Amazon Detective

API Reference

API Version 2018-10-26

Amazon Detective: API Reference

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Welcome

Detective uses machine learning and purpose-built visualizations to help you analyze and investigate security issues across your Amazon Web Services (AWS) workloads. Detective automatically extracts time-based events such as login attempts, API calls, and network traffic from AWS CloudTrail and Amazon Virtual Private Cloud (Amazon VPC) flow logs. It also extracts findings detected by Amazon GuardDuty.

The Detective API primarily supports the creation and management of behavior graphs. A behavior graph contains the extracted data from a set of member accounts, and is created and managed by an administrator account.

Every behavior graph is specific to a Region. You can only use the API to manage graphs that belong to the Region that is associated with the currently selected endpoint.

A Detective administrator account can use the Detective API to do the following:

- Enable and disable Detective. Enabling Detective creates a new behavior graph.
- View the list of member accounts in a behavior graph.
- Add member accounts to a behavior graph.
- Remove member accounts from a behavior graph.

A member account can use the Detective API to do the following:

- View the list of behavior graphs that they are invited to.
- Accept an invitation to contribute to a behavior graph.
- Decline an invitation to contribute to a behavior graph.
- Remove their account from a behavior graph.

All API actions are logged as CloudTrail events. See Logging Detective API Calls with CloudTrail.

> **Note**
> We replaced the term "master account" with the term "administrator account." An administrator account is used to centrally manage multiple accounts. In the case of Detective, the administrator account manages the accounts in their behavior graph.

This document was last published on October 6, 2021.

Actions

The following actions are supported:

AcceptInvitation

Accepts an invitation for the member account to contribute data to a behavior graph. This operation can only be called by an invited member account.

The request provides the ARN of behavior graph.

The member account status in the graph must be `INVITED`.

Request Syntax

```
PUT /invitation HTTP/1.1
Content-type: application/json

{
    "GraphArn": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

GraphArn (p. 3)

> The ARN of the behavior graph that the member account is accepting the invitation for.
>
> The member account status in the behavior graph must be `INVITED`.
>
> Type: String
>
> Pattern: ^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]{32}?$
>
> Required: Yes

Response Syntax

```
HTTP/1.1 200
```

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. 63).

ConflictException

> The request attempted an invalid action.

HTTP Status Code: 409

InternalServerException

The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ResourceNotFoundException

The request refers to a nonexistent resource.

HTTP Status Code: 404

ValidationException

The request parameters are invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of AcceptInvitation.

Sample Request

```
PUT /invitation HTTP/1.1
Host: api.detective.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 94
Authorization: AUTHPARAMS
X-Amz-Date: 20200124T163018Z
User-Agent: aws-cli/1.14.29 Python/2.7.9 Windows/8 botocore/1.8.33

{
 "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899"
}
```

Example

This example illustrates one usage of AcceptInvitation.

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Date: Fri, 24 Jan 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive
```

See Also

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

• AWS Command Line Interface

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

CreateGraph

Creates a new behavior graph for the calling account, and sets that account as the administrator account. This operation is called by the account that is enabling Detective.

Before you try to enable Detective, make sure that your account has been enrolled in Amazon GuardDuty for at least 48 hours. If you do not meet this requirement, you cannot enable Detective. If you do meet the GuardDuty prerequisite, then when you make the request to enable Detective, it checks whether your data volume is within the Detective quota. If it exceeds the quota, then you cannot enable Detective.

The operation also enables Detective for the calling account in the currently selected Region. It returns the ARN of the new behavior graph.

`CreateGraph` triggers a process to create the corresponding data tables for the new behavior graph.

An account can only be the administrator account for one behavior graph within a Region. If the same account calls `CreateGraph` with the same administrator account, it always returns the same behavior graph ARN. It does not create a new behavior graph.

Request Syntax

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

{
   "Tags": {
      "string" : "string"
   }
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

Tags (p. 6)

    The tags to assign to the new behavior graph. You can add up to 50 tags. For each tag, you provide the tag key and the tag value. Each tag key can contain up to 128 characters. Each tag value can contain up to 256 characters.

    Type: String to string map

    Map Entries: Maximum number of 50 items.

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

    Key Pattern: `^(?!aws:)[a-zA-Z+-=._:/]+$`

    Value Length Constraints: Maximum length of 256.

    Required: No

Response Syntax

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

{
    "GraphArn": "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.

GraphArn (p. 7)

The ARN of the new behavior graph.

Type: String

Pattern: ^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]
{32}?$

Errors

For information about the errors that are common to all actions, see Common Errors (p. 63).

ConflictException

The request attempted an invalid action.

HTTP Status Code: 409

InternalServerException

The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ServiceQuotaExceededException

This request cannot be completed for one of the following reasons.

- The request would cause the number of member accounts in the behavior graph to exceed the maximum allowed. A behavior graph cannot have more than 1200 member accounts.
- The request would cause the data rate for the behavior graph to exceed the maximum allowed.
- Detective is unable to verify the data rate for the member account. This is usually because the member account is not enrolled in Amazon GuardDuty.

HTTP Status Code: 402

Examples

Example

This example illustrates one usage of CreateGraph.

Sample Request

```
POST /graph HTTP/1.1
Host: api.detective.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 50
Authorization: AUTHPARAMS
X-Amz-Date: 20200122T193018Z
User-Agent: aws-cli/1.14.29 Python/2.7.9 Windows/8 botocore/1.8.33

{
    "Tags": {
        "Department" : "Finance"
    }
}
```

Example

This example illustrates one usage of CreateGraph.

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: 94
Date: Wed, 22 Jan 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive

{
 "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899"
}
```

See Also

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

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

CreateMembers

Sends a request to invite the specified AWS accounts to be member accounts in the behavior graph. This operation can only be called by the administrator account for a behavior graph.

`CreateMembers` verifies the accounts and then invites the verified accounts. The administrator can optionally specify to not send invitation emails to the member accounts. This would be used when the administrator manages their member accounts centrally.

The request provides the behavior graph ARN and the list of accounts to invite.

The response separates the requested accounts into two lists:

- The accounts that `CreateMembers` was able to start the verification for. This list includes member accounts that are being verified, that have passed verification and are to be invited, and that have failed verification.
- The accounts that `CreateMembers` was unable to process. This list includes accounts that were already invited to be member accounts in the behavior graph.

Request Syntax

```
POST /graph/members HTTP/1.1
Content-type: application/json

{
    "Accounts": [
        {
            "AccountId": "string",
            "EmailAddress": "string"
        }
    ],
    "DisableEmailNotification": boolean,
    "GraphArn": "string",
    "Message": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

Accounts (p. 9)

The list of AWS accounts to invite to become member accounts in the behavior graph. You can invite up to 50 accounts at a time. For each invited account, the account list contains the account identifier and the AWS account root user email address.

Type: Array of Account (p. 55) objects

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

Required: Yes

DisableEmailNotification (p. 9)

if set to `true`, then the member accounts do not receive email notifications. By default, this is set to `false`, and the member accounts receive email notifications.

Type: Boolean

Required: No

GraphArn (p. 9)

The ARN of the behavior graph to invite the member accounts to contribute their data to.

Type: String

Pattern: `^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]{32}?$`

Required: Yes

Message (p. 9)

Customized message text to include in the invitation email message to the invited member accounts.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1000.

Required: No

Response Syntax

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

{
   "Members": [
      {
         "AccountId": "string",
         "AdministratorId": "string",
         "DisabledReason": "string",
         "EmailAddress": "string",
         "GraphArn": "string",
         "InvitedTime": number,
         "MasterId": "string",
         "PercentOfGraphUtilization": number,
         "PercentOfGraphUtilizationUpdatedTime": number,
         "Status": "string",
         "UpdatedTime": number,
         "VolumeUsageInBytes": number,
         "VolumeUsageUpdatedTime": number
      }
   ],
   "UnprocessedAccounts": [
      {
         "AccountId": "string",
         "Reason": "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.

Members (p. 10)

The set of member account invitation requests that Detective was able to process. This includes accounts that are being verified, that failed verification, and that passed verification and are being sent an invitation.

Type: Array of MemberDetail (p. 57) objects

UnprocessedAccounts (p. 10)

The list of accounts for which Detective was unable to process the invitation request. For each account, the list provides the reason why the request could not be processed. The list includes accounts that are already member accounts in the behavior graph.

Type: Array of UnprocessedAccount (p. 60) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 63).

InternalServerException

The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ResourceNotFoundException

The request refers to a nonexistent resource.

HTTP Status Code: 404

ServiceQuotaExceededException

This request cannot be completed for one of the following reasons.

- The request would cause the number of member accounts in the behavior graph to exceed the maximum allowed. A behavior graph cannot have more than 1200 member accounts.
- The request would cause the data rate for the behavior graph to exceed the maximum allowed.
- Detective is unable to verify the data rate for the member account. This is usually because the member account is not enrolled in Amazon GuardDuty.

HTTP Status Code: 402

ValidationException

The request parameters are invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CreateMembers.

Sample Request

```
PUT /graph/members HTTP/1.1
Host: api.detective.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 442
Authorization: AUTHPARAMS
X-Amz-Date: 20200123T193018Z
User-Agent: aws-cli/1.14.29 Python/2.7.9 Windows/8 botocore/1.8.33

{
 "Accounts": [
  {
   "AccountId": "444455556666",
   "EmailAddress": "mmajor@example.com"
  },
  {
   "AccountId": "123456789012",
   "EmailAddress": "jstiles@example.com"
  }
 ],
 "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899",
 "Message": "This is Paul Santos. I need to add your account to the data we use
 for security investigation in Detective. If you have any questions, contact me at
 psantos@example.com."
}
```

Example

This example illustrates one usage of CreateMembers.

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 625
Date: Thu, 23 Jan 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive

{
 "Members": [
  {
   "AccountId": "444455556666",
   "AdministratorId": "111122223333",
   "EmailAddress": "mmajor@example.com",
   "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899",
   "InvitedTime": "2020-01-24T12:35:0.1587Z",
   "MasterId": "111122223333",
   "Status": "INVITED",
   "UpdatedTime": "2020-01-24T12:35:0.1587Z"
  },
  {
   "AccountId": "123456789012",
   "AdministratorId": "111122223333",
   "EmailAddress": "jstiles@example.com",
   "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899",
   "InvitedTime": "2020-01-24T12:35:0.1587Z",
   "MasterId": "111122223333",
   "Status": "VERIFICATION_IN_PROGRESS",
```

```
  "UpdatedTime": "2020-01-24T12:35:0.1587Z"
 }
 ],
 "UnprocessedAccounts": [ ]
}
```

See Also

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

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

DeleteGraph

Disables the specified behavior graph and queues it to be deleted. This operation removes the graph from each member account's list of behavior graphs.

`DeleteGraph` can only be called by the administrator account for a behavior graph.

Request Syntax

```
POST /graph/removal HTTP/1.1
Content-type: application/json

{
    "GraphArn": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

GraphArn (p. 14)

The ARN of the behavior graph to disable.

Type: String

Pattern: ^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]{32}?$

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

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. 63).

InternalServerException

The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ResourceNotFoundException

The request refers to a nonexistent resource.

HTTP Status Code: 404

ValidationException

The request parameters are invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteGraph.

Sample Request

```
POST /graph/removal HTTP/1.1
Host: api.detective.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 94
Authorization: AUTHPARAMS
X-Amz-Date: 20200221T193018Z
User-Agent: aws-cli/1.14.29 Python/2.7.9 Windows/8 botocore/1.8.33

{
 "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899"
}
```

Example

This example illustrates one usage of DeleteGraph.

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Date: Fri, 21 Feb 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive
```

See Also

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

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

- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DeleteMembers

Deletes one or more member accounts from the administrator account's behavior graph. This operation can only be called by a Detective administrator account. That account cannot use `DeleteMembers` to delete their own account from the behavior graph. To disable a behavior graph, the administrator account uses the `DeleteGraph` API method.

Request Syntax

```
POST /graph/members/removal HTTP/1.1
Content-type: application/json

{
    "AccountIds": [ "string" ],
    "GraphArn": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

AccountIds (p. 17)

The list of AWS account identifiers for the member accounts to delete from the behavior graph. You can delete up to 50 member accounts at a time.

Type: Array of strings

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

Length Constraints: Fixed length of 12.

Pattern: `^[0-9]+$`

Required: Yes

GraphArn (p. 17)

The ARN of the behavior graph to delete members from.

Type: String

Pattern: `^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]{32}?$`

Required: Yes

Response Syntax

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

```
{
    "AccountIds": [ "string" ],
    "UnprocessedAccounts": [
        {
            "AccountId": "string",
            "Reason": "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.

AccountIds (p. 17)

The list of AWS account identifiers for the member accounts that Detective successfully deleted from the behavior graph.

Type: Array of strings

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

Length Constraints: Fixed length of 12.

Pattern: `^[0-9]+$`

UnprocessedAccounts (p. 17)

The list of member accounts that Detective was not able to delete from the behavior graph. For each member account, provides the reason that the deletion could not be processed.

Type: Array of UnprocessedAccount (p. 60) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 63).

ConflictException

The request attempted an invalid action.

HTTP Status Code: 409

InternalServerException

The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ResourceNotFoundException

The request refers to a nonexistent resource.

HTTP Status Code: 404

ValidationException

The request parameters are invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteMembers.

Sample Request

```
POST /graph/members/removal HTTP/1.1
Host: api.detective.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 128
Authorization: AUTHPARAMS
X-Amz-Date: 20200220T193018Z
User-Agent: aws-cli/1.14.29 Python/2.7.9 Windows/8 botocore/1.8.33

{
 "AccountIds": [ "444455556666" ],
 "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899"
}
```

Example

This example illustrates one usage of DeleteMembers.

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 63
Date: Thu, 20 Feb 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572

{
 "AccountIds": [ "444455556666" ],
 "UnprocessedAccounts": [ ]
}
```

See Also

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

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

DisassociateMembership

Removes the member account from the specified behavior graph. This operation can only be called by a member account that has the `ENABLED` status.

Request Syntax

```
POST /membership/removal HTTP/1.1
Content-type: application/json

{
    "GraphArn": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

GraphArn (p. 21)

> The ARN of the behavior graph to remove the member account from.
>
> The member account's member status in the behavior graph must be `ENABLED`.
>
> Type: String
>
> Pattern: ^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]{32}?$
>
> Required: Yes

Response Syntax

```
HTTP/1.1 200
```

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. 63).

ConflictException

> The request attempted an invalid action.
>
> HTTP Status Code: 409

InternalServerException

The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ResourceNotFoundException

The request refers to a nonexistent resource.

HTTP Status Code: 404

ValidationException

The request parameters are invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DisassociateMembership.

Sample Request

```
POST /membership/removal HTTP/1.1
Host: api.detective.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 94
Authorization: AUTHPARAMS
X-Amz-Date: 20200221T193018Z
User-Agent: aws-cli/1.14.29 Python/2.7.9 Windows/8 botocore/1.8.33

{
 "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899"
}
```

Example

This example illustrates one usage of DisassociateMembership.

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Date: Thu, 21 Feb 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

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

GetMembers

Returns the membership details for specified member accounts for a behavior graph.

Request Syntax

```
POST /graph/members/get HTTP/1.1
Content-type: application/json

{
    "AccountIds": [ "string" ],
    "GraphArn": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

AccountIds (p. 24)

The list of AWS account identifiers for the member account for which to return member details. You can request details for up to 50 member accounts at a time.

You cannot use `GetMembers` to retrieve information about member accounts that were removed from the behavior graph.

Type: Array of strings

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

Length Constraints: Fixed length of 12.

Pattern: `^[0-9]+$`

Required: Yes

GraphArn (p. 24)

The ARN of the behavior graph for which to request the member details.

Type: String

Pattern: `^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]{32}?$`

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
    "MemberDetails": [
        {
            "AccountId": "string",
            "AdministratorId": "string",
            "DisabledReason": "string",
            "EmailAddress": "string",
            "GraphArn": "string",
            "InvitedTime": number,
            "MasterId": "string",
            "PercentOfGraphUtilization": number,
            "PercentOfGraphUtilizationUpdatedTime": number,
            "Status": "string",
            "UpdatedTime": number,
            "VolumeUsageInBytes": number,
            "VolumeUsageUpdatedTime": number
        }
    ],
    "UnprocessedAccounts": [
        {
            "AccountId": "string",
            "Reason": "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.

MemberDetails (p. 24)

The member account details that Detective is returning in response to the request.

Type: Array of MemberDetail (p. 57) objects

UnprocessedAccounts (p. 24)

The requested member accounts for which Detective was unable to return member details.

For each account, provides the reason why the request could not be processed.

Type: Array of UnprocessedAccount (p. 60) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 63).

InternalServerException

The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ResourceNotFoundException

The request refers to a nonexistent resource.

HTTP Status Code: 404

ValidationException

The request parameters are invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of GetMembers.

Sample Request

```
POST /graph/members/get HTTP/1.1
Host: api.detective.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 128
Authorization: AUTHPARAMS
X-Amz-Date: 20200127T193018Z
User-Agent: aws-cli/1.14.29 Python/2.7.9 Windows/8 botocore/1.8.33

{
 "AccountIds": [ "444455556666" ],
 "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899"
}
```

Example

This example illustrates one usage of GetMembers.

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: 332
Date: Mon, 27 Jan 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive

{
 "MemberDetails": [
 {
  "AccountId": "444455556666",
  "AdministratorId": "111122223333",
  "EmailAddress": "mmajor@example.com",
  "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899",
  "InvitedTime": "2020-01-24T12:35:0.1587Z",
  "MasterId": "111122223333",
  "Status": "INVITED",
  "UpdatedTime": "2020-01-24T12:35:0.1587Z"
 }
 ],
 "UnprocessedAccounts": [ ]
}
```

See Also

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

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

ListGraphs

Returns the list of behavior graphs that the calling account is an administrator account of. This operation can only be called by an administrator account.

Because an account can currently only be the administrator of one behavior graph within a Region, the results always contain a single behavior graph.

Request Syntax

```
POST /graphs/list HTTP/1.1
Content-type: application/json

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

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

MaxResults (p. 28)

The maximum number of graphs to return at a time. The total must be less than the overall limit on the number of results to return, which is currently 200.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 200.

Required: No

NextToken (p. 28)

For requests to get the next page of results, the pagination token that was returned with the previous set of results. The initial request does not include a pagination token.

Type: String

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

Required: No

Response Syntax

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

{
    "GraphList": [
```

```
    {
        "Arn": "string",
        "CreatedTime": 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.

GraphList (p. 28)

A list of behavior graphs that the account is an administrator account for.

Type: Array of Graph (p. 56) objects

NextToken (p. 28)

If there are more behavior graphs remaining in the results, then this is the pagination token to use to request the next page of behavior graphs.

Type: String

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

Errors

For information about the errors that are common to all actions, see Common Errors (p. 63).

InternalServerException

The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ValidationException

The request parameters are invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of ListGraphs.

Sample Request

```
POST /graphs/list HTTP/1.1
Host: api.detective.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 0
```

```
Authorization: AUTHPARAMS
X-Amz-Date: 20200123T193018Z
User-Agent: aws-cli/1.14.29 Python/2.7.9 Windows/8 botocore/1.8.33
```

Example

This example illustrates one usage of ListGraphs.

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: 144
Date: Thu, 23 Jan 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive

{
 "GraphList": [
  {
   "Arn": "arn:aws:detective:us-east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899",
   "CreatedTime": "2020-01-22T11:35:11.372Z"
  }
 ]
}
```

See Also

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

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

ListInvitations

Retrieves the list of open and accepted behavior graph invitations for the member account. This operation can only be called by a member account.

Open invitations are invitations that the member account has not responded to.

The results do not include behavior graphs for which the member account declined the invitation. The results also do not include behavior graphs that the member account resigned from or was removed from.

Request Syntax

```
POST /invitations/list HTTP/1.1
Content-type: application/json

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

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

MaxResults (p. 31)

> The maximum number of behavior graph invitations to return in the response. The total must be less than the overall limit on the number of results to return, which is currently 200.
>
> Type: Integer
>
> Valid Range: Minimum value of 1. Maximum value of 200.
>
> Required: No

NextToken (p. 31)

> For requests to retrieve the next page of results, the pagination token that was returned with the previous page of results. The initial request does not include a pagination token.
>
> Type: String
>
> Length Constraints: Minimum length of 1. Maximum length of 1024.
>
> Required: No

Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
    "Invitations": [
        {
            "AccountId": "string",
            "AdministratorId": "string",
            "DisabledReason": "string",
            "EmailAddress": "string",
            "GraphArn": "string",
            "InvitedTime": number,
            "MasterId": "string",
            "PercentOfGraphUtilization": number,
            "PercentOfGraphUtilizationUpdatedTime": number,
            "Status": "string",
            "UpdatedTime": number,
            "VolumeUsageInBytes": number,
            "VolumeUsageUpdatedTime": 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.

Invitations (p. 31)

The list of behavior graphs for which the member account has open or accepted invitations.

Type: Array of MemberDetail (p. 57) objects

NextToken (p. 31)

If there are more behavior graphs remaining in the results, then this is the pagination token to use to request the next page of behavior graphs.

Type: String

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

Errors

For information about the errors that are common to all actions, see Common Errors (p. 63).

InternalServerException

The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ValidationException

The request parameters are invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of ListInvitations.

Sample Request

```
POST /invitations/list HTTP/1.1
Host: api.detective.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 0
Authorization: AUTHPARAMS
X-Amz-Date: 20200124T193018Z
User-Agent: aws-cli/1.14.29 Python/2.7.9 Windows/8 botocore/1.8.33
```

Example

This example illustrates one usage of ListInvitations.

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: 302
Date: Fri, 24 Jan 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive

{
 "Invitations": [
  {
   "AccountId": "444455556666",
   "AdministratorId": "111122223333",
   "EmailAddress": "mmajor@example.com",
   "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899",
   "InvitedTime": "2020-01-24T12:35:0.1587Z",
   "MasterId": "111122223333",
   "Status": "INVITED",
   "UpdatedTime": "2020-01-24T12:35:0.1587Z"
  }
 ]
}
```

See Also

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

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

- AWS SDK for Python
- AWS SDK for Ruby V3

ListMembers

Retrieves the list of member accounts for a behavior graph. Does not return member accounts that were removed from the behavior graph.

Request Syntax

```
POST /graph/members/list HTTP/1.1
Content-type: application/json

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

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

GraphArn (p. 35)

The ARN of the behavior graph for which to retrieve the list of member accounts.

Type: String

Pattern: `^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]{32}?$`

Required: Yes

MaxResults (p. 35)

The maximum number of member accounts to include in the response. The total must be less than the overall limit on the number of results to return, which is currently 200.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 200.

Required: No

NextToken (p. 35)

For requests to retrieve the next page of member account results, the pagination token that was returned with the previous page of results. The initial request does not include a pagination token.

Type: String

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

Required: No

Response Syntax

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

{
    "MemberDetails": [
        {
            "AccountId": "string",
            "AdministratorId": "string",
            "DisabledReason": "string",
            "EmailAddress": "string",
            "GraphArn": "string",
            "InvitedTime": number,
            "MasterId": "string",
            "PercentOfGraphUtilization": number,
            "PercentOfGraphUtilizationUpdatedTime": number,
            "Status": "string",
            "UpdatedTime": number,
            "VolumeUsageInBytes": number,
            "VolumeUsageUpdatedTime": 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.

MemberDetails (p. 36)

> The list of member accounts in the behavior graph.
>
> The results include member accounts that did not pass verification and member accounts that have not yet accepted the invitation to the behavior graph. The results do not include member accounts that were removed from the behavior graph.
>
> Type: Array of MemberDetail (p. 57) objects

NextToken (p. 36)

> If there are more member accounts remaining in the results, then this is the pagination token to use to request the next page of member accounts.
>
> Type: String
>
> Length Constraints: Minimum length of 1. Maximum length of 1024.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 63).

InternalServerException

> The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ResourceNotFoundException

The request refers to a nonexistent resource.

HTTP Status Code: 404

ValidationException

The request parameters are invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of ListMembers.

Sample Request

```
POST /graph/members/list HTTP/1.1
Host: api.detective.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 94
Authorization: AUTHPARAMS
X-Amz-Date: 20200124T193018Z
User-Agent: aws-cli/1.14.29 Python/2.7.9 Windows/8 botocore/1.8.33

{
 "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899"
}
```

Example

This example illustrates one usage of ListMembers.

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: 586
Date: Fri, 24 Jan 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive

{
 "MemberDetails": [
  {
   "AccountId": "444455556666",
   "AdministratorId": "111122223333",
   "EmailAddress": "mmajor@example.com",
   "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899",
   "InvitedTime": "2020-01-24T12:35:0.1587Z",
   "MasterId": "111122223333",
   "PercentOfGraphUtilization": 5,
   "PercentOfGraphUtilizationUpdatedTime": 1586287843,
```

```
 "Status": "INVITED",
 "UpdatedTime": "2020-01-24T12:35:0.1587Z",
 "VolumeUsageInBytes": 500,
 "VolumeUsageUpdatedTime": "2020-01-26T11:15:24.129Z"
},
{
 "AccountId": "123456789012",
 "AdministratorId": "111122223333",
 "EmailAddress": "jstiles@example.com",
 "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899",
 "InvitedTime": "2020-01-24T12:35:0.1587Z",
 "MasterId": "111122223333",
 "PercentOfGraphUtilization": 2,
 "PercentOfGraphUtilizationUpdatedTime": 1586287843,
 "Status": "ENABLED",
 "UpdatedTime": "2020-01-25T05:35:11.623Z",
 "VolumeUsageInBytes": 200,
 "VolumeUsageUpdatedTime": "2020-01-26T11:14:26.427Z"
}
]
}
```

See Also

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

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

ListTagsForResource

Returns the tag values that are assigned to a behavior graph.

Request Syntax

```
GET /tags/ResourceArn HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

ResourceArn (p. 39)

The ARN of the behavior graph for which to retrieve the tag values.

Pattern: `^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]{32}?$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
    "Tags": {
        "string" : "string"
    }
}
```

Response Elements

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

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

Tags (p. 39)

The tag values that are assigned to the behavior graph. The request returns up to 50 tag values.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Key Pattern: `^(?!aws:)[a-zA-Z+-=._:/]+$`

Value Length Constraints: Maximum length of 256.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 63).

InternalServerException

The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ResourceNotFoundException

The request refers to a nonexistent resource.

HTTP Status Code: 404

ValidationException

The request parameters are invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of ListTagsForResource.

Sample Request

```
GET /tags/resourceArn HTTP/1.1
Content-Type: application/json
Content-Length: 94
Date: Fri, 24 Jan 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive

{
 "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899"
}
```

Example

This example illustrates one usage of ListTagsForResource.

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: 33
Date: Fri, 24 Jan 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive
```

```
{
    "Tags": {
        "Department" : "Finance"
    }
}
```

See Also

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

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

RejectInvitation

Rejects an invitation to contribute the account data to a behavior graph. This operation must be called by a member account that has the `INVITED` status.

Request Syntax

```
POST /invitation/removal HTTP/1.1
Content-type: application/json

{
    "GraphArn": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

GraphArn (p. 42)

> The ARN of the behavior graph to reject the invitation to.
>
> The member account's current member status in the behavior graph must be `INVITED`.
>
> Type: String
>
> Pattern: `^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]{32}?$`
>
> Required: Yes

Response Syntax

```
HTTP/1.1 200
```

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 .

ConflictException

> The request attempted an invalid action.
>
> HTTP Status Code: 409

InternalServerException

The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ResourceNotFoundException

The request refers to a nonexistent resource.

HTTP Status Code: 404

ValidationException

The request parameters are invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of RejectInvitation.

Sample Request

```
POST /invitation/removal HTTP/1.1
Host: api.detective.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 94
Authorization: AUTHPARAMS
X-Amz-Date: 20200124T193018Z
User-Agent: aws-cli/1.14.29 Python/2.7.9 Windows/8 botocore/1.8.33

{
 "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899"
}
```

Example

This example illustrates one usage of RejectInvitation.

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Date: Fri, 24 Jan 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

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

StartMonitoringMember

Sends a request to enable data ingest for a member account that has a status of
`ACCEPTED_BUT_DISABLED`.

For valid member accounts, the status is updated as follows.

- If Detective enabled the member account, then the new status is `ENABLED`.
- If Detective cannot enable the member account, the status remains `ACCEPTED_BUT_DISABLED`.

Request Syntax

```
POST /graph/member/monitoringstate HTTP/1.1
Content-type: application/json

{
   "AccountId": "string",
   "GraphArn": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

AccountId (p. 45)

   The account ID of the member account to try to enable.

   The account must be an invited member account with a status of `ACCEPTED_BUT_DISABLED`.

   Type: String

   Length Constraints: Fixed length of 12.

   Pattern: `^[0-9]+$`

   Required: Yes

GraphArn (p. 45)

   The ARN of the behavior graph.

   Type: String

   Pattern: `^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]{32}?$`

   Required: Yes

Response Syntax

```
HTTP/1.1 200
```

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. 63).

ConflictException

The request attempted an invalid action.

HTTP Status Code: 409

InternalServerException

The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ResourceNotFoundException

The request refers to a nonexistent resource.

HTTP Status Code: 404

ServiceQuotaExceededException

This request cannot be completed for one of the following reasons.

- The request would cause the number of member accounts in the behavior graph to exceed the maximum allowed. A behavior graph cannot have more than 1200 member accounts.
- The request would cause the data rate for the behavior graph to exceed the maximum allowed.
- Detective is unable to verify the data rate for the member account. This is usually because the member account is not enrolled in Amazon GuardDuty.

HTTP Status Code: 402

ValidationException

The request parameters are invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of StartMonitoringMember.

Sample Request

```
POST /graph/member/monitoringstate HTTP/1.1
Host: api.detective.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 127
Authorization: AUTHPARAMS
X-Amz-Date: 20200127T193018Z
User-Agent: aws-cli/1.14.29 Python/2.7.9 Windows/8 botocore/1.8.33
```

```
{
 "AccountId": "444455556666",
 "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899"
}
```

Example

This example illustrates one usage of StartMonitoringMember.

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Date: Thu, 21 Feb 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive
```

See Also

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

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

TagResource

Applies tag values to a behavior graph.

Request Syntax

```
POST /tags/ResourceArn HTTP/1.1
Content-type: application/json

{
    "Tags": {
        "string" : "string"
    }
}
```

URI Request Parameters

The request uses the following URI parameters.

ResourceArn (p. 48)

The ARN of the behavior graph to assign the tags to.

Pattern: `^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]{32}?$`

Required: Yes

Request Body

The request accepts the following data in JSON format.

Tags (p. 48)

The tags to assign to the behavior graph. You can add up to 50 tags. For each tag, you provide the tag key and the tag value. Each tag key can contain up to 128 characters. Each tag value can contain up to 256 characters.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Key Pattern: `^(?!aws:)[a-zA-Z+-=._:/]+$`

Value Length Constraints: Maximum length of 256.

Required: Yes

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 63).

InternalServerException

The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ResourceNotFoundException

The request refers to a nonexistent resource.

HTTP Status Code: 404

ValidationException

The request parameters are invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of TagResource.

Sample Request

```
POST /tags/resourceArn HTTP/1.1
Content-type: application/json
Host: api.detective.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 126
Authorization: AUTHPARAMS
X-Amz-Date: 20200127T193018Z
User-Agent: aws-cli/1.14.29 Python/2.7.9 Windows/8 botocore/1.8.33

{
   "GraphArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899",
   "Tags": {
      "Department" : "Finance"
   }
}
```

Example

This example illustrates one usage of TagResource.

Sample Response

```
HTTP/1.1 204 OK
```

```
Content-Length: 0
Date: Thu, 25 Feb 2021 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive
```

See Also

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

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

UntagResource

Removes tags from a behavior graph.

Request Syntax

```
DELETE /tags/ResourceArn?tagKeys=TagKeys HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

ResourceArn (p. 51)

The ARN of the behavior graph to remove the tags from.

Pattern: `^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]{32}?$`

Required: Yes

TagKeys (p. 51)

The tag keys of the tags to remove from the behavior graph. You can remove up to 50 tags at a time.

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

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

Pattern: `^(?!aws:)[a-zA-Z+-=._:/]+$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see .

InternalServerException

The request was valid but failed because of a problem with the service.

HTTP Status Code: 500

ResourceNotFoundException

The request refers to a nonexistent resource.

HTTP Status Code: 404

ValidationException

The request parameters are invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of UntagResource.

Sample Request

```
DELETE /tags/resourceArn?tagKeys=TagKeys HTTP/1.1
Content-type: application/json
Host: api.detective.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 126
Authorization: AUTHPARAMS
X-Amz-Date: 20200127T193018Z
User-Agent: aws-cli/1.14.29 Python/2.7.9 Windows/8 botocore/1.8.33

{
    "ResourceArn": "arn:aws:detective:us-
east-1:111122223333:graph:027c7c4610ea4aacaf0b883093cab899",
    "TagKeys": ["Department"]
}
```

Example

This example illustrates one usage of UntagResource.

Sample Response

```
HTTP/1.1 204 OK
Content-Length: 0
Date: Thu, 21 Feb 2020 23:07:46 GMT
x-amzn-RequestId: 397d0549-0092-11e8-a0ee-a7f9aa6e7572
Connection: Keep-alive
```

See Also

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

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

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

Data Types

The Amazon Detective 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:

- Account (p. 55)
- Graph (p. 56)
- MemberDetail (p. 57)
- UnprocessedAccount (p. 60)

Account

An AWS account that is the administrator account of or a member of a behavior graph.

Contents

AccountId

The account identifier of the AWS account.

Type: String

Length Constraints: Fixed length of 12.

Pattern: `^[0-9]+$`

Required: Yes

EmailAddress

The AWS account root user email address for the AWS account.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^.+@.+$`

Required: Yes

See Also

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

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

Graph

A behavior graph in Detective.

Contents

Arn

The ARN of the behavior graph.

Type: String

Pattern: `^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]{32}?$`

Required: No

CreatedTime

The date and time that the behavior graph was created. The value is an ISO8601 formatted string. For example, `2021-08-18T16:35:56.284Z`.

Type: Timestamp

Required: No

See Also

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

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

MemberDetail

Details about a member account that was invited to contribute to a behavior graph.

Contents

AccountId

The AWS account identifier for the member account.

Type: String

Length Constraints: Fixed length of 12.

Pattern: `^[0-9]+$`

Required: No

AdministratorId

The AWS account identifier of the administrator account for the behavior graph.

Type: String

Length Constraints: Fixed length of 12.

Pattern: `^[0-9]+$`

Required: No

DisabledReason

For member accounts with a status of `ACCEPTED_BUT_DISABLED`, the reason that the member account is not enabled.

The reason can have one of the following values:

- `VOLUME_TOO_HIGH` - Indicates that adding the member account would cause the data volume for the behavior graph to be too high.
- `VOLUME_UNKNOWN` - Indicates that Detective is unable to verify the data volume for the member account. This is usually because the member account is not enrolled in Amazon GuardDuty.

Type: String

Valid Values: `VOLUME_TOO_HIGH | VOLUME_UNKNOWN`

Required: No

EmailAddress

The AWS account root user email address for the member account.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^.+@.+$`

Required: No

GraphArn

The ARN of the behavior graph that the member account was invited to.

Type: String

Pattern: `^arn:aws[-\w]{0,10}?:detective:[-\w]{2,20}?:\d{12}?:graph:[abcdef\d]{32}?$`

Required: No

InvitedTime

The date and time that Detective sent the invitation to the member account. The value is an ISO8601 formatted string. For example, `2021-08-18T16:35:56.284Z`.

Type: Timestamp

Required: No

MasterId

This member has been deprecated.

The AWS account identifier of the administrator account for the behavior graph.

Type: String

Length Constraints: Fixed length of 12.

Pattern: `^[0-9]+$`

Required: No

PercentOfGraphUtilization

This member has been deprecated.

The member account data volume as a percentage of the maximum allowed data volume. 0 indicates 0 percent, and 100 indicates 100 percent.

Note that this is not the percentage of the behavior graph data volume.

For example, the data volume for the behavior graph is 80 GB per day. The maximum data volume is 160 GB per day. If the data volume for the member account is 40 GB per day, then `PercentOfGraphUtilization` is 25. It represents 25% of the maximum allowed data volume.

Type: Double

Required: No

PercentOfGraphUtilizationUpdatedTime

This member has been deprecated.

The date and time when the graph utilization percentage was last updated. The value is an ISO8601 formatted string. For example, `2021-08-18T16:35:56.284Z`.

Type: Timestamp

Required: No

Status

The current membership status of the member account. The status can have one of the following values:

- `INVITED` - Indicates that the member was sent an invitation but has not yet responded.
- `VERIFICATION_IN_PROGRESS` - Indicates that Detective is verifying that the account identifier and email address provided for the member account match. If they do match, then Detective

sends the invitation. If the email address and account identifier don't match, then the member cannot be added to the behavior graph.

- `VERIFICATION_FAILED` - Indicates that the account and email address provided for the member account do not match, and Detective did not send an invitation to the account.
- `ENABLED` - Indicates that the member account accepted the invitation to contribute to the behavior graph.
- `ACCEPTED_BUT_DISABLED` - Indicates that the member account accepted the invitation but is prevented from contributing data to the behavior graph. `DisabledReason` provides the reason why the member account is not enabled.

Member accounts that declined an invitation or that were removed from the behavior graph are not included.

Type: String

Valid Values: `INVITED | VERIFICATION_IN_PROGRESS | VERIFICATION_FAILED | ENABLED | ACCEPTED_BUT_DISABLED`

Required: No

UpdatedTime

The date and time that the member account was last updated. The value is an ISO8601 formatted string. For example, `2021-08-18T16:35:56.284Z`.

Type: Timestamp

Required: No

VolumeUsageInBytes

The data volume in bytes per day for the member account.

Type: Long

Required: No

VolumeUsageUpdatedTime

The date and time when the member account data volume was last updated. The value is an ISO8601 formatted string. For example, `2021-08-18T16:35:56.284Z`.

Type: Timestamp

Required: No

See Also

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

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

UnprocessedAccount

A member account that was included in a request but for which the request could not be processed.

Contents

AccountId

The AWS account identifier of the member account that was not processed.

Type: String

Length Constraints: Fixed length of 12.

Pattern: `^[0-9]+$`

Required: No

Reason

The reason that the member account request could not be processed.

Type: String

Required: No

See Also

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

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

Common Parameters

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

Action

The action to be performed.

Type: string

Required: Yes

Version

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

Type: string

Required: Yes

X-Amz-Algorithm

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

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

Type: string

Valid Values: `AWS4-HMAC-SHA256`

Required: Conditional

X-Amz-Credential

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

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

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

Type: string

Required: Conditional

X-Amz-Date

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

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is

not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see Handling Dates in Signature Version 4 in the *Amazon Web Services General Reference*.

Type: string

Required: Conditional

X-Amz-Security-Token

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

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

Type: string

Required: Conditional

X-Amz-Signature

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

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

Type: string

Required: Conditional

X-Amz-SignedHeaders

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

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

Type: string

Required: Conditional

Common Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 400

InternalFailure

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

HTTP Status Code: 500

InvalidAction

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

HTTP Status Code: 400

InvalidClientTokenId

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

HTTP Status Code: 403

InvalidParameterCombination

Parameters that must not be used together were used together.

HTTP Status Code: 400

InvalidParameterValue

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

HTTP Status Code: 400

InvalidQueryParameter

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

HTTP Status Code: 400

MalformedQueryString

The query string contains a syntax error.

HTTP Status Code: 404

MissingAction

The request is missing an action or a required parameter.

HTTP Status Code: 400

MissingAuthenticationToken

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

HTTP Status Code: 403

MissingParameter

A required parameter for the specified action is not supplied.

HTTP Status Code: 400

NotAuthorized

You do not have permission to perform this action.

HTTP Status Code: 400

OptInRequired

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

HTTP Status Code: 403

RequestExpired

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

HTTP Status Code: 400

ServiceUnavailable

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

HTTP Status Code: 503

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

ValidationError

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

HTTP Status Code: 400