
Kinesis Data Analytics

kinesisanalytics

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亚马逊云科技


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.

This document was last published on May 18, 2023.

Actions

The following actions are supported:

- [AddApplicationCloudWatchLoggingOption \(p. 3\)](#)
- [AddApplicationInput \(p. 6\)](#)
- [AddApplicationInputProcessingConfiguration \(p. 10\)](#)
- [AddApplicationOutput \(p. 13\)](#)
- [AddApplicationReferenceDataSource \(p. 17\)](#)
- [AddApplicationVpcConfiguration \(p. 21\)](#)
- [CreateApplication \(p. 24\)](#)
- [CreateApplicationPresignedUrl \(p. 34\)](#)
- [CreateApplicationSnapshot \(p. 37\)](#)
- [DeleteApplication \(p. 39\)](#)
- [DeleteApplicationCloudWatchLoggingOption \(p. 41\)](#)
- [DeleteApplicationInputProcessingConfiguration \(p. 44\)](#)
- [DeleteApplicationOutput \(p. 47\)](#)
- [DeleteApplicationReferenceDataSource \(p. 50\)](#)
- [DeleteApplicationSnapshot \(p. 53\)](#)
- [DeleteApplicationVpcConfiguration \(p. 55\)](#)
- [DescribeApplication \(p. 58\)](#)
- [DescribeApplicationSnapshot \(p. 64\)](#)
- [DescribeApplicationVersion \(p. 66\)](#)
- [DiscoverInputSchema \(p. 72\)](#)
- [ListApplications \(p. 76\)](#)
- [ListApplicationSnapshots \(p. 78\)](#)
- [ListApplicationVersions \(p. 81\)](#)
- [ListTagsForResource \(p. 84\)](#)
- [RollbackApplication \(p. 86\)](#)
- [StartApplication \(p. 92\)](#)
- [StopApplication \(p. 94\)](#)
- [TagResource \(p. 96\)](#)
- [UntagResource \(p. 98\)](#)
- [UpdateApplication \(p. 100\)](#)
- [UpdateApplicationMaintenanceConfiguration \(p. 110\)](#)

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 \(p. 147\)](#) 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 \(p. 148\)](#) 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 \(p. 170\)](#) to add.

Type: [Input \(p. 170\)](#) 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 \(p. 172\)](#) 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 Amazon SDKs, see the following:

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

AddApplicationInputProcessingConfiguration

Adds an [InputProcessingConfiguration \(p. 179\)](#) 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 \(p. 179\)](#) to add to the application.

Type: [InputProcessingConfiguration \(p. 179\)](#) 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 \(p. 180\)](#) 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 \(p. 207\)](#) 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 \(p. 209\)](#) 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 Amazon SDKs, see the following:

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

- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 \(p. 222\)](#) 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 \(p. 223\)](#) 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 \(p. 246\)](#) 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 \(p. 247\)](#) 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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"
          }
        }
      }
    }
  }
]
```



```
    "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 \(p. 147\)](#) 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 | FLINK-1_15

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 \(p. 245\)](#) 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 Amazon SDKs, see the following:

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

CreateApplicationPresignedUrl

Creates and returns a URL that you can use to connect to an application's extension.

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 Amazon SDKs, see the following:

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

- [Amazon SDK for Python](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 \(p. 148\)](#) 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 Amazon SDKs, see the following:

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

DeleteApplicationInputProcessingConfiguration

Deletes an [InputProcessingConfiguration \(p. 179\)](#) 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 Amazon SDKs, see the following:

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

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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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"
}
},
"TableReference": {
    "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 Amazon SDKs, see the following:

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 \(p. 239\)](#) 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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"
  }
},
"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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)

- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 \(p. 179\)](#) to use to preprocess the records before discovering the schema of the records.

Type: [InputProcessingConfiguration \(p. 179\)](#) 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 \(p. 183\)](#) 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 \(p. 230\)](#) 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 \(p. 240\)](#) 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 \(p. 135\)](#) 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 \(p. 239\)](#) 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 Amazon SDKs, see the following:

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

- [Amazon 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 \(p. 137\)](#) 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 \(p. 245\)](#) 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 \(p. 226\)](#) 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 \(p. 245\)](#) 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 \(p. 149\)](#) 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 \(p. 228\)](#) 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"
            }
        }
    }
],
}

```



```
    },  
    "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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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 \(p. 130\)](#) 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 \(p. 129\)](#) 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 Amazon SDKs, see the following:

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon 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](#) (p. 116)
- [ApplicationCodeConfigurationDescription](#) (p. 117)
- [ApplicationCodeConfigurationUpdate](#) (p. 118)
- [ApplicationConfiguration](#) (p. 119)
- [ApplicationConfigurationDescription](#) (p. 121)
- [ApplicationConfigurationUpdate](#) (p. 123)
- [ApplicationDetail](#) (p. 125)
- [ApplicationMaintenanceConfigurationDescription](#) (p. 129)
- [ApplicationMaintenanceConfigurationUpdate](#) (p. 130)
- [ApplicationRestoreConfiguration](#) (p. 131)
- [ApplicationSnapshotConfiguration](#) (p. 132)
- [ApplicationSnapshotConfigurationDescription](#) (p. 133)
- [ApplicationSnapshotConfigurationUpdate](#) (p. 134)
- [ApplicationSummary](#) (p. 135)
- [ApplicationVersionSummary](#) (p. 137)
- [CatalogConfiguration](#) (p. 138)
- [CatalogConfigurationDescription](#) (p. 139)
- [CatalogConfigurationUpdate](#) (p. 140)
- [CheckpointConfiguration](#) (p. 141)
- [CheckpointConfigurationDescription](#) (p. 143)
- [CheckpointConfigurationUpdate](#) (p. 145)
- [CloudWatchLoggingOption](#) (p. 147)
- [CloudWatchLoggingOptionDescription](#) (p. 148)
- [CloudWatchLoggingOptionUpdate](#) (p. 149)
- [CodeContent](#) (p. 150)
- [CodeContentDescription](#) (p. 151)
- [CodeContentUpdate](#) (p. 152)
- [CSVMappingParameters](#) (p. 153)
- [CustomArtifactConfiguration](#) (p. 154)
- [CustomArtifactConfigurationDescription](#) (p. 155)
- [DeployAsApplicationConfiguration](#) (p. 156)
- [DeployAsApplicationConfigurationDescription](#) (p. 157)
- [DeployAsApplicationConfigurationUpdate](#) (p. 158)
- [DestinationSchema](#) (p. 159)
- [EnvironmentProperties](#) (p. 160)

- [EnvironmentPropertyDescriptions \(p. 161\)](#)
- [EnvironmentPropertyUpdates \(p. 162\)](#)
- [FlinkApplicationConfiguration \(p. 163\)](#)
- [FlinkApplicationConfigurationDescription \(p. 164\)](#)
- [FlinkApplicationConfigurationUpdate \(p. 165\)](#)
- [FlinkRunConfiguration \(p. 166\)](#)
- [GlueDataCatalogConfiguration \(p. 167\)](#)
- [GlueDataCatalogConfigurationDescription \(p. 168\)](#)
- [GlueDataCatalogConfigurationUpdate \(p. 169\)](#)
- [Input \(p. 170\)](#)
- [InputDescription \(p. 172\)](#)
- [InputLambdaProcessor \(p. 174\)](#)
- [InputLambdaProcessorDescription \(p. 175\)](#)
- [InputLambdaProcessorUpdate \(p. 176\)](#)
- [InputParallelism \(p. 177\)](#)
- [InputParallelismUpdate \(p. 178\)](#)
- [InputProcessingConfiguration \(p. 179\)](#)
- [InputProcessingConfigurationDescription \(p. 180\)](#)
- [InputProcessingConfigurationUpdate \(p. 181\)](#)
- [InputSchemaUpdate \(p. 182\)](#)
- [InputStartingPositionConfiguration \(p. 183\)](#)
- [InputUpdate \(p. 184\)](#)
- [JSONMappingParameters \(p. 186\)](#)
- [KinesisFirehoseInput \(p. 187\)](#)
- [KinesisFirehoseInputDescription \(p. 188\)](#)
- [KinesisFirehoseInputUpdate \(p. 189\)](#)
- [KinesisFirehoseOutput \(p. 190\)](#)
- [KinesisFirehoseOutputDescription \(p. 191\)](#)
- [KinesisFirehoseOutputUpdate \(p. 192\)](#)
- [KinesisStreamsInput \(p. 193\)](#)
- [KinesisStreamsInputDescription \(p. 194\)](#)
- [KinesisStreamsInputUpdate \(p. 195\)](#)
- [KinesisStreamsOutput \(p. 196\)](#)
- [KinesisStreamsOutputDescription \(p. 197\)](#)
- [KinesisStreamsOutputUpdate \(p. 198\)](#)
- [LambdaOutput \(p. 199\)](#)
- [LambdaOutputDescription \(p. 200\)](#)
- [LambdaOutputUpdate \(p. 201\)](#)
- [MappingParameters \(p. 202\)](#)
- [MavenReference \(p. 203\)](#)
- [MonitoringConfiguration \(p. 204\)](#)
- [MonitoringConfigurationDescription \(p. 205\)](#)
- [MonitoringConfigurationUpdate \(p. 206\)](#)
- [Output \(p. 207\)](#)
- [OutputDescription \(p. 209\)](#)
- [OutputUpdate \(p. 211\)](#)

- [ParallelismConfiguration \(p. 213\)](#)
- [ParallelismConfigurationDescription \(p. 215\)](#)
- [ParallelismConfigurationUpdate \(p. 217\)](#)
- [PropertyGroup \(p. 219\)](#)
- [RecordColumn \(p. 220\)](#)
- [RecordFormat \(p. 221\)](#)
- [ReferenceDataSource \(p. 222\)](#)
- [ReferenceDataSourceDescription \(p. 223\)](#)
- [ReferenceDataSourceUpdate \(p. 224\)](#)
- [RunConfiguration \(p. 226\)](#)
- [RunConfigurationDescription \(p. 227\)](#)
- [RunConfigurationUpdate \(p. 228\)](#)
- [S3ApplicationCodeLocationDescription \(p. 229\)](#)
- [S3Configuration \(p. 230\)](#)
- [S3ContentBaseLocation \(p. 231\)](#)
- [S3ContentBaseLocationDescription \(p. 232\)](#)
- [S3ContentBaseLocationUpdate \(p. 233\)](#)
- [S3ContentLocation \(p. 234\)](#)
- [S3ContentLocationUpdate \(p. 235\)](#)
- [S3ReferenceDataSource \(p. 236\)](#)
- [S3ReferenceDataSourceDescription \(p. 237\)](#)
- [S3ReferenceDataSourceUpdate \(p. 238\)](#)
- [SnapshotDetails \(p. 239\)](#)
- [SourceSchema \(p. 240\)](#)
- [SqlApplicationConfiguration \(p. 241\)](#)
- [SqlApplicationConfigurationDescription \(p. 242\)](#)
- [SqlApplicationConfigurationUpdate \(p. 243\)](#)
- [SqlRunConfiguration \(p. 244\)](#)
- [Tag \(p. 245\)](#)
- [VpcConfiguration \(p. 246\)](#)
- [VpcConfigurationDescription \(p. 247\)](#)
- [VpcConfigurationUpdate \(p. 248\)](#)
- [ZeppelinApplicationConfiguration \(p. 249\)](#)
- [ZeppelinApplicationConfigurationDescription \(p. 250\)](#)
- [ZeppelinApplicationConfigurationUpdate \(p. 251\)](#)
- [ZeppelinMonitoringConfiguration \(p. 252\)](#)
- [ZeppelinMonitoringConfigurationDescription \(p. 253\)](#)
- [ZeppelinMonitoringConfigurationUpdate \(p. 254\)](#)

ApplicationCodeConfiguration

Describes code configuration for an application.

Contents

CodeContent

The location and type of the application code.

Type: [CodeContent \(p. 150\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 151\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 152\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 132\)](#) object

Required: No

EnvironmentProperties

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

Type: [EnvironmentProperties \(p. 160\)](#) object

Required: No

FlinkApplicationConfiguration

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

Type: [FlinkApplicationConfiguration \(p. 163\)](#) object

Required: No

SqlApplicationConfiguration

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

Type: [SqlApplicationConfiguration \(p. 241\)](#) object

Required: No

VpcConfigurations

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

Type: Array of [VpcConfiguration \(p. 246\)](#) objects

Required: No

ZeppelinApplicationConfiguration

The configuration parameters for a Kinesis Data Analytics Studio notebook.

Type: [ZeppelinApplicationConfiguration \(p. 249\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 133\)](#) object

Required: No

EnvironmentPropertyDescriptions

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

Type: [EnvironmentPropertyDescriptions \(p. 161\)](#) object

Required: No

FlinkApplicationConfigurationDescription

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

Type: [FlinkApplicationConfigurationDescription \(p. 164\)](#) object

Required: No

RunConfigurationDescription

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

Type: [RunConfigurationDescription \(p. 227\)](#) object

Required: No

SqlApplicationConfigurationDescription

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

Type: [SqlApplicationConfigurationDescription \(p. 242\)](#) object

Required: No

VpcConfigurationDescriptions

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

Type: Array of [VpcConfigurationDescription \(p. 247\)](#) objects

Required: No

ZeppelinApplicationConfigurationDescription

The configuration parameters for a Kinesis Data Analytics Studio notebook.

Type: [ZeppelinApplicationConfigurationDescription \(p. 250\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 134\)](#) object

Required: No

EnvironmentPropertyUpdates

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

Type: [EnvironmentPropertyUpdates \(p. 162\)](#) object

Required: No

FlinkApplicationConfigurationUpdate

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

Type: [FlinkApplicationConfigurationUpdate \(p. 165\)](#) object

Required: No

SqlApplicationConfigurationUpdate

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

Type: [SqlApplicationConfigurationUpdate \(p. 243\)](#) object

Required: No

VpcConfigurationUpdates

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

Type: Array of [VpcConfigurationUpdate \(p. 248\)](#) objects

Required: No

ZeppelinApplicationConfigurationUpdate

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

Type: [ZeppelinApplicationConfigurationUpdate \(p. 251\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 129\)](#) 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 \(p. 148\)](#) 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 | FLINK-1_15

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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 | FLINK-1_15

Required: Yes

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 167\)](#) object

Required: Yes

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 168\)](#) object

Required: Yes

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 169\)](#) object

Required: Yes

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 234\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 229\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 235\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 203\)](#) 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 \(p. 234\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 203\)](#) 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 \(p. 234\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 231\)](#) object

Required: Yes

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 232\)](#) object

Required: Yes

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 233\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 219\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 219\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 219\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 141\)](#) object

Required: No

MonitoringConfiguration

Describes configuration parameters for Amazon CloudWatch logging for an application.

Type: [MonitoringConfiguration \(p. 204\)](#) object

Required: No

ParallelismConfiguration

Describes parameters for how an application executes multiple tasks simultaneously.

Type: [ParallelismConfiguration \(p. 213\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 143\)](#) 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 \(p. 205\)](#) object

Required: No

ParallelismConfigurationDescription

Describes parameters for how an application executes multiple tasks simultaneously.

Type: [ParallelismConfigurationDescription \(p. 215\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 145\)](#) object

Required: No

MonitoringConfigurationUpdate

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

Type: [MonitoringConfigurationUpdate \(p. 206\)](#) object

Required: No

ParallelismConfigurationUpdate

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

Type: [ParallelismConfigurationUpdate \(p. 217\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 177\)](#) object

Required: No

InputProcessingConfiguration

The [InputProcessingConfiguration \(p. 179\)](#) 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 \(p. 174\)](#).

Type: [InputProcessingConfiguration \(p. 179\)](#) 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.

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

Type: [SourceSchema \(p. 240\)](#) object

Required: Yes

KinesisFirehoseInput

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

Type: [KinesisFirehoseInput \(p. 187\)](#) object

Required: No

KinesisStreamsInput

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

Type: [KinesisStreamsInput \(p. 193\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 177\)](#) 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 \(p. 180\)](#) 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 \(p. 240\)](#) object

Required: No

InputStartingPositionConfiguration

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

Type: [InputStartingPositionConfiguration \(p. 183\)](#) 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 \(p. 188\)](#) 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 \(p. 194\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

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

InputLambdaProcessorUpdate

For a SQL-based Kinesis Data Analytics application, represents an update to the [InputLambdaProcessor \(p. 174\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 174\)](#) that is used to preprocess the records in the stream before being processed by your application code.

Type: [InputLambdaProcessor \(p. 174\)](#) object

Required: Yes

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 175\)](#)

Type: [InputLambdaProcessorDescription \(p. 175\)](#) object

Required: No

See Also

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

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

InputProcessingConfigurationUpdate

For a SQL-based Kinesis Data Analytics application, describes updates to an [InputProcessingConfiguration](#) (p. 179).

Contents

InputLambdaProcessorUpdate

Provides update information for an [InputLambdaProcessor](#) (p. 174).

Type: [InputLambdaProcessorUpdate](#) (p. 176) object

Required: Yes

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 220\)](#) 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 \(p. 221\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 178\)](#) object

Required: No

InputProcessingConfigurationUpdate

Describes updates to an [InputProcessingConfiguration \(p. 179\)](#).

Type: [InputProcessingConfigurationUpdate \(p. 181\)](#) 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 \(p. 182\)](#) 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 \(p. 189\)](#) 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 \(p. 195\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 153\)](#) object

Required: No

JSONMappingParameters

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

Type: [JSONMappingParameters \(p. 186\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 159\)](#) object

Required: Yes

KinesisFirehoseOutput

Identifies a Kinesis Data Firehose delivery stream as the destination.

Type: [KinesisFirehoseOutput \(p. 190\)](#) object

Required: No

KinesisStreamsOutput

Identifies a Kinesis data stream as the destination.

Type: [KinesisStreamsOutput \(p. 196\)](#) object

Required: No

LambdaOutput

Identifies an Amazon Lambda function as the destination.

Type: [LambdaOutput \(p. 199\)](#) 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 Amazon SDKs, see the following:

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

- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 159\)](#) object

Required: No

KinesisFirehoseOutputDescription

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

Type: [KinesisFirehoseOutputDescription \(p. 191\)](#) object

Required: No

KinesisStreamsOutputDescription

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

Type: [KinesisStreamsOutputDescription \(p. 197\)](#) object

Required: No

LambdaOutputDescription

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

Type: [LambdaOutputDescription \(p. 200\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 159\)](#) object

Required: No

KinesisFirehoseOutputUpdate

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

Type: [KinesisFirehoseOutputUpdate \(p. 192\)](#) object

Required: No

KinesisStreamsOutputUpdate

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

Type: [KinesisStreamsOutputUpdate \(p. 198\)](#) object

Required: No

LambdaOutputUpdate

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

Type: [LambdaOutputUpdate \(p. 201\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 ParallelismPerKPU 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 `ParallelismPerKPU` 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 `ParallelismPerKPU` 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 ParallelismPerKPU 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 202\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 240\)](#) 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 \(p. 236\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 240\)](#) object

Required: No

S3ReferenceDataSourceDescription

Provides the Amazon S3 bucket name, the object key name that contains the reference data.

Type: [S3ReferenceDataSourceDescription \(p. 237\)](#) 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 240\)](#) 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 \(p. 238\)](#) 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 Amazon SDKs, see the following:

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

- [Amazon 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 \(p. 131\)](#) object

Required: No

FlinkRunConfiguration

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

Type: [FlinkRunConfiguration \(p. 166\)](#) object

Required: No

SqlRunConfigurations

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

Type: Array of [SqlRunConfiguration \(p. 244\)](#) objects

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 131\)](#) object

Required: No

FlinkRunConfigurationDescription

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

Type: [FlinkRunConfiguration \(p. 166\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 131\)](#) object

Required: No

FlinkRunConfiguration

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

Type: [FlinkRunConfiguration \(p. 166\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 220\)](#) 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 \(p. 221\)](#) object

Required: Yes

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 170\)](#) objects describing the input streams used by the application.

Type: Array of [Input \(p. 170\)](#) objects

Required: No

Outputs

The array of [Output \(p. 207\)](#) objects describing the destination streams used by the application.

Type: Array of [Output \(p. 207\)](#) objects

Required: No

ReferenceDataSources

The array of [ReferenceDataSource \(p. 222\)](#) objects describing the reference data sources used by the application.

Type: Array of [ReferenceDataSource \(p. 222\)](#) objects

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 172\)](#) objects describing the input streams used by the application.

Type: Array of [InputDescription \(p. 172\)](#) objects

Required: No

OutputDescriptions

The array of [OutputDescription \(p. 209\)](#) objects describing the destination streams used by the application.

Type: Array of [OutputDescription \(p. 209\)](#) objects

Required: No

ReferenceDataSourceDescriptions

The array of [ReferenceDataSourceDescription \(p. 223\)](#) objects describing the reference data sources used by the application.

Type: Array of [ReferenceDataSourceDescription \(p. 223\)](#) objects

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 184\)](#) objects describing the new input streams used by the application.

Type: Array of [InputUpdate \(p. 184\)](#) objects

Required: No

OutputUpdates

The array of [OutputUpdate \(p. 211\)](#) objects describing the new destination streams used by the application.

Type: Array of [OutputUpdate \(p. 211\)](#) objects

Required: No

ReferenceDataSourceUpdates

The array of [ReferenceDataSourceUpdate \(p. 224\)](#) objects describing the new reference data sources used by the application.

Type: Array of [ReferenceDataSourceUpdate \(p. 224\)](#) objects

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 183\)](#) object

Required: Yes

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 138\)](#) object

Required: No

CustomArtifactsConfiguration

Custom artifacts are dependency JARs and user-defined functions (UDF).

Type: Array of [CustomArtifactConfiguration \(p. 154\)](#) 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 \(p. 156\)](#) object

Required: No

MonitoringConfiguration

The monitoring configuration of a Kinesis Data Analytics Studio notebook.

Type: [ZeppelinMonitoringConfiguration \(p. 252\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 139\)](#) object

Required: No

CustomArtifactsConfigurationDescription

Custom artifacts are dependency JARs and user-defined functions (UDF).

Type: Array of [CustomArtifactConfigurationDescription \(p. 155\)](#) 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 \(p. 157\)](#) object

Required: No

MonitoringConfigurationDescription

The monitoring configuration of a Kinesis Data Analytics Studio notebook.

Type: [ZeppelinMonitoringConfigurationDescription \(p. 253\)](#) object

Required: Yes

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 \(p. 140\)](#) object

Required: No

CustomArtifactsConfigurationUpdate

Updates to the customer artifacts. Custom artifacts are dependency JAR files and user-defined functions (UDF).

Type: Array of [CustomArtifactConfiguration \(p. 154\)](#) objects

Array Members: Maximum number of 50 items.

Required: No

DeployAsApplicationConfigurationUpdate

Type: [DeployAsApplicationConfigurationUpdate \(p. 158\)](#) object

Required: No

MonitoringConfigurationUpdate

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

Type: [ZeppelinMonitoringConfigurationUpdate \(p. 254\)](#) object

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

- [Amazon SDK for C++](#)
- [Amazon SDK for Go](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 Amazon SDKs, see the following:

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