Kinesis Data Analytics

kinesisanalytics

API Version 2018-05-23

Kinesis Data Analytics: kinesisanalytics

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Welcome

Amazon Kinesis Data Analytics is a fully managed service that you can use to process and analyze streaming data using Java, SQL, or Scala. The service enables you to quickly author and run Java, SQL, or Scala code against streaming sources to perform time series analytics, feed real-time dashboards, and create real-time metrics.

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Actions

The following actions are supported:

AddApplicationCloudWatchLoggingOption

Adds an Amazon CloudWatch log stream to monitor application configuration errors.

Request Syntax

```
{
   "ApplicationName": "string",
   "CloudWatchLoggingOption": {
      "LogStreamARN": "string"
   },
   "ConditionalToken": "string",
   "CurrentApplicationVersionId": number
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 3)

The Kinesis Data Analytics application name.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

CloudWatchLoggingOption (p. 3)

Provides the Amazon CloudWatch log stream Amazon Resource Name (ARN).

Type: CloudWatchLoggingOption (p. 146) object

Required: Yes

ConditionalToken (p. 3)

A value you use to implement strong concurrency for application updates. You must provide the `CurrentApplicationVersionId` or the `ConditionalToken`. You get the application's current `ConditionalToken` using DescribeApplication (p. 58). For better concurrency support, use the `ConditionalToken` parameter instead of `CurrentApplicationVersionId`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

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

Required: No

CurrentApplicationVersionId (p. 3)

The version ID of the Kinesis Data Analytics application. You must provide the `CurrentApplicationVersionId` or the `ConditionalToken`.You can retrieve the application version ID using DescribeApplication (p. 58). For better concurrency support, use the `ConditionalToken` parameter instead of `CurrentApplicationVersionId`.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: No

Response Syntax

```
{
   "ApplicationARN": "string",
   "ApplicationVersionId": number,
   "CloudWatchLoggingOptionDescriptions": [
      {
         "CloudWatchLoggingOptionId": "string",
         "LogStreamARN": "string",
         "RoleARN": "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.

ApplicationARN (p. 4)

The application's ARN.

Type: String

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

Pattern: `arn:.*`

ApplicationVersionId (p. 4)

The new version ID of the Kinesis Data Analytics application. Kinesis Data Analytics updates the `ApplicationVersionId` each time you change the CloudWatch logging options.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

CloudWatchLoggingOptionDescriptions (p. 4)

The descriptions of the current CloudWatch logging options for the Kinesis Data Analytics application.

Type: Array of CloudWatchLoggingOptionDescription (p. 147) objects

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidApplicationConfigurationException

The user-provided application configuration is not valid.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

AddApplicationInput

Adds a streaming source to your SQL-based Kinesis Data Analytics application.

You can add a streaming source when you create an application, or you can use this operation to add a streaming source after you create an application. For more information, see CreateApplication (p. 24).

Any configuration update, including adding a streaming source using this operation, results in a new version of the application. You can use the DescribeApplication (p. 58) operation to find the current application version.

Request Syntax

```
{
   "ApplicationName": "string",
   "CurrentApplicationVersionId": number,
   "Input": {
      "InputParallelism": {
         "Count": number
      },
      "InputProcessingConfiguration": {
         "InputLambdaProcessor": {
            "ResourceARN": "string"
         }
      },
      "InputSchema": {
         "RecordColumns": [
            {
               "Mapping": "string",
               "Name": "string",
               "SqlType": "string"
            }
         ],
         "RecordEncoding": "string",
         "RecordFormat": {
            "MappingParameters": {
               "CSVMappingParameters": {
                  "RecordColumnDelimiter": "string",
                  "RecordRowDelimiter": "string"
               },
               "JSONMappingParameters": {
                  "RecordRowPath": "string"
               }
            },
            "RecordFormatType": "string"
         }
      },
      "KinesisFirehoseInput": {
         "ResourceARN": "string"
      },
      "KinesisStreamsInput": {
         "ResourceARN": "string"
      },
      "NamePrefix": "string"
   }
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 6)

The name of your existing application to which you want to add the streaming source.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

CurrentApplicationVersionId (p. 6)

The current version of your application. You must provide the `ApplicationVersionID` or the `ConditionalToken`.You can use the DescribeApplication (p. 58) operation to find the current application version.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: Yes

Input (p. 6)

The Input (p. 169) to add.

Type: Input (p. 169) object

Required: Yes

Response Syntax

```
{
   "ApplicationARN": "string",
   "ApplicationVersionId": number,
   "InputDescriptions": [
      {
         "InAppStreamNames": [ "string" ],
         "InputId": "string",
         "InputParallelism": {
            "Count": number
         },
         "InputProcessingConfigurationDescription": {
            "InputLambdaProcessorDescription": {
               "ResourceARN": "string",
               "RoleARN": "string"
            }
         },
         "InputSchema": {
            "RecordColumns": [
               {
                  "Mapping": "string",
                  "Name": "string",
                  "SqlType": "string"
               }
            ],
            "RecordEncoding": "string",
            "RecordFormat": {
               "MappingParameters": {
                  "CSVMappingParameters": {
                     "RecordColumnDelimiter": "string",
```

```
                    "RecordRowDelimiter": "string"
                 },
                 "JSONMappingParameters": {
                    "RecordRowPath": "string"
                 }
              },
              "RecordFormatType": "string"
           }
        },
        "InputStartingPositionConfiguration": {
           "InputStartingPosition": "string"
        },
        "KinesisFirehoseInputDescription": {
           "ResourceARN": "string",
           "RoleARN": "string"
        },
        "KinesisStreamsInputDescription": {
           "ResourceARN": "string",
           "RoleARN": "string"
        },
        "NamePrefix": "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.

ApplicationARN (p. 7)

The Amazon Resource Name (ARN) of the application.

Type: String

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

Pattern: `arn:.*`

ApplicationVersionId (p. 7)

Provides the current application version.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

InputDescriptions (p. 7)

Describes the application input configuration.

Type: Array of InputDescription (p. 171) objects

Errors

CodeValidationException

The user-provided application code (query) is not valid. This can be a simple syntax error.

HTTP Status Code: 400

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

AddApplicationInputProcessingConfiguration

Adds an InputProcessingConfiguration (p. 178) to a SQL-based Kinesis Data Analytics application. An input processor pre-processes records on the input stream before the application's SQL code executes. Currently, the only input processor available is Amazon Lambda.

Request Syntax

```
{
   "ApplicationName": "string",
   "CurrentApplicationVersionId": number,
   "InputId": "string",
   "InputProcessingConfiguration": {
      "InputLambdaProcessor": {
         "ResourceARN": "string"
      }
   }
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 10)

The name of the application to which you want to add the input processing configuration.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

CurrentApplicationVersionId (p. 10)

The version of the application to which you want to add the input processing configuration. You can use the DescribeApplication (p. 58) operation to get the current application version. If the version specified is not the current version, the `ConcurrentModificationException` is returned.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: Yes

InputId (p. 10)

The ID of the input configuration to add the input processing configuration to. You can get a list of the input IDs for an application using the DescribeApplication (p. 58) operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

InputProcessingConfiguration (p. 10)

The InputProcessingConfiguration (p. 178) to add to the application.

Type: InputProcessingConfiguration (p. 178) object

Required: Yes

Response Syntax

```
{
   "ApplicationARN": "string",
   "ApplicationVersionId": number,
   "InputId": "string",
   "InputProcessingConfigurationDescription": {
      "InputLambdaProcessorDescription": {
         "ResourceARN": "string",
         "RoleARN": "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.

ApplicationARN (p. 11)

The Amazon Resource Name (ARN) of the application.

Type: String

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

Pattern: `arn:.*`

ApplicationVersionId (p. 11)

Provides the current application version.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

InputId (p. 11)

The input ID that is associated with the application input. This is the ID that Kinesis Data Analytics assigns to each input configuration that you add to your application.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

InputProcessingConfigurationDescription (p. 11)

The description of the preprocessor that executes on records in this input before the application's code is run.

Type: InputProcessingConfigurationDescription (p. 179) object

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

AddApplicationOutput

Adds an external destination to your SQL-based Kinesis Data Analytics application.

If you want Kinesis Data Analytics to deliver data from an in-application stream within your application to an external destination (such as an Kinesis data stream, a Kinesis Data Firehose delivery stream, or an Amazon Lambda function), you add the relevant configuration to your application using this operation. You can configure one or more outputs for your application. Each output configuration maps an in-application stream and an external destination.

You can use one of the output configurations to deliver data from your in-application error stream to an external destination so that you can analyze the errors.

Any configuration update, including adding a streaming source using this operation, results in a new version of the application. You can use the DescribeApplication (p. 58) operation to find the current application version.

Request Syntax

```
{
   "ApplicationName": "string",
   "CurrentApplicationVersionId": number,
   "Output": {
      "DestinationSchema": {
         "RecordFormatType": "string"
      },
      "KinesisFirehoseOutput": {
         "ResourceARN": "string"
      },
      "KinesisStreamsOutput": {
         "ResourceARN": "string"
      },
      "LambdaOutput": {
         "ResourceARN": "string"
      },
      "Name": "string"
   }
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 13)

The name of the application to which you want to add the output configuration.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

CurrentApplicationVersionId (p. 13)

The version of the application to which you want to add the output configuration. You can use the DescribeApplication (p. 58) operation to get the current application version. If the version specified is not the current version, the `ConcurrentModificationException` is returned.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: Yes

Output (p. 13)

An array of objects, each describing one output configuration. In the output configuration, you specify the name of an in-application stream, a destination (that is, a Kinesis data stream, a Kinesis Data Firehose delivery stream, or an Amazon Lambda function), and record the formation to use when writing to the destination.

Type: Output (p. 206) object

Required: Yes

Response Syntax

```
{
   "ApplicationARN": "string",
   "ApplicationVersionId": number,
   "OutputDescriptions": [
      {
         "DestinationSchema": {
            "RecordFormatType": "string"
         },
         "KinesisFirehoseOutputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "KinesisStreamsOutputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "LambdaOutputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "Name": "string",
         "OutputId": "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.

ApplicationARN (p. 14)

The application Amazon Resource Name (ARN).

Type: String

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

Pattern: `arn:.*`

ApplicationVersionId (p. 14)

The updated application version ID. Kinesis Data Analytics increments this ID when the application is updated.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

OutputDescriptions (p. 14)

Describes the application output configuration. For more information, see Configuring Application Output.

Type: Array of OutputDescription (p. 208) objects

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

AddApplicationReferenceDataSource

Adds a reference data source to an existing SQL-based Kinesis Data Analytics application.

Kinesis Data Analytics reads reference data (that is, an Amazon S3 object) and creates an in-application table within your application. In the request, you provide the source (S3 bucket name and object key name), name of the in-application table to create, and the necessary mapping information that describes how data in an Amazon S3 object maps to columns in the resulting in-application table.

Request Syntax

```
{
   "ApplicationName": "string",
   "CurrentApplicationVersionId": number,
   "ReferenceDataSource": {
      "ReferenceSchema": {
         "RecordColumns": [
            {
               "Mapping": "string",
               "Name": "string",
               "SqlType": "string"
            }
         ],
         "RecordEncoding": "string",
         "RecordFormat": {
            "MappingParameters": {
               "CSVMappingParameters": {
                  "RecordColumnDelimiter": "string",
                  "RecordRowDelimiter": "string"
               },
               "JSONMappingParameters": {
                  "RecordRowPath": "string"
               }
            },
            "RecordFormatType": "string"
         }
      },
      "S3ReferenceDataSource": {
         "BucketARN": "string",
         "FileKey": "string"
      },
      "TableName": "string"
   }
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 17)

The name of an existing application.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

CurrentApplicationVersionId (p. 17)

The version of the application for which you are adding the reference data source. You can use the DescribeApplication (p. 58) operation to get the current application version. If the version specified is not the current version, the `ConcurrentModificationException` is returned.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: Yes

ReferenceDataSource (p. 17)

The reference data source can be an object in your Amazon S3 bucket. Kinesis Data Analytics reads the object and copies the data into the in-application table that is created. You provide an S3 bucket, object key name, and the resulting in-application table that is created.

Type: ReferenceDataSource (p. 221) object

Required: Yes

Response Syntax

```
{
   "ApplicationARN": "string",
   "ApplicationVersionId": number,
   "ReferenceDataSourceDescriptions": [
      {
         "ReferenceId": "string",
         "ReferenceSchema": {
            "RecordColumns": [
               {
                  "Mapping": "string",
                  "Name": "string",
                  "SqlType": "string"
               }
            ],
            "RecordEncoding": "string",
            "RecordFormat": {
               "MappingParameters": {
                  "CSVMappingParameters": {
                     "RecordColumnDelimiter": "string",
                     "RecordRowDelimiter": "string"
                  },
                  "JSONMappingParameters": {
                     "RecordRowPath": "string"
                  }
               },
               "RecordFormatType": "string"
            }
         },
         "S3ReferenceDataSourceDescription": {
            "BucketARN": "string",
            "FileKey": "string",
            "ReferenceRoleARN": "string"
         },
         "TableName": "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.

ApplicationARN (p. 18)

The application Amazon Resource Name (ARN).

Type: String

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

Pattern: `arn:.*`

ApplicationVersionId (p. 18)

The updated application version ID. Kinesis Data Analytics increments this ID when the application is updated.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

ReferenceDataSourceDescriptions (p. 18)

Describes reference data sources configured for the application.

Type: Array of ReferenceDataSourceDescription (p. 222) objects

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

AddApplicationVpcConfiguration

Adds a Virtual Private Cloud (VPC) configuration to the application. Applications can use VPCs to store and access resources securely.

Note the following about VPC configurations for Kinesis Data Analytics applications:

- VPC configurations are not supported for SQL applications.
- When a VPC is added to a Kinesis Data Analytics application, the application can no longer be accessed from the Internet directly. To enable Internet access to the application, add an Internet gateway to your VPC.

Request Syntax

```
{
   "ApplicationName": "string",
   "ConditionalToken": "string",
   "CurrentApplicationVersionId": number,
   "VpcConfiguration": {
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ]
   }
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 21)

The name of an existing application.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

ConditionalToken (p. 21)

A value you use to implement strong concurrency for application updates. You must provide the `ApplicationVersionID` or the `ConditionalToken`. You get the application's current `ConditionalToken` using DescribeApplication (p. 58). For better concurrency support, use the `ConditionalToken` parameter instead of `CurrentApplicationVersionId`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

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

Required: No

CurrentApplicationVersionId (p. 21)

The version of the application to which you want to add the VPC configuration. You must provide the `CurrentApplicationVersionId` or the `ConditionalToken`. You can use

the DescribeApplication (p. 58) operation to get the current application version. If the version specified is not the current version, the `ConcurrentModificationException` is returned. For better concurrency support, use the `ConditionalToken` parameter instead of `CurrentApplicationVersionId`.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: No

VpcConfiguration (p. 21)

Description of the VPC to add to the application.

Type: VpcConfiguration (p. 245) object

Required: Yes

Response Syntax

```
{
   "ApplicationARN": "string",
   "ApplicationVersionId": number,
   "VpcConfigurationDescription": {
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ],
      "VpcConfigurationId": "string",
      "VpcId": "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.

ApplicationARN (p. 22)

The ARN of the application.

Type: String

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

Pattern: `arn:.*`

ApplicationVersionId (p. 22)

Provides the current application version. Kinesis Data Analytics updates the ApplicationVersionId each time you update the application.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

VpcConfigurationDescription (p. 22)

The parameters of the new VPC configuration.

Type: VpcConfigurationDescription (p. 246) object

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidApplicationConfigurationException

The user-provided application configuration is not valid.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

CreateApplication

Creates a Kinesis Data Analytics application. For information about creating a Kinesis Data Analytics application, see Creating an Application.

Request Syntax

```
{
   "ApplicationConfiguration": {
      "ApplicationCodeConfiguration": {
         "CodeContent": {
            "S3ContentLocation": {
               "BucketARN": "string",
               "FileKey": "string",
               "ObjectVersion": "string"
            },
            "TextContent": "string",
            "ZipFileContent": blob
         },
         "CodeContentType": "string"
      },
      "ApplicationSnapshotConfiguration": {
         "SnapshotsEnabled": boolean
      },
      "EnvironmentProperties": {
         "PropertyGroups": [
            {
               "PropertyGroupId": "string",
               "PropertyMap": {
                  "string" : "string"
               }
            }
         ]
      },
      "FlinkApplicationConfiguration": {
         "CheckpointConfiguration": {
            "CheckpointingEnabled": boolean,
            "CheckpointInterval": number,
            "ConfigurationType": "string",
            "MinPauseBetweenCheckpoints": number
         },
         "MonitoringConfiguration": {
            "ConfigurationType": "string",
            "LogLevel": "string",
            "MetricsLevel": "string"
         },
         "ParallelismConfiguration": {
            "AutoScalingEnabled": boolean,
            "ConfigurationType": "string",
            "Parallelism": number,
            "ParallelismPerKPU": number
         }
      },
      "SqlApplicationConfiguration": {
         "Inputs": [
            {
               "InputParallelism": {
                  "Count": number
               },
               "InputProcessingConfiguration": {
                  "InputLambdaProcessor": {
                     "ResourceARN": "string"
```

```
            }
         },
         "InputSchema": {
            "RecordColumns": [
               {
                  "Mapping": "string",
                  "Name": "string",
                  "SqlType": "string"
               }
            ],
            "RecordEncoding": "string",
            "RecordFormat": {
               "MappingParameters": {
                  "CSVMappingParameters": {
                     "RecordColumnDelimiter": "string",
                     "RecordRowDelimiter": "string"
                  },
                  "JSONMappingParameters": {
                     "RecordRowPath": "string"
                  }
               },
               "RecordFormatType": "string"
            }
         },
         "KinesisFirehoseInput": {
            "ResourceARN": "string"
         },
         "KinesisStreamsInput": {
            "ResourceARN": "string"
         },
         "NamePrefix": "string"
      }
   ],
   "Outputs": [
      {
         "DestinationSchema": {
            "RecordFormatType": "string"
         },
         "KinesisFirehoseOutput": {
            "ResourceARN": "string"
         },
         "KinesisStreamsOutput": {
            "ResourceARN": "string"
         },
         "LambdaOutput": {
            "ResourceARN": "string"
         },
         "Name": "string"
      }
   ],
   "ReferenceDataSources": [
      {
         "ReferenceSchema": {
            "RecordColumns": [
               {
                  "Mapping": "string",
                  "Name": "string",
                  "SqlType": "string"
               }
            ],
            "RecordEncoding": "string",
            "RecordFormat": {
               "MappingParameters": {
                  "CSVMappingParameters": {
                     "RecordColumnDelimiter": "string",
                     "RecordRowDelimiter": "string"
```

```
                        },
                        "JSONMappingParameters": {
                           "RecordRowPath": "string"
                        }
                     },
                     "RecordFormatType": "string"
                  }
               },
               "S3ReferenceDataSource": {
                  "BucketARN": "string",
                  "FileKey": "string"
               },
               "TableName": "string"
            }
         ]
      },
      "VpcConfigurations": [
         {
            "SecurityGroupIds": [ "string" ],
            "SubnetIds": [ "string" ]
         }
      ],
      "ZeppelinApplicationConfiguration": {
         "CatalogConfiguration": {
            "GlueDataCatalogConfiguration": {
               "DatabaseARN": "string"
            }
         },
         "CustomArtifactsConfiguration": [
            {
               "ArtifactType": "string",
               "MavenReference": {
                  "ArtifactId": "string",
                  "GroupId": "string",
                  "Version": "string"
               },
               "S3ContentLocation": {
                  "BucketARN": "string",
                  "FileKey": "string",
                  "ObjectVersion": "string"
               }
            }
         ],
         "DeployAsApplicationConfiguration": {
            "S3ContentLocation": {
               "BasePath": "string",
               "BucketARN": "string"
            }
         },
         "MonitoringConfiguration": {
            "LogLevel": "string"
         }
      }
   },
   "ApplicationDescription": "string",
   "ApplicationMode": "string",
   "ApplicationName": "string",
   "CloudWatchLoggingOptions": [
      {
         "LogStreamARN": "string"
      }
   ],
   "RuntimeEnvironment": "string",
   "ServiceExecutionRole": "string",
   "Tags": [
      {
```

```
            "Key": "string",
            "Value": "string"
        }
    ]
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationConfiguration (p. 24)

Use this parameter to configure the application.

Type: ApplicationConfiguration (p. 119) object

Required: No

ApplicationDescription (p. 24)

A summary description of the application.

Type: String

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

Required: No

ApplicationMode (p. 24)

Use the `STREAMING` mode to create a Kinesis Data Analytics For Flink application. To create a Kinesis Data Analytics Studio notebook, use the `INTERACTIVE` mode.

Type: String

Valid Values: `STREAMING | INTERACTIVE`

Required: No

ApplicationName (p. 24)

The name of your application (for example, `sample-app`).

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

CloudWatchLoggingOptions (p. 24)

Use this parameter to configure an Amazon CloudWatch log stream to monitor application configuration errors.

Type: Array of CloudWatchLoggingOption (p. 146) objects

Required: No

RuntimeEnvironment (p. 24)

The runtime environment for the application.

Type: String

Valid Values: `SQL-1_0 | FLINK-1_6 | FLINK-1_8 | ZEPPELIN-FLINK-1_0 | FLINK-1_11 | FLINK-1_13 | ZEPPELIN-FLINK-2_0`

Required: Yes

ServiceExecutionRole (p. 24)

The IAM role used by the application to access Kinesis data streams, Kinesis Data Firehose delivery streams, Amazon S3 objects, and other external resources.

Type: String

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

Pattern: `arn:.*`

Required: Yes

Tags (p. 24)

A list of one or more tags to assign to the application. A tag is a key-value pair that identifies an application. Note that the maximum number of application tags includes system tags. The maximum number of user-defined application tags is 50. For more information, see Using Tagging.

Type: Array of Tag (p. 244) objects

Array Members: Minimum number of 1 item. Maximum number of 200 items.

Required: No

Response Syntax

```
{
   "ApplicationDetail": {
      "ApplicationARN": "string",
      "ApplicationConfigurationDescription": {
         "ApplicationCodeConfigurationDescription": {
            "CodeContentDescription": {
               "CodeMD5": "string",
               "CodeSize": number,
               "S3ApplicationCodeLocationDescription": {
                  "BucketARN": "string",
                  "FileKey": "string",
                  "ObjectVersion": "string"
               },
               "TextContent": "string"
            },
            "CodeContentType": "string"
         },
         "ApplicationSnapshotConfigurationDescription": {
            "SnapshotsEnabled": boolean
         },
         "EnvironmentPropertyDescriptions": {
            "PropertyGroupDescriptions": [
               {
                  "PropertyGroupId": "string",
                  "PropertyMap": {
                     "string" : "string"
                  }
               }
            ]
         },
         "FlinkApplicationConfigurationDescription": {
```

```
      "CheckpointConfigurationDescription": {
         "CheckpointingEnabled": boolean,
         "CheckpointInterval": number,
         "ConfigurationType": "string",
         "MinPauseBetweenCheckpoints": number
      },
      "JobPlanDescription": "string",
      "MonitoringConfigurationDescription": {
         "ConfigurationType": "string",
         "LogLevel": "string",
         "MetricsLevel": "string"
      },
      "ParallelismConfigurationDescription": {
         "AutoScalingEnabled": boolean,
         "ConfigurationType": "string",
         "CurrentParallelism": number,
         "Parallelism": number,
         "ParallelismPerKPU": number
      }
   },
   "RunConfigurationDescription": {
      "ApplicationRestoreConfigurationDescription": {
         "ApplicationRestoreType": "string",
         "SnapshotName": "string"
      },
      "FlinkRunConfigurationDescription": {
         "AllowNonRestoredState": boolean
      }
   },
   "SqlApplicationConfigurationDescription": {
      "InputDescriptions": [
         {
            "InAppStreamNames": [ "string" ],
            "InputId": "string",
            "InputParallelism": {
               "Count": number
            },
            "InputProcessingConfigurationDescription": {
               "InputLambdaProcessorDescription": {
                  "ResourceARN": "string",
                  "RoleARN": "string"
               }
            },
            "InputSchema": {
               "RecordColumns": [
                  {
                     "Mapping": "string",
                     "Name": "string",
                     "SqlType": "string"
                  }
               ],
               "RecordEncoding": "string",
               "RecordFormat": {
                  "MappingParameters": {
                     "CSVMappingParameters": {
                        "RecordColumnDelimiter": "string",
                        "RecordRowDelimiter": "string"
                     },
                     "JSONMappingParameters": {
                        "RecordRowPath": "string"
                     }
                  },
                  "RecordFormatType": "string"
               }
            },
            "InputStartingPositionConfiguration": {
```

```
            "InputStartingPosition": "string"
         },
         "KinesisFirehoseInputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "KinesisStreamsInputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "NamePrefix": "string"
      }
   ],
   "OutputDescriptions": [
      {
         "DestinationSchema": {
            "RecordFormatType": "string"
         },
         "KinesisFirehoseOutputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "KinesisStreamsOutputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "LambdaOutputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "Name": "string",
         "OutputId": "string"
      }
   ],
   "ReferenceDataSourceDescriptions": [
      {
         "ReferenceId": "string",
         "ReferenceSchema": {
            "RecordColumns": [
               {
                  "Mapping": "string",
                  "Name": "string",
                  "SqlType": "string"
               }
            ],
            "RecordEncoding": "string",
            "RecordFormat": {
               "MappingParameters": {
                  "CSVMappingParameters": {
                     "RecordColumnDelimiter": "string",
                     "RecordRowDelimiter": "string"
                  },
                  "JSONMappingParameters": {
                     "RecordRowPath": "string"
                  }
               },
               "RecordFormatType": "string"
            }
         },
         "S3ReferenceDataSourceDescription": {
            "BucketARN": "string",
            "FileKey": "string",
            "ReferenceRoleARN": "string"
         },
         "TableName": "string"
      }
```

```
            ]
         },
         "VpcConfigurationDescriptions": [
            {
               "SecurityGroupIds": [ "string" ],
               "SubnetIds": [ "string" ],
               "VpcConfigurationId": "string",
               "VpcId": "string"
            }
         ],
         "ZeppelinApplicationConfigurationDescription": {
            "CatalogConfigurationDescription": {
               "GlueDataCatalogConfigurationDescription": {
                  "DatabaseARN": "string"
               }
            },
            "CustomArtifactsConfigurationDescription": [
               {
                  "ArtifactType": "string",
                  "MavenReferenceDescription": {
                     "ArtifactId": "string",
                     "GroupId": "string",
                     "Version": "string"
                  },
                  "S3ContentLocationDescription": {
                     "BucketARN": "string",
                     "FileKey": "string",
                     "ObjectVersion": "string"
                  }
               }
            ],
            "DeployAsApplicationConfigurationDescription": {
               "S3ContentLocationDescription": {
                  "BasePath": "string",
                  "BucketARN": "string"
               }
            },
            "MonitoringConfigurationDescription": {
               "LogLevel": "string"
            }
         }
      },
      "ApplicationDescription": "string",
      "ApplicationMaintenanceConfigurationDescription": {
         "ApplicationMaintenanceWindowEndTime": "string",
         "ApplicationMaintenanceWindowStartTime": "string"
      },
      "ApplicationMode": "string",
      "ApplicationName": "string",
      "ApplicationStatus": "string",
      "ApplicationVersionId": number,
      "ApplicationVersionRolledBackFrom": number,
      "ApplicationVersionRolledBackTo": number,
      "ApplicationVersionUpdatedFrom": number,
      "CloudWatchLoggingOptionDescriptions": [
         {
            "CloudWatchLoggingOptionId": "string",
            "LogStreamARN": "string",
            "RoleARN": "string"
         }
      ],
      "ConditionalToken": "string",
      "CreateTimestamp": number,
      "LastUpdateTimestamp": number,
      "RuntimeEnvironment": "string",
      "ServiceExecutionRole": "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.

ApplicationDetail (p. 28)

In response to your `CreateApplication` request, Kinesis Data Analytics returns a response with details of the application it created.

Type: ApplicationDetail (p. 125) object

Errors

CodeValidationException

The user-provided application code (query) is not valid. This can be a simple syntax error.

HTTP Status Code: 400

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

LimitExceededException

The number of allowed resources has been exceeded.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

TooManyTagsException

Application created with too many tags, or too many tags added to an application. Note that the maximum number of application tags includes system tags. The maximum number of user-defined application tags is 50.

HTTP Status Code: 400

UnsupportedOperationException

The request was rejected because a specified parameter is not supported or a specified resource is not valid for this operation.

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

CreateApplicationPresignedUrl

Creates and returns a URL that you can use to connect to an application's extension. Currently, the only available extension is the Apache Flink dashboard.

The IAM role or user used to call this API defines the permissions to access the extension. After the presigned URL is created, no additional permission is required to access this URL. IAM authorization policies for this API are also enforced for every HTTP request that attempts to connect to the extension.

You control the amount of time that the URL will be valid using the `SessionExpirationDurationInSeconds` parameter. If you do not provide this parameter, the returned URL is valid for twelve hours.

Note
The URL that you get from a call to CreateApplicationPresignedUrl must be used within 3 minutes to be valid. If you first try to use the URL after the 3-minute limit expires, the service returns an HTTP 403 Forbidden error.

Request Syntax

```
{
   "ApplicationName": "string",
   "SessionExpirationDurationInSeconds": number,
   "UrlType": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 34)

The name of the application.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

SessionExpirationDurationInSeconds (p. 34)

The duration in seconds for which the returned URL will be valid.

Type: Long

Valid Range: Minimum value of 1800. Maximum value of 43200.

Required: No

UrlType (p. 34)

The type of the extension for which to create and return a URL. Currently, the only valid extension URL type is `FLINK_DASHBOARD_URL`.

Type: String

Valid Values: `FLINK_DASHBOARD_URL | ZEPPELIN_UI_URL`

Required: Yes

Response Syntax

```
{
   "AuthorizedUrl": "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.

AuthorizedUrl (p. 35)

The URL of the extension.

Type: String

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

Errors

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

CreateApplicationSnapshot

Creates a snapshot of the application's state data.

Request Syntax

```
{
   "ApplicationName": "string",
   "SnapshotName": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 37)

The name of an existing application

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

SnapshotName (p. 37)

An identifier for the application snapshot.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

Response Elements

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

Errors

InvalidApplicationConfigurationException

The user-provided application configuration is not valid.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

LimitExceededException

The number of allowed resources has been exceeded.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be found.

HTTP Status Code: 400

UnsupportedOperationException

The request was rejected because a specified parameter is not supported or a specified resource is not valid for this operation.

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

DeleteApplication

Deletes the specified application. Kinesis Data Analytics halts application execution and deletes the application.

Request Syntax

```
{
   "ApplicationName": "string",
   "CreateTimestamp": number
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 39)

The name of the application to delete.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

CreateTimestamp (p. 39)

Use the `DescribeApplication` operation to get this value.

Type: Timestamp

Required: Yes

Response Elements

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

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidApplicationConfigurationException

The user-provided application configuration is not valid.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

DeleteApplicationCloudWatchLoggingOption

Deletes an Amazon CloudWatch log stream from an Kinesis Data Analytics application.

Request Syntax

```
{
   "ApplicationName": "string",
   "CloudWatchLoggingOptionId": "string",
   "ConditionalToken": "string",
   "CurrentApplicationVersionId": number
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 41)

The application name.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

CloudWatchLoggingOptionId (p. 41)

The `CloudWatchLoggingOptionId` of the Amazon CloudWatch logging option to delete. You can get the `CloudWatchLoggingOptionId` by using the DescribeApplication (p. 58) operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

ConditionalToken (p. 41)

A value you use to implement strong concurrency for application updates. You must provide the `CurrentApplicationVersionId` or the `ConditionalToken`. You get the application's current `ConditionalToken` using DescribeApplication (p. 58). For better concurrency support, use the `ConditionalToken` parameter instead of `CurrentApplicationVersionId`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

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

Required: No

CurrentApplicationVersionId (p. 41)

The version ID of the application. You must provide the `CurrentApplicationVersionId` or the `ConditionalToken`. You can retrieve the application version ID using

DescribeApplication (p. 58). For better concurrency support, use the `ConditionalToken` parameter instead of `CurrentApplicationVersionId`.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: No

Response Syntax

```
{
   "ApplicationARN": "string",
   "ApplicationVersionId": number,
   "CloudWatchLoggingOptionDescriptions": [
      {
         "CloudWatchLoggingOptionId": "string",
         "LogStreamARN": "string",
         "RoleARN": "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.

ApplicationARN (p. 42)

The application's Amazon Resource Name (ARN).

Type: String

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

Pattern: `arn:.*`

ApplicationVersionId (p. 42)

The version ID of the application. Kinesis Data Analytics updates the `ApplicationVersionId` each time you change the CloudWatch logging options.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

CloudWatchLoggingOptionDescriptions (p. 42)

The descriptions of the remaining CloudWatch logging options for the application.

Type: Array of CloudWatchLoggingOptionDescription (p. 147) objects

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidApplicationConfigurationException

The user-provided application configuration is not valid.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

DeleteApplicationInputProcessingConfiguration

Deletes an InputProcessingConfiguration (p. 178) from an input.

Request Syntax

```
{
   "ApplicationName": "string",
   "CurrentApplicationVersionId": number,
   "InputId": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 44)

The name of the application.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

CurrentApplicationVersionId (p. 44)

The application version. You can use the DescribeApplication (p. 58) operation to get the current application version. If the version specified is not the current version, the `ConcurrentModificationException` is returned.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: Yes

InputId (p. 44)

The ID of the input configuration from which to delete the input processing configuration. You can get a list of the input IDs for an application by using the DescribeApplication (p. 58) operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

Response Syntax

```
{
   "ApplicationARN": "string",
   "ApplicationVersionId": 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.

ApplicationARN (p. 44)

The Amazon Resource Name (ARN) of the application.

Type: String

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

Pattern: `arn:.*`

ApplicationVersionId (p. 44)

The current application version ID.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

DeleteApplicationOutput

Deletes the output destination configuration from your SQL-based Kinesis Data Analytics application's configuration. Kinesis Data Analytics will no longer write data from the corresponding in-application stream to the external output destination.

Request Syntax

```
{
   "ApplicationName": "string",
   "CurrentApplicationVersionId": number,
   "OutputId": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 47)

The application name.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

CurrentApplicationVersionId (p. 47)

The application version. You can use the DescribeApplication (p. 58) operation to get the current application version. If the version specified is not the current version, the `ConcurrentModificationException` is returned.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: Yes

OutputId (p. 47)

The ID of the configuration to delete. Each output configuration that is added to the application (either when the application is created or later) using the AddApplicationOutput (p. 13) operation has a unique ID. You need to provide the ID to uniquely identify the output configuration that you want to delete from the application configuration. You can use the DescribeApplication (p. 58) operation to get the specific `OutputId`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

Response Syntax

```
{
   "ApplicationARN": "string",
   "ApplicationVersionId": 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.

ApplicationARN (p. 48)

The application Amazon Resource Name (ARN).

Type: String

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

Pattern: `arn:.*`

ApplicationVersionId (p. 48)

The current application version ID.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

DeleteApplicationReferenceDataSource

Deletes a reference data source configuration from the specified SQL-based Kinesis Data Analytics application's configuration.

If the application is running, Kinesis Data Analytics immediately removes the in-application table that you created using the AddApplicationReferenceDataSource (p. 17) operation.

Request Syntax

```
{
   "ApplicationName": "string",
   "CurrentApplicationVersionId": number,
   "ReferenceId": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 50)

The name of an existing application.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

CurrentApplicationVersionId (p. 50)

The current application version. You can use the DescribeApplication (p. 58) operation to get the current application version. If the version specified is not the current version, the `ConcurrentModificationException` is returned.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: Yes

ReferenceId (p. 50)

The ID of the reference data source. When you add a reference data source to your application using the AddApplicationReferenceDataSource (p. 17), Kinesis Data Analytics assigns an ID. You can use the DescribeApplication (p. 58) operation to get the reference ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

Response Syntax

```
{
   "ApplicationARN": "string",
   "ApplicationVersionId": 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.

ApplicationARN (p. 51)

The application Amazon Resource Name (ARN).

Type: String

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

Pattern: `arn:.*`

ApplicationVersionId (p. 51)

The updated version ID of the application.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

DeleteApplicationSnapshot

Deletes a snapshot of application state.

Request Syntax

```
{
   "ApplicationName": "string",
   "SnapshotCreationTimestamp": number,
   "SnapshotName": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 53)

The name of an existing application.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

SnapshotCreationTimestamp (p. 53)

The creation timestamp of the application snapshot to delete. You can retrieve this value using DescribeApplicationSnapshot (p. 64) or ListApplicationSnapshots (p. 78).

Type: Timestamp

Required: Yes

SnapshotName (p. 53)

The identifier for the snapshot delete.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

Response Elements

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

Errors

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be found.

HTTP Status Code: 400

UnsupportedOperationException

The request was rejected because a specified parameter is not supported or a specified resource is not valid for this operation.

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

DeleteApplicationVpcConfiguration

Removes a VPC configuration from a Kinesis Data Analytics application.

Request Syntax

```
{
   "ApplicationName": "string",
   "ConditionalToken": "string",
   "CurrentApplicationVersionId": number,
   "VpcConfigurationId": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 55)

The name of an existing application.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

ConditionalToken (p. 55)

A value you use to implement strong concurrency for application updates. You must provide the `CurrentApplicationVersionId` or the `ConditionalToken`. You get the application's current `ConditionalToken` using DescribeApplication (p. 58). For better concurrency support, use the `ConditionalToken` parameter instead of `CurrentApplicationVersionId`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

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

Required: No

CurrentApplicationVersionId (p. 55)

The current application version ID. You must provide the `CurrentApplicationVersionId` or the `ConditionalToken`. You can retrieve the application version ID using DescribeApplication (p. 58). For better concurrency support, use the `ConditionalToken` parameter instead of `CurrentApplicationVersionId`.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: No

VpcConfigurationId (p. 55)

The ID of the VPC configuration to delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

Response Syntax

```
{
   "ApplicationARN": "string",
   "ApplicationVersionId": 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.

ApplicationARN (p. 56)

The ARN of the Kinesis Data Analytics application.

Type: String

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

Pattern: `arn:.*`

ApplicationVersionId (p. 56)

The updated version ID of the application.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidApplicationConfigurationException

The user-provided application configuration is not valid.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

DescribeApplication

Returns information about a specific Kinesis Data Analytics application.

If you want to retrieve a list of all applications in your account, use the ListApplications (p. 76) operation.

Request Syntax

```
{
   "ApplicationName": "string",
   "IncludeAdditionalDetails": boolean
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 58)

The name of the application.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

IncludeAdditionalDetails (p. 58)

Displays verbose information about a Kinesis Data Analytics application, including the application's job plan.

Type: Boolean

Required: No

Response Syntax

```
{
   "ApplicationDetail": {
      "ApplicationARN": "string",
      "ApplicationConfigurationDescription": {
         "ApplicationCodeConfigurationDescription": {
            "CodeContentDescription": {
               "CodeMD5": "string",
               "CodeSize": number,
               "S3ApplicationCodeLocationDescription": {
                  "BucketARN": "string",
                  "FileKey": "string",
                  "ObjectVersion": "string"
               },
               "TextContent": "string"
            },
            "CodeContentType": "string"
```

```
      },
      "ApplicationSnapshotConfigurationDescription": {
         "SnapshotsEnabled": boolean
      },
      "EnvironmentPropertyDescriptions": {
         "PropertyGroupDescriptions": [
            {
               "PropertyGroupId": "string",
               "PropertyMap": {
                  "string" : "string"
               }
            }
         ]
      },
      "FlinkApplicationConfigurationDescription": {
         "CheckpointConfigurationDescription": {
            "CheckpointingEnabled": boolean,
            "CheckpointInterval": number,
            "ConfigurationType": "string",
            "MinPauseBetweenCheckpoints": number
         },
         "JobPlanDescription": "string",
         "MonitoringConfigurationDescription": {
            "ConfigurationType": "string",
            "LogLevel": "string",
            "MetricsLevel": "string"
         },
         "ParallelismConfigurationDescription": {
            "AutoScalingEnabled": boolean,
            "ConfigurationType": "string",
            "CurrentParallelism": number,
            "Parallelism": number,
            "ParallelismPerKPU": number
         }
      },
      "RunConfigurationDescription": {
         "ApplicationRestoreConfigurationDescription": {
            "ApplicationRestoreType": "string",
            "SnapshotName": "string"
         },
         "FlinkRunConfigurationDescription": {
            "AllowNonRestoredState": boolean
         }
      },
      "SqlApplicationConfigurationDescription": {
         "InputDescriptions": [
            {
               "InAppStreamNames": [ "string" ],
               "InputId": "string",
               "InputParallelism": {
                  "Count": number
               },
               "InputProcessingConfigurationDescription": {
                  "InputLambdaProcessorDescription": {
                     "ResourceARN": "string",
                     "RoleARN": "string"
                  }
               },
               "InputSchema": {
                  "RecordColumns": [
                     {
                        "Mapping": "string",
                        "Name": "string",
                        "SqlType": "string"
                     }
                  ],
```

```
            "RecordEncoding": "string",
            "RecordFormat": {
               "MappingParameters": {
                  "CSVMappingParameters": {
                     "RecordColumnDelimiter": "string",
                     "RecordRowDelimiter": "string"
                  },
                  "JSONMappingParameters": {
                     "RecordRowPath": "string"
                  }
               },
               "RecordFormatType": "string"
            }
         },
         "InputStartingPositionConfiguration": {
            "InputStartingPosition": "string"
         },
         "KinesisFirehoseInputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "KinesisStreamsInputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "NamePrefix": "string"
      }
   ],
   "OutputDescriptions": [
      {
         "DestinationSchema": {
            "RecordFormatType": "string"
         },
         "KinesisFirehoseOutputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "KinesisStreamsOutputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "LambdaOutputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "Name": "string",
         "OutputId": "string"
      }
   ],
   "ReferenceDataSourceDescriptions": [
      {
         "ReferenceId": "string",
         "ReferenceSchema": {
            "RecordColumns": [
               {
                  "Mapping": "string",
                  "Name": "string",
                  "SqlType": "string"
               }
            ],
            "RecordEncoding": "string",
            "RecordFormat": {
               "MappingParameters": {
                  "CSVMappingParameters": {
                     "RecordColumnDelimiter": "string",
                     "RecordRowDelimiter": "string"
```

```
                        },
                        "JSONMappingParameters": {
                           "RecordRowPath": "string"
                        }
                     },
                     "RecordFormatType": "string"
                  }
               },
               "S3ReferenceDataSourceDescription": {
                  "BucketARN": "string",
                  "FileKey": "string",
                  "ReferenceRoleARN": "string"
               },
               "TableName": "string"
            }
         ]
      },
      "VpcConfigurationDescriptions": [
         {
            "SecurityGroupIds": [ "string" ],
            "SubnetIds": [ "string" ],
            "VpcConfigurationId": "string",
            "VpcId": "string"
         }
      ],
      "ZeppelinApplicationConfigurationDescription": {
         "CatalogConfigurationDescription": {
            "GlueDataCatalogConfigurationDescription": {
               "DatabaseARN": "string"
            }
         },
         "CustomArtifactsConfigurationDescription": [
            {
               "ArtifactType": "string",
               "MavenReferenceDescription": {
                  "ArtifactId": "string",
                  "GroupId": "string",
                  "Version": "string"
               },
               "S3ContentLocationDescription": {
                  "BucketARN": "string",
                  "FileKey": "string",
                  "ObjectVersion": "string"
               }
            }
         ],
         "DeployAsApplicationConfigurationDescription": {
            "S3ContentLocationDescription": {
               "BasePath": "string",
               "BucketARN": "string"
            }
         },
         "MonitoringConfigurationDescription": {
            "LogLevel": "string"
         }
      }
   },
   "ApplicationDescription": "string",
   "ApplicationMaintenanceConfigurationDescription": {
      "ApplicationMaintenanceWindowEndTime": "string",
      "ApplicationMaintenanceWindowStartTime": "string"
   },
   "ApplicationMode": "string",
   "ApplicationName": "string",
   "ApplicationStatus": "string",
   "ApplicationVersionId": number,
```

```
      "ApplicationVersionRolledBackFrom": number,
      "ApplicationVersionRolledBackTo": number,
      "ApplicationVersionUpdatedFrom": number,
      "CloudWatchLoggingOptionDescriptions": [
         {
            "CloudWatchLoggingOptionId": "string",
            "LogStreamARN": "string",
            "RoleARN": "string"
         }
      ],
      "ConditionalToken": "string",
      "CreateTimestamp": number,
      "LastUpdateTimestamp": number,
      "RuntimeEnvironment": "string",
      "ServiceExecutionRole": "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.

ApplicationDetail (p. 58)

Provides a description of the application, such as the application's Amazon Resource Name (ARN), status, and latest version.

Type: ApplicationDetail (p. 125) object

Errors

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

DescribeApplicationSnapshot

Returns information about a snapshot of application state data.

Request Syntax

```
{
   "ApplicationName": "string",
   "SnapshotName": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 64)

The name of an existing application.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

SnapshotName (p. 64)

The identifier of an application snapshot. You can retrieve this value using ListApplicationSnapshots (p. 78).

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

Response Syntax

```
{
   "SnapshotDetails": {
      "ApplicationVersionId": number,
      "SnapshotCreationTimestamp": number,
      "SnapshotName": "string",
      "SnapshotStatus": "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.

SnapshotDetails (p. 64)

An object containing information about the application snapshot.

Type: SnapshotDetails (p. 238) object

Errors

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be found.

HTTP Status Code: 400

UnsupportedOperationException

The request was rejected because a specified parameter is not supported or a specified resource is not valid for this operation.

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

DescribeApplicationVersion

Provides a detailed description of a specified version of the application. To see a list of all the versions of an application, invoke the ListApplicationVersions (p. 81) operation.

Note
This operation is supported only for Amazon Kinesis Data Analytics for Apache Flink.

Request Syntax

```
{
   "ApplicationName": "string",
   "ApplicationVersionId": number
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 66)

The name of the application for which you want to get the version description.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

ApplicationVersionId (p. 66)

The ID of the application version for which you want to get the description.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: Yes

Response Syntax

```
{
   "ApplicationVersionDetail": {
      "ApplicationARN": "string",
      "ApplicationConfigurationDescription": {
         "ApplicationCodeConfigurationDescription": {
            "CodeContentDescription": {
               "CodeMD5": "string",
               "CodeSize": number,
               "S3ApplicationCodeLocationDescription": {
                  "BucketARN": "string",
                  "FileKey": "string",
                  "ObjectVersion": "string"
               },
               "TextContent": "string"
```

```
      },
      "CodeContentType": "string"
   },
   "ApplicationSnapshotConfigurationDescription": {
      "SnapshotsEnabled": boolean
   },
   "EnvironmentPropertyDescriptions": {
      "PropertyGroupDescriptions": [
         {
            "PropertyGroupId": "string",
            "PropertyMap": {
               "string" : "string"
            }
         }
      ]
   },
   "FlinkApplicationConfigurationDescription": {
      "CheckpointConfigurationDescription": {
         "CheckpointingEnabled": boolean,
         "CheckpointInterval": number,
         "ConfigurationType": "string",
         "MinPauseBetweenCheckpoints": number
      },
      "JobPlanDescription": "string",
      "MonitoringConfigurationDescription": {
         "ConfigurationType": "string",
         "LogLevel": "string",
         "MetricsLevel": "string"
      },
      "ParallelismConfigurationDescription": {
         "AutoScalingEnabled": boolean,
         "ConfigurationType": "string",
         "CurrentParallelism": number,
         "Parallelism": number,
         "ParallelismPerKPU": number
      }
   },
   "RunConfigurationDescription": {
      "ApplicationRestoreConfigurationDescription": {
         "ApplicationRestoreType": "string",
         "SnapshotName": "string"
      },
      "FlinkRunConfigurationDescription": {
         "AllowNonRestoredState": boolean
      }
   },
   "SqlApplicationConfigurationDescription": {
      "InputDescriptions": [
         {
            "InAppStreamNames": [ "string" ],
            "InputId": "string",
            "InputParallelism": {
               "Count": number
            },
            "InputProcessingConfigurationDescription": {
               "InputLambdaProcessorDescription": {
                  "ResourceARN": "string",
                  "RoleARN": "string"
               }
            },
            "InputSchema": {
               "RecordColumns": [
                  {
                     "Mapping": "string",
                     "Name": "string",
                     "SqlType": "string"
```

```
                    }
                ],
                "RecordEncoding": "string",
                "RecordFormat": {
                    "MappingParameters": {
                        "CSVMappingParameters": {
                            "RecordColumnDelimiter": "string",
                            "RecordRowDelimiter": "string"
                        },
                        "JSONMappingParameters": {
                            "RecordRowPath": "string"
                        }
                    },
                    "RecordFormatType": "string"
                }
            },
            "InputStartingPositionConfiguration": {
                "InputStartingPosition": "string"
            },
            "KinesisFirehoseInputDescription": {
                "ResourceARN": "string",
                "RoleARN": "string"
            },
            "KinesisStreamsInputDescription": {
                "ResourceARN": "string",
                "RoleARN": "string"
            },
            "NamePrefix": "string"
        }
    ],
    "OutputDescriptions": [
        {
            "DestinationSchema": {
                "RecordFormatType": "string"
            },
            "KinesisFirehoseOutputDescription": {
                "ResourceARN": "string",
                "RoleARN": "string"
            },
            "KinesisStreamsOutputDescription": {
                "ResourceARN": "string",
                "RoleARN": "string"
            },
            "LambdaOutputDescription": {
                "ResourceARN": "string",
                "RoleARN": "string"
            },
            "Name": "string",
            "OutputId": "string"
        }
    ],
    "ReferenceDataSourceDescriptions": [
        {
            "ReferenceId": "string",
            "ReferenceSchema": {
                "RecordColumns": [
                    {
                        "Mapping": "string",
                        "Name": "string",
                        "SqlType": "string"
                    }
                ],
                "RecordEncoding": "string",
                "RecordFormat": {
                    "MappingParameters": {
                        "CSVMappingParameters": {
```

```
                        "RecordColumnDelimiter": "string",
                        "RecordRowDelimiter": "string"
                     },
                     "JSONMappingParameters": {
                        "RecordRowPath": "string"
                     }
                  },
                  "RecordFormatType": "string"
               }
            },
            "S3ReferenceDataSourceDescription": {
               "BucketARN": "string",
               "FileKey": "string",
               "ReferenceRoleARN": "string"
            },
            "TableName": "string"
         }
      ]
   },
   "VpcConfigurationDescriptions": [
      {
         "SecurityGroupIds": [ "string" ],
         "SubnetIds": [ "string" ],
         "VpcConfigurationId": "string",
         "VpcId": "string"
      }
   ],
   "ZeppelinApplicationConfigurationDescription": {
      "CatalogConfigurationDescription": {
         "GlueDataCatalogConfigurationDescription": {
            "DatabaseARN": "string"
         }
      },
      "CustomArtifactsConfigurationDescription": [
         {
            "ArtifactType": "string",
            "MavenReferenceDescription": {
               "ArtifactId": "string",
               "GroupId": "string",
               "Version": "string"
            },
            "S3ContentLocationDescription": {
               "BucketARN": "string",
               "FileKey": "string",
               "ObjectVersion": "string"
            }
         }
      ],
      "DeployAsApplicationConfigurationDescription": {
         "S3ContentLocationDescription": {
            "BasePath": "string",
            "BucketARN": "string"
         }
      },
      "MonitoringConfigurationDescription": {
         "LogLevel": "string"
      }
   }
},
"ApplicationDescription": "string",
"ApplicationMaintenanceConfigurationDescription": {
   "ApplicationMaintenanceWindowEndTime": "string",
   "ApplicationMaintenanceWindowStartTime": "string"
},
"ApplicationMode": "string",
"ApplicationName": "string",
```

```
      "ApplicationStatus": "string",
      "ApplicationVersionId": number,
      "ApplicationVersionRolledBackFrom": number,
      "ApplicationVersionRolledBackTo": number,
      "ApplicationVersionUpdatedFrom": number,
      "CloudWatchLoggingOptionDescriptions": [
         {
            "CloudWatchLoggingOptionId": "string",
            "LogStreamARN": "string",
            "RoleARN": "string"
         }
      ],
      "ConditionalToken": "string",
      "CreateTimestamp": number,
      "LastUpdateTimestamp": number,
      "RuntimeEnvironment": "string",
      "ServiceExecutionRole": "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.

ApplicationVersionDetail (p. 66)

Describes the application, including the application Amazon Resource Name (ARN), status, latest version, and input and output configurations.

Type: ApplicationDetail (p. 125) object

Errors

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be found.

HTTP Status Code: 400

UnsupportedOperationException

The request was rejected because a specified parameter is not supported or a specified resource is not valid for this operation.

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

DiscoverInputSchema

Infers a schema for a SQL-based Kinesis Data Analytics application by evaluating sample records on the specified streaming source (Kinesis data stream or Kinesis Data Firehose delivery stream) or Amazon S3 object. In the response, the operation returns the inferred schema and also the sample records that the operation used to infer the schema.

You can use the inferred schema when configuring a streaming source for your application. When you create an application using the Kinesis Data Analytics console, the console uses this operation to infer a schema and show it in the console user interface.

Request Syntax

```
{
   "InputProcessingConfiguration": {
      "InputLambdaProcessor": {
         "ResourceARN": "string"
      }
   },
   "InputStartingPositionConfiguration": {
      "InputStartingPosition": "string"
   },
   "ResourceARN": "string",
   "S3Configuration": {
      "BucketARN": "string",
      "FileKey": "string"
   },
   "ServiceExecutionRole": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

InputProcessingConfiguration (p. 72)

The InputProcessingConfiguration (p. 178) to use to preprocess the records before discovering the schema of the records.

Type: InputProcessingConfiguration (p. 178) object

Required: No

InputStartingPositionConfiguration (p. 72)

The point at which you want Kinesis Data Analytics to start reading records from the specified streaming source discovery purposes.

Type: InputStartingPositionConfiguration (p. 182) object

Required: No

ResourceARN (p. 72)

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

Type: String

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

Pattern: `arn:.*`

Required: No

S3Configuration (p. 72)

Specify this parameter to discover a schema from data in an Amazon S3 object.

Type: S3Configuration (p. 229) object

Required: No

ServiceExecutionRole (p. 72)

The ARN of the role that is used to access the streaming source.

Type: String

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

Pattern: `arn:.*`

Required: Yes

Response Syntax

```
{
   "InputSchema": {
      "RecordColumns": [
         {
            "Mapping": "string",
            "Name": "string",
            "SqlType": "string"
         }
      ],
      "RecordEncoding": "string",
      "RecordFormat": {
         "MappingParameters": {
            "CSVMappingParameters": {
               "RecordColumnDelimiter": "string",
               "RecordRowDelimiter": "string"
            },
            "JSONMappingParameters": {
               "RecordRowPath": "string"
            }
         },
         "RecordFormatType": "string"
      }
   },
   "ParsedInputRecords": [
      [ "string" ]
   ],
   "ProcessedInputRecords": [ "string" ],
   "RawInputRecords": [ "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.

InputSchema (p. 73)

The schema inferred from the streaming source. It identifies the format of the data in the streaming source and how each data element maps to corresponding columns in the in-application stream that you can create.

Type: SourceSchema (p. 239) object

ParsedInputRecords (p. 73)

An array of elements, where each element corresponds to a row in a stream record (a stream record can have more than one row).

Type: Array of arrays of strings

ProcessedInputRecords (p. 73)

The stream data that was modified by the processor specified in the `InputProcessingConfiguration` parameter.

Type: Array of strings

RawInputRecords (p. 73)

The raw stream data that was sampled to infer the schema.

Type: Array of strings

Errors

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceProvisionedThroughputExceededException

Discovery failed to get a record from the streaming source because of the Kinesis Streams `ProvisionedThroughputExceededException`. For more information, see GetRecords in the Amazon Kinesis Streams API Reference.

HTTP Status Code: 400

ServiceUnavailableException

The service cannot complete the request.

HTTP Status Code: 500

UnableToDetectSchemaException

The data format is not valid. Kinesis Data Analytics cannot detect the schema for the given streaming source.

HTTP Status Code: 400

UnsupportedOperationException

The request was rejected because a specified parameter is not supported or a specified resource is not valid for this operation.

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

ListApplications

Returns a list of Kinesis Data Analytics applications in your account. For each application, the response includes the application name, Amazon Resource Name (ARN), and status.

If you want detailed information about a specific application, use DescribeApplication (p. 58).

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

Limit (p. 76)

The maximum number of applications to list.

Type: Integer

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

Required: No

NextToken (p. 76)

If a previous command returned a pagination token, pass it into this value to retrieve the next set of results. For more information about pagination, see Using the Amazon Command Line Interface's Pagination Options.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: No

Response Syntax

```
{
   "ApplicationSummaries": [
      {
         "ApplicationARN": "string",
         "ApplicationMode": "string",
         "ApplicationName": "string",
         "ApplicationStatus": "string",
         "ApplicationVersionId": number,
         "RuntimeEnvironment": "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.

ApplicationSummaries (p. 76)

A list of `ApplicationSummary` objects.

Type: Array of ApplicationSummary (p. 134) objects

NextToken (p. 76)

The pagination token for the next set of results, or `null` if there are no additional results. Pass this token into a subsequent command to retrieve the next set of items For more information about pagination, see Using the Amazon Command Line Interface's Pagination Options.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Errors

InvalidRequestException

The request JSON is not valid for the operation.

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

ListApplicationSnapshots

Lists information about the current application snapshots.

Request Syntax

```
{
   "ApplicationName": "string",
   "Limit": number,
   "NextToken": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 78)

The name of an existing application.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

Limit (p. 78)

The maximum number of application snapshots to list.

Type: Integer

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

Required: No

NextToken (p. 78)

Use this parameter if you receive a `NextToken` response in a previous request that indicates that there is more output available. Set it to the value of the previous call's `NextToken` response to indicate where the output should continue from.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Required: No

Response Syntax

```
{
   "NextToken": "string",
   "SnapshotSummaries": [
      {
         "ApplicationVersionId": number,
```

```
        "SnapshotCreationTimestamp": number,
        "SnapshotName": "string",
        "SnapshotStatus": "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. 78)

The token for the next set of results, or `null` if there are no additional results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

SnapshotSummaries (p. 78)

A collection of objects containing information about the application snapshots.

Type: Array of SnapshotDetails (p. 238) objects

Errors

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

UnsupportedOperationException

The request was rejected because a specified parameter is not supported or a specified resource is not valid for this operation.

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

ListApplicationVersions

Lists all the versions for the specified application, including versions that were rolled back. The response also includes a summary of the configuration associated with each version.

To get the complete description of a specific application version, invoke the DescribeApplicationVersion (p. 66) operation.

Note
This operation is supported only for Amazon Kinesis Data Analytics for Apache Flink.

Request Syntax

```
{
   "ApplicationName": "string",
   "Limit": number,
   "NextToken": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 81)

The name of the application for which you want to list all versions.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

Limit (p. 81)

The maximum number of versions to list in this invocation of the operation.

Type: Integer

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

Required: No

NextToken (p. 81)

If a previous invocation of this operation returned a pagination token, pass it into this value to retrieve the next set of results. For more information about pagination, see Using the Amazon Command Line Interface's Pagination Options.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Required: No

Response Syntax

```
{
```

```
   "ApplicationVersionSummaries": [
      {
         "ApplicationStatus": "string",
         "ApplicationVersionId": number
      }
   ],
   "NextToken": "string"
}
```

Response Elements

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

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

ApplicationVersionSummaries (p. 81)

A list of the application versions and the associated configuration summaries. The list includes application versions that were rolled back.

To get the complete description of a specific application version, invoke the DescribeApplicationVersion (p. 66) operation.

Type: Array of ApplicationVersionSummary (p. 136) objects

NextToken (p. 81)

The pagination token for the next set of results, or `null` if there are no additional results. To retrieve the next set of items, pass this token into a subsequent invocation of this operation. For more information about pagination, see Using the Amazon Command Line Interface's Pagination Options.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Errors

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be found.

HTTP Status Code: 400

UnsupportedOperationException

The request was rejected because a specified parameter is not supported or a specified resource is not valid for this operation.

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

Retrieves the list of key-value tags assigned to the application. For more information, see Using Tagging.

Request Syntax

```
{
   "ResourceARN": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

ResourceARN (p. 84)

The ARN of the application for which to retrieve tags.

Type: String

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

Pattern: `arn:.*`

Required: Yes

Response Syntax

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

Response Elements

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

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

Tags (p. 84)

The key-value tags assigned to the application.

Type: Array of Tag (p. 244) objects

Array Members: Minimum number of 1 item. Maximum number of 200 items.

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

RollbackApplication

Reverts the application to the previous running version. You can roll back an application if you suspect it is stuck in a transient status.

You can roll back an application only if it is in the `UPDATING` or `AUTOSCALING` status.

When you rollback an application, it loads state data from the last successful snapshot. If the application has no snapshots, Kinesis Data Analytics rejects the rollback request.

This action is not supported for Kinesis Data Analytics for SQL applications.

Request Syntax

```
{
   "ApplicationName": "string",
   "CurrentApplicationVersionId": number
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 86)

The name of the application.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

CurrentApplicationVersionId (p. 86)

The current application version ID. You can retrieve the application version ID using DescribeApplication (p. 58).

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: Yes

Response Syntax

```
{
   "ApplicationDetail": {
      "ApplicationARN": "string",
      "ApplicationConfigurationDescription": {
         "ApplicationCodeConfigurationDescription": {
            "CodeContentDescription": {
               "CodeMD5": "string",
               "CodeSize": number,
               "S3ApplicationCodeLocationDescription": {
```

```
            "BucketARN": "string",
            "FileKey": "string",
            "ObjectVersion": "string"
         },
         "TextContent": "string"
      },
      "CodeContentType": "string"
   },
   "ApplicationSnapshotConfigurationDescription": {
      "SnapshotsEnabled": boolean
   },
   "EnvironmentPropertyDescriptions": {
      "PropertyGroupDescriptions": [
         {
            "PropertyGroupId": "string",
            "PropertyMap": {
               "string" : "string"
            }
         }
      ]
   },
   "FlinkApplicationConfigurationDescription": {
      "CheckpointConfigurationDescription": {
         "CheckpointingEnabled": boolean,
         "CheckpointInterval": number,
         "ConfigurationType": "string",
         "MinPauseBetweenCheckpoints": number
      },
      "JobPlanDescription": "string",
      "MonitoringConfigurationDescription": {
         "ConfigurationType": "string",
         "LogLevel": "string",
         "MetricsLevel": "string"
      },
      "ParallelismConfigurationDescription": {
         "AutoScalingEnabled": boolean,
         "ConfigurationType": "string",
         "CurrentParallelism": number,
         "Parallelism": number,
         "ParallelismPerKPU": number
      }
   },
   "RunConfigurationDescription": {
      "ApplicationRestoreConfigurationDescription": {
         "ApplicationRestoreType": "string",
         "SnapshotName": "string"
      },
      "FlinkRunConfigurationDescription": {
         "AllowNonRestoredState": boolean
      }
   },
   "SqlApplicationConfigurationDescription": {
      "InputDescriptions": [
         {
            "InAppStreamNames": [ "string" ],
            "InputId": "string",
            "InputParallelism": {
               "Count": number
            },
            "InputProcessingConfigurationDescription": {
               "InputLambdaProcessorDescription": {
                  "ResourceARN": "string",
                  "RoleARN": "string"
               }
            },
            "InputSchema": {
```

```
            "RecordColumns": [
               {
                  "Mapping": "string",
                  "Name": "string",
                  "SqlType": "string"
               }
            ],
            "RecordEncoding": "string",
            "RecordFormat": {
               "MappingParameters": {
                  "CSVMappingParameters": {
                     "RecordColumnDelimiter": "string",
                     "RecordRowDelimiter": "string"
                  },
                  "JSONMappingParameters": {
                     "RecordRowPath": "string"
                  }
               },
               "RecordFormatType": "string"
            }
         },
         "InputStartingPositionConfiguration": {
            "InputStartingPosition": "string"
         },
         "KinesisFirehoseInputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "KinesisStreamsInputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "NamePrefix": "string"
      }
   ],
   "OutputDescriptions": [
      {
         "DestinationSchema": {
            "RecordFormatType": "string"
         },
         "KinesisFirehoseOutputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "KinesisStreamsOutputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "LambdaOutputDescription": {
            "ResourceARN": "string",
            "RoleARN": "string"
         },
         "Name": "string",
         "OutputId": "string"
      }
   ],
   "ReferenceDataSourceDescriptions": [
      {
         "ReferenceId": "string",
         "ReferenceSchema": {
            "RecordColumns": [
               {
                  "Mapping": "string",
                  "Name": "string",
                  "SqlType": "string"
               }
```

```
                    ],
                    "RecordEncoding": "string",
                    "RecordFormat": {
                       "MappingParameters": {
                          "CSVMappingParameters": {
                             "RecordColumnDelimiter": "string",
                             "RecordRowDelimiter": "string"
                          },
                          "JSONMappingParameters": {
                             "RecordRowPath": "string"
                          }
                       },
                       "RecordFormatType": "string"
                    }
                 },
                 "S3ReferenceDataSourceDescription": {
                    "BucketARN": "string",
                    "FileKey": "string",
                    "ReferenceRoleARN": "string"
                 },
                 "TableName": "string"
              }
           ]
        },
        "VpcConfigurationDescriptions": [
           {
              "SecurityGroupIds": [ "string" ],
              "SubnetIds": [ "string" ],
              "VpcConfigurationId": "string",
              "VpcId": "string"
           }
        ],
        "ZeppelinApplicationConfigurationDescription": {
           "CatalogConfigurationDescription": {
              "GlueDataCatalogConfigurationDescription": {
                 "DatabaseARN": "string"
              }
           },
           "CustomArtifactsConfigurationDescription": [
              {
                 "ArtifactType": "string",
                 "MavenReferenceDescription": {
                    "ArtifactId": "string",
                    "GroupId": "string",
                    "Version": "string"
                 },
                 "S3ContentLocationDescription": {
                    "BucketARN": "string",
                    "FileKey": "string",
                    "ObjectVersion": "string"
                 }
              }
           ],
           "DeployAsApplicationConfigurationDescription": {
              "S3ContentLocationDescription": {
                 "BasePath": "string",
                 "BucketARN": "string"
              }
           },
           "MonitoringConfigurationDescription": {
              "LogLevel": "string"
           }
        }
     },
     "ApplicationDescription": "string",
     "ApplicationMaintenanceConfigurationDescription": {
```

```
         "ApplicationMaintenanceWindowEndTime": "string",
         "ApplicationMaintenanceWindowStartTime": "string"
      },
      "ApplicationMode": "string",
      "ApplicationName": "string",
      "ApplicationStatus": "string",
      "ApplicationVersionId": number,
      "ApplicationVersionRolledBackFrom": number,
      "ApplicationVersionRolledBackTo": number,
      "ApplicationVersionUpdatedFrom": number,
      "CloudWatchLoggingOptionDescriptions": [
         {
            "CloudWatchLoggingOptionId": "string",
            "LogStreamARN": "string",
            "RoleARN": "string"
         }
      ],
      "ConditionalToken": "string",
      "CreateTimestamp": number,
      "LastUpdateTimestamp": number,
      "RuntimeEnvironment": "string",
      "ServiceExecutionRole": "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.

ApplicationDetail (p. 86)

Describes the application, including the application Amazon Resource Name (ARN), status, latest version, and input and output configurations.

Type: ApplicationDetail (p. 125) object

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be found.

HTTP Status Code: 400

UnsupportedOperationException

The request was rejected because a specified parameter is not supported or a specified resource is not valid for this operation.

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

StartApplication

Starts the specified Kinesis Data Analytics application. After creating an application, you must exclusively call this operation to start your application.

Request Syntax

```
{
   "ApplicationName": "string",
   "RunConfiguration": {
      "ApplicationRestoreConfiguration": {
         "ApplicationRestoreType": "string",
         "SnapshotName": "string"
      },
      "FlinkRunConfiguration": {
         "AllowNonRestoredState": boolean
      },
      "SqlRunConfigurations": [
         {
            "InputId": "string",
            "InputStartingPositionConfiguration": {
               "InputStartingPosition": "string"
            }
         }
      ]
   }
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 92)

The name of the application.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

RunConfiguration (p. 92)

Identifies the run configuration (start parameters) of a Kinesis Data Analytics application.

Type: RunConfiguration (p. 225) object

Required: No

Response Elements

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

Errors

InvalidApplicationConfigurationException

The user-provided application configuration is not valid.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

StopApplication

Stops the application from processing data. You can stop an application only if it is in the running status, unless you set the `Force` parameter to `true`.

You can use the DescribeApplication (p. 58) operation to find the application status.

Kinesis Data Analytics takes a snapshot when the application is stopped, unless `Force` is set to `true`.

Request Syntax

```
{
   "ApplicationName": "string",
   "Force": boolean
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationName (p. 94)

The name of the running application to stop.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

Force (p. 94)

Set to `true` to force the application to stop. If you set `Force` to `true`, Kinesis Data Analytics stops the application without taking a snapshot.

> **Note**
> Force-stopping your application may lead to data loss or duplication. To prevent data loss or duplicate processing of data during application restarts, we recommend you to take frequent snapshots of your application.

You can only force stop a Flink-based Kinesis Data Analytics application. You can't force stop a SQL-based Kinesis Data Analytics application.

The application must be in the `STARTING`, `UPDATING`, `STOPPING`, `AUTOSCALING`, or `RUNNING` status.

Type: Boolean

Required: No

Response Elements

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

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidApplicationConfigurationException

The user-provided application configuration is not valid.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

TagResource

Adds one or more key-value tags to a Kinesis Data Analytics application. Note that the maximum number of application tags includes system tags. The maximum number of user-defined application tags is 50. For more information, see Using Tagging.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

ResourceARN (p. 96)

The ARN of the application to assign the tags.

Type: String

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

Pattern: `arn:.*`

Required: Yes

Tags (p. 96)

The key-value tags to assign to the application.

Type: Array of Tag (p. 244) objects

Array Members: Minimum number of 1 item. Maximum number of 200 items.

Required: Yes

Response Elements

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

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be found.

HTTP Status Code: 400

TooManyTagsException

Application created with too many tags, or too many tags added to an application. Note that the maximum number of application tags includes system tags. The maximum number of user-defined application tags is 50.

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 Kinesis Data Analytics application. For more information, see Using Tagging.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

ResourceARN (p. 98)

The ARN of the Kinesis Data Analytics application from which to remove the tags.

Type: String

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

Pattern: `arn:.*`

Required: Yes

TagKeys (p. 98)

A list of keys of tags to remove from the specified application.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 200 items.

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

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be found.

HTTP Status Code: 400

TooManyTagsException

Application created with too many tags, or too many tags added to an application. Note that the maximum number of application tags includes system tags. The maximum number of user-defined application tags is 50.

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

UpdateApplication

Updates an existing Kinesis Data Analytics application. Using this operation, you can update application code, input configuration, and output configuration.

Kinesis Data Analytics updates the `ApplicationVersionId` each time you update your application.

Note
You cannot update the `RuntimeEnvironment` of an existing application. If you need to update an application's `RuntimeEnvironment`, you must delete the application and create it again.

Request Syntax

```
{
   "ApplicationConfigurationUpdate": {
      "ApplicationCodeConfigurationUpdate": {
         "CodeContentTypeUpdate": "string",
         "CodeContentUpdate": {
            "S3ContentLocationUpdate": {
               "BucketARNUpdate": "string",
               "FileKeyUpdate": "string",
               "ObjectVersionUpdate": "string"
            },
            "TextContentUpdate": "string",
            "ZipFileContentUpdate": blob
         }
      },
      "ApplicationSnapshotConfigurationUpdate": {
         "SnapshotsEnabledUpdate": boolean
      },
      "EnvironmentPropertyUpdates": {
         "PropertyGroups": [
            {
               "PropertyGroupId": "string",
               "PropertyMap": {
                  "string" : "string"
               }
            }
         ]
      },
      "FlinkApplicationConfigurationUpdate": {
         "CheckpointConfigurationUpdate": {
            "CheckpointingEnabledUpdate": boolean,
            "CheckpointIntervalUpdate": number,
            "ConfigurationTypeUpdate": "string",
            "MinPauseBetweenCheckpointsUpdate": number
         },
         "MonitoringConfigurationUpdate": {
            "ConfigurationTypeUpdate": "string",
            "LogLevelUpdate": "string",
            "MetricsLevelUpdate": "string"
         },
         "ParallelismConfigurationUpdate": {
            "AutoScalingEnabledUpdate": boolean,
            "ConfigurationTypeUpdate": "string",
            "ParallelismPerKPUUpdate": number,
            "ParallelismUpdate": number
         }
      },
      "SqlApplicationConfigurationUpdate": {
         "InputUpdates": [
            {
```

```
            "InputId": "string",
            "InputParallelismUpdate": {
               "CountUpdate": number
            },
            "InputProcessingConfigurationUpdate": {
               "InputLambdaProcessorUpdate": {
                  "ResourceARNUpdate": "string"
               }
            },
            "InputSchemaUpdate": {
               "RecordColumnUpdates": [
                  {
                     "Mapping": "string",
                     "Name": "string",
                     "SqlType": "string"
                  }
               ],
               "RecordEncodingUpdate": "string",
               "RecordFormatUpdate": {
                  "MappingParameters": {
                     "CSVMappingParameters": {
                        "RecordColumnDelimiter": "string",
                        "RecordRowDelimiter": "string"
                     },
                     "JSONMappingParameters": {
                        "RecordRowPath": "string"
                     }
                  },
                  "RecordFormatType": "string"
               }
            },
            "KinesisFirehoseInputUpdate": {
               "ResourceARNUpdate": "string"
            },
            "KinesisStreamsInputUpdate": {
               "ResourceARNUpdate": "string"
            },
            "NamePrefixUpdate": "string"
         }
      ],
      "OutputUpdates": [
         {
            "DestinationSchemaUpdate": {
               "RecordFormatType": "string"
            },
            "KinesisFirehoseOutputUpdate": {
               "ResourceARNUpdate": "string"
            },
            "KinesisStreamsOutputUpdate": {
               "ResourceARNUpdate": "string"
            },
            "LambdaOutputUpdate": {
               "ResourceARNUpdate": "string"
            },
            "NameUpdate": "string",
            "OutputId": "string"
         }
      ],
      "ReferenceDataSourceUpdates": [
         {
            "ReferenceId": "string",
            "ReferenceSchemaUpdate": {
               "RecordColumns": [
                  {
                     "Mapping": "string",
                     "Name": "string",
```

```
                        "SqlType": "string"
                     }
                  ],
                  "RecordEncoding": "string",
                  "RecordFormat": {
                     "MappingParameters": {
                        "CSVMappingParameters": {
                           "RecordColumnDelimiter": "string",
                           "RecordRowDelimiter": "string"
                        },
                        "JSONMappingParameters": {
                           "RecordRowPath": "string"
                        }
                     },
                     "RecordFormatType": "string"
                  }
               },
               "S3ReferenceDataSourceUpdate": {
                  "BucketARNUpdate": "string",
                  "FileKeyUpdate": "string"
               },
               "TableNameUpdate": "string"
            }
         ]
      },
      "VpcConfigurationUpdates": [
         {
            "SecurityGroupIdUpdates": [ "string" ],
            "SubnetIdUpdates": [ "string" ],
            "VpcConfigurationId": "string"
         }
      ],
      "ZeppelinApplicationConfigurationUpdate": {
         "CatalogConfigurationUpdate": {
            "GlueDataCatalogConfigurationUpdate": {
               "DatabaseARNUpdate": "string"
            }
         },
         "CustomArtifactsConfigurationUpdate": [
            {
               "ArtifactType": "string",
               "MavenReference": {
                  "ArtifactId": "string",
                  "GroupId": "string",
                  "Version": "string"
               },
               "S3ContentLocation": {
                  "BucketARN": "string",
                  "FileKey": "string",
                  "ObjectVersion": "string"
               }
            }
         ],
         "DeployAsApplicationConfigurationUpdate": {
            "S3ContentLocationUpdate": {
               "BasePathUpdate": "string",
               "BucketARNUpdate": "string"
            }
         },
         "MonitoringConfigurationUpdate": {
            "LogLevelUpdate": "string"
         }
      }
   },
   "ApplicationName": "string",
   "CloudWatchLoggingOptionUpdates": [
```

```
      {
         "CloudWatchLoggingOptionId": "string",
         "LogStreamARNUpdate": "string"
      }
   ],
   "ConditionalToken": "string",
   "CurrentApplicationVersionId": number,
   "RunConfigurationUpdate": {
      "ApplicationRestoreConfiguration": {
         "ApplicationRestoreType": "string",
         "SnapshotName": "string"
      },
      "FlinkRunConfiguration": {
         "AllowNonRestoredState": boolean
      }
   },
   "ServiceExecutionRoleUpdate": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationConfigurationUpdate (p. 100)

Describes application configuration updates.

Type: ApplicationConfigurationUpdate (p. 123) object

Required: No

ApplicationName (p. 100)

The name of the application to update.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

CloudWatchLoggingOptionUpdates (p. 100)

Describes application Amazon CloudWatch logging option updates. You can only update existing CloudWatch logging options with this action. To add a new CloudWatch logging option, use AddApplicationCloudWatchLoggingOption (p. 3).

Type: Array of CloudWatchLoggingOptionUpdate (p. 148) objects

Required: No

ConditionalToken (p. 100)

A value you use to implement strong concurrency for application updates. You must provide the `CurrentApplicationVersionId` or the `ConditionalToken`. You get the application's current `ConditionalToken` using DescribeApplication (p. 58). For better concurrency support, use the `ConditionalToken` parameter instead of `CurrentApplicationVersionId`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

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

Required: No

CurrentApplicationVersionId (p. 100)

The current application version ID. You must provide the `CurrentApplicationVersionId` or the `ConditionalToken`.You can retrieve the application version ID using DescribeApplication (p. 58). For better concurrency support, use the `ConditionalToken` parameter instead of `CurrentApplicationVersionId`.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: No

RunConfigurationUpdate (p. 100)

Describes updates to the application's starting parameters.

Type: RunConfigurationUpdate (p. 227) object

Required: No

ServiceExecutionRoleUpdate (p. 100)

Describes updates to the service execution role.

Type: String

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

Pattern: `arn:.*`

Required: No

Response Syntax

```
{
   "ApplicationDetail": {
      "ApplicationARN": "string",
      "ApplicationConfigurationDescription": {
         "ApplicationCodeConfigurationDescription": {
            "CodeContentDescription": {
               "CodeMD5": "string",
               "CodeSize": number,
               "S3ApplicationCodeLocationDescription": {
                  "BucketARN": "string",
                  "FileKey": "string",
                  "ObjectVersion": "string"
               },
               "TextContent": "string"
            },
            "CodeContentType": "string"
         },
         "ApplicationSnapshotConfigurationDescription": {
            "SnapshotsEnabled": boolean
         },
         "EnvironmentPropertyDescriptions": {
            "PropertyGroupDescriptions": [
               {
                  "PropertyGroupId": "string",
```

```
            "PropertyMap": {
               "string" : "string"
            }
         }
      ]
   },
   "FlinkApplicationConfigurationDescription": {
      "CheckpointConfigurationDescription": {
         "CheckpointingEnabled": boolean,
         "CheckpointInterval": number,
         "ConfigurationType": "string",
         "MinPauseBetweenCheckpoints": number
      },
      "JobPlanDescription": "string",
      "MonitoringConfigurationDescription": {
         "ConfigurationType": "string",
         "LogLevel": "string",
         "MetricsLevel": "string"
      },
      "ParallelismConfigurationDescription": {
         "AutoScalingEnabled": boolean,
         "ConfigurationType": "string",
         "CurrentParallelism": number,
         "Parallelism": number,
         "ParallelismPerKPU": number
      }
   },
   "RunConfigurationDescription": {
      "ApplicationRestoreConfigurationDescription": {
         "ApplicationRestoreType": "string",
         "SnapshotName": "string"
      },
      "FlinkRunConfigurationDescription": {
         "AllowNonRestoredState": boolean
      }
   },
   "SqlApplicationConfigurationDescription": {
      "InputDescriptions": [
         {
            "InAppStreamNames": [ "string" ],
            "InputId": "string",
            "InputParallelism": {
               "Count": number
            },
            "InputProcessingConfigurationDescription": {
               "InputLambdaProcessorDescription": {
                  "ResourceARN": "string",
                  "RoleARN": "string"
               }
            },
            "InputSchema": {
               "RecordColumns": [
                  {
                     "Mapping": "string",
                     "Name": "string",
                     "SqlType": "string"
                  }
               ],
               "RecordEncoding": "string",
               "RecordFormat": {
                  "MappingParameters": {
                     "CSVMappingParameters": {
                        "RecordColumnDelimiter": "string",
                        "RecordRowDelimiter": "string"
                     },
                     "JSONMappingParameters": {
```

```
                        "RecordRowPath": "string"
                     }
                  },
                  "RecordFormatType": "string"
               }
            },
            "InputStartingPositionConfiguration": {
               "InputStartingPosition": "string"
            },
            "KinesisFirehoseInputDescription": {
               "ResourceARN": "string",
               "RoleARN": "string"
            },
            "KinesisStreamsInputDescription": {
               "ResourceARN": "string",
               "RoleARN": "string"
            },
            "NamePrefix": "string"
         }
      ],
      "OutputDescriptions": [
         {
            "DestinationSchema": {
               "RecordFormatType": "string"
            },
            "KinesisFirehoseOutputDescription": {
               "ResourceARN": "string",
               "RoleARN": "string"
            },
            "KinesisStreamsOutputDescription": {
               "ResourceARN": "string",
               "RoleARN": "string"
            },
            "LambdaOutputDescription": {
               "ResourceARN": "string",
               "RoleARN": "string"
            },
            "Name": "string",
            "OutputId": "string"
         }
      ],
      "ReferenceDataSourceDescriptions": [
         {
            "ReferenceId": "string",
            "ReferenceSchema": {
               "RecordColumns": [
                  {
                     "Mapping": "string",
                     "Name": "string",
                     "SqlType": "string"
                  }
               ],
               "RecordEncoding": "string",
               "RecordFormat": {
                  "MappingParameters": {
                     "CSVMappingParameters": {
                        "RecordColumnDelimiter": "string",
                        "RecordRowDelimiter": "string"
                     },
                     "JSONMappingParameters": {
                        "RecordRowPath": "string"
                     }
                  },
                  "RecordFormatType": "string"
               }
            },
```

```
                "S3ReferenceDataSourceDescription": {
                   "BucketARN": "string",
                   "FileKey": "string",
                   "ReferenceRoleARN": "string"
                },
                "TableName": "string"
             }
          ]
       },
       "VpcConfigurationDescriptions": [
          {
             "SecurityGroupIds": [ "string" ],
             "SubnetIds": [ "string" ],
             "VpcConfigurationId": "string",
             "VpcId": "string"
          }
       ],
       "ZeppelinApplicationConfigurationDescription": {
          "CatalogConfigurationDescription": {
             "GlueDataCatalogConfigurationDescription": {
                "DatabaseARN": "string"
             }
          },
          "CustomArtifactsConfigurationDescription": [
             {
                "ArtifactType": "string",
                "MavenReferenceDescription": {
                   "ArtifactId": "string",
                   "GroupId": "string",
                   "Version": "string"
                },
                "S3ContentLocationDescription": {
                   "BucketARN": "string",
                   "FileKey": "string",
                   "ObjectVersion": "string"
                }
             }
          ],
          "DeployAsApplicationConfigurationDescription": {
             "S3ContentLocationDescription": {
                "BasePath": "string",
                "BucketARN": "string"
             }
          },
          "MonitoringConfigurationDescription": {
             "LogLevel": "string"
          }
       }
    },
    "ApplicationDescription": "string",
    "ApplicationMaintenanceConfigurationDescription": {
       "ApplicationMaintenanceWindowEndTime": "string",
       "ApplicationMaintenanceWindowStartTime": "string"
    },
    "ApplicationMode": "string",
    "ApplicationName": "string",
    "ApplicationStatus": "string",
    "ApplicationVersionId": number,
    "ApplicationVersionRolledBackFrom": number,
    "ApplicationVersionRolledBackTo": number,
    "ApplicationVersionUpdatedFrom": number,
    "CloudWatchLoggingOptionDescriptions": [
       {
          "CloudWatchLoggingOptionId": "string",
          "LogStreamARN": "string",
          "RoleARN": "string"
```

```
            }
        ],
        "ConditionalToken": "string",
        "CreateTimestamp": number,
        "LastUpdateTimestamp": number,
        "RuntimeEnvironment": "string",
        "ServiceExecutionRole": "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.

ApplicationDetail (p. 104)

Describes application updates.

Type: ApplicationDetail (p. 125) object

Errors

CodeValidationException

The user-provided application code (query) is not valid. This can be a simple syntax error.

HTTP Status Code: 400

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidApplicationConfigurationException

The user-provided application configuration is not valid.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

InvalidRequestException

The request JSON is not valid for the operation.

HTTP Status Code: 400

LimitExceededException

The number of allowed resources has been exceeded.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be 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

UpdateApplicationMaintenanceConfiguration

Updates the maintenance configuration of the Kinesis Data Analytics application.

You can invoke this operation on an application that is in one of the two following states: `READY` or `RUNNING`. If you invoke it when the application is in a state other than these two states, it throws a `ResourceInUseException`. The service makes use of the updated configuration the next time it schedules maintenance for the application. If you invoke this operation after the service schedules maintenance, the service will apply the configuration update the next time it schedules maintenance for the application. This means that you might not see the maintenance configuration update applied to the maintenance process that follows a successful invocation of this operation, but to the following maintenance process instead.

To see the current maintenance configuration of your application, invoke the DescribeApplication (p. 58) operation.

For information about application maintenance, see Kinesis Data Analytics for Apache Flink Maintenance.

Note
This operation is supported only for Amazon Kinesis Data Analytics for Apache Flink.

Request Syntax

```
{
   "ApplicationMaintenanceConfigurationUpdate": {
      "ApplicationMaintenanceWindowStartTimeUpdate": "string"
   },
   "ApplicationName": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

ApplicationMaintenanceConfigurationUpdate (p. 110)

Describes the application maintenance configuration update.

Type: ApplicationMaintenanceConfigurationUpdate (p. 129) object

Required: Yes

ApplicationName (p. 110)

The name of the application for which you want to update the maintenance configuration.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

Response Syntax

```
{
```

```
   "ApplicationARN": "string",
   "ApplicationMaintenanceConfigurationDescription": {
      "ApplicationMaintenanceWindowEndTime": "string",
      "ApplicationMaintenanceWindowStartTime": "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.

ApplicationARN (p. 110)

The Amazon Resource Name (ARN) of the application.

Type: String

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

Pattern: `arn:.*`

ApplicationMaintenanceConfigurationDescription (p. 110)

The application maintenance configuration description after the update.

Type: ApplicationMaintenanceConfigurationDescription (p. 128) object

Errors

ConcurrentModificationException

Exception thrown as a result of concurrent modifications to an application. This error can be the result of attempting to modify an application without using the current application ID.

HTTP Status Code: 400

InvalidArgumentException

The specified input parameter value is not valid.

HTTP Status Code: 400

ResourceInUseException

The application is not available for this operation.

HTTP Status Code: 400

ResourceNotFoundException

Specified application can't be found.

HTTP Status Code: 400

UnsupportedOperationException

The request was rejected because a specified parameter is not supported or a specified resource is not valid for this operation.

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 Kinesis Analytics 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:

ApplicationCodeConfiguration

Describes code configuration for an application.

Contents

CodeContent

The location and type of the application code.

Type: CodeContent (p. 149) object

Required: No

CodeContentType

Specifies whether the code content is in text or zip format.

Type: String

Valid Values: `PLAINTEXT | ZIPFILE`

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

ApplicationCodeConfigurationDescription

Describes code configuration for an application.

Contents

CodeContentDescription

Describes details about the location and format of the application code.

Type: CodeContentDescription (p. 150) object

Required: No

CodeContentType

Specifies whether the code content is in text or zip format.

Type: String

Valid Values: `PLAINTEXT | ZIPFILE`

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

ApplicationCodeConfigurationUpdate

Describes code configuration updates for an application. This is supported for a Flink-based Kinesis Data Analytics application or a SQL-based Kinesis Data Analytics application.

Contents

CodeContentTypeUpdate

Describes updates to the code content type.

Type: String

Valid Values: `PLAINTEXT | ZIPFILE`

Required: No

CodeContentUpdate

Describes updates to the code content of an application.

Type: CodeContentUpdate (p. 151) 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

ApplicationConfiguration

Specifies the creation parameters for a Kinesis Data Analytics application.

Contents

ApplicationCodeConfiguration

The code location and type parameters for a Flink-based Kinesis Data Analytics application.

Type: ApplicationCodeConfiguration (p. 116) object

Required: No

ApplicationSnapshotConfiguration

Describes whether snapshots are enabled for a Flink-based Kinesis Data Analytics application.

Type: ApplicationSnapshotConfiguration (p. 131) object

Required: No

EnvironmentProperties

Describes execution properties for a Flink-based Kinesis Data Analytics application.

Type: EnvironmentProperties (p. 159) object

Required: No

FlinkApplicationConfiguration

The creation and update parameters for a Flink-based Kinesis Data Analytics application.

Type: FlinkApplicationConfiguration (p. 162) object

Required: No

SqlApplicationConfiguration

The creation and update parameters for a SQL-based Kinesis Data Analytics application.

Type: SqlApplicationConfiguration (p. 240) object

Required: No

VpcConfigurations

The array of descriptions of VPC configurations available to the application.

Type: Array of VpcConfiguration (p. 245) objects

Required: No

ZeppelinApplicationConfiguration

The configuration parameters for a Kinesis Data Analytics Studio notebook.

Type: ZeppelinApplicationConfiguration (p. 248) 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

ApplicationConfigurationDescription

Describes details about the application code and starting parameters for a Kinesis Data Analytics application.

Contents

ApplicationCodeConfigurationDescription

The details about the application code for a Flink-based Kinesis Data Analytics application.

Type: ApplicationCodeConfigurationDescription (p. 117) object

Required: No

ApplicationSnapshotConfigurationDescription

Describes whether snapshots are enabled for a Flink-based Kinesis Data Analytics application.

Type: ApplicationSnapshotConfigurationDescription (p. 132) object

Required: No

EnvironmentPropertyDescriptions

Describes execution properties for a Flink-based Kinesis Data Analytics application.

Type: EnvironmentPropertyDescriptions (p. 160) object

Required: No

FlinkApplicationConfigurationDescription

The details about a Flink-based Kinesis Data Analytics application.

Type: FlinkApplicationConfigurationDescription (p. 163) object

Required: No

RunConfigurationDescription

The details about the starting properties for a Kinesis Data Analytics application.

Type: RunConfigurationDescription (p. 226) object

Required: No

SqlApplicationConfigurationDescription

The details about inputs, outputs, and reference data sources for a SQL-based Kinesis Data Analytics application.

Type: SqlApplicationConfigurationDescription (p. 241) object

Required: No

VpcConfigurationDescriptions

The array of descriptions of VPC configurations available to the application.

Type: Array of VpcConfigurationDescription (p. 246) objects

Required: No

ZeppelinApplicationConfigurationDescription

The configuration parameters for a Kinesis Data Analytics Studio notebook.

Type: ZeppelinApplicationConfigurationDescription (p. 249) 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

ApplicationConfigurationUpdate

Describes updates to an application's configuration.

Contents

ApplicationCodeConfigurationUpdate

Describes updates to an application's code configuration.

Type: ApplicationCodeConfigurationUpdate (p. 118) object

Required: No

ApplicationSnapshotConfigurationUpdate

Describes whether snapshots are enabled for a Flink-based Kinesis Data Analytics application.

Type: ApplicationSnapshotConfigurationUpdate (p. 133) object

Required: No

EnvironmentPropertyUpdates

Describes updates to the environment properties for a Flink-based Kinesis Data Analytics application.

Type: EnvironmentPropertyUpdates (p. 161) object

Required: No

FlinkApplicationConfigurationUpdate

Describes updates to a Flink-based Kinesis Data Analytics application's configuration.

Type: FlinkApplicationConfigurationUpdate (p. 164) object

Required: No

SqlApplicationConfigurationUpdate

Describes updates to a SQL-based Kinesis Data Analytics application's configuration.

Type: SqlApplicationConfigurationUpdate (p. 242) object

Required: No

VpcConfigurationUpdates

Updates to the array of descriptions of VPC configurations available to the application.

Type: Array of VpcConfigurationUpdate (p. 247) objects

Required: No

ZeppelinApplicationConfigurationUpdate

Updates to the configuration of a Kinesis Data Analytics Studio notebook.

Type: ZeppelinApplicationConfigurationUpdate (p. 250) 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

ApplicationDetail

Describes the application, including the application Amazon Resource Name (ARN), status, latest version, and input and output configurations.

Contents

ApplicationARN

The ARN of the application.

Type: String

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

Pattern: `arn:.*`

Required: Yes

ApplicationConfigurationDescription

Describes details about the application code and starting parameters for a Kinesis Data Analytics application.

Type: ApplicationConfigurationDescription (p. 121) object

Required: No

ApplicationDescription

The description of the application.

Type: String

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

Required: No

ApplicationMaintenanceConfigurationDescription

The details of the maintenance configuration for the application.

Type: ApplicationMaintenanceConfigurationDescription (p. 128) object

Required: No

ApplicationMode

To create a Kinesis Data Analytics Studio notebook, you must set the mode to `INTERACTIVE`. However, for a Kinesis Data Analytics for Apache Flink application, the mode is optional.

Type: String

Valid Values: `STREAMING | INTERACTIVE`

Required: No

ApplicationName

The name of the application.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

ApplicationStatus

The status of the application.

Type: String

Valid Values: `DELETING | STARTING | STOPPING | READY | RUNNING | UPDATING | AUTOSCALING | FORCE_STOPPING | ROLLING_BACK | MAINTENANCE | ROLLED_BACK`

Required: Yes

ApplicationVersionId

Provides the current application version. Kinesis Data Analytics updates the `ApplicationVersionId` each time you update the application.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: Yes

ApplicationVersionRolledBackFrom

If you reverted the application using RollbackApplication (p. 86), the application version when `RollbackApplication` was called.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: No

ApplicationVersionRolledBackTo

The version to which you want to roll back the application.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: No

ApplicationVersionUpdatedFrom

The previous application version before the latest application update. RollbackApplication (p. 86) reverts the application to this version.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: No

CloudWatchLoggingOptionDescriptions

Describes the application Amazon CloudWatch logging options.

Type: Array of CloudWatchLoggingOptionDescription (p. 147) objects

Required: No

ConditionalToken

A value you use to implement strong concurrency for application updates.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

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

Required: No

CreateTimestamp

The current timestamp when the application was created.

Type: Timestamp

Required: No

LastUpdateTimestamp

The current timestamp when the application was last updated.

Type: Timestamp

Required: No

RuntimeEnvironment

The runtime environment for the application.

Type: String

Valid Values: `SQL-1_0 | FLINK-1_6 | FLINK-1_8 | ZEPPELIN-FLINK-1_0 | FLINK-1_11 | FLINK-1_13 | ZEPPELIN-FLINK-2_0`

Required: Yes

ServiceExecutionRole

Specifies the IAM role that the application uses to access external resources.

Type: String

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

Pattern: `arn:.*`

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

ApplicationMaintenanceConfigurationDescription

The details of the maintenance configuration for the application.

Contents

ApplicationMaintenanceWindowEndTime

The end time for the maintenance window.

Type: String

Length Constraints: Fixed length of 5.

Pattern: `([01][0-9]|2[0-3]):[0-5][0-9]`

Required: Yes

ApplicationMaintenanceWindowStartTime

The start time for the maintenance window.

Type: String

Length Constraints: Fixed length of 5.

Pattern: `([01][0-9]|2[0-3]):[0-5][0-9]`

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

ApplicationMaintenanceConfigurationUpdate

Describes the updated maintenance configuration for the application.

Contents

ApplicationMaintenanceWindowStartTimeUpdate

The updated start time for the maintenance window.

Type: String

Length Constraints: Fixed length of 5.

Pattern: `([01][0-9]|2[0-3]):[0-5][0-9]`

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

ApplicationRestoreConfiguration

Specifies the method and snapshot to use when restarting an application using previously saved application state.

Contents

ApplicationRestoreType

Specifies how the application should be restored.

Type: String

Valid Values: `SKIP_RESTORE_FROM_SNAPSHOT | RESTORE_FROM_LATEST_SNAPSHOT | RESTORE_FROM_CUSTOM_SNAPSHOT`

Required: Yes

SnapshotName

The identifier of an existing snapshot of application state to use to restart an application. The application uses this value if `RESTORE_FROM_CUSTOM_SNAPSHOT` is specified for the `ApplicationRestoreType`.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

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

ApplicationSnapshotConfiguration

Describes whether snapshots are enabled for a Flink-based Kinesis Data Analytics application.

Contents

SnapshotsEnabled

Describes whether snapshots are enabled for a Flink-based Kinesis Data Analytics application.

Type: Boolean

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

ApplicationSnapshotConfigurationDescription

Describes whether snapshots are enabled for a Flink-based Kinesis Data Analytics application.

Contents

SnapshotsEnabled

Describes whether snapshots are enabled for a Flink-based Kinesis Data Analytics application.

Type: Boolean

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

ApplicationSnapshotConfigurationUpdate

Describes updates to whether snapshots are enabled for a Flink-based Kinesis Data Analytics application.

Contents

SnapshotsEnabledUpdate

Describes updates to whether snapshots are enabled for an application.

Type: Boolean

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

ApplicationSummary

Provides application summary information, including the application Amazon Resource Name (ARN), name, and status.

Contents

ApplicationARN

The ARN of the application.

Type: String

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

Pattern: `arn:.*`

Required: Yes

ApplicationMode

For a Kinesis Data Analytics for Apache Flink application, the mode is `STREAMING`. For a Kinesis Data Analytics Studio notebook, it is `INTERACTIVE`.

Type: String

Valid Values: `STREAMING | INTERACTIVE`

Required: No

ApplicationName

The name of the application.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

ApplicationStatus

The status of the application.

Type: String

Valid Values: `DELETING | STARTING | STOPPING | READY | RUNNING | UPDATING | AUTOSCALING | FORCE_STOPPING | ROLLING_BACK | MAINTENANCE | ROLLED_BACK`

Required: Yes

ApplicationVersionId

Provides the current application version.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: Yes

RuntimeEnvironment

The runtime environment for the application.

Type: String

Valid Values: `SQL-1_0 | FLINK-1_6 | FLINK-1_8 | ZEPPELIN-FLINK-1_0 | FLINK-1_11 | FLINK-1_13 | ZEPPELIN-FLINK-2_0`

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

ApplicationVersionSummary

The summary of the application version.

Contents

ApplicationStatus

The status of the application.

Type: String

Valid Values: `DELETING | STARTING | STOPPING | READY | RUNNING | UPDATING | AUTOSCALING | FORCE_STOPPING | ROLLING_BACK | MAINTENANCE | ROLLED_BACK`

Required: Yes

ApplicationVersionId

The ID of the application version. Kinesis Data Analytics updates the `ApplicationVersionId` each time you update the application.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

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

CatalogConfiguration

The configuration parameters for the default Amazon Glue database. You use this database for SQL queries that you write in a Kinesis Data Analytics Studio notebook.

Contents

GlueDataCatalogConfiguration

The configuration parameters for the default Amazon Glue database. You use this database for Apache Flink SQL queries and table API transforms that you write in a Kinesis Data Analytics Studio notebook.

Type: GlueDataCatalogConfiguration (p. 166) object

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

CatalogConfigurationDescription

The configuration parameters for the default Amazon Glue database. You use this database for Apache Flink SQL queries and table API transforms that you write in a Kinesis Data Analytics Studio notebook.

Contents

GlueDataCatalogConfigurationDescription

The configuration parameters for the default Amazon Glue database. You use this database for SQL queries that you write in a Kinesis Data Analytics Studio notebook.

Type: GlueDataCatalogConfigurationDescription (p. 167) object

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

CatalogConfigurationUpdate

Updates to the configuration parameters for the default Amazon Glue database. You use this database for SQL queries that you write in a Kinesis Data Analytics Studio notebook.

Contents

GlueDataCatalogConfigurationUpdate

Updates to the configuration parameters for the default Amazon Glue database. You use this database for SQL queries that you write in a Kinesis Data Analytics Studio notebook.

Type: GlueDataCatalogConfigurationUpdate (p. 168) object

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

CheckpointConfiguration

Describes an application's checkpointing configuration. Checkpointing is the process of persisting application state for fault tolerance. For more information, see Checkpoints for Fault Tolerance in the Apache Flink Documentation.

Contents

CheckpointingEnabled

Describes whether checkpointing is enabled for a Flink-based Kinesis Data Analytics application.

Note
If `CheckpointConfiguration.ConfigurationType` is `DEFAULT`, the application will use a `CheckpointingEnabled` value of `true`, even if this value is set to another value using this API or in application code.

Type: Boolean

Required: No

CheckpointInterval

Describes the interval in milliseconds between checkpoint operations.

Note
If `CheckpointConfiguration.ConfigurationType` is `DEFAULT`, the application will use a `CheckpointInterval` value of 60000, even if this value is set to another value using this API or in application code.

Type: Long

Valid Range: Minimum value of 1.

Required: No

ConfigurationType

Describes whether the application uses Kinesis Data Analytics' default checkpointing behavior. You must set this property to `CUSTOM` in order to set the `CheckpointingEnabled`, `CheckpointInterval`, or `MinPauseBetweenCheckpoints` parameters.

Note
If this value is set to `DEFAULT`, the application will use the following values, even if they are set to other values using APIs or application code:

- **CheckpointingEnabled:** true
- **CheckpointInterval:** 60000
- **MinPauseBetweenCheckpoints:** 5000

Type: String

Valid Values: `DEFAULT | CUSTOM`

Required: Yes

MinPauseBetweenCheckpoints

Describes the minimum time in milliseconds after a checkpoint operation completes that a new checkpoint operation can start. If a checkpoint operation takes longer than the `CheckpointInterval`, the application otherwise performs continual checkpoint operations. For more information, see Tuning Checkpointing in the Apache Flink Documentation.

Note
If `CheckpointConfiguration.ConfigurationType` is `DEFAULT`, the application will use a `MinPauseBetweenCheckpoints` value of 5000, even if this value is set using this API or in application code.

Type: Long

Valid Range: Minimum value of 0.

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

CheckpointConfigurationDescription

Describes checkpointing parameters for a Flink-based Kinesis Data Analytics application.

Contents

CheckpointingEnabled

Describes whether checkpointing is enabled for a Flink-based Kinesis Data Analytics application.

Note
If `CheckpointConfiguration.ConfigurationType` is `DEFAULT`, the application will use a `CheckpointingEnabled` value of `true`, even if this value is set to another value using this API or in application code.

Type: Boolean

Required: No

CheckpointInterval

Describes the interval in milliseconds between checkpoint operations.

Note
If `CheckpointConfiguration.ConfigurationType` is `DEFAULT`, the application will use a `CheckpointInterval` value of 60000, even if this value is set to another value using this API or in application code.

Type: Long

Valid Range: Minimum value of 1.

Required: No

ConfigurationType

Describes whether the application uses the default checkpointing behavior in Kinesis Data Analytics.

Note
If this value is set to `DEFAULT`, the application will use the following values, even if they are set to other values using APIs or application code:

- **CheckpointingEnabled:** true
- **CheckpointInterval:** 60000
- **MinPauseBetweenCheckpoints:** 5000

Type: String

Valid Values: `DEFAULT | CUSTOM`

Required: No

MinPauseBetweenCheckpoints

Describes the minimum time in milliseconds after a checkpoint operation completes that a new checkpoint operation can start.

Note
If `CheckpointConfiguration.ConfigurationType` is `DEFAULT`, the application will use a `MinPauseBetweenCheckpoints` value of 5000, even if this value is set using this API or in application code.

Type: Long

Valid Range: Minimum value of 0.

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

CheckpointConfigurationUpdate

Describes updates to the checkpointing parameters for a Flink-based Kinesis Data Analytics application.

Contents

CheckpointingEnabledUpdate

Describes updates to whether checkpointing is enabled for an application.

Note
If `CheckpointConfiguration.ConfigurationType` is `DEFAULT`, the application will use a `CheckpointingEnabled` value of `true`, even if this value is set to another value using this API or in application code.

Type: Boolean

Required: No

CheckpointIntervalUpdate

Describes updates to the interval in milliseconds between checkpoint operations.

Note
If `CheckpointConfiguration.ConfigurationType` is `DEFAULT`, the application will use a `CheckpointInterval` value of 60000, even if this value is set to another value using this API or in application code.

Type: Long

Valid Range: Minimum value of 1.

Required: No

ConfigurationTypeUpdate

Describes updates to whether the application uses the default checkpointing behavior of Kinesis Data Analytics. You must set this property to `CUSTOM` in order to set the `CheckpointingEnabled`, `CheckpointInterval`, or `MinPauseBetweenCheckpoints` parameters.

Note
If this value is set to `DEFAULT`, the application will use the following values, even if they are set to other values using APIs or application code:

- **CheckpointingEnabled:** true
- **CheckpointInterval:** 60000
- **MinPauseBetweenCheckpoints:** 5000

Type: String

Valid Values: `DEFAULT | CUSTOM`

Required: No

MinPauseBetweenCheckpointsUpdate

Describes updates to the minimum time in milliseconds after a checkpoint operation completes that a new checkpoint operation can start.

Note
If `CheckpointConfiguration.ConfigurationType` is `DEFAULT`, the application will use a `MinPauseBetweenCheckpoints` value of 5000, even if this value is set using this API or in application code.

Type: Long

Valid Range: Minimum value of 0.

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

CloudWatchLoggingOption

Provides a description of Amazon CloudWatch logging options, including the log stream Amazon Resource Name (ARN).

Contents

LogStreamARN

The ARN of the CloudWatch log to receive application messages.

Type: String

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

Pattern: `arn:.*`

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

CloudWatchLoggingOptionDescription

Describes the Amazon CloudWatch logging option.

Contents

CloudWatchLoggingOptionId

The ID of the CloudWatch logging option description.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: No

LogStreamARN

The Amazon Resource Name (ARN) of the CloudWatch log to receive application messages.

Type: String

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

Pattern: `arn:.*`

Required: Yes

RoleARN

The IAM ARN of the role to use to send application messages.

Note
Provided for backward compatibility. Applications created with the current API version have an application-level service execution role rather than a resource-level role.

Type: String

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

Pattern: `arn:.*`

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

CloudWatchLoggingOptionUpdate

Describes the Amazon CloudWatch logging option updates.

Contents

CloudWatchLoggingOptionId

The ID of the CloudWatch logging option to update

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

LogStreamARNUpdate

The Amazon Resource Name (ARN) of the CloudWatch log to receive application messages.

Type: String

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

Pattern: `arn:.*`

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

CodeContent

Specifies either the application code, or the location of the application code, for a Flink-based Kinesis Data Analytics application.

Contents

S3ContentLocation

Information about the Amazon S3 bucket that contains the application code.

Type: S3ContentLocation (p. 233) object

Required: No

TextContent

The text-format code for a Flink-based Kinesis Data Analytics application.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 102400.

Required: No

ZipFileContent

The zip-format code for a Flink-based Kinesis Data Analytics application.

Type: Base64-encoded binary data object

Length Constraints: Minimum length of 0. Maximum length of 52428800.

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

CodeContentDescription

Describes details about the code of a Kinesis Data Analytics application.

Contents

CodeMD5

The checksum that can be used to validate zip-format code.

Type: String

Length Constraints: Fixed length of 128.

Required: No

CodeSize

The size in bytes of the application code. Can be used to validate zip-format code.

Type: Long

Valid Range: Minimum value of 0. Maximum value of 52428800.

Required: No

S3ApplicationCodeLocationDescription

The S3 bucket Amazon Resource Name (ARN), file key, and object version of the application code stored in Amazon S3.

Type: S3ApplicationCodeLocationDescription (p. 228) object

Required: No

TextContent

The text-format code

Type: String

Length Constraints: Minimum length of 0. Maximum length of 102400.

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

CodeContentUpdate

Describes an update to the code of an application. Not supported for Apache Zeppelin.

Contents

S3ContentLocationUpdate

Describes an update to the location of code for an application.

Type: S3ContentLocationUpdate (p. 234) object

Required: No

TextContentUpdate

Describes an update to the text code for an application.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 102400.

Required: No

ZipFileContentUpdate

Describes an update to the zipped code for an application.

Type: Base64-encoded binary data object

Length Constraints: Minimum length of 0. Maximum length of 52428800.

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

CSVMappingParameters

For a SQL-based Kinesis Data Analytics application, provides additional mapping information when the record format uses delimiters, such as CSV. For example, the following sample records use CSV format, where the records use the '\n' as the row delimiter and a comma (",") as the column delimiter:

```
"name1", "address1"

"name2", "address2"
```

Contents

RecordColumnDelimiter

The column delimiter. For example, in a CSV format, a comma (",") is the typical column delimiter.

Type: String

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

Required: Yes

RecordRowDelimiter

The row delimiter. For example, in a CSV format, '\n' is the typical row delimiter.

Type: String

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

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

CustomArtifactConfiguration

Specifies dependency JARs, as well as JAR files that contain user-defined functions (UDF).

Contents

ArtifactType

`UDF` stands for user-defined functions. This type of artifact must be in an S3 bucket. A `DEPENDENCY_JAR` can be in either Maven or an S3 bucket.

Type: String

Valid Values: `UDF | DEPENDENCY_JAR`

Required: Yes

MavenReference

The parameters required to fully specify a Maven reference.

Type: MavenReference (p. 202) object

Required: No

S3ContentLocation

For a Kinesis Data Analytics application provides a description of an Amazon S3 object, including the Amazon Resource Name (ARN) of the S3 bucket, the name of the Amazon S3 object that contains the data, and the version number of the Amazon S3 object that contains the data.

Type: S3ContentLocation (p. 233) 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

CustomArtifactConfigurationDescription

Specifies a dependency JAR or a JAR of user-defined functions.

Contents

ArtifactType

`UDF` stands for user-defined functions. This type of artifact must be in an S3 bucket. A `DEPENDENCY_JAR` can be in either Maven or an S3 bucket.

Type: String

Valid Values: `UDF | DEPENDENCY_JAR`

Required: No

MavenReferenceDescription

The parameters that are required to specify a Maven dependency.

Type: MavenReference (p. 202) object

Required: No

S3ContentLocationDescription

For a Kinesis Data Analytics application provides a description of an Amazon S3 object, including the Amazon Resource Name (ARN) of the S3 bucket, the name of the Amazon S3 object that contains the data, and the version number of the Amazon S3 object that contains the data.

Type: S3ContentLocation (p. 233) 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

DeployAsApplicationConfiguration

The information required to deploy a Kinesis Data Analytics Studio notebook as an application with durable state.

Contents

S3ContentLocation

The description of an Amazon S3 object that contains the Amazon Data Analytics application, including the Amazon Resource Name (ARN) of the S3 bucket, the name of the Amazon S3 object that contains the data, and the version number of the Amazon S3 object that contains the data.

Type: S3ContentBaseLocation (p. 230) object

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

DeployAsApplicationConfigurationDescription

The configuration information required to deploy an Amazon Data Analytics Studio notebook as an application with durable state.

Contents

S3ContentLocationDescription

The location that holds the data required to specify an Amazon Data Analytics application.

Type: S3ContentBaseLocationDescription (p. 231) object

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

DeployAsApplicationConfigurationUpdate

Updates to the configuration information required to deploy an Amazon Data Analytics Studio notebook as an application with durable state.

Contents

S3ContentLocationUpdate

Updates to the location that holds the data required to specify an Amazon Data Analytics application.

Type: S3ContentBaseLocationUpdate (p. 232) 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

DestinationSchema

Describes the data format when records are written to the destination in a SQL-based Kinesis Data Analytics application.

Contents

RecordFormatType

Specifies the format of the records on the output stream.

Type: String

Valid Values: `JSON | CSV`

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

EnvironmentProperties

Describes execution properties for a Flink-based Kinesis Data Analytics application.

Contents

PropertyGroups

Describes the execution property groups.

Type: Array of PropertyGroup (p. 218) objects

Array Members: 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

EnvironmentPropertyDescriptions

Describes the execution properties for an Apache Flink runtime.

Contents

PropertyGroupDescriptions

Describes the execution property groups.

Type: Array of PropertyGroup (p. 218) objects

Array Members: Maximum number of 50 items.

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

EnvironmentPropertyUpdates

Describes updates to the execution property groups for a Flink-based Kinesis Data Analytics application or a Studio notebook.

Contents

PropertyGroups

Describes updates to the execution property groups.

Type: Array of PropertyGroup (p. 218) objects

Array Members: 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

FlinkApplicationConfiguration

Describes configuration parameters for a Flink-based Kinesis Data Analytics application or a Studio notebook.

Contents

CheckpointConfiguration

Describes an application's checkpointing configuration. Checkpointing is the process of persisting application state for fault tolerance. For more information, see Checkpoints for Fault Tolerance in the Apache Flink Documentation.

Type: CheckpointConfiguration (p. 140) object

Required: No

MonitoringConfiguration

Describes configuration parameters for Amazon CloudWatch logging for an application.

Type: MonitoringConfiguration (p. 203) object

Required: No

ParallelismConfiguration

Describes parameters for how an application executes multiple tasks simultaneously.

Type: ParallelismConfiguration (p. 212) 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

FlinkApplicationConfigurationDescription

Describes configuration parameters for a Flink-based Kinesis Data Analytics application.

Contents

CheckpointConfigurationDescription

Describes an application's checkpointing configuration. Checkpointing is the process of persisting application state for fault tolerance.

Type: CheckpointConfigurationDescription (p. 142) object

Required: No

JobPlanDescription

The job plan for an application. For more information about the job plan, see Jobs and Scheduling in the Apache Flink Documentation. To retrieve the job plan for the application, use the DescribeApplication:IncludeAdditionalDetails (p. 58) parameter of the DescribeApplication (p. 58) operation.

Type: String

Required: No

MonitoringConfigurationDescription

Describes configuration parameters for Amazon CloudWatch logging for an application.

Type: MonitoringConfigurationDescription (p. 204) object

Required: No

ParallelismConfigurationDescription

Describes parameters for how an application executes multiple tasks simultaneously.

Type: ParallelismConfigurationDescription (p. 214) 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

FlinkApplicationConfigurationUpdate

Describes updates to the configuration parameters for a Flink-based Kinesis Data Analytics application.

Contents

CheckpointConfigurationUpdate

Describes updates to an application's checkpointing configuration. Checkpointing is the process of persisting application state for fault tolerance.

Type: CheckpointConfigurationUpdate (p. 144) object

Required: No

MonitoringConfigurationUpdate

Describes updates to the configuration parameters for Amazon CloudWatch logging for an application.

Type: MonitoringConfigurationUpdate (p. 205) object

Required: No

ParallelismConfigurationUpdate

Describes updates to the parameters for how an application executes multiple tasks simultaneously.

Type: ParallelismConfigurationUpdate (p. 216) 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

FlinkRunConfiguration

Describes the starting parameters for a Flink-based Kinesis Data Analytics application.

Contents

AllowNonRestoredState

When restoring from a snapshot, specifies whether the runtime is allowed to skip a state that cannot be mapped to the new program. This will happen if the program is updated between snapshots to remove stateful parameters, and state data in the snapshot no longer corresponds to valid application data. For more information, see Allowing Non-Restored State in the Apache Flink documentation.

Note
This value defaults to `false`. If you update your application without specifying this parameter, `AllowNonRestoredState` will be set to `false`, even if it was previously set to `true`.

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

GlueDataCatalogConfiguration

The configuration of the Glue Data Catalog that you use for Apache Flink SQL queries and table API transforms that you write in an application.

Contents

DatabaseARN

The Amazon Resource Name (ARN) of the database.

Type: String

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

Pattern: `arn:.*`

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

GlueDataCatalogConfigurationDescription

The configuration of the Glue Data Catalog that you use for Apache Flink SQL queries and table API transforms that you write in an application.

Contents

DatabaseARN

The Amazon Resource Name (ARN) of the database.

Type: String

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

Pattern: `arn:.*`

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

GlueDataCatalogConfigurationUpdate

Updates to the configuration of the Glue Data Catalog that you use for SQL queries that you write in a Kinesis Data Analytics Studio notebook.

Contents

DatabaseARNUpdate

The updated Amazon Resource Name (ARN) of the database.

Type: String

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

Pattern: `arn:.*`

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

Input

When you configure the application input for a SQL-based Kinesis Data Analytics application, you specify the streaming source, the in-application stream name that is created, and the mapping between the two.

Contents

InputParallelism

Describes the number of in-application streams to create.

Type: InputParallelism (p. 176) object

Required: No

InputProcessingConfiguration

The InputProcessingConfiguration (p. 178) for the input. An input processor transforms records as they are received from the stream, before the application's SQL code executes. Currently, the only input processing configuration available is InputLambdaProcessor (p. 173).

Type: InputProcessingConfiguration (p. 178) object

Required: No

InputSchema

Describes the format of the data in the streaming source, and how each data element maps to corresponding columns in the in-application stream that is being created.

Also used to describe the format of the reference data source.

Type: SourceSchema (p. 239) object

Required: Yes

KinesisFirehoseInput

If the streaming source is an Amazon Kinesis Data Firehose delivery stream, identifies the delivery stream's ARN.

Type: KinesisFirehoseInput (p. 186) object

Required: No

KinesisStreamsInput

If the streaming source is an Amazon Kinesis data stream, identifies the stream's Amazon Resource Name (ARN).

Type: KinesisStreamsInput (p. 192) object

Required: No

NamePrefix

The name prefix to use when creating an in-application stream. Suppose that you specify a prefix "`MyInApplicationStream`." Kinesis Data Analytics then creates one or more (as per the `InputParallelism` count you specified) in-application streams with the names "`MyInApplicationStream_001`," "`MyInApplicationStream_002`," and so on.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `[^-\s<>&]*`

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

InputDescription

Describes the application input configuration for a SQL-based Kinesis Data Analytics application.

Contents

InAppStreamNames

Returns the in-application stream names that are mapped to the stream source.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `[^-\s<>&]*`

Required: No

InputId

The input ID that is associated with the application input. This is the ID that Kinesis Data Analytics assigns to each input configuration that you add to your application.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: No

InputParallelism

Describes the configured parallelism (number of in-application streams mapped to the streaming source).

Type: InputParallelism (p. 176) object

Required: No

InputProcessingConfigurationDescription

The description of the preprocessor that executes on records in this input before the application's code is run.

Type: InputProcessingConfigurationDescription (p. 179) object

Required: No

InputSchema

Describes the format of the data in the streaming source, and how each data element maps to corresponding columns in the in-application stream that is being created.

Type: SourceSchema (p. 239) object

Required: No

InputStartingPositionConfiguration

The point at which the application is configured to read from the input stream.

Type: InputStartingPositionConfiguration (p. 182) object

Required: No

KinesisFirehoseInputDescription

If a Kinesis Data Firehose delivery stream is configured as a streaming source, provides the delivery stream's ARN.

Type: KinesisFirehoseInputDescription (p. 187) object

Required: No

KinesisStreamsInputDescription

If a Kinesis data stream is configured as a streaming source, provides the Kinesis data stream's Amazon Resource Name (ARN).

Type: KinesisStreamsInputDescription (p. 193) object

Required: No

NamePrefix

The in-application name prefix.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `[^-\s<>&]*`

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

InputLambdaProcessor

An object that contains the Amazon Resource Name (ARN) of the Amazon Lambda function that is used to preprocess records in the stream in a SQL-based Kinesis Data Analytics application.

Contents

ResourceARN

The ARN of the Amazon Lambda function that operates on records in the stream.

Note
To specify an earlier version of the Lambda function than the latest, include the Lambda function version in the Lambda function ARN. For more information about Lambda ARNs, see Example ARNs: Amazon Lambda

Type: String

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

Pattern: `arn:.*`

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

InputLambdaProcessorDescription

For a SQL-based Kinesis Data Analytics application, an object that contains the Amazon Resource Name (ARN) of the Amazon Lambda function that is used to preprocess records in the stream.

Contents

ResourceARN

The ARN of the Amazon Lambda function that is used to preprocess the records in the stream.

Note
To specify an earlier version of the Lambda function than the latest, include the Lambda function version in the Lambda function ARN. For more information about Lambda ARNs, see Example ARNs: Amazon Lambda

Type: String

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

Pattern: `arn:.*`

Required: Yes

RoleARN

The ARN of the IAM role that is used to access the Amazon Lambda function.

Note
Provided for backward compatibility. Applications that are created with the current API version have an application-level service execution role rather than a resource-level role.

Type: String

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

Pattern: `arn:.*`

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

InputLambdaProcessorUpdate

For a SQL-based Kinesis Data Analytics application, represents an update to the InputLambdaProcessor (p. 173) that is used to preprocess the records in the stream.

Contents

ResourceARNUpdate

The Amazon Resource Name (ARN) of the new Amazon Lambda function that is used to preprocess the records in the stream.

Note
To specify an earlier version of the Lambda function than the latest, include the Lambda function version in the Lambda function ARN. For more information about Lambda ARNs, see Example ARNs: Amazon Lambda

Type: String

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

Pattern: `arn:.*`

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

InputParallelism

For a SQL-based Kinesis Data Analytics application, describes the number of in-application streams to create for a given streaming source.

Contents

Count

The number of in-application streams to create.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 64.

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

InputParallelismUpdate

For a SQL-based Kinesis Data Analytics application, provides updates to the parallelism count.

Contents

CountUpdate

The number of in-application streams to create for the specified streaming source.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 64.

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

InputProcessingConfiguration

For a SQL-based Kinesis Data Analytics application, describes a processor that is used to preprocess the records in the stream before being processed by your application code. Currently, the only input processor available is Amazon Lambda.

Contents

InputLambdaProcessor

The InputLambdaProcessor (p. 173) that is used to preprocess the records in the stream before being processed by your application code.

Type: InputLambdaProcessor (p. 173) object

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

InputProcessingConfigurationDescription

For a SQL-based Kinesis Data Analytics application, provides the configuration information about an input processor. Currently, the only input processor available is Amazon Lambda.

Contents

InputLambdaProcessorDescription

Provides configuration information about the associated InputLambdaProcessorDescription (p. 174)

Type: InputLambdaProcessorDescription (p. 174) 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

InputProcessingConfigurationUpdate

For a SQL-based Kinesis Data Analytics application, describes updates to an InputProcessingConfiguration (p. 178).

Contents

InputLambdaProcessorUpdate

Provides update information for an InputLambdaProcessor (p. 173).

Type: InputLambdaProcessorUpdate (p. 175) object

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

InputSchemaUpdate

Describes updates for an SQL-based Kinesis Data Analytics application's input schema.

Contents

RecordColumnUpdates

A list of `RecordColumn` objects. Each object describes the mapping of the streaming source element to the corresponding column in the in-application stream.

Type: Array of RecordColumn (p. 219) objects

Array Members: Minimum number of 1 item. Maximum number of 1000 items.

Required: No

RecordEncodingUpdate

Specifies the encoding of the records in the streaming source; for example, UTF-8.

Type: String

Length Constraints: Fixed length of 5.

Pattern: `UTF-8`

Required: No

RecordFormatUpdate

Specifies the format of the records on the streaming source.

Type: RecordFormat (p. 220) 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

InputStartingPositionConfiguration

Describes the point at which the application reads from the streaming source.

Contents

InputStartingPosition

The starting position on the stream.

- `NOW` - Start reading just after the most recent record in the stream, and start at the request timestamp that the customer issued.
- `TRIM_HORIZON` - Start reading at the last untrimmed record in the stream, which is the oldest record available in the stream. This option is not available for an Amazon Kinesis Data Firehose delivery stream.
- `LAST_STOPPED_POINT` - Resume reading from where the application last stopped reading.

Type: String

Valid Values: `NOW | TRIM_HORIZON | LAST_STOPPED_POINT`

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

InputUpdate

For a SQL-based Kinesis Data Analytics application, describes updates to a specific input configuration (identified by the `InputId` of an application).

Contents

InputId

The input ID of the application input to be updated.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

InputParallelismUpdate

Describes the parallelism updates (the number of in-application streams Kinesis Data Analytics creates for the specific streaming source).

Type: InputParallelismUpdate (p. 177) object

Required: No

InputProcessingConfigurationUpdate

Describes updates to an InputProcessingConfiguration (p. 178).

Type: InputProcessingConfigurationUpdate (p. 180) object

Required: No

InputSchemaUpdate

Describes the data format on the streaming source, and how record elements on the streaming source map to columns of the in-application stream that is created.

Type: InputSchemaUpdate (p. 181) object

Required: No

KinesisFirehoseInputUpdate

If a Kinesis Data Firehose delivery stream is the streaming source to be updated, provides an updated stream ARN.

Type: KinesisFirehoseInputUpdate (p. 188) object

Required: No

KinesisStreamsInputUpdate

If a Kinesis data stream is the streaming source to be updated, provides an updated stream Amazon Resource Name (ARN).

Type: KinesisStreamsInputUpdate (p. 194) object

Required: No

NamePrefixUpdate

The name prefix for in-application streams that Kinesis Data Analytics creates for the specific streaming source.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `[^-\s<>&]*`

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

JSONMappingParameters

For a SQL-based Kinesis Data Analytics application, provides additional mapping information when JSON is the record format on the streaming source.

Contents

RecordRowPath

The path to the top-level parent that contains the records.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 65535.

Pattern: `^(?=^\$)(?=^\S+$).*$`

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

KinesisFirehoseInput

For a SQL-based Kinesis Data Analytics application, identifies a Kinesis Data Firehose delivery stream as the streaming source. You provide the delivery stream's Amazon Resource Name (ARN).

Contents

ResourceARN

The Amazon Resource Name (ARN) of the delivery stream.

Type: String

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

Pattern: `arn:.*`

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

KinesisFirehoseInputDescription

Describes the Amazon Kinesis Data Firehose delivery stream that is configured as the streaming source in the application input configuration.

Contents

ResourceARN

The Amazon Resource Name (ARN) of the delivery stream.

Type: String

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

Pattern: `arn:.*`

Required: Yes

RoleARN

The ARN of the IAM role that Kinesis Data Analytics assumes to access the stream.

Note
Provided for backward compatibility. Applications that are created with the current API version have an application-level service execution role rather than a resource-level role.

Type: String

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

Pattern: `arn:.*`

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

KinesisFirehoseInputUpdate

For a SQL-based Kinesis Data Analytics application, when updating application input configuration, provides information about a Kinesis Data Firehose delivery stream as the streaming source.

Contents

ResourceARNUpdate

The Amazon Resource Name (ARN) of the input delivery stream to read.

Type: String

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

Pattern: `arn:.*`

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

KinesisFirehoseOutput

For a SQL-based Kinesis Data Analytics application, when configuring application output, identifies a Kinesis Data Firehose delivery stream as the destination. You provide the stream Amazon Resource Name (ARN) of the delivery stream.

Contents

ResourceARN

The ARN of the destination delivery stream to write to.

Type: String

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

Pattern: `arn:.*`

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

KinesisFirehoseOutputDescription

For a SQL-based Kinesis Data Analytics application's output, describes the Kinesis Data Firehose delivery stream that is configured as its destination.

Contents

ResourceARN

The Amazon Resource Name (ARN) of the delivery stream.

Type: String

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

Pattern: `arn:.*`

Required: Yes

RoleARN

The ARN of the IAM role that Kinesis Data Analytics can assume to access the stream.

Note
Provided for backward compatibility. Applications that are created with the current API version have an application-level service execution role rather than a resource-level role.

Type: String

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

Pattern: `arn:.*`

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

KinesisFirehoseOutputUpdate

For a SQL-based Kinesis Data Analytics application, when updating an output configuration using the UpdateApplication (p. 100) operation, provides information about a Kinesis Data Firehose delivery stream that is configured as the destination.

Contents

ResourceARNUpdate

The Amazon Resource Name (ARN) of the delivery stream to write to.

Type: String

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

Pattern: `arn:.*`

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

KinesisStreamsInput

Identifies a Kinesis data stream as the streaming source. You provide the stream's Amazon Resource Name (ARN).

Contents

ResourceARN

The ARN of the input Kinesis data stream to read.

Type: String

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

Pattern: `arn:.*`

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

KinesisStreamsInputDescription

For a SQL-based Kinesis Data Analytics application, describes the Kinesis data stream that is configured as the streaming source in the application input configuration.

Contents

ResourceARN

The Amazon Resource Name (ARN) of the Kinesis data stream.

Type: String

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

Pattern: `arn:.*`

Required: Yes

RoleARN

The ARN of the IAM role that Kinesis Data Analytics can assume to access the stream.

Note
Provided for backward compatibility. Applications that are created with the current API version have an application-level service execution role rather than a resource-level role.

Type: String

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

Pattern: `arn:.*`

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

KinesisStreamsInputUpdate

When you update the input configuration for a SQL-based Kinesis Data Analytics application, provides information about a Kinesis stream as the streaming source.

Contents

ResourceARNUpdate

The Amazon Resource Name (ARN) of the input Kinesis data stream to read.

Type: String

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

Pattern: `arn:.*`

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

KinesisStreamsOutput

When you configure a SQL-based Kinesis Data Analytics application's output, identifies a Kinesis data stream as the destination. You provide the stream Amazon Resource Name (ARN).

Contents

ResourceARN

The ARN of the destination Kinesis data stream to write to.

Type: String

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

Pattern: `arn:.*`

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

KinesisStreamsOutputDescription

For an SQL-based Kinesis Data Analytics application's output, describes the Kinesis data stream that is configured as its destination.

Contents

ResourceARN

The Amazon Resource Name (ARN) of the Kinesis data stream.

Type: String

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

Pattern: `arn:.*`

Required: Yes

RoleARN

The ARN of the IAM role that Kinesis Data Analytics can assume to access the stream.

Note
Provided for backward compatibility. Applications that are created with the current API version have an application-level service execution role rather than a resource-level role.

Type: String

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

Pattern: `arn:.*`

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

KinesisStreamsOutputUpdate

When you update a SQL-based Kinesis Data Analytics application's output configuration using the UpdateApplication (p. 100) operation, provides information about a Kinesis data stream that is configured as the destination.

Contents

ResourceARNUpdate

The Amazon Resource Name (ARN) of the Kinesis data stream where you want to write the output.

Type: String

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

Pattern: `arn:.*`

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

LambdaOutput

When you configure a SQL-based Kinesis Data Analytics application's output, identifies an Amazon Lambda function as the destination. You provide the function Amazon Resource Name (ARN) of the Lambda function.

Contents

ResourceARN

The Amazon Resource Name (ARN) of the destination Lambda function to write to.

> **Note**
> To specify an earlier version of the Lambda function than the latest, include the Lambda function version in the Lambda function ARN. For more information about Lambda ARNs, see Example ARNs: Amazon Lambda

Type: String

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

Pattern: `arn:.*`

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

LambdaOutputDescription

For a SQL-based Kinesis Data Analytics application's output, describes the Amazon Lambda function that is configured as its destination.

Contents

ResourceARN

The Amazon Resource Name (ARN) of the destination Lambda function.

Type: String

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

Pattern: `arn:.*`

Required: Yes

RoleARN

The ARN of the IAM role that Kinesis Data Analytics can assume to write to the destination function.

Note
Provided for backward compatibility. Applications that are created with the current API version have an application-level service execution role rather than a resource-level role.

Type: String

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

Pattern: `arn:.*`

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

LambdaOutputUpdate

When you update an SQL-based Kinesis Data Analytics application's output configuration using the UpdateApplication (p. 100) operation, provides information about an Amazon Lambda function that is configured as the destination.

Contents

ResourceARNUpdate

The Amazon Resource Name (ARN) of the destination Amazon Lambda function.

Note
To specify an earlier version of the Lambda function than the latest, include the Lambda function version in the Lambda function ARN. For more information about Lambda ARNs, see Example ARNs: Amazon Lambda

Type: String

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

Pattern: `arn:.*`

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

MappingParameters

When you configure a SQL-based Kinesis Data Analytics application's input at the time of creating or updating an application, provides additional mapping information specific to the record format (such as JSON, CSV, or record fields delimited by some delimiter) on the streaming source.

Contents

CSVMappingParameters

Provides additional mapping information when the record format uses delimiters (for example, CSV).

Type: CSVMappingParameters (p. 152) object

Required: No

JSONMappingParameters

Provides additional mapping information when JSON is the record format on the streaming source.

Type: JSONMappingParameters (p. 185) 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

MavenReference

The information required to specify a Maven reference. You can use Maven references to specify dependency JAR files.

Contents

ArtifactId

The artifact ID of the Maven reference.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

GroupId

The group ID of the Maven reference.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

Version

The version of the Maven reference.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

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

MonitoringConfiguration

Describes configuration parameters for Amazon CloudWatch logging for an application. For more information about CloudWatch logging, see Monitoring.

Contents

ConfigurationType

Describes whether to use the default CloudWatch logging configuration for an application. You must set this property to `CUSTOM` in order to set the `LogLevel` or `MetricsLevel` parameters.

Type: String

Valid Values: `DEFAULT | CUSTOM`

Required: Yes

LogLevel

Describes the verbosity of the CloudWatch Logs for an application.

Type: String

Valid Values: `INFO | WARN | ERROR | DEBUG`

Required: No

MetricsLevel

Describes the granularity of the CloudWatch Logs for an application. The `Parallelism` level is not recommended for applications with a Parallelism over 64 due to excessive costs.

Type: String

Valid Values: `APPLICATION | TASK | OPERATOR | PARALLELISM`

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

MonitoringConfigurationDescription

Describes configuration parameters for CloudWatch logging for an application.

Contents

ConfigurationType

Describes whether to use the default CloudWatch logging configuration for an application.

Type: String

Valid Values: `DEFAULT | CUSTOM`

Required: No

LogLevel

Describes the verbosity of the CloudWatch Logs for an application.

Type: String

Valid Values: `INFO | WARN | ERROR | DEBUG`

Required: No

MetricsLevel

Describes the granularity of the CloudWatch Logs for an application.

Type: String

Valid Values: `APPLICATION | TASK | OPERATOR | PARALLELISM`

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

MonitoringConfigurationUpdate

Describes updates to configuration parameters for Amazon CloudWatch logging for an application.

Contents

ConfigurationTypeUpdate

Describes updates to whether to use the default CloudWatch logging configuration for an application. You must set this property to `CUSTOM` in order to set the `LogLevel` or `MetricsLevel` parameters.

Type: String

Valid Values: `DEFAULT | CUSTOM`

Required: No

LogLevelUpdate

Describes updates to the verbosity of the CloudWatch Logs for an application.

Type: String

Valid Values: `INFO | WARN | ERROR | DEBUG`

Required: No

MetricsLevelUpdate

Describes updates to the granularity of the CloudWatch Logs for an application. The `Parallelism` level is not recommended for applications with a Parallelism over 64 due to excessive costs.

Type: String

Valid Values: `APPLICATION | TASK | OPERATOR | PARALLELISM`

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

Output

Describes a SQL-based Kinesis Data Analytics application's output configuration, in which you identify an in-application stream and a destination where you want the in-application stream data to be written. The destination can be a Kinesis data stream or a Kinesis Data Firehose delivery stream.

Contents

DestinationSchema

Describes the data format when records are written to the destination.

Type: DestinationSchema (p. 158) object

Required: Yes

KinesisFirehoseOutput

Identifies a Kinesis Data Firehose delivery stream as the destination.

Type: KinesisFirehoseOutput (p. 189) object

Required: No

KinesisStreamsOutput

Identifies a Kinesis data stream as the destination.

Type: KinesisStreamsOutput (p. 195) object

Required: No

LambdaOutput

Identifies an Amazon Lambda function as the destination.

Type: LambdaOutput (p. 198) object

Required: No

Name

The name of the in-application stream.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `[^-\s<>&]*`

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

OutputDescription

For a SQL-based Kinesis Data Analytics application, describes the application output configuration, which includes the in-application stream name and the destination where the stream data is written. The destination can be a Kinesis data stream or a Kinesis Data Firehose delivery stream.

Contents

DestinationSchema

The data format used for writing data to the destination.

Type: DestinationSchema (p. 158) object

Required: No

KinesisFirehoseOutputDescription

Describes the Kinesis Data Firehose delivery stream that is configured as the destination where output is written.

Type: KinesisFirehoseOutputDescription (p. 190) object

Required: No

KinesisStreamsOutputDescription

Describes the Kinesis data stream that is configured as the destination where output is written.

Type: KinesisStreamsOutputDescription (p. 196) object

Required: No

LambdaOutputDescription

Describes the Lambda function that is configured as the destination where output is written.

Type: LambdaOutputDescription (p. 199) object

Required: No

Name

The name of the in-application stream that is configured as output.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `[^-\s<>&]*`

Required: No

OutputId

A unique identifier for the output configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

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

OutputUpdate

For a SQL-based Kinesis Data Analytics application, describes updates to the output configuration identified by the `OutputId`.

Contents

DestinationSchemaUpdate

Describes the data format when records are written to the destination.

Type: DestinationSchema (p. 158) object

Required: No

KinesisFirehoseOutputUpdate

Describes a Kinesis Data Firehose delivery stream as the destination for the output.

Type: KinesisFirehoseOutputUpdate (p. 191) object

Required: No

KinesisStreamsOutputUpdate

Describes a Kinesis data stream as the destination for the output.

Type: KinesisStreamsOutputUpdate (p. 197) object

Required: No

LambdaOutputUpdate

Describes an Amazon Lambda function as the destination for the output.

Type: LambdaOutputUpdate (p. 200) object

Required: No

NameUpdate

If you want to specify a different in-application stream for this output configuration, use this field to specify the new in-application stream name.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `[^-\s<>&]*`

Required: No

OutputId

Identifies the specific output configuration that you want to update.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

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

ParallelismConfiguration

Describes parameters for how a Flink-based Kinesis Data Analytics application executes multiple tasks simultaneously. For more information about parallelism, see Parallel Execution in the Apache Flink Documentation.

Contents

AutoScalingEnabled

Describes whether the Kinesis Data Analytics service can increase the parallelism of the application in response to increased throughput.

Type: Boolean

Required: No

ConfigurationType

Describes whether the application uses the default parallelism for the Kinesis Data Analytics service. You must set this property to `CUSTOM` in order to change your application's `AutoScalingEnabled`, `Parallelism`, or `ParallelismPerKPU` properties.

Type: String

Valid Values: `DEFAULT | CUSTOM`

Required: Yes

Parallelism

Describes the initial number of parallel tasks that a Flink-based Kinesis Data Analytics application can perform. If `AutoScalingEnabled` is set to True, Kinesis Data Analytics increases the `CurrentParallelism` value in response to application load. The service can increase the `CurrentParallelism` value up to the maximum parallelism, which is `ParalellismPerKPU` times the maximum KPUs for the application. The maximum KPUs for an application is 32 by default, and can be increased by requesting a limit increase. If application load is reduced, the service can reduce the `CurrentParallelism` value down to the `Parallelism` setting.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

ParallelismPerKPU

Describes the number of parallel tasks that a Flink-based Kinesis Data Analytics application can perform per Kinesis Processing Unit (KPU) used by the application. For more information about KPUs, see Amazon Kinesis Data Analytics Pricing.

Type: Integer

Valid Range: Minimum value of 1.

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

ParallelismConfigurationDescription

Describes parameters for how a Flink-based Kinesis Data Analytics application executes multiple tasks simultaneously.

Contents

AutoScalingEnabled

Describes whether the Kinesis Data Analytics service can increase the parallelism of the application in response to increased throughput.

Type: Boolean

Required: No

ConfigurationType

Describes whether the application uses the default parallelism for the Kinesis Data Analytics service.

Type: String

Valid Values: `DEFAULT | CUSTOM`

Required: No

CurrentParallelism

Describes the current number of parallel tasks that a Flink-based Kinesis Data Analytics application can perform. If `AutoScalingEnabled` is set to True, Kinesis Data Analytics can increase this value in response to application load. The service can increase this value up to the maximum parallelism, which is `ParalellismPerKPU` times the maximum KPUs for the application. The maximum KPUs for an application is 32 by default, and can be increased by requesting a limit increase. If application load is reduced, the service can reduce the `CurrentParallelism` value down to the `Parallelism` setting.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

Parallelism

Describes the initial number of parallel tasks that a Flink-based Kinesis Data Analytics application can perform. If `AutoScalingEnabled` is set to True, then Kinesis Data Analytics can increase the `CurrentParallelism` value in response to application load. The service can increase `CurrentParallelism` up to the maximum parallelism, which is `ParalellismPerKPU` times the maximum KPUs for the application. The maximum KPUs for an application is 32 by default, and can be increased by requesting a limit increase. If application load is reduced, the service can reduce the `CurrentParallelism` value down to the `Parallelism` setting.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

ParallelismPerKPU

Describes the number of parallel tasks that a Flink-based Kinesis Data Analytics application can perform per Kinesis Processing Unit (KPU) used by the application.

Type: Integer

Valid Range: Minimum value of 1.

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

ParallelismConfigurationUpdate

Describes updates to parameters for how an application executes multiple tasks simultaneously.

Contents

AutoScalingEnabledUpdate

Describes updates to whether the Kinesis Data Analytics service can increase the parallelism of a Flink-based Kinesis Data Analytics application in response to increased throughput.

Type: Boolean

Required: No

ConfigurationTypeUpdate

Describes updates to whether the application uses the default parallelism for the Kinesis Data Analytics service, or if a custom parallelism is used. You must set this property to `CUSTOM` in order to change your application's `AutoScalingEnabled`, `Parallelism`, or `ParallelismPerKPU` properties.

Type: String

Valid Values: `DEFAULT | CUSTOM`

Required: No

ParallelismPerKPUUpdate

Describes updates to the number of parallel tasks an application can perform per Kinesis Processing Unit (KPU) used by the application.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

ParallelismUpdate

Describes updates to the initial number of parallel tasks an application can perform. If `AutoScalingEnabled` is set to True, then Kinesis Data Analytics can increase the `CurrentParallelism` value in response to application load. The service can increase `CurrentParallelism` up to the maximum parallelism, which is `ParalellismPerKPU` times the maximum KPUs for the application. The maximum KPUs for an application is 32 by default, and can be increased by requesting a limit increase. If application load is reduced, the service will reduce `CurrentParallelism` down to the `Parallelism` setting.

Type: Integer

Valid Range: Minimum value of 1.

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

PropertyGroup

Property key-value pairs passed into an application.

Contents

PropertyGroupId

Describes the key of an application execution property key-value pair.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

PropertyMap

Describes the value of an application execution property key-value pair.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

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

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

RecordColumn

For a SQL-based Kinesis Data Analytics application, describes the mapping of each data element in the streaming source to the corresponding column in the in-application stream.

Also used to describe the format of the reference data source.

Contents

Mapping

A reference to the data element in the streaming input or the reference data source.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 65535.

Required: No

Name

The name of the column that is created in the in-application input stream or reference table.

Type: String

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

Pattern: `[^-\s<>&]*`

Required: Yes

SqlType

The type of column created in the in-application input stream or reference table.

Type: String

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

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

RecordFormat

For a SQL-based Kinesis Data Analytics application, describes the record format and relevant mapping information that should be applied to schematize the records on the stream.

Contents

MappingParameters

When you configure application input at the time of creating or updating an application, provides additional mapping information specific to the record format (such as JSON, CSV, or record fields delimited by some delimiter) on the streaming source.

Type: MappingParameters (p. 201) object

Required: No

RecordFormatType

The type of record format.

Type: String

Valid Values: `JSON | CSV`

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

ReferenceDataSource

For a SQL-based Kinesis Data Analytics application, describes the reference data source by providing the source information (Amazon S3 bucket name and object key name), the resulting in-application table name that is created, and the necessary schema to map the data elements in the Amazon S3 object to the in-application table.

Contents

ReferenceSchema

Describes the format of the data in the streaming source, and how each data element maps to corresponding columns created in the in-application stream.

Type: SourceSchema (p. 239) object

Required: Yes

S3ReferenceDataSource

Identifies the S3 bucket and object that contains the reference data. A Kinesis Data Analytics application loads reference data only once. If the data changes, you call the UpdateApplication (p. 100) operation to trigger reloading of data into your application.

Type: S3ReferenceDataSource (p. 235) object

Required: No

TableName

The name of the in-application table to create.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

ReferenceDataSourceDescription

For a SQL-based Kinesis Data Analytics application, describes the reference data source configured for an application.

Contents

ReferenceId

The ID of the reference data source. This is the ID that Kinesis Data Analytics assigns when you add the reference data source to your application using the CreateApplication (p. 24) or UpdateApplication (p. 100) operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

ReferenceSchema

Describes the format of the data in the streaming source, and how each data element maps to corresponding columns created in the in-application stream.

Type: SourceSchema (p. 239) object

Required: No

S3ReferenceDataSourceDescription

Provides the Amazon S3 bucket name, the object key name that contains the reference data.

Type: S3ReferenceDataSourceDescription (p. 236) object

Required: Yes

TableName

The in-application table name created by the specific reference data source configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

ReferenceDataSourceUpdate

When you update a reference data source configuration for a SQL-based Kinesis Data Analytics application, this object provides all the updated values (such as the source bucket name and object key name), the in-application table name that is created, and updated mapping information that maps the data in the Amazon S3 object to the in-application reference table that is created.

Contents

ReferenceId

The ID of the reference data source that is being updated. You can use the DescribeApplication (p. 58) operation to get this value.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

ReferenceSchemaUpdate

Describes the format of the data in the streaming source, and how each data element maps to corresponding columns created in the in-application stream.

Type: SourceSchema (p. 239) object

Required: No

S3ReferenceDataSourceUpdate

Describes the S3 bucket name, object key name, and IAM role that Kinesis Data Analytics can assume to read the Amazon S3 object on your behalf and populate the in-application reference table.

Type: S3ReferenceDataSourceUpdate (p. 237) object

Required: No

TableNameUpdate

The in-application table name that is created by this update.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

RunConfiguration

Describes the starting parameters for an Kinesis Data Analytics application.

Contents

ApplicationRestoreConfiguration

Describes the restore behavior of a restarting application.

Type: ApplicationRestoreConfiguration (p. 130) object

Required: No

FlinkRunConfiguration

Describes the starting parameters for a Flink-based Kinesis Data Analytics application.

Type: FlinkRunConfiguration (p. 165) object

Required: No

SqlRunConfigurations

Describes the starting parameters for a SQL-based Kinesis Data Analytics application application.

Type: Array of SqlRunConfiguration (p. 243) 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

RunConfigurationDescription

Describes the starting properties for a Kinesis Data Analytics application.

Contents

ApplicationRestoreConfigurationDescription

Describes the restore behavior of a restarting application.

Type: ApplicationRestoreConfiguration (p. 130) object

Required: No

FlinkRunConfigurationDescription

Describes the starting parameters for a Flink-based Kinesis Data Analytics application.

Type: FlinkRunConfiguration (p. 165) 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

RunConfigurationUpdate

Describes the updates to the starting parameters for a Kinesis Data Analytics application.

Contents

ApplicationRestoreConfiguration

Describes updates to the restore behavior of a restarting application.

Type: ApplicationRestoreConfiguration (p. 130) object

Required: No

FlinkRunConfiguration

Describes the starting parameters for a Flink-based Kinesis Data Analytics application.

Type: FlinkRunConfiguration (p. 165) 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

S3ApplicationCodeLocationDescription

Describes the location of an application's code stored in an S3 bucket.

Contents

BucketARN

The Amazon Resource Name (ARN) for the S3 bucket containing the application code.

Type: String

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

Pattern: `arn:.*`

Required: Yes

FileKey

The file key for the object containing the application code.

Type: String

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

Required: Yes

ObjectVersion

The version of the object containing the application code.

Type: String

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

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

S3Configuration

For a SQL-based Kinesis Data Analytics application, provides a description of an Amazon S3 data source, including the Amazon Resource Name (ARN) of the S3 bucket and the name of the Amazon S3 object that contains the data.

Contents

BucketARN

The ARN of the S3 bucket that contains the data.

Type: String

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

Pattern: `arn:.*`

Required: Yes

FileKey

The name of the object that contains the data.

Type: String

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

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

S3ContentBaseLocation

The S3 bucket that holds the application information.

Contents

BasePath

The base path for the S3 bucket.

Type: String

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

Pattern: `[a-zA-Z0-9/!-_.*'()]+`

Required: No

BucketARN

The Amazon Resource Name (ARN) of the S3 bucket.

Type: String

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

Pattern: `arn:.*`

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

S3ContentBaseLocationDescription

The description of the S3 base location that holds the application.

Contents

BasePath

The base path for the S3 bucket.

Type: String

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

Pattern: `[a-zA-Z0-9/!-_.*'()]+`

Required: No

BucketARN

The Amazon Resource Name (ARN) of the S3 bucket.

Type: String

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

Pattern: `arn:.*`

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

S3ContentBaseLocationUpdate

The information required to update the S3 base location that holds the application.

Contents

BasePathUpdate

The updated S3 bucket path.

Type: String

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

Pattern: `[a-zA-Z0-9/!-_.*'()]+`

Required: No

BucketARNUpdate

The updated Amazon Resource Name (ARN) of the S3 bucket.

Type: String

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

Pattern: `arn:.*`

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

S3ContentLocation

For a Kinesis Data Analytics application provides a description of an Amazon S3 object, including the Amazon Resource Name (ARN) of the S3 bucket, the name of the Amazon S3 object that contains the data, and the version number of the Amazon S3 object that contains the data.

Contents

BucketARN

The Amazon Resource Name (ARN) for the S3 bucket containing the application code.

Type: String

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

Pattern: `arn:.*`

Required: Yes

FileKey

The file key for the object containing the application code.

Type: String

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

Required: Yes

ObjectVersion

The version of the object containing the application code.

Type: String

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

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

S3ContentLocationUpdate

Describes an update for the Amazon S3 code content location for an application.

Contents

BucketARNUpdate

The new Amazon Resource Name (ARN) for the S3 bucket containing the application code.

Type: String

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

Pattern: `arn:.*`

Required: No

FileKeyUpdate

The new file key for the object containing the application code.

Type: String

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

Required: No

ObjectVersionUpdate

The new version of the object containing the application code.

Type: String

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

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

S3ReferenceDataSource

For a SQL-based Kinesis Data Analytics application, identifies the Amazon S3 bucket and object that contains the reference data.

A Kinesis Data Analytics application loads reference data only once. If the data changes, you call the UpdateApplication (p. 100) operation to trigger reloading of data into your application.

Contents

BucketARN

The Amazon Resource Name (ARN) of the S3 bucket.

Type: String

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

Pattern: `arn:.*`

Required: No

FileKey

The object key name containing the reference data.

Type: String

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

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

S3ReferenceDataSourceDescription

For a SQL-based Kinesis Data Analytics application, provides the bucket name and object key name that stores the reference data.

Contents

BucketARN

The Amazon Resource Name (ARN) of the S3 bucket.

Type: String

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

Pattern: `arn:.*`

Required: Yes

FileKey

Amazon S3 object key name.

Type: String

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

Required: Yes

ReferenceRoleARN

The ARN of the IAM role that Kinesis Data Analytics can assume to read the Amazon S3 object on your behalf to populate the in-application reference table.

Note
Provided for backward compatibility. Applications that are created with the current API version have an application-level service execution role rather than a resource-level role.

Type: String

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

Pattern: `arn:.*`

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

S3ReferenceDataSourceUpdate

For a SQL-based Kinesis Data Analytics application, describes the Amazon S3 bucket name and object key name for an in-application reference table.

Contents

BucketARNUpdate

The Amazon Resource Name (ARN) of the S3 bucket.

Type: String

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

Pattern: `arn:.*`

Required: No

FileKeyUpdate

The object key name.

Type: String

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

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

SnapshotDetails

Provides details about a snapshot of application state.

Contents

ApplicationVersionId

The current application version ID when the snapshot was created.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 999999999.

Required: Yes

SnapshotCreationTimestamp

The timestamp of the application snapshot.

Type: Timestamp

Required: No

SnapshotName

The identifier for the application snapshot.

Type: String

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

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

SnapshotStatus

The status of the application snapshot.

Type: String

Valid Values: `CREATING | READY | DELETING | FAILED`

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

SourceSchema

For a SQL-based Kinesis Data Analytics application, describes the format of the data in the streaming source, and how each data element maps to corresponding columns created in the in-application stream.

Contents

RecordColumns

A list of `RecordColumn` objects.

Type: Array of RecordColumn (p. 219) objects

Array Members: Minimum number of 1 item. Maximum number of 1000 items.

Required: Yes

RecordEncoding

Specifies the encoding of the records in the streaming source. For example, UTF-8.

Type: String

Length Constraints: Fixed length of 5.

Pattern: `UTF-8`

Required: No

RecordFormat

Specifies the format of the records on the streaming source.

Type: RecordFormat (p. 220) object

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

SqlApplicationConfiguration

Describes the inputs, outputs, and reference data sources for a SQL-based Kinesis Data Analytics application.

Contents

Inputs

The array of Input (p. 169) objects describing the input streams used by the application.

Type: Array of Input (p. 169) objects

Required: No

Outputs

The array of Output (p. 206) objects describing the destination streams used by the application.

Type: Array of Output (p. 206) objects

Required: No

ReferenceDataSources

The array of ReferenceDataSource (p. 221) objects describing the reference data sources used by the application.

Type: Array of ReferenceDataSource (p. 221) 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

SqlApplicationConfigurationDescription

Describes the inputs, outputs, and reference data sources for a SQL-based Kinesis Data Analytics application.

Contents

InputDescriptions

The array of InputDescription (p. 171) objects describing the input streams used by the application.

Type: Array of InputDescription (p. 171) objects

Required: No

OutputDescriptions

The array of OutputDescription (p. 208) objects describing the destination streams used by the application.

Type: Array of OutputDescription (p. 208) objects

Required: No

ReferenceDataSourceDescriptions

The array of ReferenceDataSourceDescription (p. 222) objects describing the reference data sources used by the application.

Type: Array of ReferenceDataSourceDescription (p. 222) 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

SqlApplicationConfigurationUpdate

Describes updates to the input streams, destination streams, and reference data sources for a SQL-based Kinesis Data Analytics application.

Contents

InputUpdates

The array of InputUpdate (p. 183) objects describing the new input streams used by the application.

Type: Array of InputUpdate (p. 183) objects

Required: No

OutputUpdates

The array of OutputUpdate (p. 210) objects describing the new destination streams used by the application.

Type: Array of OutputUpdate (p. 210) objects

Required: No

ReferenceDataSourceUpdates

The array of ReferenceDataSourceUpdate (p. 223) objects describing the new reference data sources used by the application.

Type: Array of ReferenceDataSourceUpdate (p. 223) 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

SqlRunConfiguration

Describes the starting parameters for a SQL-based Kinesis Data Analytics application.

Contents

InputId

The input source ID. You can get this ID by calling the DescribeApplication (p. 58) operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

InputStartingPositionConfiguration

The point at which you want the application to start processing records from the streaming source.

Type: InputStartingPositionConfiguration (p. 182) object

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

Tag

A key-value pair (the value is optional) that you can define and assign to Amazon resources. If you specify a tag that already exists, the tag value is replaced with the value that you specify in the request. Note that the maximum number of application tags includes system tags. The maximum number of user-defined application tags is 50. For more information, see Using Tagging.

Contents

Key

The key of the key-value tag.

Type: String

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

Required: Yes

Value

The value of the key-value tag. The value is optional.

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

VpcConfiguration

Describes the parameters of a VPC used by the application.

Contents

SecurityGroupIds

The array of SecurityGroup IDs used by the VPC configuration.

Type: Array of strings

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

Required: Yes

SubnetIds

The array of Subnet IDs used by the VPC configuration.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 16 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

VpcConfigurationDescription

Describes the parameters of a VPC used by the application.

Contents

SecurityGroupIds

The array of SecurityGroup IDs used by the VPC configuration.

Type: Array of strings

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

Required: Yes

SubnetIds

The array of Subnet IDs used by the VPC configuration.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 16 items.

Required: Yes

VpcConfigurationId

The ID of the VPC configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

Required: Yes

VpcId

The ID of the associated VPC.

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

VpcConfigurationUpdate

Describes updates to the VPC configuration used by the application.

Contents

SecurityGroupIdUpdates

Describes updates to the array of SecurityGroup IDs used by the VPC configuration.

Type: Array of strings

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

Required: No

SubnetIdUpdates

Describes updates to the array of Subnet IDs used by the VPC configuration.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 16 items.

Required: No

VpcConfigurationId

Describes an update to the ID of the VPC configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `[a-zA-Z0-9_.-]+`

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

ZeppelinApplicationConfiguration

The configuration of a Kinesis Data Analytics Studio notebook.

Contents

CatalogConfiguration

The Amazon Glue Data Catalog that you use in queries in a Kinesis Data Analytics Studio notebook.

Type: CatalogConfiguration (p. 137) object

Required: No

CustomArtifactsConfiguration

Custom artifacts are dependency JARs and user-defined functions (UDF).

Type: Array of CustomArtifactConfiguration (p. 153) objects

Array Members: Maximum number of 50 items.

Required: No

DeployAsApplicationConfiguration

The information required to deploy a Kinesis Data Analytics Studio notebook as an application with durable state.

Type: DeployAsApplicationConfiguration (p. 155) object

Required: No

MonitoringConfiguration

The monitoring configuration of a Kinesis Data Analytics Studio notebook.

Type: ZeppelinMonitoringConfiguration (p. 251) 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

ZeppelinApplicationConfigurationDescription

The configuration of a Kinesis Data Analytics Studio notebook.

Contents

CatalogConfigurationDescription

The Amazon Glue Data Catalog that is associated with the Kinesis Data Analytics Studio notebook.

Type: CatalogConfigurationDescription (p. 138) object

Required: No

CustomArtifactsConfigurationDescription

Custom artifacts are dependency JARs and user-defined functions (UDF).

Type: Array of CustomArtifactConfigurationDescription (p. 154) objects

Array Members: Maximum number of 50 items.

Required: No

DeployAsApplicationConfigurationDescription

The parameters required to deploy a Kinesis Data Analytics Studio notebook as an application with durable state.

Type: DeployAsApplicationConfigurationDescription (p. 156) object

Required: No

MonitoringConfigurationDescription

The monitoring configuration of a Kinesis Data Analytics Studio notebook.

Type: ZeppelinMonitoringConfigurationDescription (p. 252) object

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

ZeppelinApplicationConfigurationUpdate

Updates to the configuration of Kinesis Data Analytics Studio notebook.

Contents

CatalogConfigurationUpdate

Updates to the configuration of the Amazon Glue Data Catalog that is associated with the Kinesis Data Analytics Studio notebook.

Type: CatalogConfigurationUpdate (p. 139) object

Required: No

CustomArtifactsConfigurationUpdate

Updates to the customer artifacts. Custom artifacts are dependency JAR files and user-defined functions (UDF).

Type: Array of CustomArtifactConfiguration (p. 153) objects

Array Members: Maximum number of 50 items.

Required: No

DeployAsApplicationConfigurationUpdate

Type: DeployAsApplicationConfigurationUpdate (p. 157) object

Required: No

MonitoringConfigurationUpdate

Updates to the monitoring configuration of a Kinesis Data Analytics Studio notebook.

Type: ZeppelinMonitoringConfigurationUpdate (p. 253) 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

ZeppelinMonitoringConfiguration

Describes configuration parameters for Amazon CloudWatch logging for a Kinesis Data Analytics Studio notebook. For more information about CloudWatch logging, see Monitoring.

Contents

LogLevel

The verbosity of the CloudWatch Logs for an application.

Type: String

Valid Values: `INFO | WARN | ERROR | DEBUG`

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

ZeppelinMonitoringConfigurationDescription

The monitoring configuration for Apache Zeppelin within a Kinesis Data Analytics Studio notebook.

Contents

LogLevel

Describes the verbosity of the CloudWatch Logs for an application.

Type: String

Valid Values: `INFO | WARN | ERROR | DEBUG`

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

ZeppelinMonitoringConfigurationUpdate

Updates to the monitoring configuration for Apache Zeppelin within a Kinesis Data Analytics Studio notebook.

Contents

LogLevelUpdate

Updates to the logging level for Apache Zeppelin within a Kinesis Data Analytics Studio notebook.

Type: String

Valid Values: `INFO | WARN | ERROR | DEBUG`

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