations.

Type: Array of [InstanceRecommendation \(p. 41\)](#) objects

nextToken (p. 19)

The token to use to advance to the next page of instance recommendations.

This value is null when there are no more pages of instance recommendations to return.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 57\)](#).

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

InternalServerErrorException

An internal error has occurred. Try your call again.

HTTP Status Code: 500

InvalidParameterValueException

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 400

OptInRequiredException

The account is not opted in to AWS Compute Optimizer.

HTTP Status Code: 400

ResourceNotFoundException

A resource that is required for the action doesn't exist.

HTTP Status Code: 400

ServiceUnavailableException

The request has failed due to a temporary failure of the server.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

GetEC2RecommendationProjectedMetrics

Returns the projected utilization metrics of Amazon EC2 instance recommendations.

Request Syntax

```
{
  "endTime": number,
  "instanceArn": "string",
  "period": number,
  "startTime": number,
  "stat": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 55\)](#).

The request accepts the following data in JSON format.

endTime (p. 22)

The time stamp of the last projected metrics data point to return.

Type: Timestamp

Required: Yes

instanceArn (p. 22)

The Amazon Resource Name (ARN) of the instances for which to return recommendation projected metrics.

Type: String

Required: Yes

period (p. 22)

The granularity, in seconds, of the projected metrics data points.

Type: Integer

Required: Yes

startTime (p. 22)

The time stamp of the first projected metrics data point to return.

Type: Timestamp

Required: Yes

stat (p. 22)

The statistic of the projected metrics.

Type: String

Valid Values: `Maximum` | `Average`

Required: Yes

Response Syntax

```
{
  "recommendedOptionProjectedMetrics": [
    {
      "projectedMetrics": [
        {
          "name": "string",
          "timestamps": [ number ],
          "values": [ number ]
        }
      ],
      "rank": number,
      "recommendedInstanceType": "string"
    }
  ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

recommendedOptionProjectedMetrics (p. 23)

An array of objects that describe a projected metrics.

Type: Array of [RecommendedOptionProjectedMetric](#) (p. 50) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 57).

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

InternalServerErrorException

An internal error has occurred. Try your call again.

HTTP Status Code: 500

InvalidParameterValueException

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 400

OptInRequiredException

The account is not opted in to AWS Compute Optimizer.

HTTP Status Code: 400

ResourceNotFoundException

A resource that is required for the action doesn't exist.

HTTP Status Code: 400

ServiceUnavailableException

The request has failed due to a temporary failure of the server.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

GetEnrollmentStatus

Returns the enrollment (opt in) status of an account to the AWS Compute Optimizer service.

If the account is the master account of an organization, this action also confirms the enrollment status of member accounts within the organization.

Response Syntax

```
{
  "memberAccountsEnrolled": boolean,
  "status": "string",
  "statusReason": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

memberAccountsEnrolled (p. 25)

Confirms the enrollment status of member accounts within the organization, if the account is a master account of an organization.

Type: Boolean

status (p. 25)

The enrollment status of the account.

Type: String

Valid Values: `Active` | `Inactive` | `Pending` | `Failed`

statusReason (p. 25)

The reason for the enrollment status of the account.

For example, an account might show a status of `Pending` because member accounts of an organization require more time to be enrolled in the service.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 57).

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

InternalServerErrorException

An internal error has occurred. Try your call again.

HTTP Status Code: 500

InvalidParameterValueException

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 400

ServiceUnavailableException

The request has failed due to a temporary failure of the server.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

GetRecommendationSummaries

Returns the optimization findings for an account.

For example, it returns the number of Amazon EC2 instances in an account that are under-provisioned, over-provisioned, or optimized. It also returns the number of Auto Scaling groups in an account that are not optimized, or optimized.

Request Syntax

```
{  
  "accountIds": [ "string" ],  
  "maxResults": number,  
  "nextToken": "string"  
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 55\)](#).

The request accepts the following data in JSON format.

accountIds (p. 27)

The IDs of the AWS accounts for which to return recommendation summaries.

If your account is the master account of an organization, use this parameter to specify the member accounts for which you want to return recommendation summaries.

Only one account ID can be specified per request.

Type: Array of strings

Required: No

maxResults (p. 27)

The maximum number of recommendation summaries to return with a single request.

To retrieve the remaining results, make another request with the returned `NextToken` value.

Type: Integer

Required: No

nextToken (p. 27)

The token to advance to the next page of recommendation summaries.

Type: String

Required: No

Response Syntax

```
{
```



```
"nextToken": "string",
"recommendationSummaries": [
  {
    "accountId": "string",
    "recommendationResourceType": "string",
    "summaries": [
      {
        "name": "string",
        "value": number
      }
    ]
  }
]
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

[nextToken \(p. 27\)](#)

The token to use to advance to the next page of recommendation summaries.

This value is null when there are no more pages of recommendation summaries to return.

Type: String

[recommendationSummaries \(p. 27\)](#)

An array of objects that summarize a recommendation.

Type: Array of [RecommendationSummary \(p. 49\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 57\)](#).

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

InternalServerErrorException

An internal error has occurred. Try your call again.

HTTP Status Code: 500

InvalidParameterValueException

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 400

OptInRequiredException

The account is not opted in to AWS Compute Optimizer.

HTTP Status Code: 400

ServiceUnavailableException

The request has failed due to a temporary failure of the server.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

UpdateEnrollmentStatus

Updates the enrollment (opt in) status of an account to the AWS Compute Optimizer service.

If the account is a master account of an organization, this action can also be used to enroll member accounts within the organization.

Request Syntax

```
{
  "includeMemberAccounts": boolean,
  "status": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 55\)](#).

The request accepts the following data in JSON format.

[includeMemberAccounts \(p. 30\)](#)

Indicates whether to enroll member accounts of the organization if the your account is the master account of an organization.

Type: Boolean

Required: No

[status \(p. 30\)](#)

The new enrollment status of the account.

Accepted options are `Active` or `Inactive`. You will get an error if `Pending` or `Failed` are specified.

Type: String

Valid Values: `Active` | `Inactive` | `Pending` | `Failed`

Required: Yes

Response Syntax

```
{
  "status": "string",
  "statusReason": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

[status \(p. 30\)](#)

The enrollment status of the account.

Type: String

Valid Values: `Active` | `Inactive` | `Pending` | `Failed`

[statusReason \(p. 30\)](#)

The reason for the enrollment status of the account. For example, an account might show a status of `Pending` because member accounts of an organization require more time to be enrolled in the service.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 57\)](#).

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

InternalServerErrorException

An internal error has occurred. Try your call again.

HTTP Status Code: 500

InvalidParameterValueException

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 400

ServiceUnavailableException

The request has failed due to a temporary failure of the server.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

Data Types

The AWS Compute Optimizer API contains several data types that various actions use. This section describes each data type in detail.

Note

The order of each element in a data type structure is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

- [AutoScalingGroupConfiguration](#) (p. 34)
- [AutoScalingGroupRecommendation](#) (p. 35)
- [AutoScalingGroupRecommendationOption](#) (p. 37)
- [ExportDestination](#) (p. 38)
- [Filter](#) (p. 39)
- [GetRecommendationError](#) (p. 40)
- [InstanceRecommendation](#) (p. 41)
- [InstanceRecommendationOption](#) (p. 43)
- [JobFilter](#) (p. 44)
- [ProjectedMetric](#) (p. 45)
- [RecommendationExportJob](#) (p. 46)
- [RecommendationSource](#) (p. 48)
- [RecommendationSummary](#) (p. 49)
- [RecommendedOptionProjectedMetric](#) (p. 50)
- [S3Destination](#) (p. 51)
- [S3DestinationConfig](#) (p. 52)
- [Summary](#) (p. 53)
- [UtilizationMetric](#) (p. 54)

AutoScalingGroupConfiguration

Describes the configuration of an Auto Scaling group.

Contents

desiredCapacity

The desired capacity, or number of instances, for the Auto Scaling group.

Type: Integer

Required: No

instanceType

The instance type for the Auto Scaling group.

Type: String

Required: No

maxSize

The maximum size, or maximum number of instances, for the Auto Scaling group.

Type: Integer

Required: No

minSize

The minimum size, or minimum number of instances, for the Auto Scaling group.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

AutoScalingGroupRecommendation

Describes an Auto Scaling group recommendation.

Contents

accountId

The AWS account ID of the Auto Scaling group.

Type: String

Required: No

autoScalingGroupArn

The Amazon Resource Name (ARN) of the Auto Scaling group.

Type: String

Required: No

autoScalingGroupName

The name of the Auto Scaling group.

Type: String

Required: No

currentConfiguration

An array of objects that describe the current configuration of the Auto Scaling group.

Type: [AutoScalingGroupConfiguration](#) (p. 34) object

Required: No

finding

The finding classification for the Auto Scaling group.

Findings for Auto Scaling groups include:

- **NotOptimized** —An Auto Scaling group is considered not optimized when AWS Compute Optimizer identifies a recommendation that can provide better performance for your workload.
- **Optimized** —An Auto Scaling group is considered optimized when Compute Optimizer determines that the group is correctly provisioned to run your workload based on the chosen instance type. For optimized resources, Compute Optimizer might recommend a new generation instance type.

Note

The values that are returned might be `NOT_OPTIMIZED` or `OPTIMIZED`.

Type: String

Valid Values: `Underprovisioned` | `Overprovisioned` | `Optimized` | `NotOptimized`

Required: No

lastRefreshTimestamp

The time stamp of when the Auto Scaling group recommendation was last refreshed.

Type: Timestamp

Required: No

lookBackPeriodInDays

The number of days for which utilization metrics were analyzed for the Auto Scaling group.

Type: Double

Required: No

recommendationOptions

An array of objects that describe the recommendation options for the Auto Scaling group.

Type: Array of [AutoScalingGroupRecommendationOption \(p. 37\)](#) objects

Required: No

utilizationMetrics

An array of objects that describe the utilization metrics of the Auto Scaling group.

Type: Array of [UtilizationMetric \(p. 54\)](#) objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

AutoScalingGroupRecommendationOption

Describes a recommendation option for an Auto Scaling group.

Contents

configuration

An array of objects that describe an Auto Scaling group configuration.

Type: [AutoScalingGroupConfiguration \(p. 34\)](#) object

Required: No

performanceRisk

The performance risk of the Auto Scaling group configuration recommendation.

Performance risk is the likelihood of the recommended instance type not meeting the performance requirement of your workload.

The lowest performance risk is categorized as 0, and the highest as 5.

Type: Double

Valid Range: Minimum value of 0. Maximum value of 5.

Required: No

projectedUtilizationMetrics

An array of objects that describe the projected utilization metrics of the Auto Scaling group recommendation option.

Type: Array of [UtilizationMetric \(p. 54\)](#) objects

Required: No

rank

The rank of the Auto Scaling group recommendation option.

The top recommendation option is ranked as 1.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

ExportDestination

Describes the destination of the recommendations export and metadata files.

Contents

s3

An object that describes the destination Amazon Simple Storage Service (Amazon S3) bucket name and object keys of a recommendations export file, and its associated metadata file.

Type: [S3Destination](#) (p. 51) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

Filter

Describes a filter that returns a more specific list of recommendations.

Contents

name

The name of the filter.

Specify `Finding` to return recommendations with a specific findings classification (e.g., `Overprovisioned`).

Specify `RecommendationSourceType` to return recommendations of a specific resource type (e.g., `AutoScalingGroup`).

Type: String

Valid Values: `Finding` | `RecommendationSourceType`

Required: No

values

The value of the filter.

If you specify the name parameter as `Finding`, and you request recommendations for an *instance*, then the valid values are `Underprovisioned`, `Overprovisioned`, `NotOptimized`, or `Optimized`.

If you specify the name parameter as `Finding`, and you request recommendations for an *Auto Scaling group*, then the valid values are `Optimized`, or `NotOptimized`.

If you specify the name parameter as `RecommendationSourceType`, then the valid values are `Ec2Instance`, or `AutoScalingGroup`.

Type: Array of strings

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

GetRecommendationError

Describes an error experienced when getting recommendations.

For example, an error is returned if you request recommendations for an unsupported Auto Scaling group, or if you request recommendations for an instance of an unsupported instance family.

Contents

code

The error code.

Type: String

Required: No

identifier

The ID of the error.

Type: String

Required: No

message

The message, or reason, for the error.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

InstanceRecommendation

Describes an Amazon EC2 instance recommendation.

Contents

accountId

The AWS account ID of the instance.

Type: String

Required: No

currentInstanceType

The instance type of the current instance.

Type: String

Required: No

finding

The finding classification for the instance.

Findings for instances include:

- **Underprovisioned** —An instance is considered under-provisioned when at least one specification of your instance, such as CPU, memory, or network, does not meet the performance requirements of your workload. Under-provisioned instances may lead to poor application performance.
- **Overprovisioned** —An instance is considered over-provisioned when at least one specification of your instance, such as CPU, memory, or network, can be sized down while still meeting the performance requirements of your workload, and no specification is under-provisioned. Over-provisioned instances may lead to unnecessary infrastructure cost.
- **Optimized** —An instance is considered optimized when all specifications of your instance, such as CPU, memory, and network, meet the performance requirements of your workload and is not over provisioned. An optimized instance runs your workloads with optimal performance and infrastructure cost. For optimized resources, AWS Compute Optimizer might recommend a new generation instance type.

Note

The values that are returned might be `UNDER_PROVISIONED`, `OVER_PROVISIONED`, or `OPTIMIZED`.

Type: String

Valid Values: `Underprovisioned` | `Overprovisioned` | `Optimized` | `NotOptimized`

Required: No

instanceArn

The Amazon Resource Name (ARN) of the current instance.

Type: String

Required: No

instanceName

The name of the current instance.

Type: String

Required: No

lastRefreshTimestamp

The time stamp of when the instance recommendation was last refreshed.

Type: Timestamp

Required: No

lookBackPeriodInDays

The number of days for which utilization metrics were analyzed for the instance.

Type: Double

Required: No

recommendationOptions

An array of objects that describe the recommendation options for the instance.

Type: Array of [InstanceRecommendationOption \(p. 43\)](#) objects

Required: No

recommendationSources

An array of objects that describe the source resource of the recommendation.

Type: Array of [RecommendationSource \(p. 48\)](#) objects

Required: No

utilizationMetrics

An array of objects that describe the utilization metrics of the instance.

Type: Array of [UtilizationMetric \(p. 54\)](#) objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

InstanceRecommendationOption

Describes a recommendation option for an Amazon EC2 instance.

Contents

instanceType

The instance type of the instance recommendation.

Type: String

Required: No

performanceRisk

The performance risk of the instance recommendation option.

Performance risk is the likelihood of the recommended instance type not meeting the performance requirement of your workload.

The lowest performance risk is categorized as 0, and the highest as 5.

Type: Double

Valid Range: Minimum value of 0. Maximum value of 5.

Required: No

projectedUtilizationMetrics

An array of objects that describe the projected utilization metrics of the instance recommendation option.

Type: Array of [UtilizationMetric \(p. 54\)](#) objects

Required: No

rank

The rank of the instance recommendation option.

The top recommendation option is ranked as 1.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

JobFilter

Describes a filter that returns a more specific list of recommendation export jobs.

This filter is used with the `DescribeRecommendationExportJobs` action.

Contents

name

The name of the filter.

Specify `ResourceType` to return export jobs of a specific resource type (e.g., `Ec2Instance`).

Specify `JobStatus` to return export jobs with a specific status (e.g., `Complete`).

Type: String

Valid Values: `ResourceType` | `JobStatus`

Required: No

values

The value of the filter.

If you specify the `name` parameter as `ResourceType`, the valid values are `Ec2Instance` or `AutoScalingGroup`.

If you specify the `name` parameter as `JobStatus`, the valid values are `Queued`, `InProgress`, `Complete`, or `Failed`.

Type: Array of strings

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

ProjectedMetric

Describes a projected utilization metric of a recommendation option, such as an Amazon EC2 instance.

Contents

name

The name of the projected utilization metric.

Note

Memory metrics are only returned for resources that have the unified CloudWatch agent installed on them. For more information, see [Enabling Memory Utilization with the CloudWatch Agent](#).

Type: String

Valid Values: `Cpu` | `Memory`

Required: No

timestamps

The time stamps of the projected utilization metric.

Type: Array of timestamps

Required: No

values

The values of the projected utilization metrics.

Type: Array of doubles

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

RecommendationExportJob

Describes a recommendation export job.

Use the `DescribeRecommendationExportJobs` action to view your recommendation export jobs.

Use the `ExportAutoScalingGroupRecommendations` or `ExportEC2InstanceRecommendations` actions to request an export of your recommendations.

Contents

creationTimestamp

The timestamp of when the export job was created.

Type: Timestamp

Required: No

destination

An object that describes the destination of the export file.

Type: [ExportDestination \(p. 38\)](#) object

Required: No

failureReason

The reason for an export job failure.

Type: String

Required: No

jobId

The identification number of the export job.

Type: String

Required: No

lastUpdatedTimestamp

The timestamp of when the export job was last updated.

Type: Timestamp

Required: No

resourceType

The resource type of the exported recommendations.

Type: String

Valid Values: `Ec2Instance` | `AutoScalingGroup`

Required: No

status

The status of the export job.

Type: String

Valid Values: `Queued` | `InProgress` | `Complete` | `Failed`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

RecommendationSource

Describes the source of a recommendation, such as an Amazon EC2 instance or Auto Scaling group.

Contents

recommendationSourceArn

The Amazon Resource Name (ARN) of the recommendation source.

Type: String

Required: No

recommendationSourceType

The resource type of the recommendation source.

Type: String

Valid Values: `Ec2Instance` | `AutoScalingGroup`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

RecommendationSummary

A summary of a recommendation.

Contents

accountId

The AWS account ID of the recommendation summary.

Type: String

Required: No

recommendationResourceType

The resource type of the recommendation.

Type: String

Valid Values: `Ec2Instance` | `AutoScalingGroup`

Required: No

summaries

An array of objects that describe a recommendation summary.

Type: Array of [Summary \(p. 53\)](#) objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

RecommendedOptionProjectedMetric

Describes a projected utilization metric of a recommendation option.

Contents

projectedMetrics

An array of objects that describe a projected utilization metric.

Type: Array of [ProjectedMetric \(p. 45\)](#) objects

Required: No

rank

The rank of the recommendation option projected metric.

The top recommendation option is ranked as 1.

The projected metric rank correlates to the recommendation option rank. For example, the projected metric ranked as 1 is related to the recommendation option that is also ranked as 1 in the same response.

Type: Integer

Required: No

recommendedInstanceType

The recommended instance type.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

S3Destination

Describes the destination Amazon Simple Storage Service (Amazon S3) bucket name and object keys of a recommendations export file, and its associated metadata file.

Contents

bucket

The name of the Amazon S3 bucket used as the destination of an export file.

Type: String

Required: No

key

The Amazon S3 bucket key of an export file.

The key uniquely identifies the object, or export file, in the S3 bucket.

Type: String

Required: No

metadataKey

The Amazon S3 bucket key of a metadata file.

The key uniquely identifies the object, or metadata file, in the S3 bucket.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

S3DestinationConfig

Describes the destination Amazon Simple Storage Service (Amazon S3) bucket name and key prefix for a recommendations export job.

You must create the destination Amazon S3 bucket for your recommendations export before you create the export job. Compute Optimizer does not create the S3 bucket for you. After you create the S3 bucket, ensure that it has the required permission policy to allow Compute Optimizer to write the export file to it. If you plan to specify an object prefix when you create the export job, you must include the object prefix in the policy that you add to the S3 bucket. For more information, see [Amazon S3 Bucket Policy for Compute Optimizer](#) in the *Compute Optimizer user guide*.

Contents

bucket

The name of the Amazon S3 bucket to use as the destination for an export job.

Type: String

Required: No

keyPrefix

The Amazon S3 bucket prefix for an export job.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

Summary

The summary of a recommendation.

Contents

name

The finding classification of the recommendation.

Type: String

Valid Values: `Underprovisioned` | `Overprovisioned` | `Optimized` | `NotOptimized`

Required: No

value

The value of the recommendation summary.

Type: Double

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

UtilizationMetric

Describes a utilization metric of a resource, such as an Amazon EC2 instance.

Contents

name

The name of the utilization metric.

Note

Memory metrics are only returned for resources that have the unified CloudWatch agent installed on them. For more information, see [Enabling Memory Utilization with the CloudWatch Agent](#).

Type: String

Valid Values: `Cpu` | `Memory`

Required: No

statistic

The statistic of the utilization metric.

Type: String

Valid Values: `Maximum` | `Average`

Required: No

value

The value of the utilization metric.

Type: Double

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V3](#)

Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see [Signature Version 4 Signing Process](#) in the *Amazon Web Services General Reference*.

Action

The action to be performed.

Type: string

Required: Yes

Version

The API version that the request is written for, expressed in the format YYYY-MM-DD.

Type: string

Required: Yes

X-Amz-Algorithm

The hash algorithm that you used to create the request signature.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Valid Values: `AWS4-HMAC-SHA256`

Required: Conditional

X-Amz-Credential

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4_request"). The value is expressed in the following format: `access_key/YYYYMMDD/region/service/aws4_request`.

For more information, see [Task 2: Create a String to Sign for Signature Version 4](#) in the *Amazon Web Services General Reference*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-Date

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'THHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: `20120325T120000Z`.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is

not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see [Handling Dates in Signature Version 4](#) in the *Amazon Web Services General Reference*.

Type: string

Required: Conditional

X-Amz-Security-Token

The temporary security token that was obtained through a call to AWS Security Token Service (AWS STS). For a list of services that support temporary security credentials from AWS Security Token Service, go to [AWS Services That Work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from the AWS Security Token Service, you must include the security token.

Type: string

Required: Conditional

X-Amz-Signature

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-SignedHeaders

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see [Task 1: Create a Canonical Request For Signature Version 4](#) in the *Amazon Web Services General Reference*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

Common Errors

This section lists the errors common to the API actions of all AWS services. For errors specific to an API action for this service, see the topic for that API action.

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 400

InternalFailure

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

InvalidAction

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 400

InvalidClientTokenId

The X.509 certificate or AWS access key ID provided does not exist in our records.

HTTP Status Code: 403

InvalidParameterCombination

Parameters that must not be used together were used together.

HTTP Status Code: 400

InvalidParameterValue

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

InvalidQueryParameter

The AWS query string is malformed or does not adhere to AWS standards.

HTTP Status Code: 400

MalformedQueryString

The query string contains a syntax error.

HTTP Status Code: 404

MissingAction

The request is missing an action or a required parameter.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 403

MissingParameter

A required parameter for the specified action is not supplied.

HTTP Status Code: 400

OptInRequired

The AWS access key ID needs a subscription for the service.

HTTP Status Code: 403

RequestExpired

The request reached the service more than 15 minutes after the date stamp on the request or more than 15 minutes after the request expiration date (such as for pre-signed URLs), or the date stamp on the request is more than 15 minutes in the future.

HTTP Status Code: 400

ServiceUnavailable

The request has failed due to a temporary failure of the server.

HTTP Status Code: 503

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

ValidationError

The input fails to satisfy the constraints specified by an AWS service.

HTTP Status Code: 400