Athena

Amazon Athena Documentation

API Version 2017-05-18

Athena: Amazon Athena Documentation

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Welcome

Amazon Athena is an interactive query service that lets you use standard SQL to analyze data directly in Amazon S3. You can point Athena at your data in Amazon S3 and run ad-hoc queries and get results in seconds. Athena is serverless, so there is no infrastructure to set up or manage. You pay only for the queries you run. Athena scales automatically—executing queries in parallel—so results are fast, even with large datasets and complex queries. For more information, see What is Amazon Athena in the *Amazon Athena User Guide*.

If you connect to Athena using the JDBC driver, use version 1.1.0 of the driver or later with the Amazon Athena API. Earlier version drivers do not support the API. For more information and to download the driver, see Accessing Amazon Athena with JDBC.

For code samples using the AWS SDK for Java, see Examples and Code Samples in the *Amazon Athena User Guide*.

This document was last published on October 6, 2021.

Actions

The following actions are supported:

BatchGetNamedQuery

Returns the details of a single named query or a list of up to 50 queries, which you provide as an array of query ID strings. Requires you to have access to the workgroup in which the queries were saved. Use ListNamedQueriesInput (p. 99) to get the list of named query IDs in the specified workgroup. If information could not be retrieved for a submitted query ID, information about the query ID submitted is listed under UnprocessedNamedQueryId (p. 121). Named queries differ from executed queries. Use BatchGetQueryExecutionInput (p. 88) to get details about each unique query execution, and ListQueryExecutionsInput (p. 100) to get a list of query execution IDs.

Request Syntax

```
{
   "NamedQueryIds": [ "string" ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

NamedQueryIds (p. 3)

An array of query IDs.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Required: Yes

Response Syntax

```
{
   "NamedQueries": [
      {
         "Database": "string",
         "Description": "string",
         "Name": "string",
         "NamedQueryId": "string",
         "QueryString": "string",
         "WorkGroup": "string"
      }
   ],
   "UnprocessedNamedQueryIds": [
      {
         "ErrorCode": "string",
         "ErrorMessage": "string",
         "NamedQueryId": "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.

NamedQueries (p. 3)

Information about the named query IDs submitted.

Type: Array of NamedQuery (p. 101) objects

UnprocessedNamedQueryIds (p. 3)

Information about provided query IDs.

Type: Array of UnprocessedNamedQueryId (p. 121) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

BatchGetQueryExecution

Returns the details of a single query execution or a list of up to 50 query executions, which you provide as an array of query execution ID strings. Requires you to have access to the workgroup in which the queries ran. To get a list of query execution IDs, use ListQueryExecutions:WorkGroup (p. 58). Query executions differ from named (saved) queries. Use BatchGetNamedQueryInput (p. 87) to get details about named queries.

Request Syntax

```
{
   "QueryExecutionIds": [ "string" ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

QueryExecutionIds (p. 5)

An array of query execution IDs.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Required: Yes

Response Syntax

```
{
   "QueryExecutions": [
      {
         "EngineVersion": {
            "EffectiveEngineVersion": "string",
            "SelectedEngineVersion": "string"
         },
         "Query": "string",
         "QueryExecutionContext": {
            "Catalog": "string",
            "Database": "string"
         },
         "QueryExecutionId": "string",
         "ResultConfiguration": {
            "EncryptionConfiguration": {
               "EncryptionOption": "string",
               "KmsKey": "string"
            },
            "OutputLocation": "string"
         },
         "StatementType": "string",
         "Statistics": {
```

```
            "DataManifestLocation": "string",
            "DataScannedInBytes": number,
            "EngineExecutionTimeInMillis": number,
            "QueryPlanningTimeInMillis": number,
            "QueryQueueTimeInMillis": number,
            "ServiceProcessingTimeInMillis": number,
            "TotalExecutionTimeInMillis": number
         },
         "Status": {
            "CompletionDateTime": number,
            "State": "string",
            "StateChangeReason": "string",
            "SubmissionDateTime": number
         },
         "WorkGroup": "string"
      }
   ],
   "UnprocessedQueryExecutionIds": [
      {
         "ErrorCode": "string",
         "ErrorMessage": "string",
         "QueryExecutionId": "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.

QueryExecutions (p. 5)

Information about a query execution.

Type: Array of QueryExecution (p. 106) objects

UnprocessedQueryExecutionIds (p. 5)

Information about the query executions that failed to run.

Type: Array of UnprocessedQueryExecutionId (p. 122) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateDataCatalog

Creates (registers) a data catalog with the specified name and properties. Catalogs created are visible to all users of the same AWS account.

Request Syntax

```
{
   "Description": "string",
   "Name": "string",
   "Parameters": {
      "string" : "string"
   },
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ],
   "Type": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

Description (p. 8)

A description of the data catalog to be created.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

Name (p. 8)

The name of the data catalog to create. The catalog name must be unique for the AWS account and can use a maximum of 127 alphanumeric, underscore, at sign, or hyphen characters. The remainder of the length constraint of 256 is reserved for use by Athena.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Required: Yes

Parameters (p. 8)

Specifies the Lambda function or functions to use for creating the data catalog. This is a mapping whose values depend on the catalog type.

- For the `HIVE` data catalog type, use the following syntax. The `metadata-function` parameter is required. `The sdk-version` parameter is optional and defaults to the currently supported version.

`metadata-function=lambda_arn, sdk-version=version_number`

- For the `LAMBDA` data catalog type, use one of the following sets of required parameters, but not both.
  - If you have one Lambda function that processes metadata and another for reading the actual data, use the following syntax. Both parameters are required.

    `metadata-function=lambda_arn, record-function=lambda_arn`
  - If you have a composite Lambda function that processes both metadata and data, use the following syntax to specify your Lambda function.

    `function=lambda_arn`
- The `GLUE` type takes a catalog ID parameter and is required. The *`catalog_id`* is the account ID of the AWS account to which the AWS Glue Data Catalog belongs.

  `catalog-id=catalog_id`
  - The `GLUE` data catalog type also applies to the default `AwsDataCatalog` that already exists in your account, of which you can have only one and cannot modify.
  - Queries that specify a AWS Glue Data Catalog other than the default `AwsDataCatalog` must be run on Athena engine version 2.
  - In Regions where Athena engine version 2 is not available, creating new AWS Glue data catalogs results in an `INVALID_INPUT` error.

Type: String to string map

Key Length Constraints: Minimum length of 1. Maximum length of 255.

Key Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Value Length Constraints: Maximum length of 51200.

Required: No

Tags (p. 8)

A list of comma separated tags to add to the data catalog that is created.

Type: Array of Tag (p. 120) objects

Required: No

Type (p. 8)

The type of data catalog to create: `LAMBDA` for a federated catalog, `HIVE` for an external hive metastore, or `GLUE` for an AWS Glue Data Catalog.

Type: String

Valid Values: `LAMBDA | GLUE | HIVE`

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 (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

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- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateNamedQuery

Creates a named query in the specified workgroup. Requires that you have access to the workgroup.

For code samples using the AWS SDK for Java, see Examples and Code Samples in the *Amazon Athena User Guide*.

Request Syntax

```
{
   "ClientRequestToken": "string",
   "Database": "string",
   "Description": "string",
   "Name": "string",
   "QueryString": "string",
   "WorkGroup": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

ClientRequestToken (p. 11)

A unique case-sensitive string used to ensure the request to create the query is idempotent (executes only once). If another `CreateNamedQuery` request is received, the same response is returned and another query is not created. If a parameter has changed, for example, the `QueryString`, an error is returned.

> **Important**
> This token is listed as not required because AWS SDKs (for example the AWS SDK for Java) auto-generate the token for users. If you are not using the AWS SDK or the AWS CLI, you must provide this token or the action will fail.

Type: String

Length Constraints: Minimum length of 32. Maximum length of 128.

Required: No

Database (p. 11)

The database to which the query belongs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Required: Yes

Description (p. 11)

The query description.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

Name (p. 11)

The query name.

Type: String

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

Required: Yes

QueryString (p. 11)

The contents of the query with all query statements.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 262144.

Required: Yes

WorkGroup (p. 11)

The name of the workgroup in which the named query is being created.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: No

Response Syntax

```
{
   "NamedQueryId": "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.

NamedQueryId (p. 12)

The unique ID of the query.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreatePreparedStatement

Creates a prepared statement for use with SQL queries in Athena.

Request Syntax

```
{
   "Description": "string",
   "QueryStatement": "string",
   "StatementName": "string",
   "WorkGroup": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

Description (p. 14)

The description of the prepared statement.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

QueryStatement (p. 14)

The query string for the prepared statement.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 262144.

Required: Yes

StatementName (p. 14)

The name of the prepared statement.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[a-zA-Z_][a-zA-Z0-9_@:]{1,256}`

Required: Yes

WorkGroup (p. 14)

The name of the workgroup to which the prepared statement belongs.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

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 (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateWorkGroup

Creates a workgroup with the specified name.

Request Syntax

```
{
   "Configuration": {
      "BytesScannedCutoffPerQuery": number,
      "EnforceWorkGroupConfiguration": boolean,
      "EngineVersion": {
         "EffectiveEngineVersion": "string",
         "SelectedEngineVersion": "string"
      },
      "PublishCloudWatchMetricsEnabled": boolean,
      "RequesterPaysEnabled": boolean,
      "ResultConfiguration": {
         "EncryptionConfiguration": {
            "EncryptionOption": "string",
            "KmsKey": "string"
         },
         "OutputLocation": "string"
      }
   },
   "Description": "string",
   "Name": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

Configuration (p. 16)

The configuration for the workgroup, which includes the location in Amazon S3 where query results are stored, the encryption configuration, if any, used for encrypting query results, whether the Amazon CloudWatch Metrics are enabled for the workgroup, the limit for the amount of bytes scanned (cutoff) per query, if it is specified, and whether workgroup's settings (specified with `EnforceWorkGroupConfiguration`) in the `WorkGroupConfiguration` override client-side settings. See WorkGroupConfiguration:EnforceWorkGroupConfiguration (p. 125).

Type: WorkGroupConfiguration (p. 125) object

Required: No

Description (p. 16)

The workgroup description.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Required: No

Name (p. 16)

The workgroup name.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: Yes

Tags (p. 16)

A list of comma separated tags to add to the workgroup that is created.

Type: Array of Tag (p. 120) objects

Required: No

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 (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteDataCatalog

Deletes a data catalog.

Request Syntax

```
{
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

Name (p. 19)

The name of the data catalog to delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

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 (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteNamedQuery

Deletes the named query if you have access to the workgroup in which the query was saved.

For code samples using the AWS SDK for Java, see Examples and Code Samples in the *Amazon Athena User Guide*.

Request Syntax

```
{
   "NamedQueryId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

NamedQueryId (p. 21)

The unique ID of the query to delete.

Type: String

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 (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeletePreparedStatement

Deletes the prepared statement with the specified name from the specified workgroup.

Request Syntax

```
{
   "StatementName": "string",
   "WorkGroup": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

StatementName (p. 23)

The name of the prepared statement to delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[a-zA-Z_][a-zA-Z0-9_@:]{1,256}`

Required: Yes

WorkGroup (p. 23)

The workgroup to which the statement to be deleted belongs.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

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 (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

ResourceNotFoundException

A resource, such as a workgroup, was not found.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteWorkGroup

Deletes the workgroup with the specified name. The primary workgroup cannot be deleted.

Request Syntax

```
{
   "RecursiveDeleteOption": boolean,
   "WorkGroup": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

RecursiveDeleteOption (p. 25)

The option to delete the workgroup and its contents even if the workgroup contains any named queries or query executions.

Type: Boolean

Required: No

WorkGroup (p. 25)

The unique name of the workgroup to delete.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

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 (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
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- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetDatabase

Returns a database object for the specified database and data catalog.

Request Syntax

```
{
   "CatalogName": "string",
   "DatabaseName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

CatalogName (p. 27)

The name of the data catalog that contains the database to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Required: Yes

DatabaseName (p. 27)

The name of the database to return.

Type: String

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

Required: Yes

Response Syntax

```
{
   "Database": {
      "Description": "string",
      "Name": "string",
      "Parameters": {
         "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.

Database (p. 27)

The database returned.

Type: Database (p. 92) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

MetadataException

An exception that Athena received when it called a custom metastore. Occurs if the error is not caused by user input (`InvalidRequestException`) or from the Athena platform (`InternalServerException`). For example, if a user-created Lambda function is missing permissions, the Lambda `4XX` exception is returned in a `MetadataException`.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetDataCatalog

Returns the specified data catalog.

Request Syntax

```
{
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

Name (p. 29)

The name of the data catalog to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Required: Yes

Response Syntax

```
{
   "DataCatalog": {
      "Description": "string",
      "Name": "string",
      "Parameters": {
         "string" : "string"
      },
      "Type": "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.

DataCatalog (p. 29)

The data catalog returned.

Type: DataCatalog (p. 93) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetNamedQuery

Returns information about a single query. Requires that you have access to the workgroup in which the query was saved.

Request Syntax

```
{
   "NamedQueryId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

NamedQueryId (p. 31)

The unique ID of the query. Use ListNamedQueries (p. 52) to get query IDs.

Type: String

Required: Yes

Response Syntax

```
{
   "NamedQuery": {
      "Database": "string",
      "Description": "string",
      "Name": "string",
      "NamedQueryId": "string",
      "QueryString": "string",
      "WorkGroup": "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.

NamedQuery (p. 31)

Information about the query.

Type: NamedQuery (p. 101) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetPreparedStatement

Retrieves the prepared statement with the specified name from the specified workgroup.

Request Syntax

```
{
   "StatementName": "string",
   "WorkGroup": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

StatementName (p. 33)

The name of the prepared statement to retrieve.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[a-zA-Z_][a-zA-Z0-9_@:]{1,256}`

Required: Yes

WorkGroup (p. 33)

The workgroup to which the statement to be retrieved belongs.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: Yes

Response Syntax

```
{
   "PreparedStatement": {
      "Description": "string",
      "LastModifiedTime": number,
      "QueryStatement": "string",
      "StatementName": "string",
      "WorkGroupName": "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.

PreparedStatement (p. 33)

The name of the prepared statement that was retrieved.

Type: PreparedStatement (p. 103) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

ResourceNotFoundException

A resource, such as a workgroup, was not found.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetQueryExecution

Returns information about a single execution of a query if you have access to the workgroup in which the query ran. Each time a query executes, information about the query execution is saved with a unique ID.

Request Syntax

```
{
   "QueryExecutionId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

QueryExecutionId (p. 35)

The unique ID of the query execution.

Type: String

Required: Yes

Response Syntax

```
{
   "QueryExecution": {
      "EngineVersion": {
         "EffectiveEngineVersion": "string",
         "SelectedEngineVersion": "string"
      },
      "Query": "string",
      "QueryExecutionContext": {
         "Catalog": "string",
         "Database": "string"
      },
      "QueryExecutionId": "string",
      "ResultConfiguration": {
         "EncryptionConfiguration": {
            "EncryptionOption": "string",
            "KmsKey": "string"
         },
         "OutputLocation": "string"
      },
      "StatementType": "string",
      "Statistics": {
         "DataManifestLocation": "string",
         "DataScannedInBytes": number,
         "EngineExecutionTimeInMillis": number,
         "QueryPlanningTimeInMillis": number,
         "QueryQueueTimeInMillis": number,
         "ServiceProcessingTimeInMillis": number,
         "TotalExecutionTimeInMillis": number
      },
```

```
      "Status": {
         "CompletionDateTime": number,
         "State": "string",
         "StateChangeReason": "string",
         "SubmissionDateTime": number
      },
      "WorkGroup": "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.

QueryExecution (p. 35)

Information about the query execution.

Type: QueryExecution (p. 106) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetQueryResults

Streams the results of a single query execution specified by `QueryExecutionId` from the Athena query results location in Amazon S3. For more information, see Query Results in the *Amazon Athena User Guide*. This request does not execute the query but returns results. Use StartQueryExecution (p. 70) to run a query.

To stream query results successfully, the IAM principal with permission to call `GetQueryResults` also must have permissions to the Amazon S3 `GetObject` action for the Athena query results location.

Important
IAM principals with permission to the Amazon S3 `GetObject` action for the query results location are able to retrieve query results from Amazon S3 even if permission to the `GetQueryResults` action is denied. To restrict user or role access, ensure that Amazon S3 permissions to the Athena query location are denied.

Request Syntax

```
{
   "MaxResults": number,
   "NextToken": "string",
   "QueryExecutionId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

MaxResults (p. 37)

The maximum number of results (rows) to return in this request.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

NextToken (p. 37)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the `NextToken` from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

QueryExecutionId (p. 37)

The unique ID of the query execution.

Type: String

Required: Yes

Response Syntax

```
{
   "NextToken": "string",
   "ResultSet": {
      "ResultSetMetadata": {
         "ColumnInfo": [
            {
               "CaseSensitive": boolean,
               "CatalogName": "string",
               "Label": "string",
               "Name": "string",
               "Nullable": "string",
               "Precision": number,
               "Scale": number,
               "SchemaName": "string",
               "TableName": "string",
               "Type": "string"
            }
         ]
      },
      "Rows": [
         {
            "Data": [
               {
                  "VarCharValue": "string"
               }
            ]
         }
      ]
   },
   "UpdateCount": number
}
```

Response Elements

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

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

NextToken (p. 38)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the `NextToken` from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

ResultSet (p. 38)

The results of the query execution.

Type: ResultSet (p. 115) object

UpdateCount (p. 38)

The number of rows inserted with a `CREATE TABLE AS SELECT` statement.

Type: Long

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetTableMetadata

Returns table metadata for the specified catalog, database, and table.

Request Syntax

```
{
   "CatalogName": "string",
   "DatabaseName": "string",
   "TableName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

CatalogName (p. 40)

The name of the data catalog that contains the database and table metadata to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Required: Yes

DatabaseName (p. 40)

The name of the database that contains the table metadata to return.

Type: String

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

Required: Yes

TableName (p. 40)

The name of the table for which metadata is returned.

Type: String

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

Required: Yes

Response Syntax

```
{
   "TableMetadata": {
      "Columns": [
```

```
         {
            "Comment": "string",
            "Name": "string",
            "Type": "string"
         }
      ],
      "CreateTime": number,
      "LastAccessTime": number,
      "Name": "string",
      "Parameters": {
         "string" : "string"
      },
      "PartitionKeys": [
         {
            "Comment": "string",
            "Name": "string",
            "Type": "string"
         }
      ],
      "TableType": "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.

TableMetadata (p. 40)

An object that contains table metadata.

Type: TableMetadata (p. 118) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

MetadataException

An exception that Athena received when it called a custom metastore. Occurs if the error is not caused by user input (`InvalidRequestException`) or from the Athena platform (`InternalServerException`). For example, if a user-created Lambda function is missing permissions, the Lambda `4XX` exception is returned in a `MetadataException`.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetWorkGroup

Returns information about the workgroup with the specified name.

Request Syntax

```
{
   "WorkGroup": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

WorkGroup (p. 43)

The name of the workgroup.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: Yes

Response Syntax

```
{
   "WorkGroup": {
      "Configuration": {
         "BytesScannedCutoffPerQuery": number,
         "EnforceWorkGroupConfiguration": boolean,
         "EngineVersion": {
            "EffectiveEngineVersion": "string",
            "SelectedEngineVersion": "string"
         },
         "PublishCloudWatchMetricsEnabled": boolean,
         "RequesterPaysEnabled": boolean,
         "ResultConfiguration": {
            "EncryptionConfiguration": {
               "EncryptionOption": "string",
               "KmsKey": "string"
            },
            "OutputLocation": "string"
         }
      },
      "CreationTime": number,
      "Description": "string",
      "Name": "string",
      "State": "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.

WorkGroup (p. 43)

Information about the workgroup.

Type: WorkGroup (p. 123) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListDatabases

Lists the databases in the specified data catalog.

Request Syntax

```
{
   "CatalogName": "string",
   "MaxResults": number,
   "NextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

CatalogName (p. 45)

The name of the data catalog that contains the databases to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Required: Yes

MaxResults (p. 45)

Specifies the maximum number of results to return.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 50.

Required: No

NextToken (p. 45)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the `NextToken` from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

Response Syntax

```
{
   "DatabaseList": [
      {
         "Description": "string",
```

```
         "Name": "string",
         "Parameters": {
            "string" : "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.

DatabaseList (p. 45)

A list of databases from a data catalog.

Type: Array of Database (p. 92) objects

NextToken (p. 45)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the NextToken from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

MetadataException

An exception that Athena received when it called a custom metastore. Occurs if the error is not caused by user input (`InvalidRequestException`) or from the Athena platform (`InternalServerException`). For example, if a user-created Lambda function is missing permissions, the Lambda `4XX` exception is returned in a `MetadataException`.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListDataCatalogs

Lists the data catalogs in the current AWS account.

Request Syntax

```
{
   "MaxResults": number,
   "NextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

MaxResults (p. 48)

Specifies the maximum number of data catalogs to return.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 50.

Required: No

NextToken (p. 48)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the NextToken from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

Response Syntax

```
{
   "DataCatalogsSummary": [
      {
         "CatalogName": "string",
         "Type": "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.

DataCatalogsSummary (p. 48)

A summary list of data catalogs.

Type: Array of DataCatalogSummary (p. 95) objects

NextToken (p. 48)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the NextToken from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListEngineVersions

Returns a list of engine versions that are available to choose from, including the Auto option.

Request Syntax

```
{
   "MaxResults": number,
   "NextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

MaxResults (p. 50)

The maximum number of engine versions to return in this request.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

Required: No

NextToken (p. 50)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the `NextToken` from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

Response Syntax

```
{
   "EngineVersions": [
      {
         "EffectiveEngineVersion": "string",
         "SelectedEngineVersion": "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.

EngineVersions (p. 50)

A list of engine versions that are available to choose from.

Type: Array of EngineVersion (p. 98) objects

Array Members: Minimum number of 0 items. Maximum number of 10 items.

NextToken (p. 50)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the `NextToken` from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListNamedQueries

Provides a list of available query IDs only for queries saved in the specified workgroup. Requires that you have access to the specified workgroup. If a workgroup is not specified, lists the saved queries for the primary workgroup.

For code samples using the AWS SDK for Java, see Examples and Code Samples in the *Amazon Athena User Guide*.

Request Syntax

```
{
   "MaxResults": number,
   "NextToken": "string",
   "WorkGroup": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

MaxResults (p. 52)

The maximum number of queries to return in this request.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 50.

Required: No

NextToken (p. 52)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the `NextToken` from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

WorkGroup (p. 52)

The name of the workgroup from which the named queries are being returned. If a workgroup is not specified, the saved queries for the primary workgroup are returned.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: No

Response Syntax

```
{
   "NamedQueryIds": [ "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.

NamedQueryIds (p. 53)

The list of unique query IDs.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 50 items.

NextToken (p. 53)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the `NextToken` from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go

- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListPreparedStatements

Lists the prepared statements in the specfied workgroup.

Request Syntax

```
{
   "MaxResults": number,
   "NextToken": "string",
   "WorkGroup": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

MaxResults (p. 55)

The maximum number of results to return in this request.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 50.

Required: No

NextToken (p. 55)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the `NextToken` from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

WorkGroup (p. 55)

The workgroup to list the prepared statements for.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: Yes

Response Syntax

```
{
   "NextToken": "string",
   "PreparedStatements": [
      {
```

```
        "LastModifiedTime": number,
        "StatementName": "string"
      }
   ]
}
```

Response Elements

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

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

NextToken (p. 55)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the `NextToken` from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

PreparedStatements (p. 55)

The list of prepared statements for the workgroup.

Type: Array of PreparedStatementSummary (p. 105) objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListQueryExecutions

Provides a list of available query execution IDs for the queries in the specified workgroup. If a workgroup is not specified, returns a list of query execution IDs for the primary workgroup. Requires you to have access to the workgroup in which the queries ran.

For code samples using the AWS SDK for Java, see Examples and Code Samples in the *Amazon Athena User Guide*.

Request Syntax

```
{
   "MaxResults": number,
   "NextToken": "string",
   "WorkGroup": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

MaxResults (p. 58)

The maximum number of query executions to return in this request.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 50.

Required: No

NextToken (p. 58)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the `NextToken` from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

WorkGroup (p. 58)

The name of the workgroup from which queries are being returned. If a workgroup is not specified, a list of available query execution IDs for the queries in the primary workgroup is returned.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: No

Response Syntax

```
{
   "NextToken": "string",
   "QueryExecutionIds": [ "string" ]
}
```

Response Elements

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

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

NextToken (p. 59)

A token to be used by the next request if this request is truncated.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

QueryExecutionIds (p. 59)

The unique IDs of each query execution as an array of strings.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2

- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListTableMetadata

Lists the metadata for the tables in the specified data catalog database.

Request Syntax

```
{
   "CatalogName": "string",
   "DatabaseName": "string",
   "Expression": "string",
   "MaxResults": number,
   "NextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

CatalogName (p. 61)

The name of the data catalog for which table metadata should be returned.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Required: Yes

DatabaseName (p. 61)

The name of the database for which table metadata should be returned.

Type: String

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

Required: Yes

Expression (p. 61)

A regex filter that pattern-matches table names. If no expression is supplied, metadata for all tables are listed.

Type: String

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

Required: No

MaxResults (p. 61)

Specifies the maximum number of results to return.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 50.

Required: No

NextToken (p. 61)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the NextToken from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

Response Syntax

```
{
   "NextToken": "string",
   "TableMetadataList": [
      {
         "Columns": [
            {
               "Comment": "string",
               "Name": "string",
               "Type": "string"
            }
         ],
         "CreateTime": number,
         "LastAccessTime": number,
         "Name": "string",
         "Parameters": {
            "string" : "string"
         },
         "PartitionKeys": [
            {
               "Comment": "string",
               "Name": "string",
               "Type": "string"
            }
         ],
         "TableType": "string"
      }
   ]
}
```

Response Elements

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

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

NextToken (p. 62)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the NextToken from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

TableMetadataList (p. 62)

A list of table metadata.

Type: Array of TableMetadata (p. 118) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

MetadataException

An exception that Athena received when it called a custom metastore. Occurs if the error is not caused by user input (`InvalidRequestException`) or from the Athena platform (`InternalServerException`). For example, if a user-created Lambda function is missing permissions, the Lambda `4XX` exception is returned in a `MetadataException`.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListTagsForResource

Lists the tags associated with an Athena workgroup or data catalog resource.

Request Syntax

```
{
   "MaxResults": number,
   "NextToken": "string",
   "ResourceARN": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

MaxResults (p. 64)

The maximum number of results to be returned per request that lists the tags for the resource.

Type: Integer

Valid Range: Minimum value of 75.

Required: No

NextToken (p. 64)

The token for the next set of results, or null if there are no additional results for this request, where the request lists the tags for the resource with the specified ARN.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

ResourceARN (p. 64)

Lists the tags for the resource with the specified ARN.

Type: String

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

Required: Yes

Response Syntax

```
{
   "NextToken": "string",
   "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.

NextToken (p. 64)

A token to be used by the next request if this request is truncated.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Tags (p. 64)

The list of tags associated with the specified resource.

Type: Array of Tag (p. 120) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

ResourceNotFoundException

A resource, such as a workgroup, was not found.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2

- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListWorkGroups

Lists available workgroups for the account.

Request Syntax

```
{
   "MaxResults": number,
   "NextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

MaxResults (p. 67)

The maximum number of workgroups to return in this request.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 50.

Required: No

NextToken (p. 67)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the `NextToken` from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

Response Syntax

```
{
   "NextToken": "string",
   "WorkGroups": [
      {
         "CreationTime": number,
         "Description": "string",
         "EngineVersion": {
            "EffectiveEngineVersion": "string",
            "SelectedEngineVersion": "string"
         },
         "Name": "string",
         "State": "string"
      }
   ]
}
```

Response Elements

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

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

NextToken (p. 67)

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the `NextToken` from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

WorkGroups (p. 67)

A list of WorkGroupSummary (p. 129) objects that include the names, descriptions, creation times, and states for each workgroup.

Type: Array of WorkGroupSummary (p. 129) objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

StartQueryExecution

Runs the SQL query statements contained in the `Query`. Requires you to have access to the workgroup in which the query ran. Running queries against an external catalog requires GetDataCatalog (p. 29) permission to the catalog. For code samples using the AWS SDK for Java, see Examples and Code Samples in the *Amazon Athena User Guide*.

Request Syntax

```
{
   "ClientRequestToken": "string",
   "QueryExecutionContext": {
      "Catalog": "string",
      "Database": "string"
   },
   "QueryString": "string",
   "ResultConfiguration": {
      "EncryptionConfiguration": {
         "EncryptionOption": "string",
         "KmsKey": "string"
      },
      "OutputLocation": "string"
   },
   "WorkGroup": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

ClientRequestToken (p. 70)

A unique case-sensitive string used to ensure the request to create the query is idempotent (executes only once). If another `StartQueryExecution` request is received, the same response is returned and another query is not created. If a parameter has changed, for example, the `QueryString`, an error is returned.

> **Important**
> This token is listed as not required because AWS SDKs (for example the AWS SDK for Java) auto-generate the token for users. If you are not using the AWS SDK or the AWS CLI, you must provide this token or the action will fail.

Type: String

Length Constraints: Minimum length of 32. Maximum length of 128.

Required: No

QueryExecutionContext (p. 70)

The database within which the query executes.

Type: QueryExecutionContext (p. 108) object

Required: No

QueryString (p. 70)

The SQL query statements to be executed.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 262144.

Required: Yes

ResultConfiguration (p. 70)

Specifies information about where and how to save the results of the query execution. If the query runs in a workgroup, then workgroup's settings may override query settings. This affects the query results location. The workgroup settings override is specified in EnforceWorkGroupConfiguration (true/false) in the WorkGroupConfiguration. See WorkGroupConfiguration:EnforceWorkGroupConfiguration (p. 125).

Type: ResultConfiguration (p. 112) object

Required: No

WorkGroup (p. 70)

The name of the workgroup in which the query is being started.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: No

Response Syntax

```
{
   "QueryExecutionId": "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.

QueryExecutionId (p. 71)

The unique ID of the query that ran as a result of this request.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

TooManyRequestsException

Indicates that the request was throttled.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

StopQueryExecution

Stops a query execution. Requires you to have access to the workgroup in which the query ran.

For code samples using the AWS SDK for Java, see Examples and Code Samples in the *Amazon Athena User Guide*.

Request Syntax

```
{
   "QueryExecutionId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

QueryExecutionId (p. 73)

The unique ID of the query execution to stop.

Type: String

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 (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

TagResource

Adds one or more tags to an Athena resource. A tag is a label that you assign to a resource. In Athena, a resource can be a workgroup or data catalog. Each tag consists of a key and an optional value, both of which you define. For example, you can use tags to categorize Athena workgroups or data catalogs by purpose, owner, or environment. Use a consistent set of tag keys to make it easier to search and filter workgroups or data catalogs in your account. For best practices, see Tagging Best Practices. Tag keys can be from 1 to 128 UTF-8 Unicode characters, and tag values can be from 0 to 256 UTF-8 Unicode characters. Tags can use letters and numbers representable in UTF-8, and the following characters: + - = . _ : / @. Tag keys and values are case-sensitive. Tag keys must be unique per resource. If you specify more than one tag, separate them by commas.

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

ResourceARN (p. 75)

Specifies the ARN of the Athena resource (workgroup or data catalog) to which tags are to be added.

Type: String

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

Required: Yes

Tags (p. 75)

A collection of one or more tags, separated by commas, to be added to an Athena workgroup or data catalog resource.

Type: Array of Tag (p. 120) objects

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 (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

ResourceNotFoundException

A resource, such as a workgroup, was not found.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UntagResource

Removes one or more tags from a data catalog or workgroup resource.

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

ResourceARN (p. 77)

Specifies the ARN of the resource from which tags are to be removed.

Type: String

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

Required: Yes

TagKeys (p. 77)

A comma-separated list of one or more tag keys whose tags are to be removed from the specified resource.

Type: Array of strings

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

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 (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

ResourceNotFoundException

A resource, such as a workgroup, was not found.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateDataCatalog

Updates the data catalog that has the specified name.

Request Syntax

```
{
   "Description": "string",
   "Name": "string",
   "Parameters": {
      "string" : "string"
   },
   "Type": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

Description (p. 79)

New or modified text that describes the data catalog.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

Name (p. 79)

The name of the data catalog to update. The catalog name must be unique for the AWS account and can use a maximum of 127 alphanumeric, underscore, at sign, or hyphen characters. The remainder of the length constraint of 256 is reserved for use by Athena.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Required: Yes

Parameters (p. 79)

Specifies the Lambda function or functions to use for updating the data catalog. This is a mapping whose values depend on the catalog type.

- For the `HIVE` data catalog type, use the following syntax. The `metadata-function` parameter is required. `The sdk-version` parameter is optional and defaults to the currently supported version.

  `metadata-function=`*`lambda_arn`*`, sdk-version=`*`version_number`*

- For the `LAMBDA` data catalog type, use one of the following sets of required parameters, but not both.

- If you have one Lambda function that processes metadata and another for reading the actual data, use the following syntax. Both parameters are required.

  `metadata-function=lambda_arn, record-function=lambda_arn`
- If you have a composite Lambda function that processes both metadata and data, use the following syntax to specify your Lambda function.

  `function=lambda_arn`

Type: String to string map

Key Length Constraints: Minimum length of 1. Maximum length of 255.

Key Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Value Length Constraints: Maximum length of 51200.

Required: No

Type (p. 79)

Specifies the type of data catalog to update. Specify `LAMBDA` for a federated catalog, `HIVE` for an external hive metastore, or `GLUE` for an AWS Glue Data Catalog.

Type: String

Valid Values: `LAMBDA | GLUE | HIVE`

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 (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdatePreparedStatement

Updates a prepared statement.

Request Syntax

```
{
   "Description": "string",
   "QueryStatement": "string",
   "StatementName": "string",
   "WorkGroup": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

Description (p. 82)

The description of the prepared statement.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

QueryStatement (p. 82)

The query string for the prepared statement.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 262144.

Required: Yes

StatementName (p. 82)

The name of the prepared statement.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[a-zA-Z_][a-zA-Z0-9_@:]{1,256}`

Required: Yes

WorkGroup (p. 82)

The workgroup for the prepared statement.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

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 (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

ResourceNotFoundException

A resource, such as a workgroup, was not found.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateWorkGroup

Updates the workgroup with the specified name. The workgroup's name cannot be changed.

Request Syntax

```
{
   "ConfigurationUpdates": {
      "BytesScannedCutoffPerQuery": number,
      "EnforceWorkGroupConfiguration": boolean,
      "EngineVersion": {
         "EffectiveEngineVersion": "string",
         "SelectedEngineVersion": "string"
      },
      "PublishCloudWatchMetricsEnabled": boolean,
      "RemoveBytesScannedCutoffPerQuery": boolean,
      "RequesterPaysEnabled": boolean,
      "ResultConfigurationUpdates": {
         "EncryptionConfiguration": {
            "EncryptionOption": "string",
            "KmsKey": "string"
         },
         "OutputLocation": "string",
         "RemoveEncryptionConfiguration": boolean,
         "RemoveOutputLocation": boolean
      }
   },
   "Description": "string",
   "State": "string",
   "WorkGroup": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 131).

The request accepts the following data in JSON format.

ConfigurationUpdates (p. 84)

The workgroup configuration that will be updated for the given workgroup.

Type: WorkGroupConfigurationUpdates (p. 127) object

Required: No

Description (p. 84)

The workgroup description.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Required: No

State (p. 84)

The workgroup state that will be updated for the given workgroup.

Type: String

Valid Values: `ENABLED | DISABLED`

Required: No

WorkGroup (p. 84)

The specified workgroup that will be updated.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

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 (p. 133).

InternalServerException

Indicates a platform issue, which may be due to a transient condition or outage.

HTTP Status Code: 500

InvalidRequestException

Indicates that something is wrong with the input to the request. For example, a required parameter may be missing or out of range.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

Data Types

The Amazon Athena 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:

BatchGetNamedQueryInput

Contents

NamedQueryIds

An array of query IDs.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

BatchGetQueryExecutionInput

Contents

QueryExecutionIds

An array of query execution IDs.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Column

Contains metadata for a column in a table.

Contents

Comment

Optional information about the column.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Required: No

Name

The name of the column.

Type: String

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

Required: Yes

Type

The data type of the column.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 4096.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ColumnInfo

Information about the columns in a query execution result.

Contents

CaseSensitive

Indicates whether values in the column are case-sensitive.

Type: Boolean

Required: No

CatalogName

The catalog to which the query results belong.

Type: String

Required: No

Label

A column label.

Type: String

Required: No

Name

The name of the column.

Type: String

Required: Yes

Nullable

Indicates the column's nullable status.

Type: String

Valid Values: `NOT_NULL | NULLABLE | UNKNOWN`

Required: No

Precision

For `DECIMAL` data types, specifies the total number of digits, up to 38. For performance reasons, we recommend up to 18 digits.

Type: Integer

Required: No

Scale

For `DECIMAL` data types, specifies the total number of digits in the fractional part of the value. Defaults to 0.

Type: Integer

Required: No

SchemaName

The schema name (database name) to which the query results belong.

Type: String

Required: No

TableName

The table name for the query results.

Type: String

Required: No

Type

The data type of the column.

Type: String

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Database

Contains metadata information for a database in a data catalog.

Contents

Description

An optional description of the database.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

Name

The name of the database.

Type: String

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

Required: Yes

Parameters

A set of custom key/value pairs.

Type: String to string map

Key Length Constraints: Minimum length of 1. Maximum length of 255.

Key Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Value Length Constraints: Maximum length of 51200.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DataCatalog

Contains information about a data catalog in an AWS account.

Contents

Description

An optional description of the data catalog.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

Name

The name of the data catalog. The catalog name must be unique for the AWS account and can use a maximum of 127 alphanumeric, underscore, at sign, or hyphen characters. The remainder of the length constraint of 256 is reserved for use by Athena.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Required: Yes

Parameters

Specifies the Lambda function or functions to use for the data catalog. This is a mapping whose values depend on the catalog type.

- For the `HIVE` data catalog type, use the following syntax. The `metadata-function` parameter is required. `The sdk-version` parameter is optional and defaults to the currently supported version.

  `metadata-function=`*`lambda_arn`*`, sdk-version=`*`version_number`*

- For the `LAMBDA` data catalog type, use one of the following sets of required parameters, but not both.
  - If you have one Lambda function that processes metadata and another for reading the actual data, use the following syntax. Both parameters are required.

    `metadata-function=`*`lambda_arn`*`, record-function=`*`lambda_arn`*
  - If you have a composite Lambda function that processes both metadata and data, use the following syntax to specify your Lambda function.

    `function=`*`lambda_arn`*
- The `GLUE` type takes a catalog ID parameter and is required. The *`catalog_id`* is the account ID of the AWS account to which the AWS Glue catalog belongs.

  `catalog-id=`*`catalog_id`*
  - The `GLUE` data catalog type also applies to the default `AwsDataCatalog` that already exists in your account, of which you can have only one and cannot modify.
  - Queries that specify a AWS Glue Data Catalog other than the default `AwsDataCatalog` must be run on Athena engine version 2.

Type: String to string map

Key Length Constraints: Minimum length of 1. Maximum length of 255.

Key Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Value Length Constraints: Maximum length of 51200.

Required: No

Type

The type of data catalog to create: `LAMBDA` for a federated catalog, `HIVE` for an external hive metastore, or `GLUE` for an AWS Glue Data Catalog.

Type: String

Valid Values: `LAMBDA | GLUE | HIVE`

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DataCatalogSummary

The summary information for the data catalog, which includes its name and type.

Contents

CatalogName

The name of the data catalog. The catalog name is unique for the AWS account and can use a maximum of 127 alphanumeric, underscore, at sign, or hyphen characters. The remainder of the length constraint of 256 is reserved for use by Athena.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Required: No

Type

The data catalog type.

Type: String

Valid Values: `LAMBDA | GLUE | HIVE`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Datum

A piece of data (a field in the table).

Contents

VarCharValue

The value of the datum.

Type: String

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

EncryptionConfiguration

If query results are encrypted in Amazon S3, indicates the encryption option used (for example, `SSE-KMS` or `CSE-KMS`) and key information.

Contents

EncryptionOption

Indicates whether Amazon S3 server-side encryption with Amazon S3-managed keys (`SSE-S3`), server-side encryption with KMS-managed keys (`SSE-KMS`), or client-side encryption with KMS-managed keys (CSE-KMS) is used.

If a query runs in a workgroup and the workgroup overrides client-side settings, then the workgroup's setting for encryption is used. It specifies whether query results must be encrypted, for all queries that run in this workgroup.

Type: String

Valid Values: `SSE_S3 | SSE_KMS | CSE_KMS`

Required: Yes

KmsKey

For `SSE-KMS` and `CSE-KMS`, this is the KMS key ARN or ID.

Type: String

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

EngineVersion

The Athena engine version for running queries.

Contents

EffectiveEngineVersion

Read only. The engine version on which the query runs. If the user requests a valid engine version other than Auto, the effective engine version is the same as the engine version that the user requested. If the user requests Auto, the effective engine version is chosen by Athena. When a request to update the engine version is made by a `CreateWorkGroup` or `UpdateWorkGroup` operation, the `EffectiveEngineVersion` field is ignored.

Type: String

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

Required: No

SelectedEngineVersion

The engine version requested by the user. Possible values are determined by the output of `ListEngineVersions`, including Auto. The default is Auto.

Type: String

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

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListNamedQueriesInput

Contents

MaxResults

The maximum number of queries to return in this request.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 50.

Required: No

NextToken

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the `NextToken` from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

WorkGroup

The name of the workgroup from which the named queries are being returned. If a workgroup is not specified, the saved queries for the primary workgroup are returned.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListQueryExecutionsInput

Contents

MaxResults

The maximum number of query executions to return in this request.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 50.

Required: No

NextToken

A token generated by the Athena service that specifies where to continue pagination if a previous request was truncated. To obtain the next set of pages, pass in the `NextToken` from the response object of the previous page call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

WorkGroup

The name of the workgroup from which queries are being returned. If a workgroup is not specified, a list of available query execution IDs for the queries in the primary workgroup is returned.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

NamedQuery

A query, where `QueryString` is the list of SQL query statements that comprise the query.

Contents

Database

The database to which the query belongs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Required: Yes

Description

The query description.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

Name

The query name.

Type: String

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

Required: Yes

NamedQueryId

The unique identifier of the query.

Type: String

Required: No

QueryString

The SQL query statements that comprise the query.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 262144.

Required: Yes

WorkGroup

The name of the workgroup that contains the named query.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

PreparedStatement

A prepared SQL statement for use with Athena.

Contents

Description

The description of the prepared statement.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

LastModifiedTime

The last modified time of the prepared statement.

Type: Timestamp

Required: No

QueryStatement

The query string for the prepared statement.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 262144.

Required: No

StatementName

The name of the prepared statement.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[a-zA-Z_][a-zA-Z0-9_@:]{1,256}`

Required: No

WorkGroupName

The name of the workgroup to which the prepared statement belongs.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: No

See Also

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

- AWS SDK for C++

- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

PreparedStatementSummary

The name and last modified time of the prepared statement.

Contents

LastModifiedTime

The last modified time of the prepared statement.

Type: Timestamp

Required: No

StatementName

The name of the prepared statement.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[a-zA-Z_][a-zA-Z0-9_@:]{1,256}`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

QueryExecution

Information about a single instance of a query execution.

Contents

EngineVersion

The engine version that executed the query.

Type: EngineVersion (p. 98) object

Required: No

Query

The SQL query statements which the query execution ran.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 262144.

Required: No

QueryExecutionContext

The database in which the query execution occurred.

Type: QueryExecutionContext (p. 108) object

Required: No

QueryExecutionId

The unique identifier for each query execution.

Type: String

Required: No

ResultConfiguration

The location in Amazon S3 where query results were stored and the encryption option, if any, used for query results. These are known as "client-side settings". If workgroup settings override client-side settings, then the query uses the location for the query results and the encryption configuration that are specified for the workgroup.

Type: ResultConfiguration (p. 112) object

Required: No

StatementType

The type of query statement that was run. `DDL` indicates DDL query statements. `DML` indicates DML (Data Manipulation Language) query statements, such as `CREATE TABLE AS SELECT`. `UTILITY` indicates query statements other than DDL and DML, such as `SHOW CREATE TABLE`, or `DESCRIBE TABLE`.

Type: String

Valid Values: `DDL | DML | UTILITY`

Required: No

Statistics

Query execution statistics, such as the amount of data scanned, the amount of time that the query took to process, and the type of statement that was run.

Type: QueryExecutionStatistics (p. 109) object

Required: No

Status

The completion date, current state, submission time, and state change reason (if applicable) for the query execution.

Type: QueryExecutionStatus (p. 111) object

Required: No

WorkGroup

The name of the workgroup in which the query ran.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

QueryExecutionContext

The database and data catalog context in which the query execution occurs.

Contents

Catalog

The name of the data catalog used in the query execution.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Required: No

Database

The name of the database used in the query execution. The database must exist in the catalog.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

QueryExecutionStatistics

The amount of data scanned during the query execution and the amount of time that it took to execute, and the type of statement that was run.

Contents

DataManifestLocation

The location and file name of a data manifest file. The manifest file is saved to the Athena query results location in Amazon S3. The manifest file tracks files that the query wrote to Amazon S3. If the query fails, the manifest file also tracks files that the query intended to write. The manifest is useful for identifying orphaned files resulting from a failed query. For more information, see Working with Query Results, Output Files, and Query History in the *Amazon Athena User Guide*.

Type: String

Required: No

DataScannedInBytes

The number of bytes in the data that was queried.

Type: Long

Required: No

EngineExecutionTimeInMillis

The number of milliseconds that the query took to execute.

Type: Long

Required: No

QueryPlanningTimeInMillis

The number of milliseconds that Athena took to plan the query processing flow. This includes the time spent retrieving table partitions from the data source. Note that because the query engine performs the query planning, query planning time is a subset of engine processing time.

Type: Long

Required: No

QueryQueueTimeInMillis

The number of milliseconds that the query was in your query queue waiting for resources. Note that if transient errors occur, Athena might automatically add the query back to the queue.

Type: Long

Required: No

ServiceProcessingTimeInMillis

The number of milliseconds that Athena took to finalize and publish the query results after the query engine finished running the query.

Type: Long

Required: No

TotalExecutionTimeInMillis

The number of milliseconds that Athena took to run the query.

Type: Long

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

QueryExecutionStatus

The completion date, current state, submission time, and state change reason (if applicable) for the query execution.

Contents

CompletionDateTime

The date and time that the query completed.

Type: Timestamp

Required: No

State

The state of query execution. `QUEUED` indicates that the query has been submitted to the service, and Athena will execute the query as soon as resources are available. `RUNNING` indicates that the query is in execution phase. `SUCCEEDED` indicates that the query completed without errors. `FAILED` indicates that the query experienced an error and did not complete processing. `CANCELLED` indicates that a user input interrupted query execution.

Note
Athena automatically retries your queries in cases of certain transient errors. As a result, you may see the query state transition from `RUNNING` or `FAILED` to `QUEUED`.

Type: String

Valid Values: `QUEUED | RUNNING | SUCCEEDED | FAILED | CANCELLED`

Required: No

StateChangeReason

Further detail about the status of the query.

Type: String

Required: No

SubmissionDateTime

The date and time that the query was submitted.

Type: Timestamp

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ResultConfiguration

The location in Amazon S3 where query results are stored and the encryption option, if any, used for query results. These are known as "client-side settings". If workgroup settings override client-side settings, then the query uses the workgroup settings.

Contents

EncryptionConfiguration

If query results are encrypted in Amazon S3, indicates the encryption option used (for example, `SSE-KMS` or `CSE-KMS`) and key information. This is a client-side setting. If workgroup settings override client-side settings, then the query uses the encryption configuration that is specified for the workgroup, and also uses the location for storing query results specified in the workgroup. See WorkGroupConfiguration:EnforceWorkGroupConfiguration (p. 125) and Workgroup Settings Override Client-Side Settings.

Type: EncryptionConfiguration (p. 97) object

Required: No

OutputLocation

The location in Amazon S3 where your query results are stored, such as `s3://path/to/query/bucket/`. To run the query, you must specify the query results location using one of the ways: either for individual queries using either this setting (client-side), or in the workgroup, using WorkGroupConfiguration (p. 125). If none of them is set, Athena issues an error that no output location is provided. For more information, see Query Results. If workgroup settings override client-side settings, then the query uses the settings specified for the workgroup. See WorkGroupConfiguration:EnforceWorkGroupConfiguration (p. 125).

Type: String

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ResultConfigurationUpdates

The information about the updates in the query results, such as output location and encryption configuration for the query results.

Contents

EncryptionConfiguration

The encryption configuration for the query results.

Type: EncryptionConfiguration (p. 97) object

Required: No

OutputLocation

The location in Amazon S3 where your query results are stored, such as `s3://path/to/query/bucket/`. For more information, see Query Results If workgroup settings override client-side settings, then the query uses the location for the query results and the encryption configuration that are specified for the workgroup. The "workgroup settings override" is specified in `EnforceWorkGroupConfiguration` (true/false) in the `WorkGroupConfiguration`. See WorkGroupConfiguration:EnforceWorkGroupConfiguration (p. 125).

Type: String

Required: No

RemoveEncryptionConfiguration

If set to "true", indicates that the previously-specified encryption configuration (also known as the client-side setting) for queries in this workgroup should be ignored and set to null. If set to "false" or not set, and a value is present in the `EncryptionConfiguration` in `ResultConfigurationUpdates` (the client-side setting), the `EncryptionConfiguration` in the workgroup's `ResultConfiguration` will be updated with the new value. For more information, see Workgroup Settings Override Client-Side Settings.

Type: Boolean

Required: No

RemoveOutputLocation

If set to "true", indicates that the previously-specified query results location (also known as a client-side setting) for queries in this workgroup should be ignored and set to null. If set to "false" or not set, and a value is present in the `OutputLocation` in `ResultConfigurationUpdates` (the client-side setting), the `OutputLocation` in the workgroup's `ResultConfiguration` will be updated with the new value. For more information, see Workgroup Settings Override Client-Side Settings.

Type: Boolean

Required: No

See Also

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

- AWS SDK for C++

- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ResultSet

The metadata and rows that comprise a query result set. The metadata describes the column structure and data types. To return a `ResultSet` object, use GetQueryResults (p. 37).

Contents

ResultSetMetadata

The metadata that describes the column structure and data types of a table of query results.

Type: ResultSetMetadata (p. 116) object

Required: No

Rows

The rows in the table.

Type: Array of Row (p. 117) objects

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ResultSetMetadata

The metadata that describes the column structure and data types of a table of query results. To return a `ResultSetMetadata` object, use GetQueryResults (p. 37).

Contents

ColumnInfo

Information about the columns returned in a query result metadata.

Type: Array of ColumnInfo (p. 90) objects

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Row

The rows that comprise a query result table.

Contents

Data

The data that populates a row in a query result table.

Type: Array of Datum (p. 96) objects

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TableMetadata

Contains metadata for a table.

Contents

Columns

A list of the columns in the table.

Type: Array of Column (p. 89) objects

Required: No

CreateTime

The time that the table was created.

Type: Timestamp

Required: No

LastAccessTime

The last time the table was accessed.

Type: Timestamp

Required: No

Name

The name of the table.

Type: String

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

Required: Yes

Parameters

A set of custom key/value pairs for table properties.

Type: String to string map

Key Length Constraints: Minimum length of 1. Maximum length of 255.

Key Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\t]*`

Value Length Constraints: Maximum length of 51200.

Required: No

PartitionKeys

A list of the partition keys in the table.

Type: Array of Column (p. 89) objects

Required: No

TableType

The type of table. In Athena, only `EXTERNAL_TABLE` is supported.

Type: String

Length Constraints: Maximum length of 255.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Tag

A label that you assign to a resource. In Athena, a resource can be a workgroup or data catalog. Each tag consists of a key and an optional value, both of which you define. For example, you can use tags to categorize Athena workgroups or data catalogs by purpose, owner, or environment. Use a consistent set of tag keys to make it easier to search and filter workgroups or data catalogs in your account. For best practices, see Tagging Best Practices. Tag keys can be from 1 to 128 UTF-8 Unicode characters, and tag values can be from 0 to 256 UTF-8 Unicode characters. Tags can use letters and numbers representable in UTF-8, and the following characters: + - = . _ : / @. Tag keys and values are case-sensitive. Tag keys must be unique per resource. If you specify more than one tag, separate them by commas.

Contents

Key

A tag key. The tag key length is from 1 to 128 Unicode characters in UTF-8. You can use letters and numbers representable in UTF-8, and the following characters: + - = . _ : / @. Tag keys are case-sensitive and must be unique per resource.

Type: String

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

Required: No

Value

A tag value. The tag value length is from 0 to 256 Unicode characters in UTF-8. You can use letters and numbers representable in UTF-8, and the following characters: + - = . _ : / @. Tag values are case-sensitive.

Type: String

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

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

UnprocessedNamedQueryId

Information about a named query ID that could not be processed.

Contents

ErrorCode

The error code returned when the processing request for the named query failed, if applicable.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Required: No

ErrorMessage

The error message returned when the processing request for the named query failed, if applicable.

Type: String

Required: No

NamedQueryId

The unique identifier of the named query.

Type: String

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

UnprocessedQueryExecutionId

Describes a query execution that failed to process.

Contents

ErrorCode

The error code returned when the query execution failed to process, if applicable.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Required: No

ErrorMessage

The error message returned when the query execution failed to process, if applicable.

Type: String

Required: No

QueryExecutionId

The unique identifier of the query execution.

Type: String

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WorkGroup

A workgroup, which contains a name, description, creation time, state, and other configuration, listed under WorkGroup:Configuration (p. 123). Each workgroup enables you to isolate queries for you or your group of users from other queries in the same account, to configure the query results location and the encryption configuration (known as workgroup settings), to enable sending query metrics to Amazon CloudWatch, and to establish per-query data usage control limits for all queries in a workgroup. The workgroup settings override is specified in `EnforceWorkGroupConfiguration` (true/false) in the `WorkGroupConfiguration`. See WorkGroupConfiguration:EnforceWorkGroupConfiguration (p. 125).

Contents

Configuration

The configuration of the workgroup, which includes the location in Amazon S3 where query results are stored, the encryption configuration, if any, used for query results; whether the Amazon CloudWatch Metrics are enabled for the workgroup; whether workgroup settings override client-side settings; and the data usage limits for the amount of data scanned per query or per workgroup. The workgroup settings override is specified in `EnforceWorkGroupConfiguration` (true/false) in the `WorkGroupConfiguration`. See WorkGroupConfiguration:EnforceWorkGroupConfiguration (p. 125).

Type: WorkGroupConfiguration (p. 125) object

Required: No

CreationTime

The date and time the workgroup was created.

Type: Timestamp

Required: No

Description

The workgroup description.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Required: No

Name

The workgroup name.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: Yes

State

The state of the workgroup: ENABLED or DISABLED.

Type: String

Valid Values: `ENABLED | DISABLED`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WorkGroupConfiguration

The configuration of the workgroup, which includes the location in Amazon S3 where query results are stored, the encryption option, if any, used for query results, whether the Amazon CloudWatch Metrics are enabled for the workgroup and whether workgroup settings override query settings, and the data usage limits for the amount of data scanned per query or per workgroup. The workgroup settings override is specified in `EnforceWorkGroupConfiguration` (true/false) in the `WorkGroupConfiguration`. See WorkGroupConfiguration:EnforceWorkGroupConfiguration (p. 125).

Contents

BytesScannedCutoffPerQuery

The upper data usage limit (cutoff) for the amount of bytes a single query in a workgroup is allowed to scan.

Type: Long

Valid Range: Minimum value of 10000000.

Required: No

EnforceWorkGroupConfiguration

If set to "true", the settings for the workgroup override client-side settings. If set to "false", client-side settings are used. For more information, see Workgroup Settings Override Client-Side Settings.

Type: Boolean

Required: No

EngineVersion

The engine version that all queries running on the workgroup use. Queries on the `AmazonAthenaPreviewFunctionality` workgroup run on the preview engine regardless of this setting.

Type: EngineVersion (p. 98) object

Required: No

PublishCloudWatchMetricsEnabled

Indicates that the Amazon CloudWatch metrics are enabled for the workgroup.

Type: Boolean

Required: No

RequesterPaysEnabled

If set to `true`, allows members assigned to a workgroup to reference Amazon S3 Requester Pays buckets in queries. If set to `false`, workgroup members cannot query data from Requester Pays buckets, and queries that retrieve data from Requester Pays buckets cause an error. The default is `false`. For more information about Requester Pays buckets, see Requester Pays Buckets in the *Amazon Simple Storage Service Developer Guide*.

Type: Boolean

Required: No

ResultConfiguration

The configuration for the workgroup, which includes the location in Amazon S3 where query results are stored and the encryption option, if any, used for query results. To run the query, you must specify the query results location using one of the ways: either in the workgroup using this setting, or for individual queries (client-side), using ResultConfiguration:OutputLocation (p. 112). If none of them is set, Athena issues an error that no output location is provided. For more information, see Query Results.

Type: ResultConfiguration (p. 112) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WorkGroupConfigurationUpdates

The configuration information that will be updated for this workgroup, which includes the location in Amazon S3 where query results are stored, the encryption option, if any, used for query results, whether the Amazon CloudWatch Metrics are enabled for the workgroup, whether the workgroup settings override the client-side settings, and the data usage limit for the amount of bytes scanned per query, if it is specified.

Contents

BytesScannedCutoffPerQuery

The upper limit (cutoff) for the amount of bytes a single query in a workgroup is allowed to scan.

Type: Long

Valid Range: Minimum value of 10000000.

Required: No

EnforceWorkGroupConfiguration

If set to "true", the settings for the workgroup override client-side settings. If set to "false" client-side settings are used. For more information, see Workgroup Settings Override Client-Side Settings.

Type: Boolean

Required: No

EngineVersion

The engine version requested when a workgroup is updated. After the update, all queries on the workgroup run on the requested engine version. If no value was previously set, the default is Auto. Queries on the `AmazonAthenaPreviewFunctionality` workgroup run on the preview engine regardless of this setting.

Type: EngineVersion (p. 98) object

Required: No

PublishCloudWatchMetricsEnabled

Indicates whether this workgroup enables publishing metrics to Amazon CloudWatch.

Type: Boolean

Required: No

RemoveBytesScannedCutoffPerQuery

Indicates that the data usage control limit per query is removed. WorkGroupConfiguration:BytesScannedCutoffPerQuery (p. 125)

Type: Boolean

Required: No

RequesterPaysEnabled

If set to `true`, allows members assigned to a workgroup to specify Amazon S3 Requester Pays buckets in queries. If set to `false`, workgroup members cannot query data from Requester Pays buckets, and queries that retrieve data from Requester Pays buckets cause an error. The default

is `false`. For more information about Requester Pays buckets, see Requester Pays Buckets in the *Amazon Simple Storage Service Developer Guide*.

Type: Boolean

Required: No

ResultConfigurationUpdates

The result configuration information about the queries in this workgroup that will be updated. Includes the updated results location and an updated option for encrypting query results.

Type: ResultConfigurationUpdates (p. 113) object

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WorkGroupSummary

The summary information for the workgroup, which includes its name, state, description, and the date and time it was created.

Contents

CreationTime

The workgroup creation date and time.

Type: Timestamp

Required: No

Description

The workgroup description.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Required: No

EngineVersion

The engine version setting for all queries on the workgroup. Queries on the `AmazonAthenaPreviewFunctionality` workgroup run on the preview engine regardless of this setting.

Type: EngineVersion (p. 98) object

Required: No

Name

The name of the workgroup.

Type: String

Pattern: `[a-zA-Z0-9._-]{1,128}`

Required: No

State

The state of the workgroup.

Type: String

Valid Values: `ENABLED | DISABLED`

Required: No

See Also

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

- AWS SDK for C++

- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Common Parameters

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

Action

The action to be performed.

Type: string

Required: Yes

Version

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

Type: string

Required: Yes

X-Amz-Algorithm

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

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

Type: string

Valid Values: `AWS4-HMAC-SHA256`

Required: Conditional

X-Amz-Credential

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

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

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

Type: string

Required: Conditional

X-Amz-Date

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'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 Handling Dates in Signature Version 4 in the *Amazon Web Services General Reference*.

Type: string

Required: Conditional

X-Amz-Security-Token

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

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

Type: string

Required: Conditional

X-Amz-Signature

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

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

Type: string

Required: Conditional

X-Amz-SignedHeaders

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

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

Type: string

Required: Conditional

Common Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 400

InternalFailure

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

HTTP Status Code: 500

InvalidAction

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

HTTP Status Code: 400

InvalidClientTokenId

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

HTTP Status Code: 403

InvalidParameterCombination

Parameters that must not be used together were used together.

HTTP Status Code: 400

InvalidParameterValue

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

HTTP Status Code: 400

InvalidQueryParameter

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

HTTP Status Code: 400

MalformedQueryString

The query string contains a syntax error.

HTTP Status Code: 404

MissingAction

The request is missing an action or a required parameter.

HTTP Status Code: 400

MissingAuthenticationToken

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

HTTP Status Code: 403

MissingParameter

A required parameter for the specified action is not supplied.

HTTP Status Code: 400

NotAuthorized

You do not have permission to perform this action.

HTTP Status Code: 400

OptInRequired

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

HTTP Status Code: 403

RequestExpired

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

HTTP Status Code: 400

ServiceUnavailable

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

HTTP Status Code: 503

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

ValidationError

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

HTTP Status Code: 400