aws

API Reference

RDS Data API

API Version 2018-08-01

RDS Data API: API Reference

Table of Contents

Welcome

Amazon RDS provides an HTTP endpoint to run SQL statements on an Amazon Aurora DB cluster. To run these statements, you use the RDS Data API (Data API).

Data API is available with the following types of Aurora databases:

- Aurora PostgreSQL - Serverless v2, provisioned, and Serverless v1
- Aurora MySQL - Serverless v2, provisioned, and Serverless v1

For more information about the Data API, see Using RDS Data API in the *Amazon Aurora User Guide*.

This document was last published on May 21, 2026.

Actions

The following actions are supported:

- BatchExecuteStatement
- BeginTransaction
- CommitTransaction
- ExecuteSql
- ExecuteStatement
- RollbackTransaction

BatchExecuteStatement

Runs a batch SQL statement over an array of data.

You can run bulk update and insert operations for multiple records using a DML statement with different parameter sets. Bulk operations can provide a significant performance improvement over individual insert and update operations.

> **Note**
>
> If a call isn't part of a transaction because it doesn't include the `transactionID` parameter, changes that result from the call are committed automatically.
> There isn't a fixed upper limit on the number of parameter sets. However, the maximum size of the HTTP request submitted through the Data API is 4 MiB. If the request exceeds this limit, the Data API returns an error and doesn't process the request. This 4-MiB limit includes the size of the HTTP headers and the JSON notation in the request. Thus, the number of parameter sets that you can include depends on a combination of factors, such as the size of the SQL statement and the size of each parameter set.
> The response size limit is 1 MiB. If the call returns more than 1 MiB of response data, the call is terminated.

Request Syntax

```
POST /BatchExecute HTTP/1.1
Content-type: application/json

{
   "database": "string",
   "parameterSets": [
      [
         {
            "name": "string",
            "typeHint": "string",
            "value": { ... }
         }
      ]
   ],
   "resourceArn": "string",
   "schema": "string",
```

```
    "secretArn": "string",
    "sql": "string",
    "transactionId": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

database

The name of the database.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Required: No

parameterSets

The parameter set for the batch operation.

The SQL statement is executed as many times as the number of parameter sets provided. To execute a SQL statement with no parameters, use one of the following options:

- Specify one or more empty parameter sets.
- Use the `ExecuteStatement` operation instead of the `BatchExecuteStatement` operation.

> **Note**
>
> Array parameters are not supported.

Type: Array of arrays of SqlParameter objects

Required: No

resourceArn

The Amazon Resource Name (ARN) of the Aurora Serverless DB cluster.

Type: String

Length Constraints: Minimum length of 11. Maximum length of 100.

Required: Yes

schema

The name of the database schema.

> **Note**
>
> Currently, the `schema` parameter isn't supported.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Required: No

secretArn

The ARN of the secret that enables access to the DB cluster. Enter the database user name and password for the credentials in the secret.

For information about creating the secret, see Create a database secret.

Type: String

Length Constraints: Minimum length of 11. Maximum length of 100.

Required: Yes

sql

The SQL statement to run. Don't include a semicolon (;) at the end of the SQL statement.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 65536.

Required: Yes

transactionId

The identifier of a transaction that was started by using the `BeginTransaction` operation. Specify the transaction ID of the transaction that you want to include the SQL statement in.

If the SQL statement is not part of a transaction, don't set this parameter.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 192.

Required: No

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "updateResults": [
      {
         "generatedFields": [
            { ... }
         ]
      }
   ]
}
```

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.

updateResults

The execution results of each batch entry.

Type: Array of UpdateResult objects

Errors

AccessDeniedException

You don't have sufficient access to perform this action.

HTTP Status Code: 403

BadRequestException

There is an error in the call or in a SQL statement. (This error only appears in calls from Aurora Serverless v1 databases.)

message

The error message returned by this `BadRequestException` error.

HTTP Status Code: 400

DatabaseErrorException

There was an error in processing the SQL statement.

HTTP Status Code: 400

DatabaseNotFoundException

The DB cluster doesn't have a DB instance.

HTTP Status Code: 404

DatabaseResumingException

A request was cancelled because the Aurora Serverless v2 DB instance was paused. The Data API request automatically resumes the DB instance. Wait a few seconds and try again.

HTTP Status Code: 400

DatabaseUnavailableException

The writer instance in the DB cluster isn't available.

HTTP Status Code: 504

ForbiddenException

There are insufficient privileges to make the call.

message

The error message returned by this `ForbiddenException` error.

HTTP Status Code: 403

HttpEndpointNotEnabledException

The HTTP endpoint for using RDS Data API isn't enabled for the DB cluster.

HTTP Status Code: 400

InternalServerErrorException

An internal error occurred.

HTTP Status Code: 500

InvalidResourceStateException

The resource is in an invalid state.

HTTP Status Code: 400

InvalidSecretException

The Secrets Manager secret used with the request isn't valid.

HTTP Status Code: 400

SecretsErrorException

There was a problem with the Secrets Manager secret used with the request, caused by one of the following conditions:

- RDS Data API timed out retrieving the secret.
- The secret provided wasn't found.
- The secret couldn't be decrypted.

HTTP Status Code: 400

ServiceUnavailableError

The service specified by the `resourceArn` parameter isn't available.

HTTP Status Code: 503

StatementTimeoutException

The execution of the SQL statement timed out.

dbConnectionId

The database connection ID that executed the SQL statement.

message

The error message returned by this `StatementTimeoutException` error.

HTTP Status Code: 400

TransactionNotFoundException

The transaction ID wasn't found.

HTTP Status Code: 404

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

BeginTransaction

Starts a SQL transaction.

> **Note**
>
> A transaction can run for a maximum of 24 hours. A transaction is terminated and rolled back automatically after 24 hours.
> A transaction times out if no calls use its transaction ID in three minutes. If a transaction times out before it's committed, it's rolled back automatically.
> For Aurora MySQL, DDL statements inside a transaction cause an implicit commit. We recommend that you run each MySQL DDL statement in a separate `ExecuteStatement` call with `continueAfterTimeout` enabled.

Request Syntax

```
POST /BeginTransaction HTTP/1.1
Content-type: application/json

{
   "database": "string",
   "resourceArn": "string",
   "schema": "string",
   "secretArn": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

database

The name of the database.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Required: No

resourceArn

The Amazon Resource Name (ARN) of the Aurora Serverless DB cluster.

Type: String

Length Constraints: Minimum length of 11. Maximum length of 100.

Required: Yes

schema

The name of the database schema.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Required: No

secretArn

The name or ARN of the secret that enables access to the DB cluster.

Type: String

Length Constraints: Minimum length of 11. Maximum length of 100.

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "transactionId": "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.

transactionId

The transaction ID of the transaction started by the call.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 192.

Errors

AccessDeniedException

You don't have sufficient access to perform this action.

HTTP Status Code: 403

BadRequestException

There is an error in the call or in a SQL statement. (This error only appears in calls from Aurora Serverless v1 databases.)

message

The error message returned by this `BadRequestException` error.

HTTP Status Code: 400

DatabaseErrorException

There was an error in processing the SQL statement.

HTTP Status Code: 400

DatabaseNotFoundException

The DB cluster doesn't have a DB instance.

HTTP Status Code: 404

DatabaseResumingException

A request was cancelled because the Aurora Serverless v2 DB instance was paused. The Data API request automatically resumes the DB instance. Wait a few seconds and try again.

HTTP Status Code: 400

DatabaseUnavailableException

The writer instance in the DB cluster isn't available.

HTTP Status Code: 504

ForbiddenException

There are insufficient privileges to make the call.

message

The error message returned by this `ForbiddenException` error.

HTTP Status Code: 403

HttpEndpointNotEnabledException

The HTTP endpoint for using RDS Data API isn't enabled for the DB cluster.

HTTP Status Code: 400

InternalServerErrorException

An internal error occurred.

HTTP Status Code: 500

InvalidResourceStateException

The resource is in an invalid state.

HTTP Status Code: 400

InvalidSecretException

The Secrets Manager secret used with the request isn't valid.

HTTP Status Code: 400

SecretsErrorException

There was a problem with the Secrets Manager secret used with the request, caused by one of the following conditions:

- RDS Data API timed out retrieving the secret.
- The secret provided wasn't found.
- The secret couldn't be decrypted.

HTTP Status Code: 400

ServiceUnavailableError

The service specified by the `resourceArn` parameter isn't available.

HTTP Status Code: 503

StatementTimeoutException

The execution of the SQL statement timed out.

dbConnectionId

The database connection ID that executed the SQL statement.

message

The error message returned by this `StatementTimeoutException` error.

HTTP Status Code: 400

TransactionNotFoundException

The transaction ID wasn't found.

HTTP Status Code: 404

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4

- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CommitTransaction

Ends a SQL transaction started with the `BeginTransaction` operation and commits the changes.

Request Syntax

```
POST /CommitTransaction HTTP/1.1
Content-type: application/json

{
   "resourceArn": "string",
   "secretArn": "string",
   "transactionId": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

resourceArn

The Amazon Resource Name (ARN) of the Aurora Serverless DB cluster.

Type: String

Length Constraints: Minimum length of 11. Maximum length of 100.

Required: Yes

secretArn

The name or ARN of the secret that enables access to the DB cluster.

Type: String

Length Constraints: Minimum length of 11. Maximum length of 100.

Required: Yes

transactionId

The identifier of the transaction to end and commit.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 192.

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "transactionStatus": "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.

transactionStatus

The status of the commit operation.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Errors

AccessDeniedException

You don't have sufficient access to perform this action.

HTTP Status Code: 403

BadRequestException

There is an error in the call or in a SQL statement. (This error only appears in calls from Aurora Serverless v1 databases.)

message

The error message returned by this `BadRequestException` error.

HTTP Status Code: 400

DatabaseErrorException

There was an error in processing the SQL statement.

HTTP Status Code: 400

DatabaseNotFoundException

The DB cluster doesn't have a DB instance.

HTTP Status Code: 404

DatabaseUnavailableException

The writer instance in the DB cluster isn't available.

HTTP Status Code: 504

ForbiddenException

There are insufficient privileges to make the call.

message

The error message returned by this `ForbiddenException` error.

HTTP Status Code: 403

HttpEndpointNotEnabledException

The HTTP endpoint for using RDS Data API isn't enabled for the DB cluster.

HTTP Status Code: 400

InternalServerErrorException

An internal error occurred.

HTTP Status Code: 500

InvalidResourceStateException

The resource is in an invalid state.

HTTP Status Code: 400

InvalidSecretException

The Secrets Manager secret used with the request isn't valid.

HTTP Status Code: 400

NotFoundException

The `resourceArn`, `secretArn`, or `transactionId` value can't be found.

message

The error message returned by this `NotFoundException` error.

HTTP Status Code: 404

SecretsErrorException

There was a problem with the Secrets Manager secret used with the request, caused by one of the following conditions:

- RDS Data API timed out retrieving the secret.
- The secret provided wasn't found.
- The secret couldn't be decrypted.

HTTP Status Code: 400

ServiceUnavailableError

The service specified by the `resourceArn` parameter isn't available.

HTTP Status Code: 503

StatementTimeoutException

The execution of the SQL statement timed out.

dbConnectionId

The database connection ID that executed the SQL statement.

message

The error message returned by this `StatementTimeoutException` error.

HTTP Status Code: 400

TransactionNotFoundException

The transaction ID wasn't found.

HTTP Status Code: 404

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ExecuteSql

Runs one or more SQL statements.

> **Note**
>
> This operation isn't supported for Aurora Serverless v2 and provisioned DB clusters. For Aurora Serverless v1 DB clusters, the operation is deprecated. Use the `BatchExecuteStatement` or `ExecuteStatement` operation.

Request Syntax

```
POST /ExecuteSql HTTP/1.1
Content-type: application/json

{
   "awsSecretStoreArn": "string",
   "database": "string",
   "dbClusterOrInstanceArn": "string",
   "schema": "string",
   "sqlStatements": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

awsSecretStoreArn

The Amazon Resource Name (ARN) of the secret that enables access to the DB cluster. Enter the database user name and password for the credentials in the secret.

For information about creating the secret, see Create a database secret.

Type: String

Length Constraints: Minimum length of 11. Maximum length of 100.

Required: Yes

database

The name of the database.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Required: No

dbClusterOrInstanceArn

The ARN of the Aurora Serverless DB cluster.

Type: String

Length Constraints: Minimum length of 11. Maximum length of 100.

Required: Yes

schema

The name of the database schema.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Required: No

sqlStatements

One or more SQL statements to run on the DB cluster.

You can separate SQL statements from each other with a semicolon (;). Any valid SQL statement is permitted, including data definition, data manipulation, and commit statements.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 65536.

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "sqlStatementResults": [
      {
         "numberOfRecordsUpdated": number,
         "resultFrame": {
            "records": [
               {
                  "values": [
                     { ... }
                  ]
               }
            ],
            "resultSetMetadata": {
               "columnCount": number,
               "columnMetadata": [
                  {
                     "arrayBaseColumnType": number,
                     "isAutoIncrement": boolean,
                     "isCaseSensitive": boolean,
                     "isCurrency": boolean,
                     "isSigned": boolean,
                     "label": "string",
                     "name": "string",
                     "nullable": number,
                     "precision": number,
                     "scale": number,
                     "schemaName": "string",
                     "tableName": "string",
                     "type": number,
                     "typeName": "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.

sqlStatementResults

The results of the SQL statement or statements.

Type: Array of SqlStatementResult objects

Errors

AccessDeniedException

You don't have sufficient access to perform this action.

HTTP Status Code: 403

BadRequestException

There is an error in the call or in a SQL statement. (This error only appears in calls from Aurora Serverless v1 databases.)

message

The error message returned by this `BadRequestException` error.

HTTP Status Code: 400

ForbiddenException

There are insufficient privileges to make the call.

message

The error message returned by this `ForbiddenException` error.

HTTP Status Code: 403

InternalServerErrorException

An internal error occurred.

HTTP Status Code: 500

ServiceUnavailableError

The service specified by the `resourceArn` parameter isn't available.

HTTP Status Code: 503

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ExecuteStatement

Runs a SQL statement against a database.

> **Note**
>
> If a call isn't part of a transaction because it doesn't include the `transactionID` parameter, changes that result from the call are committed automatically.
> If the binary response data from the database is more than 1 MB, the call is terminated.

Request Syntax

```
POST /Execute HTTP/1.1
Content-type: application/json

{
   "continueAfterTimeout": boolean,
   "database": "string",
   "formatRecordsAs": "string",
   "includeResultMetadata": boolean,
   "parameters": [
      {
         "name": "string",
         "typeHint": "string",
         "value": { ... }
      }
   ],
   "resourceArn": "string",
   "resultSetOptions": {
      "decimalReturnType": "string",
      "longReturnType": "string"
   },
   "schema": "string",
   "secretArn": "string",
   "sql": "string",
   "transactionId": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

continueAfterTimeout

A value that indicates whether to continue running the statement after the call times out. By default, the statement stops running when the call times out.

> **Note**
>
> For DDL statements, we recommend continuing to run the statement after the call times out. When a DDL statement terminates before it is finished running, it can result in errors and possibly corrupted data structures.

Type: Boolean

Required: No

database

The name of the database.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Required: No

formatRecordsAs

A value that indicates whether to format the result set as a single JSON string. This parameter only applies to `SELECT` statements and is ignored for other types of statements. Allowed values are `NONE` and `JSON`. The default value is `NONE`. The result is returned in the `formattedRecords` field.

For usage information about the JSON format for result sets, see Using the Data API in the *Amazon Aurora User Guide*.

Type: String

Valid Values: `NONE | JSON`

Required: No

includeResultMetadata

A value that indicates whether to include metadata in the results.

Type: Boolean

Required: No

parameters

The parameters for the SQL statement.

> **Note**
>
> Array parameters are not supported.

Type: Array of SqlParameter objects

Required: No

resourceArn

The Amazon Resource Name (ARN) of the Aurora Serverless DB cluster.

Type: String

Length Constraints: Minimum length of 11. Maximum length of 100.

Required: Yes

resultSetOptions

Options that control how the result set is returned.

Type: ResultSetOptions object

Required: No

schema

The name of the database schema.

> **Note**
>
> Currently, the `schema` parameter isn't supported.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Required: No

secretArn

The ARN of the secret that enables access to the DB cluster. Enter the database user name and password for the credentials in the secret.

For information about creating the secret, see Create a database secret.

> **Note**
>
> When you use the CLI on Linux to reference a secret created in the RDS console, the ARN might include special characters like `rds!cluster`. If you enclose the ARN in double quotes, the `!` character might trigger a shell expansion error, such as `-bash: !cluster: event not found`. To avoid this, escape the exclamation mark (\!) in the ARN or enclose the entire ARN in single quotes (') instead of double quotes. Alternatively, disable shell history expansion by running `set +H` before you execute the command.

Type: String

Length Constraints: Minimum length of 11. Maximum length of 100.

Required: Yes

sql

The SQL statement to run.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 65536.

Required: Yes

transactionId

The identifier of a transaction that was started by using the `BeginTransaction` operation. Specify the transaction ID of the transaction that you want to include the SQL statement in.

If the SQL statement is not part of a transaction, don't set this parameter.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 192.

Required: No

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "columnMetadata": [
      {
         "arrayBaseColumnType": number,
         "isAutoIncrement": boolean,
         "isCaseSensitive": boolean,
         "isCurrency": boolean,
         "isSigned": boolean,
         "label": "string",
         "name": "string",
         "nullable": number,
         "precision": number,
         "scale": number,
         "schemaName": "string",
         "tableName": "string",
         "type": number,
         "typeName": "string"
      }
   ],
   "formattedRecords": "string",
```

```
   "generatedFields": [
      { ... }
   ],
   "numberOfRecordsUpdated": number,
   "records": [
      [
         { ... }
      ]
   ]
}
```

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.

columnMetadata

Metadata for the columns included in the results. This field is blank if the `formatRecordsAs` parameter is set to `JSON`.

Type: Array of ColumnMetadata objects

formattedRecords

A string value that represents the result set of a `SELECT` statement in JSON format. This value is only present when the `formatRecordsAs` parameter is set to `JSON`.

The size limit for this field is currently 10 MB. If the JSON-formatted string representing the result set requires more than 10 MB, the call returns an error.

Type: String

generatedFields

Values for fields generated during a DML request.

> **Note**
>
> The `generatedFields` data isn't supported by Aurora PostgreSQL. To get the values of generated fields, use the `RETURNING` clause. For more information, see Returning Data From Modified Rows in the PostgreSQL documentation.

Type: Array of Field objects

numberOfRecordsUpdated

The number of records updated by the request.

Type: Long

records

The records returned by the SQL statement. This field is blank if the `formatRecordsAs` parameter is set to `JSON`.

Type: Array of arrays of Field objects

Errors

AccessDeniedException

You don't have sufficient access to perform this action.

HTTP Status Code: 403

BadRequestException

There is an error in the call or in a SQL statement. (This error only appears in calls from Aurora Serverless v1 databases.)

message

The error message returned by this `BadRequestException` error.

HTTP Status Code: 400

DatabaseErrorException

There was an error in processing the SQL statement.

HTTP Status Code: 400

DatabaseNotFoundException

The DB cluster doesn't have a DB instance.

HTTP Status Code: 404

DatabaseResumingException

A request was cancelled because the Aurora Serverless v2 DB instance was paused. The Data API request automatically resumes the DB instance. Wait a few seconds and try again.

HTTP Status Code: 400

DatabaseUnavailableException

The writer instance in the DB cluster isn't available.

HTTP Status Code: 504

ForbiddenException

There are insufficient privileges to make the call.

message

The error message returned by this `ForbiddenException` error.

HTTP Status Code: 403

HttpEndpointNotEnabledException

The HTTP endpoint for using RDS Data API isn't enabled for the DB cluster.

HTTP Status Code: 400

InternalServerErrorException

An internal error occurred.

HTTP Status Code: 500

InvalidResourceStateException

The resource is in an invalid state.

HTTP Status Code: 400

InvalidSecretException

The Secrets Manager secret used with the request isn't valid.

HTTP Status Code: 400

SecretsErrorException

There was a problem with the Secrets Manager secret used with the request, caused by one of the following conditions:

- RDS Data API timed out retrieving the secret.
- The secret provided wasn't found.
- The secret couldn't be decrypted.

HTTP Status Code: 400

ServiceUnavailableError

The service specified by the `resourceArn` parameter isn't available.

HTTP Status Code: 503

StatementTimeoutException

The execution of the SQL statement timed out.

dbConnectionId

The database connection ID that executed the SQL statement.

message

The error message returned by this `StatementTimeoutException` error.

HTTP Status Code: 400

TransactionNotFoundException

The transaction ID wasn't found.

HTTP Status Code: 404

UnsupportedResultException

There was a problem with the result because of one of the following conditions:

- It contained an unsupported data type.
- It contained a multidimensional array.
- The size was too large.

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 V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

RollbackTransaction

Performs a rollback of a transaction. Rolling back a transaction cancels its changes.

Request Syntax

```
POST /RollbackTransaction HTTP/1.1
Content-type: application/json

{
   "resourceArn": "string",
   "secretArn": "string",
   "transactionId": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

resourceArn

The Amazon Resource Name (ARN) of the Aurora Serverless DB cluster.

Type: String

Length Constraints: Minimum length of 11. Maximum length of 100.

Required: Yes

secretArn

The name or ARN of the secret that enables access to the DB cluster.

Type: String

Length Constraints: Minimum length of 11. Maximum length of 100.

Required: Yes

transactionId

The identifier of the transaction to roll back.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 192.

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "transactionStatus": "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.

transactionStatus

The status of the rollback operation.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Errors

AccessDeniedException

You don't have sufficient access to perform this action.

HTTP Status Code: 403

BadRequestException

There is an error in the call or in a SQL statement. (This error only appears in calls from Aurora Serverless v1 databases.)

message

The error message returned by this `BadRequestException` error.

HTTP Status Code: 400

DatabaseErrorException

There was an error in processing the SQL statement.

HTTP Status Code: 400

DatabaseNotFoundException

The DB cluster doesn't have a DB instance.

HTTP Status Code: 404

DatabaseUnavailableException

The writer instance in the DB cluster isn't available.

HTTP Status Code: 504

ForbiddenException

There are insufficient privileges to make the call.

message

The error message returned by this `ForbiddenException` error.

HTTP Status Code: 403

HttpEndpointNotEnabledException

The HTTP endpoint for using RDS Data API isn't enabled for the DB cluster.

HTTP Status Code: 400

InternalServerErrorException

An internal error occurred.

HTTP Status Code: 500

InvalidResourceStateException

The resource is in an invalid state.

HTTP Status Code: 400

InvalidSecretException

The Secrets Manager secret used with the request isn't valid.

HTTP Status Code: 400

NotFoundException

The `resourceArn`, `secretArn`, or `transactionId` value can't be found.

message

The error message returned by this `NotFoundException` error.

HTTP Status Code: 404

SecretsErrorException

There was a problem with the Secrets Manager secret used with the request, caused by one of the following conditions:

- RDS Data API timed out retrieving the secret.
- The secret provided wasn't found.
- The secret couldn't be decrypted.

HTTP Status Code: 400

ServiceUnavailableError

The service specified by the `resourceArn` parameter isn't available.

HTTP Status Code: 503

StatementTimeoutException

The execution of the SQL statement timed out.

dbConnectionId

The database connection ID that executed the SQL statement.

message

The error message returned by this `StatementTimeoutException` error.

HTTP Status Code: 400

TransactionNotFoundException

The transaction ID wasn't found.

HTTP Status Code: 404

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

Data Types

The AWS RDS DataService 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:

- ArrayValue
- ColumnMetadata
- Field
- Record
- ResultFrame
- ResultSetMetadata
- ResultSetOptions
- SqlParameter
- SqlStatementResult
- StructValue
- UpdateResult
- Value

ArrayValue

Contains an array.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

arrayValues

An array of arrays.

Type: Array of ArrayValue objects

Required: No

booleanValues

An array of Boolean values.

Type: Array of booleans

Required: No

doubleValues

An array of floating-point numbers.

Type: Array of doubles

Required: No

longValues

An array of integers.

Type: Array of longs

Required: No

stringValues

An array of strings.

Type: Array of strings

Required: No

See Also

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

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

ColumnMetadata

Contains the metadata for a column.

Contents

arrayBaseColumnType

The type of the column.

Type: Integer

Required: No

isAutoIncrement

A value that indicates whether the column increments automatically.

Type: Boolean

Required: No

isCaseSensitive

A value that indicates whether the column is case-sensitive.

Type: Boolean

Required: No

isCurrency

A value that indicates whether the column contains currency values.

Type: Boolean

Required: No

isSigned

A value that indicates whether an integer column is signed.

Type: Boolean

Required: No

label

The label for the column.

Type: String

Required: No

name

The name of the column.

Type: String

Required: No

nullable

A value that indicates whether the column is nullable.

Type: Integer

Required: No

precision

The precision value of a decimal number column.

Type: Integer

Required: No

scale

The scale value of a decimal number column.

Type: Integer

Required: No

schemaName

The name of the schema that owns the table that includes the column.

Type: String

Required: No

tableName

The name of the table that includes the column.

Type: String

Required: No

type

The type of the column.

Type: Integer

Required: No

typeName

The database-specific data type of the column.

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 Java V2
- AWS SDK for Ruby V3

Field

Contains a value.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

arrayValue

An array of values.

Type: ArrayValue object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

blobValue

A value of BLOB data type.

Type: Base64-encoded binary data object

Required: No

booleanValue

A value of Boolean data type.

Type: Boolean

Required: No

doubleValue

A value of double data type.

Type: Double

Required: No

isNull

A NULL value.

Type: Boolean

Required: No

longValue

A value of long data type.

Type: Long

Required: No

stringValue

A value of string data type.

Type: String

Required: No

See Also

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

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

Record

A record returned by a call.

> **Note**
>
> This data structure is only used with the deprecated `ExecuteSql` operation. Use the `BatchExecuteStatement` or `ExecuteStatement` operation instead.

Contents

values

The values returned in the record.

Type: Array of Value 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 Java V2
- AWS SDK for Ruby V3

ResultFrame

The result set returned by a SQL statement.

> **Note**
>
> This data structure is only used with the deprecated `ExecuteSql` operation. Use the `BatchExecuteStatement` or `ExecuteStatement` operation instead.

Contents

records

The records in the result set.

Type: Array of Record objects

Required: No

resultSetMetadata

The result-set metadata in the result set.

Type: ResultSetMetadata 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 Java V2
- AWS SDK for Ruby V3

ResultSetMetadata

The metadata of the result set returned by a SQL statement.

Contents

columnCount

The number of columns in the result set.

Type: Long

Required: No

columnMetadata

The metadata of the columns in the result set.

Type: Array of ColumnMetadata 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 Java V2
- AWS SDK for Ruby V3

ResultSetOptions

Options that control how the result set is returned.

Contents

decimalReturnType

A value that indicates how a field of `DECIMAL` type is represented in the response. The value of `STRING`, the default, specifies that it is converted to a String value. The value of `DOUBLE_OR_LONG` specifies that it is converted to a Long value if its scale is 0, or to a Double value otherwise.

> **Note**
>
> Conversion to Double or Long can result in roundoff errors due to precision loss. We recommend converting to String, especially when working with currency values.

Type: String

Valid Values: `STRING | DOUBLE_OR_LONG`

Required: No

longReturnType

A value that indicates how a field of `LONG` type is represented. Allowed values are `LONG` and `STRING`. The default is `LONG`. Specify `STRING` if the length or precision of numeric values might cause truncation or rounding errors.

Type: String

Valid Values: `STRING | 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 Java V2
- AWS SDK for Ruby V3

SqlParameter

A parameter used in a SQL statement.

Contents

name

The name of the parameter.

Type: String

Required: No

typeHint

A hint that specifies the correct object type for data type mapping. Possible values are as follows:

- `DATE` - The corresponding `String` parameter value is sent as an object of `DATE` type to the database. The accepted format is `YYYY-MM-DD`.
- `DECIMAL` - The corresponding `String` parameter value is sent as an object of `DECIMAL` type to the database.
- `JSON` - The corresponding `String` parameter value is sent as an object of `JSON` type to the database.
- `TIME` - The corresponding `String` parameter value is sent as an object of `TIME` type to the database. The accepted format is `HH:MM:SS[.FFF]`.
- `TIMESTAMP` - The corresponding `String` parameter value is sent as an object of `TIMESTAMP` type to the database. The accepted format is `YYYY-MM-DD HH:MM:SS[.FFF]`.
- `UUID` - The corresponding `String` parameter value is sent as an object of `UUID` type to the database.

Type: String

Valid Values: `JSON | UUID | TIMESTAMP | DATE | TIME | DECIMAL`

Required: No

value

The value of the parameter.

Type: Field object

Note: This object is a Union. Only one member of this object can be specified or returned.

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 Java V2
- AWS SDK for Ruby V3

SqlStatementResult

The result of a SQL statement.

> **Note**
>
> This data structure is only used with the deprecated `ExecuteSql` operation. Use the `BatchExecuteStatement` or `ExecuteStatement` operation instead.

Contents

numberOfRecordsUpdated

The number of records updated by a SQL statement.

Type: Long

Required: No

resultFrame

The result set of the SQL statement.

Type: ResultFrame 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 Java V2
- AWS SDK for Ruby V3

StructValue

A structure value returned by a call.

> **Note**
>
> This data structure is only used with the deprecated `ExecuteSql` operation. Use the `BatchExecuteStatement` or `ExecuteStatement` operation instead.

Contents

attributes

The attributes returned in the record.

Type: Array of Value 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 Java V2
- AWS SDK for Ruby V3

UpdateResult

The response elements represent the results of an update.

Contents

generatedFields

Values for fields generated during the request.

Type: Array of Field 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 Java V2
- AWS SDK for Ruby V3

Value

Contains the value of a column.

> **Note**
>
> This data structure is only used with the deprecated `ExecuteSql` operation. Use the `BatchExecuteStatement` or `ExecuteStatement` operation instead.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

arrayValues

An array of column values.

Type: Array of Value objects

Required: No

bigIntValue

A value for a column of big integer data type.

Type: Long

Required: No

bitValue

A value for a column of BIT data type.

Type: Boolean

Required: No

blobValue

A value for a column of BLOB data type.

Type: Base64-encoded binary data object

Required: No

doubleValue

A value for a column of double data type.

Type: Double

Required: No

intValue

A value for a column of integer data type.

Type: Integer

Required: No

isNull

A NULL value.

Type: Boolean

Required: No

realValue

A value for a column of real data type.

Type: Float

Required: No

stringValue

A value for a column of string data type.

Type: String

Required: No

structValue

A value for a column of STRUCT data type.

Type: StructValue 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 Java V2
- AWS SDK for Ruby V3