AWS IoT Things Graph: API Reference
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Welcome

AWS IoT Things Graph provides an integrated set of tools that enable developers to connect devices and services that use different standards, such as units of measure and communication protocols. AWS IoT Things Graph makes it possible to build IoT applications with little to no code by connecting devices and services and defining how they interact at an abstract level.

For more information about how AWS IoT Things Graph works, see the User Guide.

This document was last published on April 2, 2020.
Actions

The following actions are supported:

- `AssociateEntityToThing` (p. 3)
- `CreateFlowTemplate` (p. 5)
- `CreateSystemInstance` (p. 7)
- `CreateSystemTemplate` (p. 11)
- `DeleteFlowTemplate` (p. 13)
- `DeleteNamespace` (p. 15)
- `DeleteSystemInstance` (p. 17)
- `DeleteSystemTemplate` (p. 19)
- `DeploySystemInstance` (p. 21)
- `DeprecateFlowTemplate` (p. 24)
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- `GetSystemTemplateRevisions` (p. 47)
- `GetUploadStatus` (p. 50)
- `ListFlowExecutionMessages` (p. 53)
- `ListTagsForResource` (p. 55)
- `SearchEntities` (p. 57)
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- `SearchSystemInstances` (p. 65)
- `SearchSystemTemplates` (p. 68)
- `SearchThings` (p. 71)
- `TagResource` (p. 74)
- `UndeploySystemInstance` (p. 76)
- `UntagResource` (p. 78)
- `UpdateFlowTemplate` (p. 80)
- `UpdateSystemTemplate` (p. 83)
- `UploadEntityDefinitions` (p. 86)
AssociateEntityToThing

Associates a device with a concrete thing that is in the user's registry.

A thing can be associated with only one device at a time. If you associate a thing with a new device id, its previous association will be removed.

**Request Syntax**

```json
{
   "entityId": "string",
   "namespaceVersion": number,
   "thingName": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**entityId (p. 3)**

The ID of the device to be associated with the thing.

The ID should be in the following format.

`urn:tdm:REGION/ACCOUNT ID/default:device:DEVICENAME`

Type: String

Length Constraints: Maximum length of 160.

Pattern: `urn:tdm:(([a-z][2]-(gov-)?[a-z]{4,9}-)\[0-9]{1,3}/\[0-9]+/)*[\p{Alnum}_]+(/[\p{Alnum}_]+)*"/([\p{Alnum}_]+(/[\p{Alnum}_]+)*)*#`

Required: Yes

**namespaceVersion (p. 3)**

The version of the user's namespace. Defaults to the latest version of the user's namespace.

Type: Long

Required: No

**thingName (p. 3)**

The name of the thing to which the entity is to be associated.

Type: String


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

For information about the errors that are common to all actions, see Common Errors (p. 113).

**InternalFailureException**

HTTP Status Code: 500

**InvalidRequestException**

HTTP Status Code: 400

**ResourceNotFoundException**

HTTP Status Code: 400

**ThrottlingException**

HTTP Status Code: 400

See Also

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

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

Creates a workflow template. Workflows can be created only in the user's namespace. (The public namespace contains only entities.) The workflow can contain only entities in the specified namespace. The workflow is validated against the entities in the latest version of the user's namespace unless another namespace version is specified in the request.

Request Syntax

```json
{
   "compatibleNamespaceVersion": number,
   "definition": {
      "language": "string",
      "text": "string"
   }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**compatibleNamespaceVersion (p. 5)**

The namespace version in which the workflow is to be created.

If no value is specified, the latest version is used by default.

Type: Long

Required: No

**definition (p. 5)**

The workflow DefinitionDocument.

Type: DefinitionDocument (p. 89) object

Required: Yes

Response Syntax

```json
{
   "summary": {
      "arn": "string",
      "createdAt": number,
      "id": "string",
      "revisionNumber": 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.

**summary (p. 5)**

The summary object that describes the created workflow.

Type: *FlowTemplateSummary (p. 99)* object

**Errors**

For information about the errors that are common to all actions, see *Common Errors (p. 113)*.

**InternalFailureException**

HTTP Status Code: 500

**InvalidRequestException**

HTTP Status Code: 400

**LimitExceededException**

HTTP Status Code: 400

**ResourceAlreadyExistsException**

HTTP Status Code: 400

**ThrottlingException**

HTTP Status Code: 400

**See Also**

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

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

Creates a system instance.

This action validates the system instance, prepares the deployment-related resources. For Greengrass deployments, it updates the Greengrass group that is specified by the greengrassGroupName parameter. It also adds a file to the S3 bucket specified by the s3BucketName parameter. You need to call DeploySystemInstance after running this action.

For Greengrass deployments, since this action modifies and adds resources to a Greengrass group and an S3 bucket on the caller’s behalf, the calling identity must have write permissions to both the specified Greengrass group and S3 bucket. Otherwise, the call will fail with an authorization error.

For cloud deployments, this action requires a flowActionsRoleArn value. This is an IAM role that has permissions to access AWS services, such as AWS Lambda and AWS IoT, that the flow uses when it executes.

If the definition document doesn’t specify a version of the user’s namespace, the latest version will be used by default.

Request Syntax

```json
{
    "definition": {
        "language": "string",
        "text": "string"
    },
    "flowActionsRoleArn": "string",
    "greengrassGroupName": "string",
    "metricsConfiguration": {
        "cloudMetricEnabled": boolean,
        "metricRuleRoleArn": "string"
    },
    "s3BucketName": "string",
    "tags": [
        {
            "key": "string",
            "value": "string"
        }
    ],
    "target": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**definition (p. 7)**

A document that defines an entity.

Type: DefinitionDocument (p. 89) object

Required: Yes
flowActionsRoleArn (p. 7)

The ARN of the IAM role that AWS IoT Things Graph will assume when it executes the flow. This role must have read and write access to AWS Lambda and AWS IoT and any other AWS services that the flow uses when it executes. This value is required if the value of the target parameter is CLOUD.

Type: String


Required: No

greengrassGroupName (p. 7)

The name of the Greengrass group where the system instance will be deployed. This value is required if the value of the target parameter is GREENGRASS.

Type: String

Required: No

metricsConfiguration (p. 7)

An object that specifies whether cloud metrics are collected in a deployment and, if so, what role is used to collect metrics.

Type: MetricsConfiguration (p. 100) object

Required: No

s3BucketName (p. 7)

The name of the Amazon Simple Storage Service bucket that will be used to store and deploy the system instance's resource file. This value is required if the value of the target parameter is GREENGRASS.

Type: String

Required: No

tags (p. 7)

Metadata, consisting of key-value pairs, that can be used to categorize your system instances.

Type: Array of Tag (p. 109) objects

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

Required: No

target (p. 7)

The target type of the deployment. Valid values are GREENGRASS and CLOUD.

Type: String

Valid Values: GREENGRASS | CLOUD

Required: Yes

Response Syntax

```json
{
```
"summary": {
  "arn": "string",
  "createdAt": number,
  "greengrassGroupId": "string",
  "greengrassGroupName": "string",
  "greengrassGroupVersionId": "string",
  "id": "string",
  "status": "string",
  "target": "string",
  "updatedAt": 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.

summary (p. 8)

The summary object that describes the new system instance.

Type: SystemInstanceSummary (p. 104) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException

HTTP Status Code: 500

InvalidRequestException

HTTP Status Code: 400

LimitExceededException

HTTP Status Code: 400

ResourceAlreadyExistsException

HTTP Status Code: 400

ThrottlingException

HTTP Status Code: 400

See Also

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

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

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

Creates a system. The system is validated against the entities in the latest version of the user’s namespace unless another namespace version is specified in the request.

Request Syntax

```
{
  "compatibleNamespaceVersion": number,
  "definition": {
    "language": "string",
    "text": "string"
  }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

`compatibleNamespaceVersion (p. 11)`

The namespace version in which the system is to be created.

If no value is specified, the latest version is used by default.

Type: Long

Required: No

`definition (p. 11)`

The `DefinitionDocument` used to create the system.

Type: `DefinitionDocument (p. 89)` object

Required: Yes

Response Syntax

```
{
  "summary": {
    "arn": "string",
    "createdAt": number,
    "id": "string",
    "revisionNumber": 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.
summary (p. 11)
The summary object that describes the created system.
Type: SystemTemplateSummary (p. 108) object

Errors
For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException
HTTP Status Code: 500

InvalidRequestException
HTTP Status Code: 400

ResourceAlreadyExistsException
HTTP Status Code: 400

ThrottlingException
HTTP Status Code: 400

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

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

Deletes a workflow. Any new system or deployment that contains this workflow will fail to update or deploy. Existing deployments that contain the workflow will continue to run (since they use a snapshot of the workflow taken at the time of deployment).

Request Syntax

```json
{
  "id": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

id (p. 13)

The ID of the workflow to be deleted.

The ID should be in the following format.

`urn:tdm:REGION/ACCOUNT ID/default:workflow:WORKFLOWNAME`

Type: String

Length Constraints: Maximum length of 160.

Pattern:

```
^urn:tdm:([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/[0-9]+)/*[^\p{Alnum}_]+(/[^\p{Alnum}_]+)*:expr([^\p{Alnum}_]+)+([^\p{Alnum}_]+)+)+*#`
```

Required: Yes

Response Elements

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

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

**InternalFailureException**

HTTP Status Code: 500

**InvalidRequestException**

HTTP Status Code: 400

**ResourceInUseException**

HTTP Status Code: 400
ThrottlingException

HTTP Status Code: 400

See Also

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

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

Deletes the specified namespace. This action deletes all of the entities in the namespace. Delete the systems and flows that use entities in the namespace before performing this action. This action takes no request parameters.

Response Syntax

```
{
    "namespaceArn": "string",
    "namespaceName": "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.

namespaceArn (p. 15)

The ARN of the namespace to be deleted.

Type: String

namespaceName (p. 15)

The name of the namespace to be deleted.

Type: String

Length Constraints: Maximum length of 128.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException

HTTP Status Code: 500

ThrottlingException

HTTP Status Code: 400

See Also

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

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

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

Deletes a system instance. Only system instances that have never been deployed, or that have been
undeployed can be deleted.

Users can create a new system instance that has the same ID as a deleted system instance.

Request Syntax

```
{
   "id": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common
Parameters (p. 111).

The request accepts the following data in JSON format.

id (p. 17)

The ID of the system instance to be deleted.

Type: String

Length Constraints: Maximum length of 160.

Pattern: ^urn:tdm:(([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/
[0-9]+/)[p\{Alnum\}]+(/[p\{Alnum\}]+)*):([p\{Alpha\}]*):([p\{Alnum\}]+(/[p\{Alnum\}]+)*)#

Required: Yes

Response Elements

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

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException

HTTP Status Code: 500

InvalidRequestException

HTTP Status Code: 400

ResourceInUseException

HTTP Status Code: 400

ThrottlingException

HTTP Status Code: 400
See Also

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

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

Deletes a system. New deployments can’t contain the system after its deletion. Existing deployments that contain the system will continue to work because they use a snapshot of the system that is taken when it is deployed.

Request Syntax

```json
{
  "id": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

id (p. 19)

The ID of the system to be deleted.

The ID should be in the following format.

```
urn:tdm:REGION/ACCOUNT ID/default:system:SYSTEMNAME
```

Type: String

Length Constraints: Maximum length of 160.

Pattern: `^urn:tdm:([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/[0-9]+/[\p{Alnum}_]+/)[\p{Alnum}_]+(/[\p{Alnum}_]+)*:([\p{Alpha}]*)*([\p{Alnum}_]+/([\p{Alnum}_]+/)*$`

Required: Yes

Response Elements

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

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException

HTTP Status Code: 500

InvalidRequestException

HTTP Status Code: 400

ResourceInUseException

HTTP Status Code: 400
ThrottlingException

HTTP Status Code: 400

See Also

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

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

Greengrass and Cloud Deployments

Deploys the system instance to the target specified in CreateSystemInstance.

Greengrass Deployments

If the system or any workflows and entities have been updated before this action is called, then the deployment will create a new Amazon Simple Storage Service resource file and then deploy it.

Since this action creates a Greengrass deployment on the caller's behalf, the calling identity must have write permissions to the specified Greengrass group. Otherwise, the call will fail with an authorization error.

For information about the artifacts that get added to your Greengrass core device when you use this API, see AWS IoT Things Graph and AWS IoT Greengrass.

Request Syntax

```json
{
    "id": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

id (p. 21)

The ID of the system instance. This value is returned by the CreateSystemInstance action.

The ID should be in the following format.

```
urn:tdm:REGION/ACCOUNT ID/default:deployment:DEPLOYMENTNAME
```

Type: String

Length Constraints: Maximum length of 160.

Pattern: ^urn:tdm:([a-z]{2}-(gov-)?[a-z]{4,9}[-0-9]{1,3}/[0-9]+)*([A-Za-z0-9_]+(/[A-Za-z0-9_]+)*)*:([A-Za-z0-9_]+(/([A-Za-z0-9_]+)*)+)

Required: Yes

Response Syntax

```json
{
    "greengrassDeploymentId": "string",
    "summary": {
        "arn": "string",
```

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"createdAt": number,
"greengrassGroupId": "string",
"greengrassGroupName": "string",
"greengrassGroupVersionId": "string",
"id": "string",
"status": "string",
"target": "string",
"updatedAt": 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.

**greengrassDeploymentId (p. 21)**

The ID of the Greengrass deployment used to deploy the system instance.

Type: String

**summary (p. 21)**

An object that contains summary information about a system instance that was deployed.

Type: SystemInstanceSummary (p. 104) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

**InternalFailureException**

HTTP Status Code: 500

**InvalidRequestException**

HTTP Status Code: 400

**ResourceInUseException**

HTTP Status Code: 400

**ResourceNotFoundException**

HTTP Status Code: 400

**ThrottlingException**

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
See Also

- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeprecateFlowTemplate

Deprecates the specified workflow. This action marks the workflow for deletion. Deprecated flows can't be deployed, but existing deployments will continue to run.

Request Syntax

```
{
    "id": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**id (p. 24)**

The ID of the workflow to be deleted.

The ID should be in the following format.

`urn:tdm:REGION/ACCOUNT ID/default:workflow:WORKFLOWNAME`

Type: String

Length Constraints: Maximum length of 160.

Pattern: `^urn:tdm:([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/\[0-9]+/)*[\p{Alnum}_]+(/[\p{Alnum}_]+)*:\([\p{Alpha}]*:\([\p{Alnum}_]+(/[\p{Alnum}_]+)*\)*#`

Required: Yes

Response Elements

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

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

**InternalFailureException**

HTTP Status Code: 500

**InvalidRequestException**

HTTP Status Code: 400

**ResourceNotFoundException**

HTTP Status Code: 400
ThrottlingException

HTTP Status Code: 400

See Also

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

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

Deprecates the specified system.

**Request Syntax**

```json
{
    "id": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**id (p. 26)**

The ID of the system to delete.

The ID should be in the following format.

```
urn:tdm:REGION/ACCOUNT ID/default:system:SYSTEMNAME
```

Type: String

Length Constraints: Maximum length of 160.

Pattern: ^urn:tdm:([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/[0-9]+/)*\p{Alnum}_+(/\p{Alnum}_+)*(:\p{Alpha}*)?(:\p{Alnum}_+)+(/\p{Alnum}_+)*#

Required: Yes

**Response Elements**

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

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 113).

- **InternalFailureException**
  
  HTTP Status Code: 500

- **InvalidRequestException**
  
  HTTP Status Code: 400

- **ResourceNotFoundException**
  
  HTTP Status Code: 400

- **ThrottlingException**
  
  HTTP Status Code: 400
See Also

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

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

Gets the latest version of the user's namespace and the public version that it is tracking.

**Request Syntax**

```
{
    "namespaceName": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see [Common Parameters](#). The request accepts the following data in JSON format.

**namespaceName (p. 28)**

The name of the user's namespace. Set this to `aws` to get the public namespace.

- Type: String
- Length Constraints: Maximum length of 128.
- Required: No

**Response Syntax**

```
{
    "namespaceArn": "string",
    "namespaceName": "string",
    "namespaceVersion": number,
    "trackingNamespaceName": "string",
    "trackingNamespaceVersion": 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.

**namespaceArn (p. 28)**

The ARN of the namespace.

- Type: String

**namespaceName (p. 28)**

The name of the namespace.

- Type: String
Length Constraints: Maximum length of 128.

**namespaceVersion (p. 28)**

The version of the user's namespace to describe.

Type: Long

**trackingNamespaceName (p. 28)**

The name of the public namespace that the latest namespace version is tracking.

Type: String

Length Constraints: Maximum length of 128.

**trackingNamespaceVersion (p. 28)**

The version of the public namespace that the latest version is tracking.

Type: Long

---

**Errors**

For information about the errors that are common to all actions, see [Common Errors (p. 113)](#).

**InternalFailureException**

HTTP Status Code: 500

**InvalidRequestException**

HTTP Status Code: 400

**ResourceNotFoundException**

HTTP Status Code: 400

**ThrottlingException**

HTTP Status Code: 400

---

**See Also**

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

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

Dissociates a device entity from a concrete thing. The action takes only the type of the entity that you need to dissociate because only one entity of a particular type can be associated with a thing.

Request Syntax

```
{
    "entityType": "string",
    "thingName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**entityType (p. 30)**

The entity type from which to disassociate the thing.

Type: String

Valid Values: DEVICE | SERVICE | DEVICE_MODEL | CAPABILITY | STATE | ACTION | EVENT | PROPERTY | MAPPING | ENUM

Required: Yes

**thingName (p. 30)**

The name of the thing to disassociate.

Type: String


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

For information about the errors that are common to all actions, see Common Errors (p. 113).

**InternalFailureException**

HTTP Status Code: 500

**InvalidRequestException**

HTTP Status Code: 400
See Also

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

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

Gets definitions of the specified entities. Uses the latest version of the user's namespace by default. This API returns the following TDM entities.

- Properties
- States
- Events
- Actions
- Capabilities
- Mappings
- Devices
- Device Models
- Services

This action doesn't return definitions for systems, flows, and deployments.

Request Syntax

```json
{
  "ids": [ "string" ],
  "namespaceVersion": number
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**ids (p. 32)**

An array of entity IDs.

The IDs should be in the following format.

`urn:tdm:REGION/ACCOUNT ID/default:device:DEVICENAME`

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 25 items.

Length Constraints: Maximum length of 160.

Pattern: `^urn:tdm:([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/[0-9]+/)*[pAlnum_]+(/[pAlnum_]+)*:([^pAlnum_]+)/(pAlnum_)+(/[pAlnum_]+)*$`

Required: Yes

**namespaceVersion (p. 32)**

The version of the user's namespace. Defaults to the latest version of the user's namespace.
Type: Long
Required: No

Response Syntax

```json
{
  "descriptions": [
    {
      "arn": "string",
      "createdAt": number,
      "definition": {
        "language": "string",
        "text": "string"
      },
      "id": "string",
      "type": "string"
    }
  ]
}
```

Response Elements

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

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

descriptions (p. 33)

An array of descriptions for the specified entities.

Type: Array of EntityDescription (p. 91) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException

HTTP Status Code: 500

InvalidRequestException

HTTP Status Code: 400

ResourceNotFoundException

HTTP Status Code: 400

ThrottlingException

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
See Also

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

Gets the latest version of the DefinitionDocument and FlowTemplateSummary for the specified workflow.

**Request Syntax**

```
{
  "id": "string",
  "revisionNumber": number
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**id (p. 35)**

The ID of the workflow.

The ID should be in the following format.

```
urn:tdm:REGION/ACCOUNT ID/default:workflow:WORKFLOWNAME
```

Type: String

Length Constraints: Maximum length of 160.

Pattern: ^urn:tdm:(([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/
[0-9]+)/*[\p{Alnum}_]+(/[\p{Alnum}_]+)+)*/([[\p{Alpha}]*):([[\p{Alnum}_]+(/[/
[\p{Alnum}_]+]+)*)$

Required: Yes

**revisionNumber (p. 35)**

The number of the workflow revision to retrieve.

Type: Long

Required: No

**Response Syntax**

```
{
  "description": {
    "definition": {
      "language": "string",
      "text": "string"
    },
    "summary": {
      "arn": "string",
      "createdAt": number,
      "id": "string",
    }
  }
}
```
"revisionNumber": number,
  "validatedNamespaceVersion": 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.

description (p. 35)

The object that describes the specified workflow.

Type: FlowTemplateDescription (p. 97) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException

HTTP Status Code: 500

InvalidRequestException

HTTP Status Code: 400

ResourceNotFoundException

HTTP Status Code: 400

ThrottlingException

HTTP Status Code: 400

See Also

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

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

Gets revisions of the specified workflow. Only the last 100 revisions are stored. If the workflow has been deprecated, this action will return revisions that occurred before the deprecation. This action won't work for workflows that have been deleted.

Request Syntax

```json
{
  "id": "string",
  "maxResults": number,
  "nextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

id (p. 37)

The ID of the workflow.

The ID should be in the following format.

```
urn:tdm:REGION/ACCOUNT ID/default:workflow:WORKFLOWNAME
```

Type: String

Length Constraints: Maximum length of 160.

Pattern: `^urn:tdm:((\[a-z\]{2}-(gov-)?[a-z]\{4,9\}-[0-9]\{1,3\}/
[0-9]+)/)*[\p{Alnum}]+/[\p{Alnum}]+)*:([\p{Alnum}]+)/(\[\p{Alnum}]+(/
[\p{Alnum}]+))*$`

Required: Yes

maxResults (p. 37)

The maximum number of results to return in the response.

Type: Integer


Required: No

nextToken (p. 37)

The string that specifies the next page of results. Use this when you're paginating results.

Type: String

Required: No
Response Syntax

```
{
    "nextToken": "string",
    "summaries": [
        {
            "arn": "string",
            "createdAt": number,
            "id": "string",
            "revisionNumber": number
        }
    ]
}
```

Response Elements

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

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

**nextToken (p. 38)**

The string to specify as `nextToken` when you request the next page of results.

Type: String

**summaries (p. 38)**

An array of objects that provide summary data about each revision.

Type: Array of `FlowTemplateSummary (p. 99)` objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

**InternalFailureException**

HTTP Status Code: 500

**InvalidRequestException**

HTTP Status Code: 400

**ResourceNotFoundException**

HTTP Status Code: 400

**ThrottlingException**

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
See Also

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

Gets the status of a namespace deletion task.

Response Syntax

```json
{
  "errorCode": "string",
  "errorMessage": "string",
  "namespaceArn": "string",
  "namespaceName": "string",
  "status": "string"
}
```

Response Elements

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

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

**errorCode (p. 40)**

An error code returned by the namespace deletion task.

Type: String

Valid Values: VALIDATION_FAILED

**errorMessage (p. 40)**

An error code returned by the namespace deletion task.

Type: String

**namespaceArn (p. 40)**

The ARN of the namespace that is being deleted.

Type: String

**namespaceName (p. 40)**

The name of the namespace that is being deleted.

Type: String

Length Constraints: Maximum length of 128.

**status (p. 40)**

The status of the deletion request.

Type: String

Valid Values: IN_PROGRESS | SUCCEEDED | FAILED

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).
See Also

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

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

Gets a system instance.

**Request Syntax**

```json
{
   "id": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**id (p. 42)**

The ID of the system deployment instance. This value is returned by CreateSystemInstance.

The ID should be in the following format.

```
urn:tdm:REGION/ACCOUNT ID/default:deployment:DEPLOYMENTNAME
```

Type: String

Length Constraints: Maximum length of 160.

Pattern: ^urn:tdm:([a-z]{2}-(gov-)?[a-z]{4,9}[-0-9]{1,3}/
[0-9]+/)[p(Alnum)_]+(/[p(Alnum)_]+)*([^\p{Alnum}]+)([^\p{Alnum}]+)*/$^

Required: Yes

**Response Syntax**

```json
{
   "description": {
      "definition": {
         "language": "string",
         "text": "string"
      },
      "flowActionsRoleArn": "string",
      "metricsConfiguration": {
         "cloudMetricEnabled": boolean,
         "metricRuleRoleArn": "string"
      },
      "s3BucketName": "string",
      "summary": {
         "arn": "string",
         "createdAt": number,
         "greengrassGroupId": "string",
         "greengrassGroupName": "string",
         "greengrassGroupVersionId": "string",
         "id": "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.

description (p. 42)
An object that describes the system instance.
Type: SystemInstanceDescription (p. 101) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException
HTTP Status Code: 500

InvalidRequestException
HTTP Status Code: 400

ResourceNotFoundException
HTTP Status Code: 400

ThrottlingException
HTTP Status Code: 400

See Also

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

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

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• AWS SDK for Python
• AWS SDK for Ruby V3
GetSystemTemplate

Gets a system.

**Request Syntax**

```
{
    "id": "string",
    "revisionNumber": number
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**id (p. 45)**

The ID of the system to get. This ID must be in the user's namespace.

The ID should be in the following format.

urn:tdm:REGION/ACCOUNT ID/default:system:SYSTEMNAME

Type: String

Length Constraints: Maximum length of 160.

Pattern: ^urn:tdm:([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/[0-9]+/)*[p{Alnum}]+(/[p{Alpha}]+)+(/[p{Alnum}]+)+(/[p{Alnum}]+)+)*$

Required: Yes

**revisionNumber (p. 45)**

The number that specifies the revision of the system to get.

Type: Long

Required: No

**Response Syntax**

```
{
    "description": {
        "definition": {
            "language": "string",
            "text": "string"
        },
        "summary": {
            "arn": "string",
            "createdAt": number,
            "id": "string",
            "revisionNumber": 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.

**description (p. 45)**

An object that contains summary data about the system.

Type: `SystemTemplateDescription (p. 106)` object

Errors

For information about the errors that are common to all actions, see *Common Errors (p. 113).*

- `InternalFailureException`
  - HTTP Status Code: 500
- `InvalidRequestException`
  - HTTP Status Code: 400
- `ResourceNotFoundException`
  - HTTP Status Code: 400
- `ThrottlingException`
  - HTTP Status Code: 400

See Also

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

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

Gets revisions made to the specified system template. Only the previous 100 revisions are stored. If the system has been deprecated, this action will return the revisions that occurred before its deprecation. This action won't work with systems that have been deleted.

Request Syntax

```
{
   "id": "string",
   "maxResults": number,
   "nextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**id (p. 47)**

The ID of the system template.

The ID should be in the following format.

```
urn:tdm:REGION/ACCOUNT ID/default:system:SYSTEMNAME
```

Type: String

Length Constraints: Maximum length of 160.

Pattern: `^urn:tdm:(([a-z]{2}-gov-)?[a-z]{4,9}-[0-9]{1,3}/[0-9]+)/*/[^\p{Alnum}]+/(\[^\p{Alnum}]+)*:\([^\p{Alnum}]+\)+/(\[^\p{Alnum}]+)*#`

Required: Yes

**maxResults (p. 47)**

The maximum number of results to return in the response.

Type: Integer


Required: No

**nextToken (p. 47)**

The string that specifies the next page of results. Use this when you're paginationg results.

Type: String

Required: No
Response Syntax

{
    "nextToken": "string",
    "summaries": [
        {
            "arn": "string",
            "createdAt": number,
            "id": "string",
            "revisionNumber": number
        }
    ]
}

Response Elements

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

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

nextToken (p. 48)

The string to specify as nextToken when you request the next page of results.

Type: String

summaries (p. 48)

An array of objects that contain summary data about the system template revisions.

Type: Array of SystemTemplateSummary (p. 108) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException

HTTP Status Code: 500

InvalidRequestException

HTTP Status Code: 400

ResourceNotFoundException

HTTP Status Code: 400

ThrottlingException

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
See Also

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

Gets the status of the specified upload.

**Request Syntax**

```json
{
  "uploadId": "string"
}
```

**Request Parameters**

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

The request accepts the following data in JSON format.

- **uploadId (p. 50)**
  
  The ID of the upload. This value is returned by the UploadEntityDefinitions action.
  
  Type: String
  
  
  Required: Yes

**Response Syntax**

```json
{
  "createdDate": number,
  "failureReason": [ "string" ],
  "namespaceArn": "string",
  "namespaceName": "string",
  "namespaceVersion": number,
  "uploadId": "string",
  "uploadStatus": "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.

- **createdDate (p. 50)**
  
  The date at which the upload was created.
  
  Type: Timestamp

- **failureReason (p. 50)**
  
  The reason for an upload failure.
  
  Type: Array of strings

---

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namespaceArn (p. 50)

The ARN of the upload.
Type: String

namespaceName (p. 50)

The name of the upload's namespace.
Type: String
Length Constraints: Maximum length of 128.

namespaceVersion (p. 50)

The version of the user's namespace. Defaults to the latest version of the user's namespace.
Type: Long

uploadId (p. 50)

The ID of the upload.
Type: String

uploadStatus (p. 50)

The status of the upload. The initial status is IN_PROGRESS. The response show all validation failures if the upload fails.
Type: String
Valid Values: IN_PROGRESS | SUCCEEDED | FAILED

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException

HTTP Status Code: 500

InvalidRequestException

HTTP Status Code: 400

ResourceNotFoundException

HTTP Status Code: 400

ThrottlingException

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
See Also

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

Returns a list of objects that contain information about events in a flow execution.

**Request Syntax**

```json
{
   "flowExecutionId": "string",
   "maxResults": number,
   "nextToken": "string"
}
```

**Request Parameters**

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

The request accepts the following data in JSON format.

- **flowExecutionId (p. 53)**
  
  The ID of the flow execution.

  Type: String

  Required: Yes

- **maxResults (p. 53)**

  The maximum number of results to return in the response.

  Type: Integer


  Required: No

- **nextToken (p. 53)**

  The string that specifies the next page of results. Use this when you're paginating results.

  Type: String

  Required: No

**Response Syntax**

```json
{
   "messages": [
      {
         "eventType": "string",
         "messageId": "string",
         "payload": "string",
         "timestamp": 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.

messages (p. 53)

A list of objects that contain information about events in the specified flow execution.

Type: Array of FlowExecutionMessage (p. 94) objects

nextToken (p. 53)

The string to specify as nextToken when you request the next page of results.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException

HTTP Status Code: 500

InvalidRequestException

HTTP Status Code: 400

ResourceNotFoundException

HTTP Status Code: 400

ThrottlingException

HTTP Status Code: 400

See Also

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

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

Lists all tags on an AWS IoT Things Graph resource.

**Request Syntax**

```
{
    "maxResults": number,
    "nextToken": "string",
    "resourceArn": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

- **maxResults (p. 55)**
  - The maximum number of tags to return.
  - Type: Integer
  - Required: No

- **nextToken (p. 55)**
  - The token that specifies the next page of results to return.
  - Type: String
  - Required: No

- **resourceArn (p. 55)**
  - The Amazon Resource Name (ARN) of the resource whose tags are to be returned.
  - Type: String
  - Required: Yes

**Response Syntax**

```
{
    "nextToken": "string",
    "tags": [  
        {
            "key": "string",
            "value": "string"
        }
    ]
}
```
**Response Elements**

If the action is successful, the service sends back an HTTP 200 response. The following data is returned in JSON format by the service.

**nextToken (p. 55)**

The token that specifies the next page of results to return.

Type: String

**tags (p. 55)**

List of tags returned by the ListTagsForResource operation.

Type: Array of Tag (p. 109) objects

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

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 113).

**InternalFailureException**

HTTP Status Code: 500

**InvalidRequestException**

HTTP Status Code: 400

**ResourceAlreadyExistsException**

HTTP Status Code: 400

**ThrottlingException**

HTTP Status Code: 400

**See Also**

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

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

Searches for entities of the specified type. You can search for entities in your namespace and the public namespace that you’re tracking.

Request Syntax

```json
{
  "entityTypes": [ "string" ],
  "filters": [
    {
      "name": "string",
      "value": [ "string" ]
    }
  ],
  "maxResults": number,
  "namespaceVersion": number,
  "nextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**entityTypes (p. 57)**

The entity types for which to search.

Type: Array of strings

Valid Values: DEVICE | SERVICE | DEVICE_MODEL | CAPABILITY | STATE | ACTION | EVENT | PROPERTY | MAPPING | ENUM

Required: Yes

**filters (p. 57)**

Optional filter to apply to the search. Valid filters are NAME NAMESPACE, SEMANTIC_TYPE_PATH and REFERENCED_ENTITY_ID. REFERENCED_ENTITY_ID filters on entities that are used by the entity in the result set. For example, you can filter on the ID of a property that is used in a state.

Multiple filters function as OR criteria in the query. Multiple values passed inside the filter function as AND criteria.

Type: Array of EntityFilter (p. 93) objects

Required: No

**maxResults (p. 57)**

The maximum number of results to return in the response.

Type: Integer


Required: No
namespaceVersion (p. 57)
The version of the user's namespace. Defaults to the latest version of the user's namespace.
Type: Long
Required: No

nextToken (p. 57)
The string that specifies the next page of results. Use this when you're paginating results.
Type: String
Required: No

Response Syntax

```json
{
  "descriptions": [
    {
      "arn": "string",
      "createdAt": number,
      "definition": {
        "language": "string",
        "text": "string"
      },
      "id": "string",
      "type": "string"
    },
    "nextToken": "string"
  ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.
The following data is returned in JSON format by the service.

descriptions (p. 58)
An array of descriptions for each entity returned in the search result.
Type: Array of EntityDescription (p. 91) objects

nextToken (p. 58)
The string to specify as nextToken when you request the next page of results.
Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException
HTTP Status Code: 500
InvalidRequestException

HTTP Status Code: 400

ThrottlingException

HTTP Status Code: 400

See Also

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

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

Searches for AWS IoT Things Graph workflow execution instances.

Request Syntax

```json
{
  "endTime": number,
  "flowExecutionId": "string",
  "maxResults": number,
  "nextToken": "string",
  "startTime": number,
  "systemInstanceId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**endTime (p. 60)**

The date and time of the latest flow execution to return.

- Type: Timestamp
- Required: No

**flowExecutionId (p. 60)**

The ID of a flow execution.

- Type: String
- Required: No

**maxResults (p. 60)**

The maximum number of results to return in the response.

- Type: Integer
- Required: No

**nextToken (p. 60)**

The string that specifies the next page of results. Use this when you're paginating results.

- Type: String
- Required: No

**startTime (p. 60)**

The date and time of the earliest flow execution to return.

- Type: Timestamp
systemInstanceId (p. 60)

The ID of the system instance that contains the flow.

Type: String

Length Constraints: Maximum length of 160.

Pattern: ^urn:tdm:((\[a-z\]{2}-(gov-)?\[a-z\]{4,9}-\[0-9\]{1,3}/\[0-9\]+/)*\[\p{Alnum}_\]+(/\[\p{Alnum}_\]+)*):([^\p{Alnum}_]+(/[^\p{Alnum}_]+)*):([^\p{Alpha}]>*):([^\p{Alnum}_]+(/[^\p{Alnum}_]+)*)$

Required: Yes

Response Syntax

```json
{
  "nextToken": "string",
  "summaries": [
    {
      "createdAt": number,
      "flowExecutionId": "string",
      "flowTemplateId": "string",
      "status": "string",
      "systemInstanceId": "string",
      "updatedAt": number
    }
  ]
}
```

Response Elements

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

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

nextToken (p. 61)

The string to specify as nextToken when you request the next page of results.

Type: String

summaries (p. 61)

An array of objects that contain summary information about each workflow execution in the result set.

Type: Array of FlowExecutionSummary (p. 95) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException

HTTP Status Code: 500
InvalidRequestException
   HTTP Status Code: 400
ResourceNotFoundException
   HTTP Status Code: 400
ThrottlingException
   HTTP Status Code: 400

See Also

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

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

Searches for summary information about workflows.

Request Syntax

```json
{
    "filters": [
        {
            "name": "string",
            "value": [ "string" ]
        }
    ],
    "maxResults": number,
    "nextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**filters (p. 63)**

An array of objects that limit the result set. The only valid filter is `DEVICE_MODEL_ID`.

Type: Array of `FlowTemplateFilter (p. 98)` objects

Required: No

**maxResults (p. 63)**

The maximum number of results to return in the response.

Type: Integer


Required: No

**nextToken (p. 63)**

The string that specifies the next page of results. Use this when you're paginating results.

Type: String

Required: No

Response Syntax

```json
{
    "nextToken": "string",
    "summaries": [
        {
            "arn": "string",
            "createdAt": number,
```
Response Elements

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

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

**nextToken (p. 63)**

The string to specify as nextToken when you request the next page of results.

Type: String

**summaries (p. 63)**

An array of objects that contain summary information about each workflow in the result set.

Type: Array of FlowTemplateSummary (p. 99) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

**InternalFailureException**

HTTP Status Code: 500

**InvalidRequestException**

HTTP Status Code: 400

**ThrottlingException**

HTTP Status Code: 400

See Also

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

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

Searches for system instances in the user's account.

**Request Syntax**

```
{
    "filters": [
        {
            "name": "string",
            "value": [ "string" ]
        }
    ],
    "maxResults": number,
    "nextToken": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

- **filters** (p. 65)
  - Optional filter to apply to the search. Valid filters are `SYSTEM_TEMPLATE_ID`, `STATUS`, and `GREENGRASS_GROUP_NAME`.
  - Multiple filters function as OR criteria in the query. Multiple values passed inside the filter function as AND criteria.
  - Type: Array of `SystemInstanceFilter` (p. 103) objects
  - Required: No

- **maxResults** (p. 65)
  - The maximum number of results to return in the response.
  - Type: Integer
  - Required: No

- **nextToken** (p. 65)
  - The string that specifies the next page of results. Use this when you're paginating results.
  - Type: String
  - Required: No

**Response Syntax**

```
{
```

---

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65
"nextToken": "string",
"summaries": [
{
"arn": "string",
"createdAt": number,
"greengrassGroupId": "string",
"greengrassGroupName": "string",
"greengrassGroupVersionId": "string",
"id": "string",
"status": "string",
"target": "string",
"updatedAt": number

}
]

Response Elements

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

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

nextToken (p. 65)

The string to specify as nextToken when you request the next page of results.

Type: String

summaries (p. 65)

An array of objects that contain summary data about the system instances in the result set.

Type: Array of SystemInstanceSummary (p. 104) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException

HTTP Status Code: 500

InvalidRequestException

HTTP Status Code: 400

ThrottlingException

HTTP Status Code: 400

See Also

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

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

Searches for summary information about systems in the user's account. You can filter by the ID of a workflow to return only systems that use the specified workflow.

Request Syntax

```json
{
  "filters": [
    {
      "name": "string",
      "value": [ "string" ]
    }
  ],
  "maxResults": number,
  "nextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

filters (p. 68)

An array of filters that limit the result set. The only valid filter is FLOW_TEMPLATE_ID.

Type: Array of SystemTemplateFilter (p. 107) objects

Required: No

maxResults (p. 68)

The maximum number of results to return in the response.

Type: Integer


Required: No

nextToken (p. 68)

The string that specifies the next page of results. Use this when you're paginating results.

Type: String

Required: No

Response Syntax

```json
{
  "nextToken": "string",
  "summaries": [ 
    {
      
```
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. 68)

  The string to specify as nextToken when you request the next page of results.

    Type: String

summaries (p. 68)

  An array of objects that contain summary information about each system deployment in the result set.

    Type: Array of SystemTemplateSummary (p. 108) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException

  HTTP Status Code: 500

InvalidRequestException

  HTTP Status Code: 400

ThrottlingException

  HTTP Status Code: 400

See Also

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

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

Searches for things associated with the specified entity. You can search by both device and device model.

For example, if two different devices, camera1 and camera2, implement the camera device model, the user can associate thing1 to camera1 and thing2 to camera2. SearchThings(camera2) will return only thing2, but SearchThings(camera) will return both thing1 and thing2.

This action searches for exact matches and doesn't perform partial text matching.

Request Syntax

```
{
    "entityId": "string",
    "maxResults": number,
    "namespaceVersion": number,
    "nextToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

`entityId` (p. 71)

The ID of the entity to which the things are associated.

The IDs should be in the following format.

`urn:tdm:REGION/ACCOUNT ID/default:device:DEVICENAME`

Type: String

Length Constraints: Maximum length of 160.

Pattern: `^urn:tdm:([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/[0-9]+)/(\[p{Alnum}_]+)/(\[p{Alnum}_]+)*/([\p{Alpha}]*)*:([\p{Alpha}]*)+:([\p{Alnum}_]+)*/([\p{Alnum}_]+)*/#`

Required: Yes

`maxResults` (p. 71)

The maximum number of results to return in the response.

Type: Integer


Required: No

`namespaceVersion` (p. 71)

The version of the user's namespace. Defaults to the latest version of the user's namespace.

Type: Long
Required: No

**nextToken (p. 71)**

The string that specifies the next page of results. Use this when you're paginating results.

Type: String

Required: No

---

**Response Syntax**

```json
{
    "nextToken": "string",
    "things": [
        {
            "thingArn": "string",
            "thingName": "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. 72)**

The string to specify as `nextToken` when you request the next page of results.

Type: String

**things (p. 72)**

An array of things in the result set.

Type: Array of Thing (p. 110) objects

---

**Errors**

For information about the errors that are common to all actions, see [Common Errors (p. 113)](#).

- **InternalFailureException**
  - HTTP Status Code: 500

- **InvalidRequestException**
  - HTTP Status Code: 400

- **ResourceNotFoundException**
  - HTTP Status Code: 400

- **ThrottlingException**
  - HTTP Status Code: 400

---
See Also

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

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

Creates a tag for the specified resource.

**Request Syntax**

```json
{
   "resourceArn": "string",
   "tags": [
      {
         "key": "string",
         "value": "string"
      }
   ]
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**resourceArn (p. 74)**

The Amazon Resource Name (ARN) of the resource whose tags are returned.

Type: String

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

Required: Yes

**tags (p. 74)**

A list of tags to add to the resource.

Type: Array of Tag (p. 109) objects

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

Required: Yes

**Response Elements**

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

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 113).

**InternalFailureException**

HTTP Status Code: 500

**InvalidRequestException**

HTTP Status Code: 400
ResourceAlreadyExistsException

HTTP Status Code: 400

ThrottlingException

HTTP Status Code: 400

See Also

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

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

Removes a system instance from its target (Cloud or Greengrass).

Request Syntax

```json
{
   "id": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**id (p. 76)**

The ID of the system instance to remove from its target.

Type: String

Length Constraints: Maximum length of 160.

Pattern: ^urn:tdm:([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/[0-9]+/)[a-z0-9]+(/[a-z0-9]+)+$ (p. 76)

Required: Yes

Response Syntax

```json
{
   "summary": {
      "arn": "string",
      "createdAt": number,
      "greengrassGroupId": "string",
      "greengrassGroupName": "string",
      "greengrassGroupVersionId": "string",
      "id": "string",
      "status": "string",
      "target": "string",
      "updatedAt": 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.
summary (p. 76)

An object that contains summary information about the system instance that was removed from its target.

Type: SystemInstanceSummary (p. 104) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException
  HTTP Status Code: 500
InvalidRequestException
  HTTP Status Code: 400
ResourceInUseException
  HTTP Status Code: 400
ResourceNotFoundException
  HTTP Status Code: 400
ThrottlingException
  HTTP Status Code: 400

See Also

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

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

Removes a tag from the specified resource.

Request Syntax

```
{
  "resourceArn": "string",
  "tagKeys": [ "string" ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

- **resourceArn (p. 78)**
  - The Amazon Resource Name (ARN) of the resource whose tags are to be removed.
  - Type: String
  - Required: Yes

- **tagKeys (p. 78)**
  - A list of tag key names to remove from the resource. You don't specify the value. Both the key and its associated value are removed.
  - Type: Array of strings
  - Array Members: Minimum number of 1 item. Maximum number of 50 items.
  - Pattern: `^([\p{L}\p{Z}\p{N}_.:=+\-@]*)$`
  - Required: Yes

Response Elements

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

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).
InternalFailureException  
HTTP Status Code: 500  

InvalidRequestException  
HTTP Status Code: 400  

ResourceAlreadyExistsException  
HTTP Status Code: 400  

ThrottlingException  
HTTP Status Code: 400  

See Also  
For more information about using this API in one of the language-specific AWS SDKs, see the following:  
- AWS Command Line Interface  
- AWS SDK for .NET  
- AWS SDK for C++  
- AWS SDK for Go  
- AWS SDK for Java  
- AWS SDK for JavaScript  
- AWS SDK for PHP V3  
- AWS SDK for Python  
- AWS SDK for Ruby V3
**UpdateFlowTemplate**

Updates the specified workflow. All deployed systems and system instances that use the workflow will see the changes in the flow when it is redeployed. If you don't want this behavior, copy the workflow (creating a new workflow with a different ID), and update the copy. The workflow can contain only entities in the specified namespace.

**Request Syntax**

```json
{
    "compatibleNamespaceVersion": number,
    "definition": {
        "language": "string",
        "text": "string"
    },
    "id": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**compatibleNamespaceVersion (p. 80)**

The version of the user's namespace.

If no value is specified, the latest version is used by default. Use the GetFlowTemplateRevisions if you want to find earlier revisions of the flow to update.

Type: Long

Required: No

**definition (p. 80)**

The DefinitionDocument that contains the updated workflow definition.

Type: DefinitionDocument (p. 89) object

Required: Yes

**id (p. 80)**

The ID of the workflow to be updated.

The ID should be in the following format.

`urn:tdm:REGION/ACCOUNT ID/default:workflow:WORKFLOWNAME`

Type: String

Length Constraints: Maximum length of 160.

Pattern: `^urn:tdm:([^a-z]{2}-(gov-)?[a-z]{4,9}[-0-9]{1,3}/[0-9]+)+([^p\{Alnum\}]+(\[/p\{Alnum\}\]+)*:\[/[p\{Alpha\}\]*:[/\{p\{Alnum\}\}]+(/[^p\{Alnum\}\]+)*\]$`
Response Syntax

```json
{
  "summary": {
    "arn": "string",
    "createdAt": number,
    "id": "string",
    "revisionNumber": 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.

**summary (p. 81)**

An object containing summary information about the updated workflow.

Type: FlowTemplateSummary (p. 99) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

**InternalFailureException**

HTTP Status Code: 500

**InvalidRequestException**

HTTP Status Code: 400

**ResourceNotFoundException**

HTTP Status Code: 400

**ThrottlingException**

HTTP Status Code: 400

See Also

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

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

Updates the specified system. You don’t need to run this action after updating a workflow. Any deployment that uses the system will see the changes in the system when it is redeployed.

Request Syntax

```
{
    "compatibleNamespaceVersion": number,
    "definition": {
        "language": "string",
        "text": "string"
    },
    "id": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**compatibleNamespaceVersion (p. 83)**

The version of the user's namespace. Defaults to the latest version of the user's namespace.

If no value is specified, the latest version is used by default.

Type: Long

Required: No

**definition (p. 83)**

The DefinitionDocument that contains the updated system definition.

Type: DefinitionDocument (p. 89) object

Required: Yes

**id (p. 83)**

The ID of the system to be updated.

The ID should be in the following format.

`urn:tdm:REGION/ACCOUNT ID/default:system:SYSTEMNAME`

Type: String

Length Constraints: Maximum length of 160.

Pattern: `^urn:tdm:([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/[0-9]+)*\p{Alnum}_+(/\p{Alnum}_+)*\p{Alpha}+\p{Alnum}_+(/\p{Alnum}_+)*#`

Required: Yes
Response Syntax

```json
{
    "summary": {
        "arn": "string",
        "createdAt": number,
        "id": "string",
        "revisionNumber": 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.

summary (p. 84)

An object containing summary information about the updated system.

Type: SystemTemplateSummary (p. 108) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

InternalFailureException

   HTTP Status Code: 500

InvalidRequestException

   HTTP Status Code: 400

ResourceNotFoundException

   HTTP Status Code: 400

ThrottlingException

   HTTP Status Code: 400

See Also

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

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

Asynchronously uploads one or more entity definitions to the user's namespace. The document parameter is required if syncWithPublicNamespace and deleteExistingEntities are false. If the syncWithPublicNamespace parameter is set to true, the user's namespace will synchronize with the latest version of the public namespace. If deprecateExistingEntities is set to true, all entities in the latest version will be deleted before the new DefinitionDocument is uploaded.

When a user uploads entity definitions for the first time, the service creates a new namespace for the user. The new namespace tracks the public namespace. Currently users can have only one namespace. The namespace version increments whenever a user uploads entity definitions that are backwards-incompatible and whenever a user sets the syncWithPublicNamespace parameter or the deprecateExistingEntities parameter to true.

The IDs for all of the entities should be in URN format. Each entity must be in the user's namespace. Users can't create entities in the public namespace, but entity definitions can refer to entities in the public namespace.

Valid entities are Device, DeviceModel, Service, Capability, State, Action, Event, Property, Mapping, Enum.

Request Syntax

```json
{
    "deprecateExistingEntities": boolean,
    "document": {
        "language": "string",
        "text": "string"
    },
    "syncWithPublicNamespace": boolean
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 111).

The request accepts the following data in JSON format.

**deprecateExistingEntities (p. 86)**

A Boolean that specifies whether to deprecate all entities in the latest version before uploading the new DefinitionDocument. If set to true, the upload will create a new namespace version.

Type: Boolean

Required: No

**document (p. 86)**

The DefinitionDocument that defines the updated entities.

Type: DefinitionDocument (p. 89) object

Required: No

**syncWithPublicNamespace (p. 86)**

A Boolean that specifies whether to synchronize with the latest version of the public namespace. If set to true, the upload will create a new namespace version.
Type: Boolean
Required: No

Response Syntax

```json
{
  "uploadId": "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.

- **uploadId (p. 87)**
  - The ID that specifies the upload action. You can use this to track the status of the upload.
  - Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 113).

- **InternalFailureException**
  - HTTP Status Code: 500
- **InvalidRequestException**
  - HTTP Status Code: 400
- **ThrottlingException**
  - HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
The AWS IoT Things Graph 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:

- DefinitionDocument (p. 89)
- DependencyRevision (p. 90)
- EntityDescription (p. 91)
- EntityFilter (p. 93)
- FlowExecutionMessage (p. 94)
- FlowExecutionSummary (p. 95)
- FlowTemplateDescription (p. 97)
- FlowTemplateFilter (p. 98)
- FlowTemplateSummary (p. 99)
- MetricsConfiguration (p. 100)
- SystemInstanceDescription (p. 101)
- SystemInstanceFilter (p. 103)
- SystemInstanceSummary (p. 104)
- SystemTemplateDescription (p. 106)
- SystemTemplateFilter (p. 107)
- SystemTemplateSummary (p. 108)
- Tag (p. 109)
- Thing (p. 110)
DefinitionDocument

A document that defines an entity.

Contents

language

The language used to define the entity. GRAPHQL is the only valid value.

Type: String

Valid Values: GRAPHQL

Required: Yes

text

The GraphQL text that defines the entity.

Type: String

Length Constraints: Maximum length of 1048576.

Required: Yes

See Also

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

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

An object that contains the ID and revision number of a workflow or system that is part of a deployment.

Contents

id

The ID of the workflow or system.

Type: String

Length Constraints: Maximum length of 160.

Pattern: ^urn:tdm:((\[a-z\]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/[0-9]+/)*\[\p{Alnum}_\]+(\[/\p{Alnum}_\]+)*):([\p{Alpha}]*)([\p{Alpha}]+([/\p{Alnum}_\]+)+)*#

Required: No

revisionNumber

The revision number of the workflow or system.

Type: Long

Required: No

See Also

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

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

Describes the properties of an entity.

Contents

**arn**

The entity ARN.

Type: String

Required: No

**createdAt**

The time at which the entity was created.

Type: Timestamp

Required: No

**definition**

The definition document of the entity.

Type: [DefinitionDocument](p. 89) object

Required: No

**id**

The entity ID.

Type: String

Length Constraints: Maximum length of 160.

Pattern: ^urn:tdm:(([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/[0-9]+/)*[\p{Alnum}_]+(/[\p{Alnum}_]+)*(:([\p{Alpha}]*)*:([\p{Alnum}_]+)/([\p{Alnum}_]+)*)*$  

Required: No

**type**

The entity type.

Type: String

Valid Values: DEVICE | SERVICE | DEVICE_MODEL | CAPABILITY | STATE | ACTION | EVENT | PROPERTY | MAPPING | ENUM

Required: No

See Also

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

- AWS SDK for C++
• AWS SDK for Go
• AWS SDK for Java
• AWS SDK for Ruby V3
EntityFilter

An object that filters an entity search. Multiple filters function as OR criteria in the search. For example a search that includes a namespace and a REFERENCED_ENTITY_ID filter searches for entities in the specified namespace that use the entity specified by the value of REFERENCED_ENTITY_ID.

Contents

name

The name of the entity search filter field. REFERENCED_ENTITY_ID filters on entities that are used by the entity in the result set. For example, you can filter on the ID of a property that is used in a state.

Type: String

Valid Values: NAME | NAMESPACE | SEMANTIC_TYPE_PATH | REFERENCED_ENTITY_ID

Required: No

value

An array of string values for the search filter field. Multiple values function as AND criteria in the search.

Type: Array of strings

Required: No

See Also

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

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

An object that contains information about a flow event.

**Contents**

**eventType**

The type of flow event.

- Type: String

  Valid Values: EXECUTION_STARTED | EXECUTION_FAILED | EXECUTION_ABORTED | EXECUTION_SUCCEEDED | STEP_STARTED | STEP_FAILED | STEP_SUCCEEDED | ACTIVITY_SCHEDULED | ACTIVITY_STARTED | ACTIVITY_FAILED | ACTIVITY_SUCCEEDED | START_FLOW_EXECUTION_TASK | SCHEDULE_NEXT_READY_STEPS_TASK | THING_ACTION_TASK | THING_ACTION_TASK_FAILED | THING_ACTION_TASK_SUCCEEDED | ACKNOWLEDGE_TASK_MESSAGE

  Required: No

**messageId**

The unique identifier of the message.

- Type: String

  Required: No

**payload**

A string containing information about the flow event.

- Type: String

  Required: No

**timestamp**

The date and time when the message was last updated.

- Type: Timestamp

  Required: No

**See Also**

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

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

An object that contains summary information about a flow execution.

Contents

createdAt

The date and time when the flow execution summary was created.

Type: Timestamp

Required: No

flowExecutionId

The ID of the flow execution.

Type: String

Required: No

flowTemplateId

The ID of the flow.

Type: String

Length Constraints: Maximum length of 160.

Pattern: ^urn:tdm:([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/[0-9]+/)[p(Alnum)_]+(/[p(Alnum)_]+)*([^p(Alpha)]*:([^p(Alnum)_]+)+/[^p(Alnum)_]+)*#

Required: No

status

The current status of the flow execution.

Type: String

Valid Values: RUNNING | ABORTED | SUCCEEDED | FAILED

Required: No

systemInstanceId

The ID of the system instance that contains the flow.

Type: String

Length Constraints: Maximum length of 160.

Pattern: ^urn:tdm:([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/[0-9]+/)[p(Alnum)_]+(/[p(Alnum)_]+)*([^p(Alpha)]*:([^p(Alnum)_]+)+/[^p(Alnum)_]+)*#

Required: No

updatedAt

The date and time when the flow execution summary was last updated.
Type: Timestamp
Required: No

See Also

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

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

An object that contains a workflow’s definition and summary information.

Contents

definition

A workflow’s definition document.

Type: DefinitionDocument (p. 89) object

Required: No

summary

An object that contains summary information about a workflow.

Type: FlowTemplateSummary (p. 99) object

Required: No

validatedNamespaceVersion

The version of the user’s namespace against which the workflow was validated. Use this value in your system instance.

Type: Long

Required: No

See Also

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

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

An object that filters a workflow search.

**Contents**

**name**

The name of the search filter field.

Type: String

Valid Values: DEVICE_MODEL_ID

Required: Yes

**value**

An array of string values for the search filter field. Multiple values function as AND criteria in the search.

Type: Array of strings

Pattern: ^urn:tdm:(([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/[0-9]+/)*[\p{Alnum}_]+(/[\p{Alnum}_]+)*):([\p{Alpha}]*):([\p{Alnum}]+(/[\p{Alnum}_]+)*+)*$,

Required: Yes

**See Also**

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

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

An object that contains summary information about a workflow.

Contents

**arn**

The ARN of the workflow.

Type: String

Required: No

**createdAt**

The date when the workflow was created.

Type: Timestamp

Required: No

**id**

The ID of the workflow.

Type: String

Length Constraints: Maximum length of 160.

Pattern: ^urn:tdm:(([a-z]{2}-(gov-)?[a-z]{4,9}-[0-9]{1,3}/
[0-9]+)/+)[\p{Alnum}_]+(/[\p{Alnum}_]+)*:\([\p{Alpha}]*:([\p{Alnum}_]+)/(\/[\p{Alnum}_]+)*\)$

Required: No

**revisionNumber**

The revision number of the workflow.

Type: Long

Required: No

See Also

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

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

An object that specifies whether cloud metrics are collected in a deployment and, if so, what role is used to collect metrics.

Contents

cloudMetricEnabled

A Boolean that specifies whether cloud metrics are collected.

Type: Boolean
Required: No

metricRuleRoleArn

The ARN of the role that is used to collect cloud metrics.

Type: String
Required: No

See Also

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

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

An object that contains a system instance definition and summary information.

Contents

definition

A document that defines an entity.

Type: DefinitionDocument (p. 89) object

Required: No

flowActionsRoleArn

The AWS Identity and Access Management (IAM) role that AWS IoT Things Graph assumes during flow execution in a cloud deployment. This role must have read and write permissions to AWS Lambda and AWS IoT and to any other AWS services that the flow uses.

Type: String


Required: No

metricsConfiguration

An object that specifies whether cloud metrics are collected in a deployment and, if so, what role is used to collect metrics.

Type: MetricsConfiguration (p. 100) object

Required: No

s3BucketName

The Amazon Simple Storage Service bucket where information about a system instance is stored.

Type: String

Required: No

summary

An object that contains summary information about a system instance.

Type: SystemInstanceStateSummary (p. 104) object

Required: No

validatedDependencyRevisions

A list of objects that contain all of the IDs and revision numbers of workflows and systems that are used in a system instance.

Type: Array of DependencyRevision (p. 90) objects

Required: No

validatedNamespaceVersion

The version of the user's namespace against which the system instance was validated.
See Also

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

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

An object that filters a system instance search. Multiple filters function as OR criteria in the search. For example, a search that includes a GREENGRASS_GROUP_NAME and a STATUS filter searches for system instances in the specified Greengrass group that have the specified status.

Contents

name

The name of the search filter field.

Type: String

Valid Values: SYSTEM_TEMPLATE_ID | STATUS | GREENGRASS_GROUP_NAME

Required: No

value

An array of string values for the search filter field. Multiple values function as AND criteria in the search.

Type: Array of strings

Required: No

See Also

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

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

An object that contains summary information about a system instance.

**Contents**

**arn**

The ARN of the system instance.
Type: String
Required: No

**createdAt**

The date when the system instance was created.
Type: Timestamp
Required: No

**greengrassGroupId**

The ID of the Greengrass group where the system instance is deployed.
Type: String
Required: No

**greengrassGroupName**

The ID of the Greengrass group where the system instance is deployed.
Type: String
Required: No

**greengrassGroupVersionId**

The version of the Greengrass group where the system instance is deployed.
Type: String
Required: No

**id**

The ID of the system instance.
Type: String
Length Constraints: Maximum length of 160.
Pattern: `urn:tdm:([a-z](2)-(gov-)?[a-z](4,9)-[0-9]{1,3}/[0-9]+/[p{Alnum}_]+(/[p{Alnum}_]+)*):([p{Alpha}]*):([p{Alnum}_]+/([p{Alnum}_]+)*))*`#
Required: No

**status**

The status of the system instance.
Type: String

Valid Values: NOT_DEPLOYED | BOOTSTRAP | DEPLOY_IN_PROGRESS | DEPLOYED_IN_TARGET | UNDEPLOY_IN_PROGRESS | FAILED | PENDING_DELETE | DELETED_IN_TARGET

Required: No

target

The target of the system instance.

Type: String

Valid Values: GREENGRASS | CLOUD

Required: No

updatedAt

The date and time when the system instance was last updated.

Type: Timestamp

Required: No

See Also

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

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

An object that contains a system's definition document and summary information.

Contents

definition

The definition document of a system.

Type: DefinitionDocument (p. 89) object

Required: No

summary

An object that contains summary information about a system.

Type: SystemTemplateSummary (p. 108) object

Required: No

validatedNamespaceVersion

The namespace version against which the system was validated. Use this value in your system instance.

Type: Long

Required: No

See Also

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

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

An object that filters a system search.

Contents

name

The name of the system search filter field.

Type: String

Valid Values: FLOW_TEMPLATE_ID

Required: Yes

value

An array of string values for the search filter field. Multiple values function as AND criteria in the search.

Type: Array of strings

Pattern: ^urn:tdm:(([a-z](2)-(gov-)?[a-z](4,9)-[0-9]{1,3}/[0-9]+/)*\[\p{Alnum}_\]+(/\[\p{Alnum}_\]+)*):([\p{Alpha}]*):([\p{Alnum}_]+(/[\p{Alnum}_]+)*\$)

Required: Yes

See Also

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

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

An object that contains information about a system.

Contents

arn

The ARN of the system.

Type: String

Required: No

createdAt

The date when the system was created.

Type: Timestamp

Required: No

id

The ID of the system.

Type: String

Length Constraints: Maximum length of 160.

Pattern: ^urn:tdm:(([-z]{2}-(gov-)?[-z]{4,9}-[0-9]{1,3}/[0-9]+/)*[\p{Alnum}_]+(/[\p{Alnum}_]+)*):([^\p{Alpha}]*):([^\p{Alnum}_]+)/([\p{Alnum}_]+)*$  

Required: No

revisionNumber

The revision number of the system.

Type: Long

Required: No

See Also

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

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

Metadata assigned to an AWS IoT Things Graph resource consisting of a key-value pair.

Contents

key

The required name of the tag. The string value can be from 1 to 128 Unicode characters in length.

Type: String


Pattern: ^([\p{L}\p{Z}\p{N}_.:/=\-@])*$

Required: Yes

value

The optional value of the tag. The string value can be from 1 to 256 Unicode characters in length.

Type: String

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

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V3
**Thing**

An AWS IoT thing.

**Contents**

**thingArn**

The ARN of the thing.

Type: String

Required: No

**thingName**

The name of the thing.

Type: String


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

Required: No

**See Also**

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V3
Common Parameters

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

**Action**

The action to be performed.

Type: string

Required: Yes

**Version**

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

Type: string

Required: Yes

**X-Amz-Algorithm**

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

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

Type: string

Valid Values: AWS4-HMAC-SHA256

Required: Conditional

**X-Amz-Credential**

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

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

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

Type: string

Required: Conditional

**X-Amz-Date**

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: 20120325T120000Z.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is
not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see Handling Dates in Signature Version 4 in the Amazon Web Services General Reference.

Type: string

Required: Conditional

**X-Amz-Security-Token**

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

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

Type: string

Required: Conditional

**X-Amz-Signature**

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

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

Type: string

Required: Conditional

**X-Amz-SignedHeaders**

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

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

Type: string

Required: Conditional
Common Errors

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

**AccessDeniedException**

You do not have sufficient access to perform this action.

HTTP Status Code: 400

**IncompleteSignature**

The request signature does not conform to AWS standards.

HTTP Status Code: 400

**InternalFailure**

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

HTTP Status Code: 500

**InvalidAction**

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

HTTP Status Code: 400

**InvalidClientTokenId**

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

HTTP Status Code: 403

**InvalidParameterCombination**

Parameters that must not be used together were used together.

HTTP Status Code: 400

**InvalidParameterValue**

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

HTTP Status Code: 400

**InvalidQueryParameter**

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

HTTP Status Code: 400

**MalformedQueryString**

The query string contains a syntax error.

HTTP Status Code: 404

**MissingAction**

The request is missing an action or a required parameter.

HTTP Status Code: 400
**MissingAuthenticationToken**

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

HTTP Status Code: 403

**MissingParameter**

A required parameter for the specified action is not supplied.

HTTP Status Code: 400

**OptInRequired**

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

HTTP Status Code: 403

**RequestExpired**

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

HTTP Status Code: 400

**ServiceUnavailable**

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

HTTP Status Code: 503

**ThrottlingException**

The request was denied due to request throttling.

HTTP Status Code: 400

**ValidationError**

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

HTTP Status Code: 400