

Amazon RDS Performance Insights



Amazon RDS Performance Insights: API Reference

Table of Contents

Welcome	1
Actions	2
CreatePerformanceAnalysisReport	3
Request Syntax	3
Request Parameters	3
Response Syntax	4
Response Elements	5
Errors	5
Examples	5
See Also	7
DeletePerformanceAnalysisReport	8
Request Syntax	8
Request Parameters	8
Response Elements	9
Errors	9
Examples	10
See Also	10
DescribeDimensionKeys	12
Request Syntax	12
Request Parameters	12
Response Syntax	17
Response Elements	17
Errors	18
Examples	19
See Also	21
GetDimensionKeyDetails	23
Request Syntax	23
Request Parameters	23
Response Syntax	25
Response Elements	26
Errors	26
Examples	26
See Also	29
GetPerformanceAnalysisReport	31

Request Syntax	31
Request Parameters	31
Response Syntax	33
Response Elements	34
Errors	34
Examples	35
See Also	37
GetResourceMetadata	38
Request Syntax	38
Request Parameters	38
Response Syntax	39
Response Elements	39
Errors	40
Examples	40
See Also	41
GetResourceMetrics	43
Request Syntax	43
Request Parameters	43
Response Syntax	46
Response Elements	47
Errors	48
Examples	49
See Also	51
ListAvailableResourceDimensions	52
Request Syntax	52
Request Parameters	52
Response Syntax	54
Response Elements	55
Errors	55
Examples	56
See Also	57
ListAvailableResourceMetrics	59
Request Syntax	59
Request Parameters	59
Response Syntax	61
Response Elements	61

Errors	62
Examples	62
See Also	63
ListPerformanceAnalysisReports	65
Request Syntax	65
Request Parameters	65
Response Syntax	67
Response Elements	67
Errors	68
Examples	68
See Also	70
ListTagsForResource	72
Request Syntax	72
Request Parameters	72
Response Syntax	73
Response Elements	73
Errors	73
Examples	74
See Also	75
TagResource	76
Request Syntax	76
Request Parameters	76
Response Elements	77
Errors	77
Examples	78
See Also	79
UntagResource	80
Request Syntax	80
Request Parameters	80
Response Elements	81
Errors	81
Examples	82
See Also	83
Data Types	84
AnalysisReport	86
Contents	86

See Also	88
AnalysisReportSummary	89
Contents	89
See Also	90
Data	91
Contents	91
See Also	91
DataPoint	92
Contents	92
See Also	92
DimensionDetail	93
Contents	93
See Also	93
DimensionGroup	94
Contents	94
See Also	98
DimensionGroupDetail	99
Contents	99
See Also	99
DimensionKeyDescription	100
Contents	100
See Also	101
DimensionKeyDetail	102
Contents	102
See Also	103
FeatureMetadata	104
Contents	104
See Also	104
Insight	106
Contents	106
See Also	108
MetricDimensionGroups	109
Contents	109
See Also	109
MetricKeyDataPoints	110
Contents	110

See Also	110
MetricQuery	111
Contents	111
See Also	112
PerformanceInsightsMetric	114
Contents	114
See Also	115
Recommendation	116
Contents	116
See Also	116
ResponsePartitionKey	118
Contents	118
See Also	118
ResponseResourceMetric	119
Contents	119
See Also	120
ResponseResourceMetricKey	121
Contents	121
See Also	122
Tag	123
Contents	123
See Also	124
Common Parameters	125
Common Errors	128

Welcome

Amazon RDS Performance Insights enables you to monitor and explore different dimensions of database load based on data captured from a running DB instance. The guide provides detailed information about Performance Insights data types, parameters and errors.

When Performance Insights is enabled, the Amazon RDS Performance Insights API provides visibility into the performance of your DB instance. Amazon CloudWatch provides the authoritative source for Amazon service-vended monitoring metrics. Performance Insights offers a domain-specific view of DB load.

DB load is measured as average active sessions. Performance Insights provides the data to API consumers as a two-dimensional time-series dataset. The time dimension provides DB load data for each time point in the queried time range. Each time point decomposes overall load in relation to the requested dimensions, measured at that time point. Examples include SQL, Wait event, User, and Host.

- To learn more about Performance Insights and Amazon Aurora DB instances, go to the [Amazon Aurora User Guide](#).
- To learn more about Performance Insights and Amazon RDS DB instances, go to the [Amazon RDS User Guide](#).
- To learn more about Performance Insights and Amazon DocumentDB clusters, go to the [Amazon DocumentDB Developer Guide](#).

This document was last published on July 3, 2025.

Actions

The following actions are supported:

- [CreatePerformanceAnalysisReport](#)
- [DeletePerformanceAnalysisReport](#)
- [DescribeDimensionKeys](#)
- [GetDimensionKeyDetails](#)
- [GetPerformanceAnalysisReport](#)
- [GetResourceMetadata](#)
- [GetResourceMetrics](#)
- [ListAvailableResourceDimensions](#)
- [ListAvailableResourceMetrics](#)
- [ListPerformanceAnalysisReports](#)
- [ListTagsForResource](#)
- [TagResource](#)
- [UntagResource](#)

CreatePerformanceAnalysisReport

Creates a new performance analysis report for a specific time period for the DB instance.

Request Syntax

```
{  
    "EndTime": number,  
    "Identifier": "string",  
    "ServiceType": "string",  
    "StartTime": number,  
    "Tags": [  
        {  
            "Key": "string",  
            "Value": "string"  
        }  
    ]  
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Note

In the following list, the required parameters are described first.

EndTime

The end time defined for the analysis report.

Type: Timestamp

Required: Yes

Identifier

An immutable, Amazon Region-unique identifier for a data source. Performance Insights gathers metrics from this data source.

To use an Amazon RDS instance as a data source, you specify its `DbiResourceId` value. For example, specify db-ADECBTYHKTSAUMUZQYPDS2GW4A.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-]+\$

Required: Yes

ServiceType

The Amazon service for which Performance Insights will return metrics. Valid value is RDS.

Type: String

Valid Values: RDS | DOCDB

Required: Yes

StartTime

The start time defined for the analysis report.

Type: Timestamp

Required: Yes

Tags

The metadata assigned to the analysis report consisting of a key-value pair.

Type: Array of [Tag](#) objects

Array Members: Minimum number of 0 items. Maximum number of 200 items.

Required: No

Response Syntax

```
{  
  "AnalysisReportId": "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.

[AnalysisReportId](#)

A unique identifier for the created analysis report.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: report-[0-9a-f]{17}

Errors

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

InternalServiceError

The request failed due to an unknown error.

HTTP Status Code: 500

InvalidArgumentException

One of the arguments provided is invalid for this request.

HTTP Status Code: 400

NotAuthorizedException

The user is not authorized to perform this request.

HTTP Status Code: 400

Examples

Create a performance analysis report

The following example creates a performance analysis report for the specified time period and adds the specified tag to the report.

Sample Request

```
POST / HTTP/1.1
Host: <Hostname>
Accept-Encoding: identity
X-Amz-Target: PerformanceInsightsv20180227.CreatePerformanceAnalysisReport
Content-Type: application/x-amz-json-1.1
User-Agent: <UserAgentString>
X-Amz-Date: <Date>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
  Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
    "ServiceType": "RDS",
    "Identifier": "db-ABC1DEFGHIJKL2MN0PQRSTUW3W",
    "StartTime": 1689280091,
    "EndTime": 1689282071,
    "Tags": [
        {
            "Key": "Name",
            "Value": "MyName"
        }
    ]
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/x-amz-json-1.1
Date: <Date>
x-amzn-RequestId: <RequestId>
Content-Length: <PayloadSizeBytes>
Connection: keep-alive

{
    "AnalysisReportId": "report-01234567890abcdef"
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

DeletePerformanceAnalysisReport

Deletes a performance analysis report.

Request Syntax

```
{  
    "AnalysisReportId": "string",  
    "Identifier": "string",  
    "ServiceType": "string"  
}
```

Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

AnalysisReportId

The unique identifier of the analysis report for deletion.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: report-[0-9a-f]{17}

Required: Yes

Identifier

An immutable identifier for a data source that is unique for an Amazon Region. Performance Insights gathers metrics from this data source. In the console, the identifier is shown as *ResourceID*. When you call `DescribeDBInstances`, the identifier is returned as `DbiResourceId`.

To use a DB instance as a data source, specify its `DbiResourceId` value. For example, specify `db-ABCDEFGHIJKLMNOPQRSTUVWXYZ1VW2X`.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `^[a-zA-Z0-9-]+$`

Required: Yes

ServiceType

The Amazon service for which Performance Insights will return metrics. Valid value is RDS.

Type: String

Valid Values: RDS | DOCDB

Required: Yes

Response Elements

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

Errors

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

InternalServerError

The request failed due to an unknown error.

HTTP Status Code: 500

InvalidArgumentException

One of the arguments provided is invalid for this request.

HTTP Status Code: 400

NotAuthorizedException

The user is not authorized to perform this request.

HTTP Status Code: 400

Examples

Delete a performance analysis report

The following example deletes the performance analysis report `report-01234567890abcdef`.

Sample Request

```
POST / HTTP/1.1
Host: <Hostname>
Accept-Encoding: identity
X-Amz-Target: PerformanceInsightsv20180227.GetPerformanceAnalysisReport
Content-Type: application/x-amz-json-1.1
User-Agent: <UserAgentString>
X-Amz-Date: <Date>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
  Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
    "AnalysisReportId": "report-01234567890abcdef",
    "Identifier": "db-ABC1DEFGHIJKL2MNOPQRSTUWV3W",
    "ServiceType": "RDS"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/x-amz-json-1.1
Date: <Date>
x-amzn-RequestId: <RequestId>
Content-Length: <PayloadSizeBytes>
Connection: keep-alive
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

DescribeDimensionKeys

For a specific time period, retrieve the top N dimension keys for a metric.

Note

Each response element returns a maximum of 500 bytes. For larger elements, such as SQL statements, only the first 500 bytes are returned.

Request Syntax

```
{  
    "AdditionalMetrics": [ "string" ],  
    "EndTime": number,  
    "Filter": {  
        "string" : "string"  
    },  
    "GroupBy": {  
        "Dimensions": [ "string" ],  
        "Group": "string",  
        "Limit": number  
    },  
    "Identifier": "string",  
    "MaxResults": number,  
    "Metric": "string",  
    "NextToken": "string",  
    "PartitionBy": {  
        "Dimensions": [ "string" ],  
        "Group": "string",  
        "Limit": number  
    },  
    "PeriodInSeconds": number,  
    "ServiceType": "string",  
    "StartTime": number  
}
```

Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

EndTime

The date and time specifying the end of the requested time series data. The value specified is *exclusive*, which means that data points less than (but not equal to) EndTime are returned.

The value for EndTime must be later than the value for StartTime.

Type: Timestamp

Required: Yes

GroupBy

A specification for how to aggregate the data points from a query result. You must specify a valid dimension group. Performance Insights returns all dimensions within this group, unless you provide the names of specific dimensions within this group. You can also request that Performance Insights return a limited number of values for a dimension.

Type: [DimensionGroup](#) object

Required: Yes

Identifier

An immutable, Amazon Region-unique identifier for a data source. Performance Insights gathers metrics from this data source.

To use an Amazon RDS instance as a data source, you specify its DbiResourceId value. For example, specify db-FAIHNTYBKTGAUSUZQYPDS2GW4A.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-]+\$

Required: Yes

Metric

The name of a Performance Insights metric to be measured.

Valid values for Metric are:

- db.load.avg - A scaled representation of the number of active sessions for the database engine.
- db.sampledload.avg - The raw number of active sessions for the database engine.

If the number of active sessions is less than an internal Performance Insights threshold, db.load.avg and db.sampledload.avg are the same value. If the number of active sessions is greater than the internal threshold, Performance Insights samples the active sessions, with db.load.avg showing the scaled values, db.sampledload.avg showing the raw values, and db.sampledload.avg less than db.load.avg. For most use cases, you can query db.load.avg only.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: .*\\$.*

Required: Yes

ServiceType

The Amazon service for which Performance Insights will return metrics. Valid values are as follows:

- RDS
- DOCDB

Type: String

Valid Values: RDS | DOCDB

Required: Yes

StartTime

The date and time specifying the beginning of the requested time series data. You must specify a StartTime within the past 7 days. The value specified is *inclusive*, which means that data points equal to or greater than StartTime are returned.

The value for StartTime must be earlier than the value for EndTime.

Type: Timestamp

Required: Yes

AdditionalMetrics

Additional metrics for the top N dimension keys. If the specified dimension group in the GroupBy parameter is db.sql_tokenized, you can specify per-SQL metrics to get the values for the top N SQL digests. The response syntax is as follows: "AdditionalMetrics" : { "string" : "string" }.

The only supported statistic function is .avg.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 30 items.

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-_\.:/*)(]+\$

Required: No

Filter

One or more filters to apply in the request. Restrictions:

- Any number of filters by the same dimension, as specified in the GroupBy or Partition parameters.
- A single filter for any other dimension in this dimension group.

 **Note**

The db.sql.db_id filter isn't available for RDS for SQL Server DB instances.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 256.

Key Pattern: ^[a-zA-Z0-9-_\.:/*)(]+\$

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `. *\\S . *`

Required: No

MaxResults

The maximum number of items to return in the response. If more items exist than the specified `MaxRecords` value, a pagination token is included in the response so that the remaining results can be retrieved.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 25.

Required: No

NextToken

An optional pagination token provided by a previous request. If this parameter is specified, the response includes only records beyond the token, up to the value specified by `MaxRecords`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

Pattern: `^ [a-zA-Z0-9_=-]+ $`

Required: No

PartitionBy

For each dimension specified in `GroupBy`, specify a secondary dimension to further subdivide the partition keys in the response.

Type: [DimensionGroup](#) object

Required: No

PeriodInSeconds

The granularity, in seconds, of the data points returned from Performance Insights. A period can be as short as one second, or as long as one day (86400 seconds). Valid values are:

- 1 (one second)
- 60 (one minute)
- 300 (five minutes)

- 3600 (one hour)
- 86400 (twenty-four hours)

If you don't specify `PeriodInSeconds`, then Performance Insights chooses a value for you, with a goal of returning roughly 100-200 data points in the response.

Type: Integer

Required: No

Response Syntax

```
{  
    "AlignedEndTime": number,  
    "AlignedStartTime": number,  
    "Keys": [  
        {  
            "AdditionalMetrics": {  
                "string": number  
            },  
            "Dimensions": {  
                "string": "string"  
            },  
            "Partitions": [ number ],  
            "Total": number  
        }  
    ],  
    "NextToken": "string",  
    "PartitionKeys": [  
        {  
            "Dimensions": {  
                "string": "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.

AlignedEndTime

The end time for the returned dimension keys, after alignment to a granular boundary (as specified by `PeriodInSeconds`). `AlignedEndTime` will be greater than or equal to the value of the user-specified `Endtime`.

Type: Timestamp

AlignedStartTime

The start time for the returned dimension keys, after alignment to a granular boundary (as specified by `PeriodInSeconds`). `AlignedStartTime` will be less than or equal to the value of the user-specified `StartTime`.

Type: Timestamp

Keys

The dimension keys that were requested.

Type: Array of [DimensionKeyDescription](#) objects

NextToken

A pagination token that indicates the response didn't return all available records because `MaxRecords` was specified in the previous request. To get the remaining records, specify `NextToken` in a separate request with this value.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

Pattern: ^[a-zA-Z0-9_-=-]+\$

PartitionKeys

If `PartitionBy` was present in the request, `PartitionKeys` contains the breakdown of dimension keys by the specified partitions.

Type: Array of [ResponsePartitionKey](#) objects

Errors

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

InternalServerError

The request failed due to an unknown error.

HTTP Status Code: 500

InvalidArgumentException

One of the arguments provided is invalid for this request.

HTTP Status Code: 400

NotAuthorizedException

The user is not authorized to perform this request.

HTTP Status Code: 400

Examples

Retrieve top dimension keys

The following example retrieves the top 10 dimension keys for metrics db.load.avg, db.sql_tokenized.stats.calls_per_sec.avg, and db.sql_tokenized.statement over a specific 5-minute time range. The request returns the metrics in dimension groups db.sql_tokenized.id and db.sql_tokenized.statement. For both of these dimension groups, the request subdivides the partition keys by db.user.id and db.user.name.

Sample Request

```
POST / HTTP/1.1
Host: <Hostname>
Accept-Encoding: identity
X-Amz-Target: PerformanceInsightsv20180227.DescribeDimensionKeys
Content-Type: application/x-amz-json-1.1
User-Agent: <UserAgentString>
X-Amz-Date: <Date>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
  Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
```

```
"ServiceType": "RDS",
"Identifier": "db-ABC1DEFGHIJKLMNOPQRSTUVWXYZ",
"StartTime": 1603915200,
"EndTime": 1603918800,
"PeriodInSeconds": 300,
"Metric": "db.load.avg",
"GroupBy": {
    "Dimensions": [ "db.sql_tokenized.id", "db.sql_tokenized.statement" ],
    "Group": "db.sql_tokenized",
    "Limit": 5
},
"Filter": {
    "db.user.name" : "example-user"
},
"PartitionBy": {
    "Dimensions": [ "db.user.id", "db.user.name" ],
    "Group": "db.user",
    "Limit": 5
},
"MaxResults": 10,
"AdditionalMetrics": [
    "db.sql_tokenized.stats.calls_per_sec.avg",
    "db.sql_tokenized.stats.rows_per_sec.avg"
]
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/x-amz-json-1.1
Date: <Date>
x-amzn-RequestId: <RequestId>
Content-Length: <PayloadSizeBytes>
Connection: keep-alive

{
    "AlignedEndTime": 1.6244895E9,
    "AlignedStartTime": 1.6244889E9,
    "Keys": [
        {
            "Dimensions": {
                "db.sql_tokenized.id" : "12A345BCDE67F8G9H012I3IJKI4J5675K8L912M",
                "db.sql_tokenized.statement" : "SELECT * FROM users WHERE id = 12345"
            }
        }
    ]
}
```

```
        "db.sql_tokenized.statement" : "INSERT INTO pgbench_history (tid, bid, aid, delta, mtime) VALUES (?, ?, ?, ?, CURRENT_TIMESTAMP);"
    },
    "Partitions": [ 2.133333333333333 ],
    "Total": 2.133333333333333,
    "AdditionalMetrics" : {
        "db.sql_tokenized.stats.calls_per_sec.avg": 1.0,
        "db.sql_tokenized.stats.rows_per_sec.avg": 3.0
    }
},
.....
],
"PartitionKeys": [
{
    "Dimensions": {
        "db.user.name": "example-user",
        "db.user.id": "A12B3456C7D8E890F123F45G67HIJ8K9LM0N102"
    }
}
]
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

GetDimensionKeyDetails

Get the attributes of the specified dimension group for a DB instance or data source. For example, if you specify a SQL ID, GetDimensionKeyDetails retrieves the full text of the dimension db.sql.statement associated with this ID. This operation is useful because GetResourceMetrics and DescribeDimensionKeys don't support retrieval of large SQL statement text, lock snapshots, and execution plans.

Request Syntax

```
{  
    "Group": "string",  
    "GroupIdentifier": "string",  
    "Identifier": "string",  
    "RequestedDimensions": [ "string" ],  
    "ServiceType": "string"  
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Note

In the following list, the required parameters are described first.

Group

The name of the dimension group. Performance Insights searches the specified group for the dimension group ID. The following group name values are valid:

- db.execution_plan (Amazon RDS and Aurora only)
- db.lock_snapshot (Aurora only)
- db.query (Amazon DocumentDB only)
- db.sql (Amazon RDS and Aurora only)

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `.*\$.*`

Required: Yes

GroupIdentifier

The ID of the dimension group from which to retrieve dimension details. For dimension group db.sql, the group ID is db.sql.id. The following group ID values are valid:

- `db.execution_plan.id` for dimension group `db.execution_plan` (Aurora and RDS only)
- `db.sql.id` for dimension group `db.sql` (Aurora and RDS only)
- `db.query.id` for dimension group `db.query` (DocumentDB only)
- For the dimension group `db.lock_snapshot`, the `GroupIdentifier` is the epoch timestamp when Performance Insights captured the snapshot, in seconds. You can retrieve this value with the `GetResourceMetrics` operation for a 1 second period.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `.*\$.*`

Required: Yes

Identifier

The ID for a data source from which to gather dimension data. This ID must be immutable and unique within an Amazon Region. When a DB instance is the data source, specify its `DbiResourceId` value. For example, specify `db-ABCDEFGHIJKLMNOPQRSTUVWXYZ1VW2X`.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `^[a-zA-Z0-9-]+$`

Required: Yes

ServiceType

The Amazon service for which Performance Insights returns data. The only valid value is RDS.

Type: String

Valid Values: RDS | DOCDB

Required: Yes

RequestedDimensions

A list of dimensions to retrieve the detail data for within the given dimension group. If you don't specify this parameter, Performance Insights returns all dimension data within the specified dimension group. Specify dimension names for the following dimension groups:

- db.execution_plan - Specify the dimension name db.execution_plan.raw_plan or the short dimension name raw_plan (Amazon RDS and Aurora only)
- db.lock_snapshot - Specify the dimension name db.lock_snapshot.lock_trees or the short dimension name lock_trees. (Aurora only)
- db.sql - Specify either the full dimension name db.sql.statement or the short dimension name statement (Aurora and RDS only).
- db.query - Specify either the full dimension name db.query.statement or the short dimension name statement (DocumentDB only).

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-_\.:/*)(]+\$

Required: No

Response Syntax

```
{  
  "Dimensions": [  
    {  
      "Dimension": "string",  
      "Status": "string",  
      "Value": "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.

Dimensions

The details for the requested dimensions.

Type: Array of [DimensionKeyDetail](#) objects

Errors

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

InternalServiceError

The request failed due to an unknown error.

HTTP Status Code: 500

InvalidArgumentException

One of the arguments provided is invalid for this request.

HTTP Status Code: 400

NotAuthorizedException

The user is not authorized to perform this request.

HTTP Status Code: 400

Examples

Retrieve the full SQL text for a query

The following example requests the full text for the SQL query with the ID example-group-identifier, which is a placeholder for a SQL ID that you retrieved by calling `GetResourceMetrics` or `DescribeDimensionKeys`. Because the dimension details are available, the response shows the full SQL text.

Sample Request

```
{  
    "ServiceType": "RDS",  
    "Identifier": "db-ABC1DEFGHIJKL2MNOPQRSTUW3W",  
    "Group": "db.sql",  
    "GroupIdentifier": "example-group-identifier",  
    "RequestedDimensions": ["statement"]  
}
```

Sample Response

```
{  
    "Dimensions": [  
        {  
            "Value": "SELECT e.last_name, d.department_name FROM employees e, departments d  
WHERE e.department_id=d.department_id",  

```

Retrieve locking data for a database at a point in time

The following example requests locking data at the epoch timestamp 1730231303. You can retrieve the epoch timestamp with the `GetResourceMetrics` operation for a 1 second period.

Note that Performance Insights uses the comma-separated values format for the response. Each column value is enclosed in double quotation marks (" ") and separated by a comma. Each line is separated by a new line. The first line in the response describes the column names, and each of the following lines represents session data from a blocking or blocked session. The value level is the level of the session in the blocking tree hierarchy. For example, the session at level 0 is blocking the sessions at level 1.

Sample Request

```
{  
    "ServiceType": "RDS",  
    "Identifier": "db-ABC1DEFGHIJKL2MNOPQRSTUW3W",  
    "EpochTimestamp": 1730231303}
```

```
        "Group": "db.lock_snapshot",
        "GroupIdentifier": "1730231303",
        "RequestedDimensions": ["lock_trees"]
    }
```

Sample Response

```

    "Dimensions": [
    {
        "Value": "\"level\", \"blocked_sessions_count\", \"pid\", \"session_id\" , \"blocking_mode\", \"waiting_mode\", \"last_query_executed\", \"application\\\", \"blocking_txn_start_time\", \"waiting_start_time\", \"session_start_time\\\", \"state\", \"wait_event_type\", \"wait_event\", \"last_query_exec_time\", \"user\", \"host\", \"port\", \"client_address\", \"granted\", \"waiting_tuple\", \"waiting_page\", \"waiting_transaction_id\", \"waiting_relation\", \"waiting_object_id\\\", \"waiting_database_id\", \"waiting_database_name\", \"waiting_locktype\\\", \"blocking_time_(In_Seconds)\\n\\\"0\\\", \"4\\\", \"28599\\\", \"63bcb300.6fb7\\\", \\"\\\", \\"\\\", \\"update sbtest1 set id = 20000 where id=1;\\\", \\"psql\\\", \\"\\\", \\"\\\", \\"167253338000\\\", \\"idle in transaction\\\", \\"Client\\\", \\"ClientRead\\\", \\"167253338000\\\", \\"postgres\\\", \\"\\\", \\"37444\\\", \\"34.222.155.102\\\", \"t\\\", \\"\\\", \\"\\\", \\"\\\", \\"\\\", \\"\\\", \\"\\\", \\"\\\", \\"\\\", \\"42\\n\\\"1\\\", \\"3\\\", \\"30877\\\", \\"63bcbe21.789d\\\", \\"ExclusiveLock\\\", \\"ShareLock\\\", \\"update sbtest1 set id=20000 where id=1;\\\", \\"psql\\\", \\"167253338000\\\", \\"167253575800\\\", \\"167253575800\\\", \\"active\\\", \\"Lock\\\", \\"transactionid\\\", \\"167253575800\\\", \\"postgres\\\", \\"\\\", \\"35064\\\", \\"34.222.155.102\\\", \"f\\\", \\"\\\", \\"\\\", \\"569470\\\", \\"\\\", \\"\\\", \\"\\\", \\"sbtest\\\", \\"transactionid\\\", \\"2430\\n\\\"2\\\", \\"2\\\", \\"30937\\\", \\"63bcbe5c.78d9\\\", \\"AccessExclusiveLock\\\", \\"AccessExclusiveLock\\\", \\"update sbtest1 set id = 20000 where id=1;\\\", \\"psql\\\", \\"167253575800\\\", \\"167253337000\\\", \\"167253337000\\\", \\"active\\\", \\"Lock\\\", \\"tuple\\\", \\"167253337000\\\", \\"postgres\\\", \\"\\\", \\"37398\\\", \\"34.222.155.102\\\", \\"f\\\", \\"1\\\", \\"0\\\", \\"\\\", \\"16946\\\", \\"\\\", \\"16839\\\", \\"sbtest\\\", \\"tuple\\\", \\"2470\\n\\\"3\\\", \\"1\\\", \\"31029\\\", \\"63bcbebf.7935\\\", \\"AccessExclusiveLock\\\", \\"AccessExclusiveLock\\\", \\"update sbtest1 set id = 20000 where id=1;\\\", \\"psql\\\", \\"167253337000\\\", \\"167253333000\\\", \\"active\\\", \\"Lock\\\", \\"tuple\\\", \\"167253333000\\\", \\"postgres\\\", \\"\\\", \\"36266\\\", \\"34.222.155.102\\\", \"f\\\", \\"1\\\", \\"0\\\", \\"\\\", \\"16946\\\", \\"\\\", \\"16839\\\", \\"sbtest\\\", \\"tuple\\\", \\"2440\\n\\\"4\\\", \\"0\\\", \\"31062\\\", \\"63bcbe8.7956\\\", \\"AccessExclusiveLock\\\", \\"AccessExclusiveLock\\\", \\"update sbtest1 set id = 20000 where id=1;\\\", \\"psql\\\", \\"167253333000\\\", \\"167253336000\\\", \\"167253336000\\\", \\"active\\\", \\"Lock\\\", \\"tuple\\\", \\"167253336000\\\", \\"postgres\\\", \\"\\\", \\"56694\\\", \\"34.222.155.102\\\", \\"f\\\", \\"1\\\", \\"0\\\", \\"\\\", \\"16946\\\", \\"\\\", \\"16839\\\", \\"sbtest\\\", \\"tuple\\\", \\"\\\"\\n\", \"Dimension\": \"db.lock_snapshot\", \"Status\": \"AVAILABLE\"
    },
    ...
  ]
}

```

```
]  
}
```

Retrieve execution plans for a database

The following example requests execution plans for a database, where the plan ID is 435345209.

Sample Request

```
{  
    "ServiceType": "RDS",  
    "Identifier": "db-ABC1DEFGHIJKL2MNOPQRSTUV3W",  
    "GroupIdentifier": "435345209",  
    "Group": "db.execution_plan",  
    "RequestedDimensions": ["raw_plan"]  
}
```

Sample Response

```
{  
    "Dimensions": [  
        {  
            "Value": "Update on orders  (cost=0.43..8.46 rows=0 width=0)\n    -> Index Scan  
using orders_pk on orders  (cost=0.43..8.46 rows=1 width=14)\n                    Index Cond:  
(order_id = 200)"  
            "Dimension": "db.execution_plan.raw_plan",  
            "Status": "AVAILABLE",  
        }  
    ]  
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)

- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

GetPerformanceAnalysisReport

Retrieves the report including the report ID, status, time details, and the insights with recommendations. The report status can be RUNNING, SUCCEEDED, or FAILED. The insights include the description and recommendation fields.

Request Syntax

```
{  
    "AcceptLanguage": "string",  
    "AnalysisReportId": "string",  
    "Identifier": "string",  
    "ServiceType": "string",  
    "TextFormat": "string"  
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Note

In the following list, the required parameters are described first.

AnalysisReportId

A unique identifier of the created analysis report. For example, report-12345678901234567

Type: String

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: report-[0-9a-f]{17}

Required: Yes

Identifier

An immutable identifier for a data source that is unique for an Amazon Region. Performance Insights gathers metrics from this data source. In the console, the identifier is shown

as *ResourceID*. When you call `DescribeDBInstances`, the identifier is returned as `DbiResourceId`.

To use a DB instance as a data source, specify its `DbiResourceId` value. For example, specify db-ABCDEFHIJKLMNOPQRSTUVWXYZ1VW2X.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-]+\$

Required: Yes

ServiceType

The Amazon service for which Performance Insights will return metrics. Valid value is RDS.

Type: String

Valid Values: RDS | DOCDB

Required: Yes

AcceptLanguage

The text language in the report. The default language is EN_US (English).

Type: String

Valid Values: EN_US

Required: No

TextFormat

Indicates the text format in the report. The options are PLAIN_TEXT or MARKDOWN. The default value is plain text.

Type: String

Valid Values: PLAIN_TEXT | MARKDOWN

Required: No

Response Syntax

```
{  
  "AnalysisReport": {  
    "AnalysisReportId": "string",  
    "CreateTime": number,  
    "EndTime": number,  
    "Identifier": "string",  
    "Insights": [  
      {  
        "BaselineData": [  
          {  
            "PerformanceInsightsMetric": {  
              "Dimensions": {  
                "string" : "string"  
              },  
              "DisplayName": "string",  
              "Filter": {  
                "string" : "string"  
              },  
              "Metric": "string",  
              "Value": number  
            }  
          }  
        ],  
        "Context": "string",  
        "Description": "string",  
        "EndTime": number,  
        "InsightData": [  
          {  
            "PerformanceInsightsMetric": {  
              "Dimensions": {  
                "string" : "string"  
              },  
              "DisplayName": "string",  
              "Filter": {  
                "string" : "string"  
              },  
              "Metric": "string",  
              "Value": number  
            }  
          }  
        ],  
      }  
    ]  
  }  
}
```

```
"InsightId": "string",
"InsightType": "string",
"Recommendations": [
    {
        "RecommendationDescription": "string",
        "RecommendationId": "string"
    }
],
"SeverityStartTime": number,
"SupportingInsights": [
    "Insight"
]
}
],
"ServiceType": "string",
"StartTime": number,
"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.

[AnalysisReport](#)

The summary of the performance analysis report created for a time period.

Type: [AnalysisReport](#) object

Errors

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

InternalServiceError

The request failed due to an unknown error.

HTTP Status Code: 500

InvalidArgumentException

One of the arguments provided is invalid for this request.

HTTP Status Code: 400

NotAuthorizedException

The user is not authorized to perform this request.

HTTP Status Code: 400

Examples

Retrieve a performance analysis report

The following example gets the report insights and other details for the report report-01234567890abcdef.

Sample Request

```
POST / HTTP/1.1
Host: <Hostname>
Accept-Encoding: identity
X-Amz-Target: PerformanceInsightsv20180227.GetPerformanceAnalysisReport
Content-Type: application/x-amz-json-1.1
User-Agent: <UserAgentString>
X-Amz-Date: <Date>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
  Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "AnalysisReportId": "report-01234567890abcdef",
  "Identifier": "db-ABC1DEFGHIJKLMNOPQRSTUVWXYZ",
  "ServiceType": "RDS"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/x-amz-json-1.1
Date: <Date>
x-amzn-RequestId: <RequestId>
Content-Length: <PayloadSizeBytes>
Connection: keep-alive

{
    "AnalysisReport": {
        "AnalysisReportId": "report-01234567890abcdef",
        "CreateTime": 1690906983.028,
        "EndTime": 1690453065,
        "Identifier": "db-ABC1DEFGHIJKL2MNOPQRSTUWV3W",
        "Insights": [
            {
                "BaselineData": [
                    {
                        "PerformanceInsightsMetric": {
                            "Dimensions": {},
                            "Metric": "db.load.avg",
                            "Value": 0
                        }
                    }
                ],
                "Context": "CAUSAL",
                "Description": "The database is idle, with no detectable load for the time range.",
                "EndTime": 1690453065,
                "InsightData": [
                    {
                        "PerformanceInsightsMetric": {
                            "Dimensions": {},
                            "Metric": "db.load.avg",
                            "Value": 0
                        }
                    }
                ],
                "InsightId": "MURCX0xPQURfWkVSTwY8NIIdQhkWEeU19Zybf8H636v47008ID2uUn6uLWFp5MDAwMDAwMDAw",
                "InsightType": "DB_LOAD_ZERO",
                "Recommendations": [
                    {
                        "RecommendationDescription": "Try creating an analysis report for a different time range."
                    }
                ]
            }
        ]
    }
}
```

```
        "RecommendationId":  
        "MVJ1Y29tbWVuZGF0aW9uREJfTE9BRF9aRVJPvXe8CGe_f-ZX2tY-  
        Em61aD6v2u9wcPi58j_zY28eKEwwMDAwMDAwMDA="  
    }  
],  
"Severity": "LOW",  
"StartTime": 1690009222,  
"SupportingInsights": []  
}  
],  
"ServiceType": "RDS",  
"StartTime": 1690009222,  
"Status": "SUCCEEDED"  
}  
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

GetResourceMetadata

Retrieve the metadata for different features. For example, the metadata might indicate that a feature is turned on or off on a specific DB instance.

Request Syntax

```
{  
    "Identifier": "string",  
    "ServiceType": "string"  
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Note

In the following list, the required parameters are described first.

Identifier

An immutable identifier for a data source that is unique for an Amazon Region. Performance Insights gathers metrics from this data source. To use a DB instance as a data source, specify its DbiResourceId value. For example, specify db-ABCDEFGHIJKLMNOPQRSTU1VW2X.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-]+\$

Required: Yes

ServiceType

The Amazon service for which Performance Insights returns metrics.

Type: String

Valid Values: RDS | DOCDB

Required: Yes

Response Syntax

```
{  
  "Features": {  
    "string" : {  
      "Status": "string"  
    }  
  },  
  "Identifier": "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.

Features

The metadata for different features. For example, the metadata might indicate that a feature is turned on or off on a specific DB instance.

Type: String to [FeatureMetadata](#) object map

Key Length Constraints: Minimum length of 0. Maximum length of 256.

Key Pattern: .*\S.*

Identifier

An immutable identifier for a data source that is unique for an Amazon Region. Performance Insights gathers metrics from this data source. To use a DB instance as a data source, specify its DbiResourceId value. For example, specify db-ABCDEFGHIJKLMNOPQRSTU1VW2X.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: .*\\$.*

Errors

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

InternalServerError

The request failed due to an unknown error.

HTTP Status Code: 500

InvalidArgumentException

One of the arguments provided is invalid for this request.

HTTP Status Code: 400

NotAuthorizedException

The user is not authorized to perform this request.

HTTP Status Code: 400

Examples

Retrieve metadata for different features

The following example requests all metadata for the database with the ID db-ABC1DEFGHIJKL2MN0PQRSTUV3W. The response shows that SQL digest statistics are enabled.

Sample Request

```
POST / HTTP/1.1
Host: <Hostname>
Accept-Encoding: identity
X-Amz-Target: PerformanceInsightsv20180227.GetResourceMetadata
Content-Type: application/x-amz-json-1.1
User-Agent: <UserAgentString>
X-Amz-Date: <Date>
```

```
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
    "ServiceType": "RDS",
    "Identifier": "db-ABC1DEFGHIJKL2MNOPQRSTUWV3W"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/x-amz-json-1.1
Date: <Date>
x-amzn-RequestId: <RequestId>
Content-Length: <PayloadSizeBytes>
Connection: keep-alive

{
    "Identifier": "db-ABC1DEFGHIJKL2MNOPQRSTUWV3W",
    "Features": {
        "SQL_DIGEST_STATISTICS": {
            "Status": "ENABLED"
        }
    }
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)

- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

GetResourceMetrics

Retrieve Performance Insights metrics for a set of data sources over a time period. You can provide specific dimension groups and dimensions, and provide filtering criteria for each group. You must specify an aggregate function for each metric.

Note

Each response element returns a maximum of 500 bytes. For larger elements, such as SQL statements, only the first 500 bytes are returned.

Request Syntax

```
{  
    "EndTime": number,  
    "Identifier": "string",  
    "MaxResults": number,  
    "MetricQueries": [  
        {  
            "Filter": {  
                "string": "string"  
            },  
            "GroupBy": {  
                "Dimensions": [ "string" ],  
                "Group": "string",  
                "Limit": number  
            },  
            "Metric": "string"  
        }  
    ],  
    "NextToken": "string",  
    "PeriodAlignment": "string",  
    "PeriodInSeconds": number,  
    "ServiceType": "string",  
    "StartTime": number  
}
```

Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

EndTime

The date and time specifying the end of the requested time series query range. The value specified is *exclusive*. Thus, the command returns data points less than (but not equal to) EndTime.

The value for EndTime must be later than the value for StartTime.

Type: Timestamp

Required: Yes

Identifier

An immutable identifier for a data source that is unique for an Amazon Region. Performance Insights gathers metrics from this data source. In the console, the identifier is shown as *ResourceID*. When you call `DescribeDBInstances`, the identifier is returned as `DbiResourceId`.

To use a DB instance as a data source, specify its `DbiResourceId` value. For example, specify db-ABCDEFIGHIJKLMNOPQRSTUVWXYZ1VW2X.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-]+\$

Required: Yes

MetricQueries

An array of one or more queries to perform. Each query must specify a Performance Insights metric and specify an aggregate function, and you can provide filtering criteria. You must append the aggregate function to the metric. For example, to find the average for the metric `db.load` you must use `db.load.avg`. Valid values for aggregate functions include `.avg`, `.min`, `.max`, and `.sum`.

Type: Array of [MetricQuery](#) objects

Array Members: Minimum number of 1 item. Maximum number of 15 items.

Required: Yes

[ServiceType](#)

The Amazon service for which Performance Insights returns metrics. Valid values are as follows:

- RDS
- DOCDB

Type: String

Valid Values: RDS | DOCDB

Required: Yes

[StartTime](#)

The date and time specifying the beginning of the requested time series query range. You can't specify a StartTime that is earlier than 7 days ago. By default, Performance Insights has 7 days of retention, but you can extend this range up to 2 years. The value specified is *inclusive*. Thus, the command returns data points equal to or greater than StartTime.

The value for StartTime must be earlier than the value for EndTime.

Type: Timestamp

Required: Yes

[MaxResults](#)

The maximum number of items to return in the response.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 25.

Required: No

[NextToken](#)

An optional pagination token provided by a previous request. If this parameter is specified, the response includes only records beyond the token, up to the value specified by MaxRecords.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

Pattern: ^[a-zA-Z0-9_=-]+\$

Required: No

PeriodAlignment

The returned timestamp which is the start or end time of the time periods. The default value is END_TIME.

Type: String

Valid Values: END_TIME | START_TIME

Required: No

PeriodInSeconds

The granularity, in seconds, of the data points returned from Performance Insights. A period can be as short as one second, or as long as one day (86400 seconds). Valid values are:

- 1 (one second)
- 60 (one minute)
- 300 (five minutes)
- 3600 (one hour)
- 86400 (twenty-four hours)

If you don't specify PeriodInSeconds, then Performance Insights will choose a value for you, with a goal of returning roughly 100-200 data points in the response.

Type: Integer

Required: No

Response Syntax

```
{
```

```
"AlignedEndTime": number,
"AlignedStartTime": number,
"Identifier": "string",
"MetricList": [
    {
        "DataPoints": [
            {
                "Timestamp": number,
                "Value": number
            }
        ],
        "Key": {
            "Dimensions": {
                "string": "string"
            },
            "Metric": "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.

AlignedEndTime

The end time for the returned metrics, after alignment to a granular boundary (as specified by `PeriodInSeconds`). `AlignedEndTime` will be greater than or equal to the value of the user-specified `Endtime`.

Type: Timestamp

AlignedStartTime

The start time for the returned metrics, after alignment to a granular boundary (as specified by `PeriodInSeconds`). `AlignedStartTime` will be less than or equal to the value of the user-specified `StartTime`.

Type: Timestamp

Identifier

An immutable identifier for a data source that is unique for an Amazon Region. Performance Insights gathers metrics from this data source. In the console, the identifier is shown as *ResourceID*. When you call `DescribeDBInstances`, the identifier is returned as `DbiResourceId`.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `.*\$.*`

MetricList

An array of metric results, where each array element contains all of the data points for a particular dimension.

Type: Array of [MetricKeyDataPoints](#) objects

NextToken

An optional pagination token provided by a previous request. If this parameter is specified, the response includes only records beyond the token, up to the value specified by `MaxRecords`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

Pattern: `^[a-zA-Z0-9_=-]+$`

Errors

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

InternalServiceError

The request failed due to an unknown error.

HTTP Status Code: 500

InvalidArgumentException

One of the arguments provided is invalid for this request.

HTTP Status Code: 400

NotAuthorizedException

The user is not authorized to perform this request.

HTTP Status Code: 400

Examples

Retrieve Data Points for All Dimensions Within a Group

The following example requests data points for the db.wait_event dimension group, and for the db.wait_event.name dimension within that group. In the response, the relevant data points are grouped by the requested dimension (db.wait_event.name).

Sample Request

```
POST / HTTP/1.1
Host: <Hostname>
Accept-Encoding: identity
X-Amz-Target: PerformanceInsightsv20180227.GetResourceMetrics
Content-Type: application/x-amz-json-1.1
User-Agent: <UserAgentString>
X-Amz-Date: <Date>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
  Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
    "ServiceType": "RDS",
    "Identifier": "db-ABC1DEFGHIJKL2MNOPQRSTUWV3W",
    "MetricQueries": [
        {
            "Metric": "db.load.avg",
            "GroupBy": {
                "Group": "db.wait_event",
                "Dimensions": ["db.wait_event.type"]
            }
        }
    ],
    "StartTime": 1527026400,
```

```
"EndTime": 1527080400,  
"PeriodInSeconds": 300  
}
```

Sample Response

```
HTTP/1.1 200 OK  
Content-Type: application/x-amz-json-1.1  
Date: <Date>  
x-amzn-RequestId: <RequestId>  
Content-Length: <PayloadSizeBytes>  
Connection: keep-alive  
  
{  
    "AlignedEndTime": 1.5270804E9,  
    "AlignedStartTime": 1.5270264E9,  
    "Identifier": "db-ABC1DEFGHIJKL2MNOPQRSTUV3W",  
    "MetricList": [  
        {  
            "Key": {  
                "Metric": "db.load.avg"  
            },  
            "DataPoints": [  
                {  
                    "Timestamp": 1527026700.0,  
                    "Value": 1.3533333333333333  
                },  
                {  
                    "Timestamp": 1527027000.0,  
                    "Value": 0.88  
                },  
                ...  
            ]  
        },  
        {  
            "Key": {  
                "Metric": "db.load.avg",  
                "Dimensions": {  
                    "db.wait_event.name": "wait/synch/mutex/innodb/  
aurora_lock_thread_slot_futex"  
                }  
            },  
        },  
    ]  
}
```

```
        "DataPoints": [
            {
                "Timestamp": 1527026700.0,
                "Value": 0.8566666666666667
            },
            {
                "Timestamp": 1527027000.0,
                "Value": 0.8633333333333333
            },
            ...
        ],
    },
    ...
]
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

ListAvailableResourceDimensions

Retrieve the dimensions that can be queried for each specified metric type on a specified DB instance.

Request Syntax

```
{  
    "AuthorizedActions": [ "string" ],  
    "Identifier": "string",  
    "MaxResults": number,  
    "Metrics": [ "string" ],  
    "NextToken": "string",  
    "ServiceType": "string"  
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Note

In the following list, the required parameters are described first.

Identifier

An immutable identifier for a data source that is unique within an Amazon Region. Performance Insights gathers metrics from this data source. To use an Amazon RDS DB instance as a data source, specify its DbiResourceId value. For example, specify db-ABCDEFHIGJKLMNOPQRSTUVWXYZ.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-]+\$

Required: Yes

Metrics

The types of metrics for which to retrieve dimensions. Valid values include db.load.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 5 items.

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-_\.:/*)(]+\$

Required: Yes

ServiceType

The Amazon service for which Performance Insights returns metrics.

Type: String

Valid Values: RDS | DOCDB

Required: Yes

AuthorizedActions

The actions to discover the dimensions you are authorized to access. If you specify multiple actions, then the response will contain the dimensions common for all the actions.

When you don't specify this request parameter or provide an empty list, the response contains all the available dimensions for the target database engine whether or not you are authorized to access them.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 3 items.

Valid Values: DescribeDimensionKeys | GetDimensionKeyDetails | GetResourceMetrics

Required: No

MaxResults

The maximum number of items to return in the response. If more items exist than the specified MaxRecords value, a pagination token is included in the response so that the remaining results can be retrieved.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 25.

Required: No

NextToken

An optional pagination token provided by a previous request. If this parameter is specified, the response includes only records beyond the token, up to the value specified by MaxRecords.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

Pattern: ^[a-zA-Z0-9_=--]+\$

Required: No

Response Syntax

```
{  
  "MetricDimensions": [  
    {  
      "Groups": [  
        {  
          "Dimensions": [  
            {  
              "Identifier": "string"  
            }  
          ],  
          "Group": "string"  
        }  
      ],  
      "Metric": "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.

MetricDimensions

The dimension information returned for requested metric types.

Type: Array of [MetricDimensionGroups](#) objects

NextToken

An optional pagination token provided by a previous request. If this parameter is specified, the response includes only records beyond the token, up to the value specified by MaxRecords.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

Pattern: ^[a-zA-Z0-9_=^-]+\$

Errors

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

InternalServiceError

The request failed due to an unknown error.

HTTP Status Code: 500

InvalidArgumentException

One of the arguments provided is invalid for this request.

HTTP Status Code: 400

NotAuthorizedException

The user is not authorized to perform this request.

HTTP Status Code: 400

Examples

Retrieving dimensions for the metric type db.load

The following example retrieves the dimensions for the metric type db.load.

Sample Request

```
POST / HTTP/1.1
Host: <Hostname>
Accept-Encoding: identity
X-Amz-Target: PerformanceInsightsv20180227.DescribeDimensionKeys
Content-Type: application/x-amz-json-1.1
User-Agent: <UserAgentString>
X-Amz-Date: <Date>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
  Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "ServiceType": "RDS",
  "Identifier": "db-ABC1DEFGHIJKL2MNOPQRSTUWV3W",
  "Metrics": ["db.load"]
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/x-amz-json-1.1
Date: <Date>
x-amzn-RequestId: <RequestId>
Content-Length: <PayloadSizeBytes>
Connection: keep-alive

{
  "MetricDimensions": [
    {
      "Metric": "db.load",
      "Groups": [
        "Group1"
      ]
    }
  ]
}
```

```
{  
    "Group": "db.user",  
    "Dimensions": [  
        {  
            "Identifier": "db.user.id"  
        },  
        {  
            "Identifier": "db.user.name"  
        }  
    ]  
},  
{  
    "Group": "db.sql_tokenized",  
    "Dimensions": [  
        {  
            "Identifier": "db.sql_tokenized.id"  
        },  
        {  
            "Identifier": "db.sql_tokenized.db_id"  
        },  
        {  
            "Identifier": "db.sql_tokenized.statement"  
        }  
    ]  
},  
...  
]  
}  
]
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)

- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

ListAvailableResourceMetrics

Retrieve metrics of the specified types that can be queried for a specified DB instance.

Request Syntax

```
{  
    "Identifier": "string",  
    "MaxResults": number,  
    "MetricTypes": [ "string" ],  
    "NextToken": "string",  
    "ServiceType": "string"  
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Note

In the following list, the required parameters are described first.

Identifier

An immutable identifier for a data source that is unique within an Amazon Region. Performance Insights gathers metrics from this data source. To use an Amazon RDS DB instance as a data source, specify its DbiResourceId value. For example, specify db-ABCDEFHIGJKLMNOPQRSTUVWXYZ.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-]+\$

Required: Yes

MetricTypes

The types of metrics to return in the response. Valid values in the array include the following:

- os (OS counter metrics) - All engines
- db (DB load metrics) - All engines except for Amazon DocumentDB
- db.sql.stats (per-SQL metrics) - All engines except for Amazon DocumentDB
- db.sql_tokenized.stats (per-SQL digest metrics) - All engines except for Amazon DocumentDB

Type: Array of strings

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-_\.:/*)(]+\$

Required: Yes

ServiceType

The Amazon service for which Performance Insights returns metrics.

Type: String

Valid Values: RDS | DOCDB

Required: Yes

MaxResults

The maximum number of items to return. If the MaxRecords value is less than the number of existing items, the response includes a pagination token.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 25.

Required: No

NextToken

An optional pagination token provided by a previous request. If this parameter is specified, the response includes only records beyond the token, up to the value specified by MaxRecords.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

Pattern: ^[a-zA-Z0-9_=--]+\$

Required: No

Response Syntax

```
{  
    "Metrics": [  
        {  
            "Description": "string",  
            "Metric": "string",  
            "Unit": "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.

Metrics

An array of metrics available to query. Each array element contains the full name, description, and unit of the metric.

Type: Array of [ResponseResourceMetric](#) objects

NextToken

A pagination token that indicates the response didn't return all available records because MaxRecords was specified in the previous request. To get the remaining records, specify NextToken in a separate request with this value.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

Pattern: ^[a-zA-Z0-9_-=-]+\$

Errors

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

InternalServerError

The request failed due to an unknown error.

HTTP Status Code: 500

InvalidArgumentException

One of the arguments provided is invalid for this request.

HTTP Status Code: 400

NotAuthorizedException

The user is not authorized to perform this request.

HTTP Status Code: 400

Examples

List specified metrics

The following example requests the metrics for metric types os and db.

Sample Request

```
POST / HTTP/1.1
Host: <Hostname>
Accept-Encoding: identity
X-Amz-Target: PerformanceInsightsv20180227.ListAvailableResourceMetrics
Content-Type: application/x-amz-json-1.1
User-Agent: <UserAgentString>
X-Amz-Date: <Date>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
Signature=<Signature>
```

```
Content-Length: <PayloadSizeBytes>

{
    "ServiceType": "RDS",
    "Identifier": "db-ABC1DEFGHIJKL2MN0PQRSTUV3W",
    "MetricTypes": [ "os", "db" ]
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/x-amz-json-1.1
Date: <Date>
x-amzn-RequestId: <RequestId>
Content-Length: <PayloadSizeBytes>
Connection: keep-alive

{
    "Metrics": [
        {
            "Description": "The number of virtual CPUs for the DB instance",
            "Metric": "os.general.numVCPUs",
            "Unit": "vCPUs"
        },
        ....,
        {
            "Description": "Time spent reading data file blocks by backends in this
instance",
            "Metric": "db.IO.read_latency",
            "Unit": "Milliseconds per block"
        },
        ....
    ]
}
```

See Also

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

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

ListPerformanceAnalysisReports

Lists all the analysis reports created for the DB instance. The reports are sorted based on the start time of each report.

Request Syntax

```
{  
    "Identifier": "string",  
    "ListTags": boolean,  
    "MaxResults": number,  
    "NextToken": "string",  
    "ServiceType": "string"  
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Note

In the following list, the required parameters are described first.

Identifier

An immutable identifier for a data source that is unique for an Amazon Region. Performance Insights gathers metrics from this data source. In the console, the identifier is shown as *ResourceID*. When you call `DescribeDBInstances`, the identifier is returned as `DbiResourceId`.

To use a DB instance as a data source, specify its `DbiResourceId` value. For example, specify db-ABCDEFGHIJKLMNOPQRSTUVWXYZ.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-]+\$

Required: Yes

ServiceType

The Amazon service for which Performance Insights returns metrics. Valid value is RDS.

Type: String

Valid Values: RDS | DOCDB

Required: Yes

ListTags

Specifies whether or not to include the list of tags in the response.

Type: Boolean

Required: No

MaxResults

The maximum number of items to return in the response. If more items exist than the specified MaxResults value, a pagination token is included in the response so that the remaining results can be retrieved.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 25.

Required: No

NextToken

An optional pagination token provided by a previous request. If this parameter is specified, the response includes only records beyond the token, up to the value specified by MaxResults.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

Pattern: ^[a-zA-Z0-9_=]-]+\$

Required: No

Response Syntax

```
{  
    "AnalysisReports": [  
        {  
            "AnalysisReportId": "string",  
            "CreateTime": number,  
            "EndTime": number,  
            "StartTime": number,  
            "Status": "string",  
            "Tags": [  
                {  
                    "Key": "string",  
                    "Value": "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.

[AnalysisReports](#)

List of reports including the report identifier, start and end time, creation time, and status.

Type: Array of [AnalysisReportSummary](#) objects

[NextToken](#)

An optional pagination token provided by a previous request. If this parameter is specified, the response includes only records beyond the token, up to the value specified by MaxResults.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8192.

Pattern: ^[a-zA-Z0-9_=^-]+\$

Errors

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

InternalServerError

The request failed due to an unknown error.

HTTP Status Code: 500

InvalidArgumentException

One of the arguments provided is invalid for this request.

HTTP Status Code: 400

NotAuthorizedException

The user is not authorized to perform this request.

HTTP Status Code: 400

Examples

List of analysis reports for a DB instance

The following example lists all the analysis reports for the DB instance db-ABC1DEFGHIJKL2MN0PQRSTUW3W along with tags for each report.

Sample Request

```
POST / HTTP/1.1
Host: <Hostname>
Accept-Encoding: identity
X-Amz-Target: PerformanceInsightsv20180227.ListPerformanceAnalysisReports
Content-Type: application/x-amz-json-1.1
User-Agent: <UserAgentString>
X-Amz-Date: <Date>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
  Signature=<Signature>
Content-Length: <PayloadSizeBytes>
```

```
{  
    "Identifier": "db-ABC1DEFGHIJKL2MNOPQRSTUV3W",  
    "ServiceType": "RDS",  
    "ListTags": true,  
    "MaxResults": 5  
}
```

Sample Response

```
HTTP/1.1 200 OK  
Content-Type: application/x-amz-json-1.1  
Date: <Date>  
x-amzn-RequestId: <RequestId>  
Content-Length: <PayloadSizeBytes>  
Connection: keep-alive  
  
{  
    "AnalysisReports": [  
        {  
            "AnalysisReportId": "report-01234567890abcdef",  
            "CreateTime": 1690561641.014,  
            "EndTime": 1689356407,  
            "StartTime": 1689161030,  
            "Status": "SUCCEEDED",  
            "Tags": [  
                {  
                    "Key": "Name",  
                    "Value": "MyName1"  
                }  
            ]  
        },  
        {  
            "AnalysisReportId": "report-01234567891abcdef",  
            "CreateTime": 1690487582.167,  
            "EndTime": 1689339840,  
            "StartTime": 1689176864,  
            "Status": "SUCCEEDED",  
            "Tags": [  
                {  
                    "Key": "MyKey",  
                    "Value": "MyValue"  
                }  
            ]  
        }  
    ]  
}
```

```
        },
        {
            "Key": "Name",
            "Value": "MyName2"
        }
    ],
},
{
    "AnalysisReportId": "report-01234567892abcdef",
    "CreateTime": 1690551889.941,
    "EndTime": 1689324849,
    "StartTime": 1689177272,
    "Status": "SUCCEEDED",
    "Tags": [
        {
            "Key": "Name",
            "Value": ""
        }
    ]
}
]
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

ListTagsForResource

Retrieves all the metadata tags associated with Amazon RDS Performance Insights resource.

Request Syntax

```
{  
    "ResourceARN": "string",  
    "ServiceType": "string"  
}
```

Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

ResourceARN

Lists all the tags for the Amazon RDS Performance Insights resource. This value is an Amazon Resource Name (ARN). For information about creating an ARN, see [Constructing an RDS Amazon Resource Name \(ARN\)](#).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1011.

Pattern: ^arn:.*:pi:.*\$

Required: Yes

ServiceType

List the tags for the Amazon service for which Performance Insights returns metrics. Valid value is RDS.

Type: String

Valid Values: RDS | DOCDB

Required: Yes

Response Syntax

```
{  
  "Tags": [  
    {  
      "Key": "string",  
      "Value": "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.

Tags

The metadata assigned to an Amazon RDS resource consisting of a key-value pair.

Type: Array of [Tag](#) objects

Array Members: Minimum number of 0 items. Maximum number of 200 items.

Errors

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

InternalServiceError

The request failed due to an unknown error.

HTTP Status Code: 500

InvalidArgumentException

One of the arguments provided is invalid for this request.

HTTP Status Code: 400

NotAuthorizedException

The user is not authorized to perform this request.

HTTP Status Code: 400

Examples

List tags for an analysis report

The following example lists all the tags for the report `report-01234567890abcdef`.

Sample Request

```
POST / HTTP/1.1
Host: <Hostname>
Accept-Encoding: identity
X-Amz-Target: PerformanceInsightsv20180227.ListTagsForResource
Content-Type: application/x-amz-json-1.1
User-Agent: <UserAgentString>
X-Amz-Date: <Date>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
    "ServiceType": "RDS",
    "ResourceARN": "arn:aws:pi:us-west-2:123456789012:perf-reports/rds/db-
ABC1DEFGHIJKL2MNOPQRSTUVWXYZW/report-01234567890abcdef"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/x-amz-json-1.1
Date: <Date>
x-amzn-RequestId: <RequestId>
Content-Length: <PayloadSizeBytes>
Connection: keep-alive

{
    "Tags": [
        {
            "Key": "MyKey",
            "Value": "MyValue"
        },
        {
            "Key": "Name",
            "Value": "MyName"
        }
    ]
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

TagResource

Adds metadata tags to the Amazon RDS Performance Insights resource.

Request Syntax

```
{  
    "ResourceARN": "string",  
    "ServiceType": "string",  
    "Tags": [  
        {  
            "Key": "string",  
            "Value": "string"  
        }  
    ]  
}
```

Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

ResourceARN

The Amazon RDS Performance Insights resource that the tags are added to. This value is an Amazon Resource Name (ARN). For information about creating an ARN, see [Constructing an RDS Amazon Resource Name \(ARN\)](#).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1011.

Pattern: ^arn:.*:pi:.*\$

Required: Yes

ServiceType

The Amazon service for which Performance Insights returns metrics. Valid value is RDS.

Type: String

Valid Values: RDS | DOCDB

Required: Yes

Tags

The metadata assigned to an Amazon RDS resource consisting of a key-value pair.

Type: Array of [Tag](#) objects

Array Members: Minimum number of 0 items. Maximum number of 200 items.

Required: Yes

Response Elements

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

Errors

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

InternalServerError

The request failed due to an unknown error.

HTTP Status Code: 500

InvalidArgumentException

One of the arguments provided is invalid for this request.

HTTP Status Code: 400

NotAuthorizedException

The user is not authorized to perform this request.

HTTP Status Code: 400

Examples

Add tag to an analysis report

The following example adds a tag to the report `report-01234567890abcdef`.

Sample Request

```
POST / HTTP/1.1
Host: <Hostname>
Accept-Encoding: identity
X-Amz-Target: PerformanceInsightsv20180227.TagResource
Content-Type: application/x-amz-json-1.1
User-Agent: <UserAgentString>
X-Amz-Date: <Date>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
  Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
  "ServiceType": "RDS",
  "ResourceARN": "arn:aws:pi:us-west-2:123456789012:perf-reports/rds/db-
ABC1DEFGHIJKL2MNOPQRSTUVWXYZW/report-01234567890abcdef",
  "Tags": [
    {
      "Key": "MyKey",
      "Value": "MyValue"
    }
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/x-amz-json-1.1
Date: <Date>
x-amzn-RequestId: <RequestId>
Content-Length: <PayloadSizeBytes>
Connection: keep-alive
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

UntagResource

Deletes the metadata tags from the Amazon RDS Performance Insights resource.

Request Syntax

```
{  
    "ResourceARN": "string",  
    "ServiceType": "string",  
    "TagKeys": [ "string" ]  
}
```

Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

ResourceARN

The Amazon RDS Performance Insights resource that the tags are added to. This value is an Amazon Resource Name (ARN). For information about creating an ARN, see [Constructing an RDS Amazon Resource Name \(ARN\)](#).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1011.

Pattern: ^arn:.+:pi:.*\$

Required: Yes

ServiceType

List the tags for the Amazon service for which Performance Insights returns metrics. Valid value is RDS.

Type: String

Valid Values: RDS | DOCDB

Required: Yes

TagKeys

The metadata assigned to an Amazon RDS Performance Insights resource consisting of a key-value pair.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 200 items.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: ^ . *\$

Required: Yes

Response Elements

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

Errors

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

InternalServerError

The request failed due to an unknown error.

HTTP Status Code: 500

InvalidArgumentException

One of the arguments provided is invalid for this request.

HTTP Status Code: 400

NotAuthorizedException

The user is not authorized to perform this request.

HTTP Status Code: 400

Examples

Delete tag from an analysis report

The following example deletes the tag MyKey from the report report-01234567890abcdef.

Sample Request

```
POST / HTTP/1.1
Host: <Hostname>
Accept-Encoding: identity
X-Amz-Target: PerformanceInsightsv20180227.UntagResource
Content-Type: application/x-amz-json-1.1
User-Agent: <UserAgentString>
X-Amz-Date: <Date>
Authorization: AWS4-HMAC-SHA256 Credential=<Credential>, SignedHeaders=<Headers>,
Signature=<Signature>
Content-Length: <PayloadSizeBytes>

{
    "ServiceType": "RDS",
    "ResourceARN": "arn:aws:pi:us-west-2:123456789012:perf-reports/rds/db-
ABC1DEFGHIJKL2MNOPQRSTUVWXYZW/report-01234567890abcdef",
    "Tags": ["MyKey"]
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/x-amz-json-1.1
Date: <Date>
x-amzn-RequestId: <RequestId>
Content-Length: <PayloadSizeBytes>
Connection: keep-alive
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

Data Types

The Amazon RDS Performance Insights 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:

- [AnalysisReport](#)
- [AnalysisReportSummary](#)
- [Data](#)
- [DataPoint](#)
- [DimensionDetail](#)
- [DimensionGroup](#)
- [DimensionGroupDetail](#)
- [DimensionKeyDescription](#)
- [DimensionKeyDetail](#)
- [FeatureMetadata](#)
- [Insight](#)
- [MetricDimensionGroups](#)
- [MetricKeyDataPoints](#)
- [MetricQuery](#)
- [PerformanceInsightsMetric](#)
- [Recommendation](#)
- [ResponsePartitionKey](#)
- [ResponseResourceMetric](#)
- [ResponseResourceMetricKey](#)
- [Tag](#)

AnalysisReport

Retrieves the summary of the performance analysis report created for a time period.

Contents

Note

In the following list, the required parameters are described first.

AnalysisReportId

The name of the analysis report.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: report-[0-9a-f]{17}

Required: Yes

CreateTime

The time you created the analysis report.

Type: Timestamp

Required: No

EndTime

The analysis end time in the report.

Type: Timestamp

Required: No

Identifier

The unique identifier of the analysis report.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-]+\$

Required: No

Insights

The list of identified insights in the analysis report.

Type: Array of [Insight](#) objects

Required: No

ServiceType

List the tags for the Amazon service for which Performance Insights returns metrics. Valid values are as follows:

- RDS
- DOCDB

Type: String

Valid Values: RDS | DOCDB

Required: No

StartTime

The analysis start time in the report.

Type: Timestamp

Required: No

Status

The status of the created analysis report.

Type: String

Valid Values: RUNNING | SUCCEEDED | FAILED

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

AnalysisReportSummary

Retrieves the details of the performance analysis report.

Contents

Note

In the following list, the required parameters are described first.

AnalysisReportId

The name of the analysis report.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: .*\S.*

Required: No

CreateTime

The time you created the analysis report.

Type: Timestamp

Required: No

EndTime

The end time of the analysis in the report.

Type: Timestamp

Required: No

StartTime

The start time of the analysis in the report.

Type: Timestamp

Required: No

Status

The status of the analysis report.

Type: String

Valid Values: RUNNING | SUCCEEDED | FAILED

Required: No

Tags

List of all the tags added to the analysis report.

Type: Array of [Tag](#) objects

Array Members: Minimum number of 0 items. Maximum number of 200 items.

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

Data

List of data objects which provide details about source metrics. This field can be used to determine the PI metric to render for the insight. This data type also includes static values for the metrics for the Insight that were calculated and included in text and annotations on the DB load chart.

Contents

Note

In the following list, the required parameters are described first.

PerformanceInsightsMetric

This field determines the Performance Insights metric to render for the insight. The name field refers to a Performance Insights metric.

Type: [PerformanceInsightsMetric](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

DataPoint

A timestamp, and a single numerical value, which together represent a measurement at a particular point in time.

Contents

Note

In the following list, the required parameters are described first.

Timestamp

The time, in epoch format, associated with a particular Value.

Type: Timestamp

Required: Yes

Value

The actual value associated with a particular Timestamp.

Type: Double

Required: Yes

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

DimensionDetail

The information about a dimension.

Contents

Note

In the following list, the required parameters are described first.

Identifier

The identifier of a dimension.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: .*\S.*

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

DimensionGroup

A logical grouping of Performance Insights metrics for a related subject area. For example, the db.sql dimension group consists of the following dimensions:

- db.sql.id - The hash of a running SQL statement, generated by Performance Insights.
- db.sql.db_id - Either the SQL ID generated by the database engine, or a value generated by Performance Insights that begins with pi-.
- db.sql.statement - The full text of the SQL statement that is running, for example, SELECT * FROM employees.
- db.sql_tokenized.id - The hash of the SQL digest generated by Performance Insights.

 **Note**

Each response element returns a maximum of 500 bytes. For larger elements, such as SQL statements, only the first 500 bytes are returned.

Contents

 **Note**

In the following list, the required parameters are described first.

Group

The name of the dimension group. Valid values are as follows:

- db - The name of the database to which the client is connected. The following values are permitted:
 - Aurora PostgreSQL
 - Amazon RDS PostgreSQL
 - Aurora MySQL
 - Amazon RDS MySQL
 - Amazon RDS MariaDB

- Amazon DocumentDB
- db.application - The name of the application that is connected to the database. The following values are permitted:
 - Aurora PostgreSQL
 - Amazon RDS PostgreSQL
 - Amazon DocumentDB
- db.blocking_sql - The SQL queries blocking the most DB load.
- db.blocking_session - The sessions blocking the most DB load.
- db.blocking_object - The object resources acquired by other sessions that are blocking the most DB load.
- db.host - The host name of the connected client (all engines).
- db.plans - The execution plans for the query (only Aurora PostgreSQL).
- db.query - The query that is currently running (only Amazon DocumentDB).
- db.query_tokenized - The digest query (only Amazon DocumentDB).
- db.session_type - The type of the current session (only Aurora PostgreSQL and RDS PostgreSQL).
- db.sql - The text of the SQL statement that is currently running (all engines except Amazon DocumentDB).
- db.sql_tokenized - The SQL digest (all engines except Amazon DocumentDB).
- db.user - The user logged in to the database (all engines except Amazon DocumentDB).
- db.wait_event - The event for which the database backend is waiting (all engines except Amazon DocumentDB).
- db.wait_event_type - The type of event for which the database backend is waiting (all engines except Amazon DocumentDB).
- db.wait_state - The event for which the database backend is waiting (only Amazon DocumentDB).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-_\.:/*)(]+\$

Required: Yes

Dimensions

A list of specific dimensions from a dimension group. If this parameter is not present, then it signifies that all of the dimensions in the group were requested, or are present in the response.

Valid values for elements in the Dimensions array are:

- db.application.name - The name of the application that is connected to the database.
Valid values are as follows:
 - Aurora PostgreSQL
 - Amazon RDS PostgreSQL
 - Amazon DocumentDB
- db.blocking_sql.id - The ID for each of the SQL queries blocking the most DB load.
- db.blocking_sql.sql - The SQL text for each of the SQL queries blocking the most DB load.
- db.blocking_session.id - The ID for each of the sessions blocking the most DB load.
- db.blocking_object.id - The ID for each of the object resources acquired by other sessions that are blocking the most DB load.
- db.blocking_object.type - The object type for each of the object resources acquired by other sessions that are blocking the most DB load.
- db.blocking_object.value - The value for each of the object resources acquired by other sessions that are blocking the most DB load.
- db.host.id - The host ID of the connected client (all engines).
- db.host.name - The host name of the connected client (all engines).
- db.name - The name of the database to which the client is connected. Valid values are as follows:
 - Aurora PostgreSQL
 - Amazon RDS PostgreSQL
 - Aurora MySQL
 - Amazon RDS MySQL
 - Amazon RDS MariaDB
 - Amazon DocumentDB
- db.query.id - The query ID generated by Performance Insights (only Amazon DocumentDB).

- db.query.db_id - The query ID generated by the database (only Amazon DocumentDB).
- db.query.statement - The text of the query that is being run (only Amazon DocumentDB).
- db.query.tokenized_id
- db.query.tokenized.id - The query digest ID generated by Performance Insights (only Amazon DocumentDB).
- db.query.tokenized.db_id - The query digest ID generated by Performance Insights (only Amazon DocumentDB).
- db.query.tokenized.statement - The text of the query digest (only Amazon DocumentDB).
- db.session_type.name - The type of the current session (only Amazon DocumentDB).
- db.sql.id - The hash of the full, non-tokenized SQL statement generated by Performance Insights (all engines except Amazon DocumentDB).
- db.sql.db_id - Either the SQL ID generated by the database engine, or a value generated by Performance Insights that begins with pi- (all engines except Amazon DocumentDB).
- db.sql.statement - The full text of the SQL statement that is running, as in `SELECT * FROM employees` (all engines except Amazon DocumentDB)
- db.sql.tokenized_id - The hash of the SQL digest generated by Performance Insights (all engines except Amazon DocumentDB). The db.sql.tokenized_id dimension fetches the value of the db.sql_tokenized.id dimension. Amazon RDS returns db.sql.tokenized_id from the db.sql dimension group.
- db.sql_tokenized.id - The hash of the SQL digest generated by Performance Insights (all engines except Amazon DocumentDB). In the console, db.sql_tokenized.id is called the Support ID because Amazon Support can look at this data to help you troubleshoot database issues.
- db.sql_tokenized.db_id - Either the native database ID used to refer to the SQL statement, or a synthetic ID such as pi-2372568224 that Performance Insights generates if the native database ID isn't available (all engines except Amazon DocumentDB).
- db.sql_tokenized.statement - The text of the SQL digest, as in `SELECT * FROM employees WHERE employee_id = ?` (all engines except Amazon DocumentDB)
- db.user.id - The ID of the user logged in to the database (all engines except Amazon DocumentDB).
- db.user.name - The name of the user logged in to the database (all engines except Amazon DocumentDB).

- db.wait_event.name - The event for which the backend is waiting (all engines except Amazon DocumentDB).
- db.wait_event.type - The type of event for which the backend is waiting (all engines except Amazon DocumentDB).
- db.wait_event_type.name - The name of the event type for which the backend is waiting (all engines except Amazon DocumentDB).
- db.wait_state.name - The event for which the backend is waiting (only Amazon DocumentDB).

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-_\.:/*)(]+\$

Required: No

Limit

The maximum number of items to fetch for this dimension group.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 25.

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

DimensionGroupDetail

Information about dimensions within a dimension group.

Contents

Note

In the following list, the required parameters are described first.

Dimensions

The dimensions within a dimension group.

Type: Array of [DimensionDetail](#) objects

Required: No

Group

The name of the dimension group.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: .*\\$.*

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

DimensionKeyDescription

An object that includes the requested dimension key values and aggregated metric values within a dimension group.

Contents

Note

In the following list, the required parameters are described first.

AdditionalMetrics

A map that contains the value for each additional metric.

Type: String to double map

Key Length Constraints: Minimum length of 0. Maximum length of 256.

Key Pattern: . *\S . *

Required: No

Dimensions

A map of name-value pairs for the dimensions in the group.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 256.

Key Pattern: . *\S . *

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: . *\S . *

Required: No

Partitions

If PartitionBy was specified, PartitionKeys contains the dimensions that were.

Type: Array of doubles

Required: No

Total

The aggregated metric value for the dimensions, over the requested time range.

Type: Double

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

DimensionKeyDetail

An object that describes the details for a specified dimension.

Contents

Note

In the following list, the required parameters are described first.

Dimension

The full name of the dimension. The full name includes the group name and key name. The following values are valid:

- db.query.statement (Amazon DocumentDB)
- db.sql.statement (Amazon RDS and Aurora)

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: .*\S.*

Required: No

Status

The status of the dimension detail data. Possible values include the following:

- AVAILABLE - The dimension detail data is ready to be retrieved.
- PROCESSING - The dimension detail data isn't ready to be retrieved because more processing time is required. If the requested detail data has the status PROCESSING, Performance Insights returns the truncated query.
- UNAVAILABLE - The dimension detail data could not be collected successfully.

Type: String

Valid Values: AVAILABLE | PROCESSING | UNAVAILABLE

Required: No

Value

The value of the dimension detail data. Depending on the return status, this value is either the full or truncated SQL query for the following dimensions:

- db.query.statement (Amazon DocumentDB)
- db.sql.statement (Amazon RDS and Aurora)

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: .*\\$.*

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

FeatureMetadata

The metadata for a feature. For example, the metadata might indicate that a feature is turned on or off on a specific DB instance.

Contents

Note

In the following list, the required parameters are described first.

Status

The status of the feature on the DB instance. Possible values include the following:

- ENABLED - The feature is enabled on the instance.
- DISABLED - The feature is disabled on the instance.
- UNSUPPORTED - The feature isn't supported on the instance.
- ENABLED_PENDING_REBOOT - The feature is enabled on the instance but requires a reboot to take effect.
- DISABLED_PENDING_REBOOT - The feature is disabled on the instance but requires a reboot to take effect.
- UNKNOWN - The feature status couldn't be determined.

Type: String

Valid Values: ENABLED | DISABLED | UNSUPPORTED | ENABLED_PENDING_REBOOT | DISABLED_PENDING_REBOOT | UNKNOWN

Required: No

See Also

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

- [Amazon SDK for C++](#)

- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

Insight

Retrieves the list of performance issues which are identified.

Contents

Note

In the following list, the required parameters are described first.

InsightId

The unique identifier for the insight. For example, insight-12345678901234567.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: .*\S.*

Required: Yes

BaselineData

Metric names and values from the timeframe used as baseline to generate the insight.

Type: Array of [Data](#) objects

Required: No

Context

Indicates if the insight is causal or correlated insight.

Type: String

Valid Values: CAUSAL | CONTEXTUAL

Required: No

Description

Description of the insight. For example: A high severity Insight found between 02:00 to 02:30, where there was an unusually high DB load 600x above baseline. Likely performance impact.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 8000.

Pattern: (. | \n)*

Required: No

EndTime

The end time of the insight. For example, 2018-10-30T00:00:00Z.

Type: Timestamp

Required: No

InsightData

List of data objects containing metrics and references from the time range while generating the insight.

Type: Array of [Data](#) objects

Required: No

InsightType

The type of insight. For example, HighDBLoad, HighCPU, or DominatingSQLs.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: . * \S . *

Required: No

Recommendations

List of recommendations for the insight. For example, Investigate the following SQLs that contributed to 100% of the total DBLoad during that time period: sql-id.

Type: Array of [Recommendation](#) objects

Required: No

Severity

The severity of the insight. The values are: Low, Medium, or High.

Type: String

Valid Values: LOW | MEDIUM | HIGH

Required: No

StartTime

The start time of the insight. For example, 2018-10-30T00:00:00Z.

Type: Timestamp

Required: No

SupportingInsights

List of supporting insights that provide additional factors for the insight.

Type: Array of [Insight](#) objects

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

MetricDimensionGroups

The available dimension information for a metric type.

Contents

Note

In the following list, the required parameters are described first.

Groups

The available dimension groups for a metric type.

Type: Array of [DimensionGroupDetail](#) objects

Required: No

Metric

The metric type to which the dimension information belongs.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: .*\\$.*

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

MetricKeyDataPoints

A time-ordered series of data points, corresponding to a dimension of a Performance Insights metric.

Contents

Note

In the following list, the required parameters are described first.

DataPoints

An array of timestamp-value pairs, representing measurements over a period of time.

Type: Array of [DataPoint](#) objects

Required: No

Key

The dimensions to which the data points apply.

Type: [ResponseResourceMetricKey](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

MetricQuery

A single query to be processed. You must provide the metric to query and append an aggregate function to the metric. For example, to find the average for the metric db.load you must use db.load.avg. Valid values for aggregate functions include .avg, .min, .max, and .sum. If no other parameters are specified, Performance Insights returns all data points for the specified metric. Optionally, you can request that the data points be aggregated by dimension group (GroupBy), and return only those data points that match your criteria (Filter).

Contents

Note

In the following list, the required parameters are described first.

Metric

The name of a Performance Insights metric to be measured.

Valid values for Metric are:

- db.load.avg - A scaled representation of the number of active sessions for the database engine.
- db.sampledload.avg - The raw number of active sessions for the database engine.
- The counter metrics listed in [Performance Insights operating system counters](#) in the *Amazon Aurora User Guide*.
- The counter metrics listed in [Performance Insights operating system counters](#) in the *Amazon RDS User Guide*.

If the number of active sessions is less than an internal Performance Insights threshold, db.load.avg and db.sampledload.avg are the same value. If the number of active sessions is greater than the internal threshold, Performance Insights samples the active sessions, with db.load.avg showing the scaled values, db.sampledload.avg showing the raw values, and db.sampledload.avg less than db.load.avg. For most use cases, you can query db.load.avg only.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-_\.:/*)(]+\$

Required: Yes

Filter

One or more filters to apply in the request. Restrictions:

- Any number of filters by the same dimension, as specified in the `GroupBy` parameter.
- A single filter for any other dimension in this dimension group.

 **Note**

The `db.sql.db_id` filter isn't available for RDS for SQL Server DB instances.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 256.

Key Pattern: ^[a-zA-Z0-9-_\.:/*)(]+\$

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: .*\S.*

Required: No

GroupBy

A specification for how to aggregate the data points from a query result. You must specify a valid dimension group. Performance Insights will return all of the dimensions within that group, unless you provide the names of specific dimensions within that group. You can also request that Performance Insights return a limited number of values for a dimension.

Type: [DimensionGroup](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

PerformanceInsightsMetric

This data type helps to determine Performance Insights metric to render for the insight.

Contents

Note

In the following list, the required parameters are described first.

Dimensions

A dimension map that contains the dimensions for this partition.

Type: String to string map

Key Length Constraints: Minimum length of 1. Maximum length of 2000.

Key Pattern: ^ . *\$

Value Length Constraints: Minimum length of 1. Maximum length of 2000.

Value Pattern: ^ . *\$

Required: No

DisplayName

The Performance Insights metric name.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: ^ . *\$

Required: No

Filter

The filter for the Performance Insights metric.

Type: String to string map

Key Length Constraints: Minimum length of 1. Maximum length of 2000.

Key Pattern: ^.*\$

Value Length Constraints: Minimum length of 1. Maximum length of 2000.

Value Pattern: ^.*\$

Required: No

Metric

The Performance Insights metric.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: ^.*\$

Required: No

Value

The value of the metric. For example, 9 for db.load.avg.

Type: Double

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

Recommendation

The list of recommendations for the insight.

Contents

Note

In the following list, the required parameters are described first.

RecommendationDescription

The recommendation details to help resolve the performance issue. For example, Investigate the following SQLs that contributed to 100% of the total DBLoad during that time period: sql-id

Type: String

Length Constraints: Minimum length of 0. Maximum length of 8000.

Pattern: (. | \n)*

Required: No

RecommendationId

The unique identifier for the recommendation.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: . * \S . *

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

ResponsePartitionKey

If PartitionBy was specified in a DescribeDimensionKeys request, the dimensions are returned in an array. Each element in the array specifies one dimension.

Contents

Note

In the following list, the required parameters are described first.

Dimensions

A dimension map that contains the dimensions for this partition.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 256.

Key Pattern: . *\S . *

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: . *\S . *

Required: Yes

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

ResponseResourceMetric

An object that contains the full name, description, and unit of a metric.

Contents

Note

In the following list, the required parameters are described first.

Description

The description of the metric.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Required: No

Metric

The full name of the metric.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: .*\\$.*

Required: No

Unit

The unit of the metric.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: .*\\$.*

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

ResponseResourceMetricKey

An object describing a Performance Insights metric and one or more dimensions for that metric.

Contents

Note

In the following list, the required parameters are described first.

Metric

The name of a Performance Insights metric to be measured.

Valid values for Metric are:

- db.load.avg - A scaled representation of the number of active sessions for the database engine.
- db.sampledload.avg - The raw number of active sessions for the database engine.
- The counter metrics listed in [Performance Insights operating system counters](#) in the *Amazon Aurora User Guide*.
- The counter metrics listed in [Performance Insights operating system counters](#) in the *Amazon RDS User Guide*.

If the number of active sessions is less than an internal Performance Insights threshold, db.load.avg and db.sampledload.avg are the same value. If the number of active sessions is greater than the internal threshold, Performance Insights samples the active sessions, with db.load.avg showing the scaled values, db.sampledload.avg showing the raw values, and db.sampledload.avg less than db.load.avg. For most use cases, you can query db.load.avg only.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: .*\\$.*

Required: Yes

Dimensions

The valid dimensions for the metric.

Type: String to string map

Key Length Constraints: Minimum length of 0. Maximum length of 256.

Key Pattern: .*\S.*

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: .*\S.*

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for Ruby V3](#)

Tag

Metadata assigned to an Amazon RDS resource consisting of a key-value pair.

Contents

Note

In the following list, the required parameters are described first.

Key

A key is the required name of the tag. The string value can be from 1 to 128 Unicode characters in length and can't be prefixed with aws: or rds:. The string can only contain only the set of Unicode letters, digits, white-space, '_', ':', '!', '/', '=', '+', '-', '@' (Java regex: "`^([\u00p{L}]\u00p{Z}|\u00p{N}_.:/+@\u00p{Z}]*)$`").

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^ . *$`

Required: Yes

Value

A value is the optional value of the tag. The string value can be from 1 to 256 Unicode characters in length and can't be prefixed with aws: or rds:. The string can only contain only the set of Unicode letters, digits, white-space, '_', ':', '!', '/', '=', '+', '-', '@' (Java regex: "`^([\u00p{L}]\u00p{Z}|\u00p{N}_.:/+@\u00p{Z}]*)$`").

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `^ . *$`

Required: Yes

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 [Signing Amazon API requests](#) in the *IAM User Guide*.

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 [Create a signed Amazon API request](#) in the *IAM User Guide*.

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'T'HHMMSS'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 [Elements of an Amazon API request signature](#) in the *IAM User Guide*.

Type: string

Required: Conditional

X-Amz-Security-Token

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

Condition: If you're using temporary security credentials from Amazon STS, 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 [Create a signed Amazon API request](#) in the *IAM User Guide*.

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 Amazon 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 Amazon 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 Amazon access key ID provided does not exist in our records.

HTTP Status Code: 403

NotAuthorized

You do not have permission to perform this action.

HTTP Status Code: 400

OptInRequired

The Amazon 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

ValidationException

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

HTTP Status Code: 400