AWS Certificate Manager
Private Certificate Authority
AWS Private Certificate Authority Documentation
API Version 2017-08-22
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Welcome

Note
This is the ACM Private CA API Reference. It provides descriptions, syntax, and usage examples for each of the actions and data types involved in creating and managing private certificate authorities (CA) for your organization.

The documentation for each action shows the Query API request parameters and the XML response. Alternatively, you can use one of the AWS SDKs to access an API that's tailored to the programming language or platform that you're using. For more information, see AWS SDKs.

Note
Each ACM Private CA API action has a quota that determines the number of times the action can be called per second. For more information, see API Rate Quotas in ACM Private CA in the ACM Private CA user guide.

This document was last published on April 3, 2020.
Actions

The following actions are supported:

- CreateCertificateAuthority (p. 3)
- CreateCertificateAuthorityAuditReport (p. 8)
- CreatePermission (p. 12)
- DeleteCertificateAuthority (p. 16)
- DeletePermission (p. 19)
- DescribeCertificateAuthority (p. 22)
- DescribeCertificateAuthorityAuditReport (p. 26)
- GetCertificate (p. 29)
- GetCertificateAuthorityCertificate (p. 33)
- GetCertificateAuthorityCsr (p. 36)
- ImportCertificateAuthorityCertificate (p. 39)
- IssueCertificate (p. 43)
- ListCertificateAuthorities (p. 48)
- ListPermissions (p. 53)
- ListTags (p. 57)
- RestoreCertificateAuthority (p. 61)
- RevokeCertificate (p. 64)
- TagCertificateAuthority (p. 68)
- UntagCertificateAuthority (p. 71)
- UpdateCertificateAuthority (p. 74)
CreateCertificateAuthority

Creates a root or subordinate private certificate authority (CA). You must specify the CA configuration, the certificate revocation list (CRL) configuration, the CA type, and an optional idempotency token to avoid accidental creation of multiple CAs. The CA configuration specifies the name of the algorithm and key size to be used to create the CA private key, the type of signing algorithm that the CA uses, and X.500 subject information. The CRL configuration specifies the CRL expiration period in days (the validity period of the CRL), the Amazon S3 bucket that will contain the CRL, and a CNAME alias for the S3 bucket that is included in certificates issued by the CA. If successful, this action returns the Amazon Resource Name (ARN) of the CA.

**Note**
Both PCA and the IAM principal must have permission to write to the S3 bucket that you specify. If the IAM principal making the call does not have permission to write to the bucket, then an exception is thrown. For more information, see Configure Access to ACM Private CA.

**Request Syntax**

```json
{
  "CertificateAuthorityConfiguration": {
    "KeyAlgorithm": "string",
    "SigningAlgorithm": "string",
    "Subject": {
      "CommonName": "string",
      "Country": "string",
      "DistinguishedNameQualifier": "string",
      "GenerationQualifier": "string",
      "GivenName": "string",
      "Initials": "string",
      "Locality": "string",
      "Organization": "string",
      "OrganizationalUnit": "string",
      "Pseudonym": "string",
      "Surname": "string",
      "Title": "string"
    }
  },
  "CertificateAuthorityType": "string",
  "IdempotencyToken": "string",
  "RevocationConfiguration": {
    "CrlConfiguration": {
      "CustomCname": "string",
      "Enabled": boolean,
      "ExpirationInDays": number,
      "S3BucketName": "string"
    }
  },
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ]
}
```
Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

CertificateAuthorityConfiguration (p. 3)

Name and bit size of the private key algorithm, the name of the signing algorithm, and X.500 certificate subject information.

Type: CertificateAuthorityConfiguration (p. 84) object

Required: Yes

CertificateAuthorityType (p. 3)

The type of the certificate authority.

Type: String

Valid Values: ROOT | SUBORDINATE

Required: Yes

IdempotencyToken (p. 3)

Alphanumeric string that can be used to distinguish between calls to CreateCertificateAuthority. For a given token, ACM Private CA creates exactly one CA. If you issue a subsequent call using the same token, ACM Private CA returns the ARN of the existing CA and takes no further action. If you change the idempotency token across multiple calls, ACM Private CA creates a unique CA for each unique token.

Type: String


Pattern: [\u0009\u000A\u000D\u0020-\u00FF]*

Required: No

RevocationConfiguration (p. 3)

Contains a Boolean value that you can use to enable a certification revocation list (CRL) for the CA, the name of the S3 bucket to which ACM Private CA will write the CRL, and an optional CNAME alias that you can use to hide the name of your bucket in the CRL Distribution Points extension of your CA certificate. For more information, see the CrlConfiguration structure.

Type: RevocationConfiguration (p. 89) object

Required: No

Tags (p. 3)

Key-value pairs that will be attached to the new private CA. You can associate up to 50 tags with a private CA. For information using tags with IAM to manage permissions, see Controlling Access Using IAM Tags.

Type: Array of Tag (p. 90) objects

Array Members: Minimum number of 1 item. Maximum number of 50 items.
Required: No

Response Syntax

```json
{
    "CertificateAuthorityArn": "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.

CertificateAuthorityArn (p. 5)

If successful, the Amazon Resource Name (ARN) of the certificate authority (CA). This is of the form:

```
```

Type: String


Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:[\w+=/,.@-]*:[0-9]*:[\w+=/,.@-]+(/[\w+=/,.@-]+)*`

Errors

For information about the errors that are common to all actions, see Common Errors (p. 94).

InvalidArgsException

One or more of the specified arguments was not valid.

HTTP Status Code: 400

InvalidPolicyException

The S3 bucket policy is not valid. The policy must give ACM Private CA rights to read from and write to the bucket and find the bucket location.

HTTP Status Code: 400

InvalidTagException

The tag associated with the CA is not valid. The invalid argument is contained in the message field.

HTTP Status Code: 400

LimitExceededException

An ACM Private CA quota has been exceeded. See the exception message returned to determine the quota that was exceeded.

HTTP Status Code: 400
Examples

Example

Sample Request

```
POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 512
X-Amz-Target: ACMPrivateCA.CreateCertificateAuthority
X-Amz-Date: 20180515T165448Z
User-Agent: aws-cli/1.15.4 Python/2.7.9 Windows/8 botocore/1.10.4
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=AWS_Access_Key_ID/20180515/AWS_Region/acm-pca/aws4_request,
SignedHeaders=content-type;host;x-amz-date;x-amz-target,
Signature=6fc58aa6789659cb4e0d0b48a2562d982b68edd56ea05c94c2af9aeafbe

{
  "IdempotencyToken": "98256344",
  "CertificateAuthorityConfiguration": {
    "KeyAlgorithm": "RSA_2048",
    "SigningAlgorithm": "SHA256WITHRSA",
    "Subject": {
      "Locality": "Seattle",
      "Country": "US",
      "CommonName": "www.example.com",
      "State": "WA",
      "Organization": "Example Ltd.",
      "OrganizationalUnit": "Corporate"
    }
  },
  "CertificateAuthorityType": "SUBORDINATE",
  "RevocationConfiguration": {
    "CrlConfiguration": {
      "CustomCname": "CRL",
      "Enabled": true,
      "S3BucketName": "your-crl-bucket-name",
      "ExpirationInDays": 3650
    }
  }
}
```
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
CreateCertificateAuthorityAuditReport

Creates an audit report that lists every time that your CA private key is used. The report is saved in the Amazon S3 bucket that you specify on input. The IssueCertificate and RevokeCertificate actions use the private key.

**Note**
Both PCA and the IAM principal must have permission to write to the S3 bucket that you specify. If the IAM principal making the call does not have permission to write to the bucket, then an exception is thrown. For more information, see Configure Access to ACM Private CA.

**Request Syntax**

```json
{
   "AuditReportResponseFormat": "string",
   "CertificateAuthorityArn": "string",
   "S3BucketName": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

**AuditReportResponseFormat (p. 8)**

The format in which to create the report. This can be either JSON or CSV.

Type: String

Valid Values: JSON | CSV

Required: Yes

**CertificateAuthorityArn (p. 8)**

The Amazon Resource Name (ARN) of the CA to be audited. This is of the form:

```
```

Type: String


Pattern: `arn::w+=/,.@-]+:[\w+=/,.@-]+:[\w+=/,.@-]*:[0-9]*:[\w+=/,.@-]+(/[\w+=/,.@-]+)*`

Required: Yes

**S3BucketName (p. 8)**

The name of the S3 bucket that will contain the audit report.

Type: String

Required: Yes
Response Syntax

```
{
    "AuditReportId": "string",
    "S3Key": "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.

`AuditReportId` (p. 9)

An alphanumeric string that contains a report identifier.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `[a-z0-9]{8}-[a-z0-9]{4}-[a-z0-9]{4}-[a-z0-9]{4}-[a-z0-9]{12}`

`S3Key` (p. 9)

The key that uniquely identifies the report file in your S3 bucket.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 94).

`InvalidArgsException`

One or more of the specified arguments was not valid.

HTTP Status Code: 400

`InvalidArnException`

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

`InvalidStateException`

The private CA is in a state during which a report or certificate cannot be generated.

HTTP Status Code: 400

`RequestFailedException`

The request has failed for an unspecified reason.

HTTP Status Code: 400

`RequestInProgressException`

Your request is already in progress.
HTTP Status Code: 400

ResourceNotFoundException

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

Examples

Example

Sample Request

```plaintext
POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 216
X-Amz-Target: ACMPrivateCA.CreateCertificateAuthorityAuditReport
X-Amz-Date: 20180226T184819Z
User-Agent: aws-cli/1.14.28 Python/2.7.9 Windows/8 botocore/1.8.32
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=AWS_Access_Key_ID/20180226/AWS_Region/acm-pca/aw4_request,
SignedHeaders=content-type;host;x-amz-date;x-amz-target,
Signature=62380db816189148e510734f0ef2bfec08248fb3f447f64d740f31757e1beda0

{  
  "AuditReportResponseFormat": "JSON",
  "S3BucketName": "your-bucket-name",
}
```

Example

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 15 May 2018 16:29:03 GMT
Content-Type: application/x-amz-json-1.1
Content-Length: 158
x-amzn-RequestId: e8516078-ff66-4e2a-bc38-eb1aaae2d886
Connection: keep-alive

{
  "AuditReportId": "9654b603-d6a9-4c57-952a-ebcc95631fab",
  "S3Key": "audit-report/PCA_ID/9654b603-d6a9-4c57-952a-ebcc95631fab.json"
}
```

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
CreatePermission

Assigns permissions from a private CA to a designated AWS service. Services are specified by their service principals and can be given permission to create and retrieve certificates on a private CA. Services can also be given permission to list the active permissions that the private CA has granted. For ACM to automatically renew your private CA’s certificates, you must assign all possible permissions from the CA to the ACM service principal.

At this time, you can only assign permissions to ACM (acm.amazonaws.com). Permissions can be revoked with the DeletePermission action and listed with the ListPermissions action.

Request Syntax

```
{
  "Actions": [ "string" ],
  "CertificateAuthorityArn": "string",
  "Principal": "string",
  "SourceAccount": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

**Actions (p. 12)**

The actions that the specified AWS service principal can use. These include IssueCertificate, GetCertificate, and ListPermissions.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 3 items.

Valid Values: IssueCertificate | GetCertificate | ListPermissions

Required: Yes

**CertificateAuthorityArn (p. 12)**

The Amazon Resource Name (ARN) of the CA that grants the permissions. You can find the ARN by calling the ListCertificateAuthorities action. This must have the following form:

```
```

Type: String


Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:[\w+=/,.@-]*:[0-9]*:[\w+=/,.@-]+(/[\w+=/,.@-]+)*`

Required: Yes
Principal (p. 12)
The AWS service or identity that receives the permission. At this time, the only valid principal is acm.amazonaws.com.

Type: String
Length Constraints: Minimum length of 0. Maximum length of 128.
Pattern: ^[^*]+$
Required: Yes

SourceAccount (p. 12)
The ID of the calling account.
Type: String
Length Constraints: Fixed length of 12.
Pattern: [0-9]+
Required: No

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. 94).

InvalidArnException
The requested Amazon Resource Name (ARN) does not refer to an existing resource.
HTTP Status Code: 400

InvalidStateException
The private CA is in a state during which a report or certificate cannot be generated.
HTTP Status Code: 400

LimitExceededException
An ACM Private CA quota has been exceeded. See the exception message returned to determine the quota that was exceeded.
HTTP Status Code: 400

PermissionAlreadyExistsException
The designated permission has already been given to the user.
HTTP Status Code: 400

RequestFailedException
The request has failed for an unspecified reason.
HTTP Status Code: 400
ResourceNotFoundException

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

Examples

Example

Sample Request

POST / HTTP/1.1
Host: acm.us-east-1.amazonaws.com
X-Amz-Target: CertificateManager.CreatePermission
X-Amz-Date: 20190207T170903Z
User-Agent: aws-cli/1.10.20 Python/2.7.3 Linux/3.13.0-83-generic botocore/1.4.11
Content-Type: application/x-amz-json-1.1
Authorization: AUTHPARAMS,
SignedHeaders=content-type;host;user-agent;x-amz-date;x-amz-target,
Signature=379429306c5e89b9b4be5b35e29c26cc1da38215d8055a5ed0bda57bcc881cc

{
  "Actions": {
    "IssueCertificate",
    "GetCertificate",
    "ListPermissions"
  },
  "Principal": "acm.amazonaws.com",
  "SourceAccount": "012345678901"
}

Example

Sample Response

HTTP/1.1 200 OK
x-amzn-RequestId: 3c8d676d-025e-11e6-8823-93164b47113c
Content-Type: application/x-amz-json-1.1
Content-Length: 0
Date: Thu, Feb 7 2019 17:09:05 GMT

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
See Also

- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteCertificateAuthority

Deletes a private certificate authority (CA). You must provide the Amazon Resource Name (ARN) of the private CA that you want to delete. You can find the ARN by calling the ListCertificateAuthorities action.

**Note**
Deleting a CA will invalidate other CAs and certificates below it in your CA hierarchy.

Before you can delete a CA that you have created and activated, you must disable it. To do this, call the UpdateCertificateAuthority action and set the CertificateAuthorityStatus parameter to DISABLED.

Additionally, you can delete a CA if you are waiting for it to be created (that is, the status of the CA is CREATING). You can also delete it if the CA has been created but you haven't yet imported the signed certificate into ACM Private CA (that is, the status of the CA is PENDING_CERTIFICATE).

When you successfully call DeleteCertificateAuthority, the CA's status changes to DELETED. However, the CA won't be permanently deleted until the restoration period has passed. By default, if you do not set the PermanentDeletionTimeInDays parameter, the CA remains restorable for 30 days. You can set the parameter from 7 to 30 days. The DescribeCertificateAuthority action returns the time remaining in the restoration window of a private CA in the DELETED state. To restore an eligible CA, call the RestoreCertificateAuthority action.

**Request Syntax**

```
{
   "CertificateAuthorityArn": "string",
   "PermanentDeletionTimeInDays": number
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

**CertificateAuthorityArn (p. 16)**

The Amazon Resource Name (ARN) that was returned when you called CreateCertificateAuthority. This must have the following form:

```
```

Type: String


Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:[\w+=/,.@-]*:[0-9]*:[\w+=/,.@-]+(/[\w+=/,.@-]+)*`

Required: Yes

**PermanentDeletionTimeInDays (p. 16)**

The number of days to make a CA restorable after it has been deleted. This can be anywhere from 7 to 30 days, with 30 being the default.
Type: Integer


Required: No

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. 94).

ConcurrentModificationException

A previous update to your private CA is still ongoing.

HTTP Status Code: 400

InvalidArnException

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

InvalidStateException

The private CA is in a state during which a report or certificate cannot be generated.

HTTP Status Code: 400

ResourceNotFoundException

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

Examples

Example

Sample Request

```
POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 163
X-Amz-Target: ACMPrivateCA.DeleteCertificateAuthority
X-Amz-Date: 20180515T160248Z
User-Agent: aws-cli/1.15.4 Python/2.7.9 Windows/8 botocore/1.10.4
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=
AWS_Access_Key_ID/20180515/AWS_Region/acm-pca/aws4_request,
SignedHeaders=content-type;host;x-amz-date;x-amz-target,
Signature=8f7e5b799989c607156141bc6856eb48acc45def7eced2b27fbaa11f34d7bd1

```
Example

Sample Response

This function does not return a value.

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
DeletePermission

Revoke permissions that a private CA assigned to a designated AWS service. Permissions can be created with the CreatePermission action and listed with the ListPermissions action.

Request Syntax

```
{
    "CertificateAuthorityArn": "string",
    "Principal": "string",
    "SourceAccount": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

CertificateAuthorityArn (p. 19)

The Amazon Resource Number (ARN) of the private CA that issued the permissions. You can find the CA's ARN by calling the ListCertificateAuthorities action. This must have the following form:

```
```

Type: String


Pattern: `arn:\[[w+=/,.@-]+:\[w+=/,.@-]+:*[0-9]*:*[w+=,.,@-]+(/[\w+=/,.@-]+)*\]`

Required: Yes

Principal (p. 19)

The AWS service or identity that will have its CA permissions revoked. At this time, the only valid service principal is `acm.amazonaws.com`.

Type: String

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

Pattern: `^[^*]+$`

Required: Yes

SourceAccount (p. 19)

The AWS account that calls this action.

Type: String

Length Constraints: Fixed length of 12.

Pattern: `[0-9]+`
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. 94).

InvalidArnException

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

InvalidStateException

The private CA is in a state during which a report or certificate cannot be generated.

HTTP Status Code: 400

RequestFailedException

The request has failed for an unspecified reason.

HTTP Status Code: 400

ResourceNotFoundException

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

Examples

Example

Sample Request

```
POST / HTTP/1.1
Host: acm.us-east-1.amazonaws.com
X-Amz-Target: CertificateManager.DeletePermission
X-Amz-Date: 20190213T171121Z
User-Agent: aws-cli/1.10.20 Python/2.7.3 Linux/3.13.0-83-generic botocore/1.4.11
Content-Type: application/x-amz-json-1.1
Authorization: AUTHPARAMS,
SignedHeaders=content-type;host;user-agent;x-amz-date;x-amz-target,
Signature=3c9429306c5e89b9b4be5b35e29c26cc1da32a15d8055a5ed0bda57bce81cc

{
  "Actions": {
    "GetCertificate",
    "CreateCertificate",
    "ListPermissions"
  },
  "Principal": "acm.amazonaws.com",
}
```
"SourceAccount": "012345678901"
}

Example

Sample Response

HTTP/1.1 200 OK
x-amzn-RequestId: 3c8d676d-025e-11e6-8823-93164b47113c
Content-Type: application/x-amz-json-1.1
Content-Length: 0
Date: Thu, Feb 13 2019 17:11:22 GMT

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
DescribeCertificateAuthority

Lists information about your private certificate authority (CA). You specify the private CA on input by its ARN (Amazon Resource Name). The output contains the status of your CA. This can be any of the following:

- **CREATING** - ACM Private CA is creating your private certificate authority.
- **PENDING_CERTIFICATE** - The certificate is pending. You must use your ACM Private CA-hosted or on-premises root or subordinate CA to sign your private CA CSR and then import it into PCA.
- **ACTIVE** - Your private CA is active.
- **DISABLED** - Your private CA has been disabled.
- **EXPIRED** - Your private CA certificate has expired.
- **FAILED** - Your private CA has failed. Your CA can fail because of problems such as a network outage or backend AWS failure or other errors. A failed CA can never return to the pending state. You must create a new CA.
- **DELETED** - Your private CA is within the restoration period, after which it is permanently deleted. The length of time remaining in the CA's restoration period is also included in this action's output.

**Request Syntax**

```json
{
  "CertificateAuthorityArn": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

**CertificateAuthorityArn (p. 22)**

The Amazon Resource Name (ARN) that was returned when you called CreateCertificateAuthority. This must be of the form:

```text
```

- **Type:** String
- **Length Constraints:** Minimum length of 5. Maximum length of 200.
- **Pattern:** `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:[\w+=/,.@-]*:0-9*:[\w+=/,.@-]+(/[\w+=/,.@-]*)*`
- **Required:** Yes

**Response Syntax**

```json
{
}
```
"CertificateAuthority": {  
  "Arn": "string",
  "CertificateAuthorityConfiguration": {
    "KeyAlgorithm": "string",
    "SigningAlgorithm": "string",
    "Subject": {
      "CommonName": "string",
      "Country": "string",
      "DistinguishedNameQualifier": "string",
      "GenerationQualifier": "string",
      "GivenName": "string",
      "Initials": "string",
      "Locality": "string",
      "Organization": "string",
      "OrganizationalUnit": "string",
      "Pseudonym": "string",
      "SerialNumber": "string",
      "State": "string",
      "Surname": "string",
      "Title": "string"
    }
  },
  "CreatedAt": number,
  "FailureReason": "string",
  "LastStateChangeAt": number,
  "NotAfter": number,
  "NotBefore": number,
  "RestorableUntil": number,
  "RevocationConfiguration": {
    "CrlConfiguration": {
      "CustomCname": "string",
      "Enabled": boolean,
      "ExpirationInDays": number,
      "S3BucketName": "string"
    }
  },
  "Serial": "string",
  "Status": "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.

CertificateAuthority (p. 22)

A CertificateAuthority structure that contains information about your private CA.

Type: CertificateAuthority (p. 81) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 94).

InvalidArnException

The requested Amazon Resource Name (ARN) does not refer to an existing resource.
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AWS Private Certificate Authority Documentation
Examples

HTTP Status Code: 400

**ResourceNotFoundException**

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

### Examples

#### Example

**Sample Request**

```
POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 128
X-Amz-Target: ACMPrivateCA.DescribeCertificateAuthority
X-Amz-Date: 20180226T175919Z
User-Agent: aws-cli/1.14.28 Python/2.7.9 Windows/8 botocore/1.8.32
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=Access_Key_ID/20180226/AWS_Region/acm-pca/aws4_request,
SignedHeaders=content-type;host;x-amz-date;x-amz-target,
Signature=953a014106627a76d91f55fd86bb1149bf65d578886bf2371aa4c73c56e16a1d

```

**Sample Response**

```
HTTP/1.1 200 OK
Date: Tue, 15 May 2018 17:09:51 GMT
Content-Type: application/x-amz-json-1.1
Content-Length: 713
x-amzn-RequestId: 8d51e9ff-8ae9-4ccf-816a-8e7d9c3dc1af
Connection: keep-alive

{
  "CertificateAuthority": {
    "CertificateAuthorityConfiguration": {
      "KeyAlgorithm": "RSA_2048",
      "SigningAlgorithm": "SHA256WITHRSA",
      "Subject": {
        "CommonName": "www.example.com",
        "Country": "US",
        "Locality": "Seattle",
        "Organization": "Example Company",
        "OrganizationalUnit": "Corporate",
        "State": "WA"
      }
    },
    "CreatedAt": 1.516130652887E9,
    "LastStateChangeAt": 1.516130652887E9,
    "NotAfter": 1.831494803E9,
  }
```
```

"NotBefore": 1.516134803E9,
"RevocationConfiguration": {
  "CrlConfiguration": {
    "CustomCname": "http://somename.crl",
    "Enabled": true,
    "ExpirationInDays": 3650,
    "S3BucketName": "your-bucket-name"
  }
},
"Serial": "4118",
"Status": "ACTIVE",
"Type": "SUBORDINATE"
}
```

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
DescribeCertificateAuthorityAuditReport

Lists information about a specific audit report created by calling the
CreateCertificateAuthorityAuditReport action. Audit information is created every time the certificate
authority (CA) private key is used. The private key is used when you call the IssueCertificate action or the
RevokeCertificate action.

Request Syntax

```json
{
    "AuditReportId": "string",
    "CertificateAuthorityArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common
Parameters (p. 92).

The request accepts the following data in JSON format.

AuditReportId (p. 26)

The report ID returned by calling the CreateCertificateAuthorityAuditReport action.

Type: String

Length Constraints: Fixed length of 36.

Pattern: [a-z0-9](8)-[a-z0-9]{4}-[a-z0-9]{4}-[a-z0-9]{4}-[a-z0-9]{12}

Required: Yes

CertificateAuthorityArn (p. 26)

The Amazon Resource Name (ARN) of the private CA. This must be of the form:


Type: String


Pattern: `arn:[\w+=/,.@-/]+:[\w+=/,.@-/]+:[0-9]*:[\w+=,.@-/]+(/[\w+=/,.@-/])*`

Required: Yes

Response Syntax

```json
{
    "AuditReportStatus": "string",
    "CreatedAt": number,
    "S3BucketName": "string",
    "S3Key": "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.

**AuditReportStatus (p. 26)**

Specifies whether report creation is in progress, has succeeded, or has failed.

Type: String

Valid Values: CREATING | SUCCESS | FAILED

**CreatedAt (p. 26)**

The date and time at which the report was created.

Type: Timestamp

**S3BucketName (p. 26)**

Name of the S3 bucket that contains the report.

Type: String

**S3Key (p. 26)**

S3 key that uniquely identifies the report file in your S3 bucket.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 94).

**InvalidArgsException**

One or more of the specified arguments was not valid.

HTTP Status Code: 400

**InvalidArnException**

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

**ResourceNotFound Exception**

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

Examples

Example

Sample Request

```
POST / HTTP/1.1
```

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Example

Sample Response

HTTP/1.1 200 OK
Date: Tue, 15 May 2018 16:33:26 GMT
Content-Type: application/x-amz-json-1.1
Content-Length: 211
x-amzn-RequestId: 3af6a588-856c-48eb-81ab-f2f08fbc618c
Connection: keep-alive

{
    "AuditReportStatus": "SUCCESS",
    "CreatedAt": 1.526401743081E9,
    "S3BucketName": "your-bucket-name",
    "S3Key": "audit-report/PCA_ID/Audit_Report_ID.json"
}

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

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GetCertificate

Retrieves a certificate from your private CA. The ARN of the certificate is returned when you call the IssueCertificate action. You must specify both the ARN of your private CA and the ARN of the issued certificate when calling the GetCertificate action. You can retrieve the certificate if it is in the ISSUED state. You can call the CreateCertificateAuthorityAuditReport action to create a report that contains information about all of the certificates issued and revoked by your private CA.

Request Syntax

```json
{
   "CertificateArn": "string",
   "CertificateAuthorityArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

CertificateArn (p. 29)

The ARN of the issued certificate. The ARN contains the certificate serial number and must be in the following form:

```plaintext
```

Type: String


Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:[\w+=/,.@-]*:[0-9]*:[\w+=,.@-]+(/[\w+=/,.@-]+)*`

Required: Yes

CertificateAuthorityArn (p. 29)

The Amazon Resource Name (ARN) that was returned when you called CreateCertificateAuthority. This must be of the form:

```plaintext
```

Type: String


Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:[\w+=/,.@-]*:[0-9]*:[\w+=,.@-]+(/[\w+=/,.@-]+)*`

Required: Yes
Response Syntax

```json
{
    "Certificate": "string",
    "CertificateChain": "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.

**Certificate (p. 30)**

The base64 PEM-encoded certificate specified by the CertificateArn parameter.

Type: String

**CertificateChain (p. 30)**

The base64 PEM-encoded certificate chain that chains up to the on-premises root CA certificate that you used to sign your private CA certificate.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 94).

**InvalidArnException**

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

**InvalidStateException**

The private CA is in a state during which a report or certificate cannot be generated.

HTTP Status Code: 400

**RequestFailedException**

The request has failed for an unspecified reason.

HTTP Status Code: 400

**RequestInProgressException**

Your request is already in progress.

HTTP Status Code: 400

**ResourceNotFoundException**

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400
Examples

Example

Sample Request

```
POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 292
X-Amz-Target: ACMPrivateCA.GetCertificate
X-Amz-Date: 20180226T194913Z
User-Agent: aws-cli/1.14.28 Python/2.7.9 Windows/8 botocore/1.8.32
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=AWS_Access_Key_ID/20180226/AWS_Region/acm-pca/aws4_request, SignedHeaders=content-type;host;x-amz-date;x-amz-target,
Signature=4fe34fda80c9d5b608be6f5d4f4939444dd7cdd542ec09b1002182e4ef9fcee

{
}
```

Example

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 15 May 2018 17:35:47 GMT
Content-Type: application/x-amz-json-1.1
Content-Length: 4184
x-amzn-RequestId: 9f537e0a-993c-4a03-8aec-0fc52c772b84
Connection: keep-alive

{
  "Certificate": "-----BEGIN CERTIFICATE----- base64-encoded certificate -----END CERTIFICATE-----",
  "CertificateChain": "-----BEGIN CERTIFICATE----- base64-encoded certificate -----END CERTIFICATE-----"
}
```

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
See Also

- AWS SDK for Python
- AWS SDK for Ruby V3
GetCertificateAuthorityCertificate

Retrieves the certificate and certificate chain for your private certificate authority (CA). Both the certificate and the chain are base64 PEM-encoded. The chain does not include the CA certificate. Each certificate in the chain signs the one before it.

Request Syntax

```json
{
   "CertificateAuthorityArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

**CertificateAuthorityArn (p. 33)**

The Amazon Resource Name (ARN) of your private CA. This is of the form:

```
```

Type: String


Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]*:[0-9]*:[\w+=/,.@-]+(/[\w+=/,.@-]+)*`

Required: Yes

Response Syntax

```json
{
   "Certificate": "string",
   "CertificateChain": "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.

**Certificate (p. 33)**

Base64-encoded certificate authority (CA) certificate.

Type: String
CertificateChain (p. 33)

Base64-encoded certificate chain that includes any intermediate certificates and chains up to root on-premises certificate that you used to sign your private CA certificate. The chain does not include your private CA certificate. If this is a root CA, the value will be null.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 94).

InvalidArnException

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

InvalidStateException

The private CA is in a state during which a report or certificate cannot be generated.

HTTP Status Code: 400

ResourceNotFoundException

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

Examples

Example

Sample Request

```plaintext
POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 128
X-Amz-Target: ACMPrivateCA.GetCertificateAuthorityCertificate
X-Amz-Date: 20180226T174831Z
User-Agent: aws-cli/1.14.28 Python/2.7.9 Windows/8 botocore/1.8.32
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=
Access_Key_ID/20180226/
AWS_Region/acs4_request,
Signature=2675f0e4055c234f5b6e155bd3245ca327382d47a160c20f2abc802e1f0eab6

```

Example

Sample Response

```
HTTP/1.1 200 OK
```

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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
GetCertificateAuthorityCsr

Retrieves the certificate signing request (CSR) for your private certificate authority (CA). The CSR is created when you call the CreateCertificateAuthority action. Sign the CSR with your ACM Private CA-hosted or on-premises root or subordinate CA. Then import the signed certificate back into ACM Private CA by calling the ImportCertificateAuthorityCertificate action. The CSR is returned as a base64 PEM-encoded string.

Request Syntax

```
{
   "CertificateAuthorityArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

**CertificateAuthorityArn (p. 36)**

The Amazon Resource Name (ARN) that was returned when you called the CreateCertificateAuthority action. This must be of the form:

```
```

Type: String


Pattern: `arn:[\w+=/,.@-]+:\[\w+=/,.@-]+:[\w+=/,.@-]*:[0-9]*:[\w+=/,.@-]+(/[\w+=/,.@-]+)*`

Required: Yes

Response Syntax

```
{
   "Csr": "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.

**Csr (p. 36)**

The base64 PEM-encoded certificate signing request (CSR) for your private CA certificate.

Type: String
Errors

For information about the errors that are common to all actions, see Common Errors (p. 94).

InvalidArnException

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

InvalidStateException

The private CA is in a state during which a report or certificate cannot be generated.

HTTP Status Code: 400

RequestFailedException

The request has failed for an unspecified reason.

HTTP Status Code: 400

RequestInProgressException

Your request is already in progress.

HTTP Status Code: 400

ResourceNotFoundException

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

Examples

Example

Sample Request

```text
POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 128
X-Amz-Target: ACMPrivateCA.GetCertificateAuthorityCsr
X-Amz-Date: 20180226T175413Z
User-Agent: aws-cli/1.14.28 Python/2.7.9 Windows/8 botocore/1.8.32
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=AWS_Key_ID
    /20180226/AWS_Region/acm-pca/aw4_request,
    SignedHeaders=content-type;host;x-amz-date;x-amz-target,
    Signature=aa5f823a8637e4709fd4b06988934f4ed4f38f2541889a2f6894f09d75f8b071

```

Example

Sample Response

```
HTTP/1.1 200 OK
```

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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
ImportCertificateAuthorityCertificate

Imports a signed private CA certificate into ACM Private CA. This action is used when you are using a chain of trust whose root is located outside ACM Private CA. Before you can call this action, the following preparations must in place:

1. In ACM Private CA, call the CreateCertificateAuthority action to create the private CA that you plan to back with the imported certificate.
2. Call the GetCertificateAuthorityCsr action to generate a certificate signing request (CSR).
3. Sign the CSR using a root or intermediate CA hosted by either an on-premises PKI hierarchy or by a commercial CA.
4. Create a certificate chain and copy the signed certificate and the certificate chain to your working directory.

The following requirements apply when you import a CA certificate.

- You cannot import a non-self-signed certificate for use as a root CA.
- You cannot import a self-signed certificate for use as a subordinate CA.
- Your certificate chain must not include the private CA certificate that you are importing.
- Your ACM Private CA-hosted or on-premises CA certificate must be the last certificate in your chain.
  The subordinate certificate, if any, that your root CA signed must be next to last. The subordinate certificate signed by the preceding subordinate CA must come next, and so on until your chain is built.
- The chain must be PEM-encoded.
- The maximum allowed size of a certificate is 32 KB.
- The maximum allowed size of a certificate chain is 2 MB.

Enforcement of Critical Constraints

ACM Private CA allows the following extensions to be marked critical in the imported CA certificate or chain.

- Basic constraints (must be marked critical)
- Subject alternative names
- Key usage
- Extended key usage
- Authority key identifier
- Subject key identifier
- Issuer alternative name
- Subject directory attributes
- Subject information access
- Certificate policies
- Policy mappings
- Inhibit anyPolicy

ACM Private CA rejects the following extensions when they are marked critical in an imported CA certificate or chain.

- Name constraints
- Policy constraints
• CRL distribution points
• Authority information access
• Freshest CRL
• Any other extension

Request Syntax

```json
{
  "Certificate": blob,
  "CertificateAuthorityArn": "string",
  "CertificateChain": blob
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

Certificate (p. 40)

The PEM-encoded certificate for a private CA. This may be a self-signed certificate in the case of a root CA, or it may be signed by another CA that you control.

Type: Base64-encoded binary data object


Required: Yes

CertificateAuthorityArn (p. 40)

The Amazon Resource Name (ARN) that was returned when you called CreateCertificateAuthority. This must be of the form:

```
```

Type: String


Pattern: `arn:[:\w+=/,.@-]+[:[:\w+=/,.@-]+[:[:\w+=/,.@-]+[:[:0-9]*[:[:\w+=/,.@-]+(:[:\w+=/,.@-]+)*

Required: Yes

CertificateChain (p. 40)

A PEM-encoded file that contains all of your certificates, other than the certificate you're importing, chaining up to your root CA. Your ACM Private CA-hosted or on-premises root certificate is the last in the chain, and each certificate in the chain signs the one preceding.

This parameter must be supplied when you import a subordinate CA. When you import a root CA, there is no chain.

Type: Base64-encoded binary data object
Length Constraints: Minimum length of 0. Maximum length of 2097152.

Required: No

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. 94).

CertificateMismatchException

The certificate authority certificate you are importing does not comply with conditions specified in the certificate that signed it.

HTTP Status Code: 400

ConcurrentModificationException

A previous update to your private CA is still ongoing.

HTTP Status Code: 400

InvalidArnException

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

InvalidRequestException

The request action cannot be performed or is prohibited.

HTTP Status Code: 400

InvalidStateException

The private CA is in a state during which a report or certificate cannot be generated.

HTTP Status Code: 400

MalformedCertificateException

One or more fields in the certificate are invalid.

HTTP Status Code: 400

RequestFailedException

The request has failed for an unspecified reason.

HTTP Status Code: 400

RequestInProgressException

Your request is already in progress.

HTTP Status Code: 400

ResourceNotFoundException

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.
Examples

Example

Sample Request

```
POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 3375
X-Amz-Target: ACMPrivateCA.ImportCertificateAuthorityCertificate
X-Amz-Date: 20180226T203302Z
User-Agent: aws-cli/1.14.28 Python/2.7.9 Windows/8 botocore/1.8.32
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=AWS_Access_Key_ID/20180226/AWS_Region/acm-pca/aws4_request, SignedHeaders=content-type;host;x-amz-date;x-amz-target, Signature=cdf100cc3972f9df2e0f94295a6e378fbac8c1f489363689805504450e605d83

{
  "CertificateChain": "base64-encoded certificate chain",
  "Certificate": "base64-encoded certificate",
}
```

Example

Sample Response

This function does not return a value.

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
IssueCertificate

Uses your private certificate authority (CA) to issue a client certificate. This action returns the Amazon Resource Name (ARN) of the certificate. You can retrieve the certificate by calling the GetCertificate action and specifying the ARN.

Note

You cannot use the ACM ListCertificateAuthorities action to retrieve the ARNs of the certificates that you issue by using ACM Private CA.

Request Syntax

```
{
  "CertificateAuthorityArn": "string",
  "Csr": blob,
  "IdempotencyToken": "string",
  "SigningAlgorithm": "string",
  "TemplateArn": "string",
  "Validity": {
    "Type": "string",
    "Value": number
  }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

CertificateAuthorityArn (p. 43)

The Amazon Resource Name (ARN) that was returned when you called CreateCertificateAuthority. This must be of the form:

```
```

Type: String


Pattern: `arn:[:\w+=/,.@-]+[:\w+=/,.@-]+[:\w+=/,.@-]*[\w+=/,.@-]+(/[\w+=/,.@-]+)*`

Required: Yes

Csr (p. 43)

The certificate signing request (CSR) for the certificate you want to issue. You can use the following OpenSSL command to create the CSR and a 2048 bit RSA private key.

```
openssl req -new -newkey rsa:2048 -days 365 -keyout private/test_cert_priv_key.pem -out csr/test_cert_.csr
```

If you have a configuration file, you can use the following OpenSSL command. The `usr_cert` block in the configuration file contains your X509 version 3 extensions.
openssl req -new -config openssl_rsa.cnf -extensions usr_cert -newkey rsa:2048 -days -365 -keyout private/test_cert_priv_key.pem -out csr/test_cert_.csr

Type: Base64-encoded binary data object

Required: Yes

IdempotencyToken (p. 43)

Custom string that can be used to distinguish between calls to the IssueCertificate action. Idempotency tokens time out after one hour. Therefore, if you call IssueCertificate multiple times with the same idempotency token within 5 minutes, ACM Private CA recognizes that you are requesting only one certificate and will issue only one. If you change the idempotency token for each call, PCA recognizes that you are requesting multiple certificates.

Type: String
Pattern: [\u0009\u000A\u000D\u0020-\u00FF]*

Required: No

SigningAlgorithm (p. 43)

The name of the algorithm that will be used to sign the certificate to be issued.
This parameter should not be confused with the SigningAlgorithm parameter used to sign a CSR.

Type: String
Valid Values: SHA256WITHECDSA | SHA384WITHECDSA | SHA512WITHECDSA | SHA256WITHRSA | SHA384WITHRSA | SHA512WITHRSA

Required: Yes

TemplateArn (p. 43)

Specifies a custom configuration template to use when issuing a certificate. If this parameter is not provided, ACM Private CA defaults to the EndEntityCertificate/V1 template. For CA certificates, you should choose the shortest path length that meets your needs. The path length is indicated by the PathLenN portion of the ARN, where N is the CA depth.

Note: The CA depth configured on a subordinate CA certificate must not exceed the limit set by its parents in the CA hierarchy.

The following service-owned TemplateArn values are supported by ACM Private CA:
- arn:aws:acm-pca:::template/CodeSigningCertificate/V1
- arn:aws:acm-pca:::template/CodeSigningCertificate_CSRPassthrough/V1
- arn:aws:acm-pca:::template/EndEntityCertificate/V1
- arn:aws:acm-pca:::template/EndEntityCertificate_CSRPassthrough/V1
- arn:aws:acm-pca:::template/EndEntityClientAuthCertificate/V1
- arn:aws:acm-pca:::template/EndEntityClientAuthCertificate_CSRPassthrough/V1
- arn:aws:acm-pca:::template/EndEntityServerAuthCertificate/V1
- arn:aws:acm-pca:::template/EndEntityServerAuthCertificate_CSRPassthrough/V1
- arn:aws:acm-pca:::template/OCSPSigningCertificate/V1
• arn:aws:acm-pca:::template/OCSPSigningCertificate_CSRPassthrough/V1
• arn:aws:acm-pca:::template/RootCACertificate/V1
• arn:aws:acm-pca:::template/SubordinateCACertificate_PathLen0/V1
• arn:aws:acm-pca:::template/SubordinateCACertificate_PathLen1/V1
• arn:aws:acm-pca:::template/SubordinateCACertificate_PathLen2/V1
• arn:aws:acm-pca:::template/SubordinateCACertificate_PathLen3/V1

For more information, see Using Templates.

Type: String


Pattern:

```
arn:[\w+=/,.@-]+:[\w+=/,.@-]+:[\w+=/,.@-]*:[0-9]*:([\w+=/,.@-]+/([\w+=/,.@-]+])*#
```

Required: No

**Validity (p. 43)**

Information describing the validity period of the certificate.

When issuing a certificate, ACM Private CA sets the "Not Before" date in the validity field to date and time minus 60 minutes. This is intended to compensate for time inconsistencies across systems of 60 minutes or less.

The validity period configured on a certificate must not exceed the limit set by its parents in the CA hierarchy.

Type: Validity (p. 91) object

Required: Yes

**Response Syntax**

```
{
   "CertificateArn": "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.

**CertificateArn (p. 45)**

The Amazon Resource Name (ARN) of the issued certificate and the certificate serial number. This is of the form:

```
```

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 94).

InvalidArgsException

One or more of the specified arguments was not valid.

HTTP Status Code: 400

InvalidArnException

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

InvalidStateException

The private CA is in a state during which a report or certificate cannot be generated.

HTTP Status Code: 400

LimitExceededException

An ACM Private CA quota has been exceeded. See the exception message returned to determine the quota that was exceeded.

HTTP Status Code: 400

MalformedCSRException

The certificate signing request is invalid.

HTTP Status Code: 400

ResourceNotFoundException

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

Examples

Example

Sample Request

```
POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 1680
X-Amz-Target: ACMPrivateCA.IssueCertificate
X-Amz-Date: 20180226T193956Z
User-Agent: aws-cli/1.14.28 Python/2.7.9 Windows/8 botocore/1.8.32
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=AWS_Key_ID/20180226/AWS_Region/acm-pca/aws4_request,
SignedHeaders=content-type;host;x-amz-date;x-amz-target,
```
Example

Sample Response

HTTP/1.1 200 OK
Date: Tue, 15 May 2018 18:08:50 GMT
Content-Type: application/x-amz-json-1.1
Content-Length: 163
x-amzn-RequestId: 629173f2-4697-44fa-a599-b757a8da6c7e
Connection: keep-alive

{
  "CertificateArn": "arn:aws:acm-pca:region:account:certificate-authority/12345678-1234-1234-1234-123456789012/certificate/e8cbd2bedb122329f97706bcfec990f8"
}

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
ListCertificateAuthorities

Lists the private certificate authorities that you created by using the CreateCertificateAuthority action.

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

**MaxResults (p. 48)**

Use this parameter when paginating results to specify the maximum number of items to return in the response on each page. If additional items exist beyond the number you specify, the NextToken element is sent in the response. Use this NextToken value in a subsequent request to retrieve additional items.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

**NextToken (p. 48)**

Use this parameter when paginating results in a subsequent request after you receive a response with truncated results. Set it to the value of the NextToken parameter from the response you just received.

Type: String


Required: No

Response Syntax

```json
{
  "CertificateAuthorities": [
    {
      "Arn": "string",
      "CertificateAuthorityConfiguration": {
        "KeyAlgorithm": "string",
        "SigningAlgorithm": "string",
        "Subject": {
          "CommonName": "string",
          "Country": "string",
          "DistinguishedNameQualifier": "string",
          "GenerationQualifier": "string",
          "GivenName": "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.

**CertificateAuthorities (p. 48)**

Summary information about each certificate authority you have created.

Type: Array of CertificateAuthority (p. 81) objects

**NextToken (p. 48)**

When the list is truncated, this value is present and should be used for the NextToken parameter in a subsequent pagination request.

Type: String


**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 94).

**InvalidNextTokenException**

The token specified in the NextToken argument is not valid. Use the token returned from your previous call to ListCertificateAuthorities.
HTTP Status Code: 400

Examples

Example

Sample Request

POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 18
X-Amz-Target: ACMPrivateCA.ListCertificateAuthorities
X-Amz-Date: 20180226T150214Z
User-Agent: aws-cli/1.14.28 Python/2.7.9 Windows/8 botocore/1.8.32
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=Access_Key_ID/20180226/AWS_Region/acm-pca/aws4_request,
SignedHeaders=content-type;host;x-amz-date;x-amz-target,Signature=580fdd5ac17213a3016252fb1b3e1064b507f415f1b55ef1a42c9d7945d620c1

{"MaxResults": 10}

Example

Sample Response

HTTP/1.1 200 OK
Date: Tue, 15 May 2018 15:56:45 GMT
Content-Type: application/x-amz-json-1.1
Content-Length: 5484
x-amzn-RequestId: 9f96be4c-2204-4232-84df-fe5e44d22b22
Connection: keep-alive

{
  "CertificateAuthorities": [{
    "CertificateAuthorityConfiguration": {
      "KeyAlgorithm": "RSA_2048",
      "SigningAlgorithm": "SHA256WITHRSA",
      "Subject": {
        "CommonName": "www.example.com",
        "Locality": "Seattle",
        "Organization": "Example Corporation",
        "OrganizationalUnit": "Operations",
        "State": "Washington"
      }
    },
    "CreatedAt": 1.510085139623E9,
    "LastStateChangeAt": 1.515616539109E9,
    "NotAfter": 1.825445955E9,
    "NotBefore": 1.510085955E9,
    "RevocationConfiguration": {
      "CrlConfiguration": {
        "CustomCname": "https://somename.crl",
        "Enabled": true,
        "ExpirationInDays": 3650,
        "S3BucketName": "your-bucket-name"
      }
    }
  }]
}
}\),
"Serial": "4109",
"Status": "DISABLED",
"Type": "SUBORDINATE"
},
{
"Arn": "arn:aws:acm-pca:AWS.Region:AWS.Account:certificate-
authority/11111111-2222-3333-4444-555555555555",
"CertificateAuthorityConfiguration": {
"KeyAlgorithm": "RSA_4096",
"SigningAlgorithm": "SHA256WITHRSA",
"Subject": {
"CommonName": "www.example.com",
"Country": "US",
"Locality": "Spokane",
"Organization": "Example Sales LLC",
"OrganizationalUnit": "Corporate",
"State": "Washington"
}
},
"CreatedAt": 1.517421065699E9,
"LastStateChangeAt": 1.517421065699E9,
"RevocationConfiguration": {
"CrlConfiguration": {
"CustomCname": "https://somename.crl",
"Enabled": true,
"ExpirationInDays": 3650,
"S3BucketName": "your-bucket-name"
}
},
"Serial": "3611",
"Status": "PENDING_CERTIFICATE",
"Type": "SUBORDINATE"
},
{
"Arn": "arn:aws:acm-pca:AWS.Region:AWS.Account:certificate-
authority/99999999-4321-1234-4321-4321-888888888888",
"CertificateAuthorityConfiguration": {
"KeyAlgorithm": "RSA_2048",
"SigningAlgorithm": "SHA256WITHRSA",
"Subject": {
"CommonName": "www.company.com",
"Country": "US",
"Locality": "Seattle",
"Organization": "Company Ltd."
"OrganizationalUnit": "Sales",
"State": "Washington"
}
},
"CreatedAt": 1.505332492167E9,
"LastStateChangeAt": 1.505332492167E9,
"NotAfter": 1.820697079E9,
"NotBefore": 1.505337079E9,
"RevocationConfiguration": {
"CrlConfiguration": {
"CustomCname": "https://somename.crl",
"Enabled": true,
"ExpirationInDays": 3650,
"S3BucketName": "your-bucket-name"
}
},
"Serial": "4100",
"Status": "ACTIVE",
"Type": "SUBORDINATE"
}
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
ListPermissions

Lists all the permissions, if any, that have been assigned by a private CA. Permissions can be granted with the CreatePermission action and revoked with the DeletePermission action.

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

**CertificateAuthorityArn (p. 53)**

The Amazon Resource Number (ARN) of the private CA to inspect. You can find the ARN by calling the ListCertificateAuthorities action. This must be of the form: `arn:aws:acm-pca:region:account:certificate-authority/12345678-1234-1234-1234-123456789012` You can get a private CA's ARN by running the ListCertificateAuthorities action.

Type: String


Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:[\w+=/,.@-]*:[0-9]*:[\w+=,.@-]+(/[\w+=,.@-]*)*`

Required: Yes

**MaxResults (p. 53)**

When paginating results, use this parameter to specify the maximum number of items to return in the response. If additional items exist beyond the number you specify, the NextToken element is sent in the response. Use this NextToken value in a subsequent request to retrieve additional items.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

**NextToken (p. 53)**

When paginating results, use this parameter in a subsequent request after you receive a response with truncated results. Set it to the value of NextToken from the response you just received.

Type: String


Required: No
Response Syntax

```json
{
    "NextToken": "string",
    "Permissions": [
        {
            "Actions": [ "string" ],
            "CertificateAuthorityArn": "string",
            "CreatedAt": number,
            "Policy": "string",
            "Principal": "string",
            "SourceAccount": "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. 54)**

When the list is truncated, this value is present and should be used for the `NextToken` parameter in a subsequent pagination request.

Type: String


**Permissions (p. 54)**

Summary information about each permission assigned by the specified private CA, including the action enabled, the policy provided, and the time of creation.

Type: Array of Permission (p. 87) objects

Array Members: Minimum number of 0 items.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 94).

**InvalidArnException**

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

**InvalidNextTokenException**

The token specified in the `NextToken` argument is not valid. Use the token returned from your previous call to `ListCertificate Authorities`.

HTTP Status Code: 400

**InvalidStateException**

The private CA is in a state during which a report or certificate cannot be generated.
HTTP Status Code: 400
**RequestFailedException**

The request has failed for an unspecified reason.

HTTP Status Code: 400
**ResourceNotFoundException**

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

**Examples**

**Example**

**Sample Request**

```
POST / HTTP/1.1
Host: acm.us-east-1.amazonaws.com
X-Amz-Target: CertificateManager.ListPermissions
X-Amz-Date: 20190113T171333Z
User-Agent: aws-cli/1.10.20 Python/2.7.3 Linux/3.13.0-83-generic botocore/1.4.11
Content-Type: application/x-amz-json-1.1
Authorization: AUTHPARAMS,
SignedHeaders=content-type;host;user-agent;x-amz-date;x-amz-target,
Signature=3c9429306c5a99b9b4be5b35f55c26cc1da32a215d8055a5ed0bdda57bcc881ccc
{
  "MaxResults": 10
}
```

**Example**

**Sample Response**

```
HTTP/1.1 200 OK
x-amzn-RequestId: 3c8d676d-025e-11e6-8823-93164b47113c
Content-Type: application/x-amz-json-1.1
Content-Length: 579
Date: Thu, Feb 13 2019 17:13:36 GMT
{
  "Permissions": [
  {
    "Actions": {
      "IssueCertificate",
      "GetCertificate",
      "ListPermissions"
    },
    "CreatedAt": 1.516130652887E9,
    "Principal": "acm.amazonaws.com",
    "SourceAccount": "012345678901"
  }
  
```

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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
ListTags

Lists the tags, if any, that are associated with your private CA. Tags are labels that you can use to identify and organize your CAs. Each tag consists of a key and an optional value. Call the TagCertificateAuthority action to add one or more tags to your CA. Call the UntagCertificateAuthority action to remove tags.

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

**CertificateAuthorityArn (p. 57)**

The Amazon Resource Name (ARN) that was returned when you called the CreateCertificateAuthority action. This must be of the form:

```
```

Type: String


Pattern: `arn:[\w+=/,.@-]+:\[\w+=/,.@-]+:\[\w+=/,.@-]*:0-9*:\[\w+=/,.@-]+(\[\w+=/,.@-])*

Required: Yes

**MaxResults (p. 57)**

Use this parameter when paginating results to specify the maximum number of items to return in the response. If additional items exist beyond the number you specify, the NextToken element is sent in the response. Use this NextToken value in a subsequent request to retrieve additional items.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

**NextToken (p. 57)**

Use this parameter when paginating results in a subsequent request after you receive a response with truncated results. Set it to the value of NextToken from the response you just received.

Type: String

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. 58)**

When the list is truncated, this value is present and should be used for the `NextToken` parameter in a subsequent pagination request.

Type: String


**Tags (p. 58)**

The tags associated with your private CA.

Type: Array of Tag (p. 90) objects

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

Errors

For information about the errors that are common to all actions, see Common Errors (p. 94).

**InvalidArnException**

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

**InvalidStateException**

The private CA is in a state during which a report or certificate cannot be generated.

HTTP Status Code: 400

**ResourceNotFoundException**

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400
Examples

Example

Sample Request

POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 146
X-Amz-Target: ACMPrivateCA.ListTags
X-Amz-Date: 20180226T164656Z
User-Agent: aws-cli/1.14.28 Python/2.7.9 Windows/8 botocore/1.8.32
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=Access_Key_ID/20180226/AWS_Region/acm-pca/aws4_request,
SignedHeaders=content-type;host;x-amz-date;x-amz-target,
Signature=59cc6594a1df0f441bd39e466755465e52545f57faa8329d907c715bc8af97b
{
    "MaxResults": 10,
}

Example

Sample Response

HTTP/1.1 200 OK
Date: Tue, 15 May 2018 18:25:09 GMT
Content-Type: application/x-amz-json-1.1
Content-Length: 69
x-amzn-RequestId: 9893f3cb-1bd8-4a15-8394-4f5364963acf
Connection: keep-alive

    "Tags": [{
        "Key": "Admin",
        "Value": "Alice"
    },
    {"Key": "Purpose",
        "Value": "Website"
    }]
}

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
See Also

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
RestoreCertificateAuthority

Restores a certificate authority (CA) that is in the **DELETED** state. You can restore a CA during the period that you defined in the `PermanentDeletionTimeInDays` parameter of the `DeleteCertificateAuthority` action. Currently, you can specify 7 to 30 days. If you did not specify a `PermanentDeletionTimeInDays` value, by default you can restore the CA at any time in a 30 day period. You can check the time remaining in the restoration period of a private CA in the **DELETED** state by calling the `DescribeCertificateAuthority` or `ListCertificateAuthorities` actions. The status of a restored CA is set to its pre-deletion status when the `RestoreCertificateAuthority` action returns. To change its status to **ACTIVE**, call the `UpdateCertificateAuthority` action. If the private CA was in the **PENDING_CERTIFICATE** state at deletion, you must use the `ImportCertificateAuthorityCertificate` action to import a certificate authority into the private CA before it can be activated. You cannot restore a CA after the restoration period has ended.

**Request Syntax**

```json
{
    "CertificateAuthorityArn": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

**CertificateAuthorityArn (p. 61)**

The Amazon Resource Name (ARN) that was returned when you called the `CreateCertificateAuthority` action. This must be of the form:

```
```

Type: String


Pattern: `arn:[\w+=/,.@-]+:\[\w+=/,.@-]+:[\w+=/,.@-]*:[0-9]*:[\w+=/,.@-]+(/[\w+=/,.@-]+)*`

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. 94).

**InvalidArnException**

The requested Amazon Resource Name (ARN) does not refer to an existing resource.
HTTP Status Code: 400
InvalidStateException

The private CA is in a state during which a report or certificate cannot be generated.

HTTP Status Code: 400
ResourceNotFoundException

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

Examples

Example

Sample Request

```
POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 128
X-Amz-Target: ACMPrivateCA.RestoreCertificateAuthority
X-Amz-Date: 20180514T174156Z
User-Agent: aws-cli/1.15.4 Python/2.7.9 Windows/8 botocore/1.10.4
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=Access_Key_ID/20180514/AWS_Region/acm-pca/aws4_request, SignedHeaders=content-type;host;x-amz-date;x-amz-target,
Signature=a47d3316aee9992689407c40f877138c261cefe7399f6f68c5ffcafe46c593f8

{"CertificateAuthorityArn": "arn:aws:acm-pca:AWS_region:AWS_Acccount:certificate-
authority/12345678-1234-1234-1234-123456789012"}
```

Example

Sample Response

```
This function does not return a value.
```

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
RevokeCertificate

Revoke a certificate that was issued inside ACM Private CA. If you enable a certificate revocation list (CRL) when you create or update your private CA, information about the revoked certificates will be included in the CRL. ACM Private CA writes the CRL to an S3 bucket that you specify. A CRL is typically updated approximately 30 minutes after a certificate is revoked. If for any reason the CRL update fails, ACM Private CA attempts makes further attempts every 15 minutes. With Amazon CloudWatch, you can create alarms for the metrics CRLGenerated and MisconfiguredCRLBucket. For more information, see Supported CloudWatch Metrics.

Note
Both PCA and the IAM principal must have permission to write to the S3 bucket that you specify. If the IAM principal making the call does not have permission to write to the bucket, then an exception is thrown. For more information, see Configure Access to ACM Private CA.

Note
You cannot revoke a root CA self-signed certificate.

Request Syntax

```
{
   "CertificateAuthorityArn": "string",
   "CertificateSerial": "string",
   "RevocationReason": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

CertificateAuthorityArn (p. 64)

Amazon Resource Name (ARN) of the private CA that issued the certificate to be revoked. This must be of the form:

```
```

Type: String


Pattern: `arn:aws:acm-pca:region:account:certificate-authority/\d+` (matches exactly the ARN pattern)

Required: Yes

CertificateSerial (p. 64)

Serial number of the certificate to be revoked. This must be in hexadecimal format. You can retrieve the serial number by calling GetCertificate with the Amazon Resource Name (ARN) of the certificate you want and the ARN of your private CA. The GetCertificate action retrieves the certificate in the
PEM format. You can use the following OpenSSL command to list the certificate in text format and copy the hexadecimal serial number.

```
openssl x509 -in file_path -text -noout
```

You can also copy the serial number from the console or use the DescribeCertificate action in the AWS Certificate Manager API Reference.

**Type:** String

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

**Required:** Yes

**RevocationReason (p. 64)**

Specifies why you revoked the certificate.

**Type:** String

**Valid Values:** UNSPECIFIED | KEY_COMPROMISE | CERTIFICATE_AUTHORITY_COMPROMISE | AFFILIATION_CHANGED | SUPERSEDED | CESSATION_OF_OPERATION | PRIVILEGE_WITHDRAWN | A_A_COMPROMISE

**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. 94).

**ConcurrentModificationException**

A previous update to your private CA is still ongoing.

HTTP Status Code: 400

**InvalidArnException**

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

**InvalidRequestException**

The request action cannot be performed or is prohibited.

HTTP Status Code: 400

**InvalidStateException**

The private CA is in a state during which a report or certificate cannot be generated.

HTTP Status Code: 400

**LimitExceededException**

An ACM Private CA quota has been exceeded. See the exception message returned to determine the quota that was exceeded.

HTTP Status Code: 400
RequestAlreadyProcessedException

Your request has already been completed.

HTTP Status Code: 400

RequestFailedException

The request has failed for an unspecified reason.

HTTP Status Code: 400

RequestInProgressException

Your request is already in progress.

HTTP Status Code: 400

ResourceNotFoundException

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

Examples

Example

Sample Request

```plaintext
POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 238
X-Amz-Target: ACMPrivateCA.RevokeCertificate
X-Amz-Date: 20180226T200035Z
User-Agent: aws-cli/1.14.28 Python/2.7.9 Windows/8 botocore/1.8.32
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=AWS_Access_Key_ID/20180226/AWS_Region/acm-pca/aw4_request,
SignedHeaders=content-type;host;x-amz-date;x-amz-target,
Signature=ab19c4301eb2e8e9f188f3d478cb1d5a28bfb41de535b5006c0738d41cfd86
{
    "RevocationReason": "KEY_COMPROMISE",
}
```  

Example

Sample Response

This function does not return a value.

See Also

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

- 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
TagCertificateAuthority

Adds one or more tags to your private CA. Tags are labels that you can use to identify and organize your AWS resources. Each tag consists of a key and an optional value. You specify the private CA on input by its Amazon Resource Name (ARN). You specify the tag by using a key-value pair. You can apply a tag to just one private CA if you want to identify a specific characteristic of that CA, or you can apply the same tag to multiple private CAs if you want to filter for a common relationship among those CAs. To remove one or more tags, use the UntagCertificateAuthority action. Call the ListTags action to see what tags are associated with your CA.

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

CertificateAuthorityArn (p. 68)

The Amazon Resource Name (ARN) that was returned when you called CreateCertificateAuthority. This must be of the form:

```
```

Type: String


Pattern: arn:aws:acm-pca:region:account:certificate-authority/\w+=/\.\-\+:[\w+=/\.\-\+][\w+=/\.\-\+]*:[0-9]*:[\w+=/\.\-\+]+(/[\w+=/\.\-\+]*)*

Required: Yes

Tags (p. 68)

List of tags to be associated with the CA.

Type: Array of Tag (p. 90) objects

Array Members: Minimum number of 1 item. 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.

API Version 2017-08-22
Errors

For information about the errors that are common to all actions, see Common Errors (p. 94).

**InvalidArnException**

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

**InvalidStateException**

The private CA is in a state during which a report or certificate cannot be generated.

HTTP Status Code: 400

**InvalidTagException**

The tag associated with the CA is not valid. The invalid argument is contained in the message field.

HTTP Status Code: 400

**ResourceNotFoundException**

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

**TooManyTagsException**

You can associate up to 50 tags with a private CA. Exception information is contained in the exception message field.

HTTP Status Code: 400

Examples

**Example**

**Sample Request**

```
POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 180
X-Amz-Target: ACMPrivateCA.TagCertificateAuthority
X-Amz-Date: 20180226T170330Z
User-Agent: aws-cli/1.14.28 Python/2.7.9 Windows/8 botocore/1.8.32
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=Access_Key_ID/20180226/AWS_Region/acm-pca/aws4_request, SignedHeaders=content-type;host;x-amz-date;x-amz-target, Signature=823508ca59a8620ec0981fada8b14a1b85e1db9938103e1fe2a7c394e70b1d0b

{
  "Tags": [{
    "Key": "Bob",
    "Value": "DatabaseAdmin"
  }]
}
```

API Version 2017-08-22
Example

Sample Response

This function does not return a value.

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
UntagCertificateAuthority

Remove one or more tags from your private CA. A tag consists of a key-value pair. If you do not specify the value portion of the tag when calling this action, the tag will be removed regardless of value. If you specify a value, the tag is removed only if it is associated with the specified value. To add tags to a private CA, use the TagCertificateAuthority. Call the ListTags action to see what tags are associated with your CA.

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

CertificateAuthorityArn (p. 71)

The Amazon Resource Name (ARN) that was returned when you called CreateCertificateAuthority. This must be of the form:

```
```

Type: String


Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:[\w+=/,.@-]*:[0-9]*:[\w+=/,.@-]+(/[\w+=/,.@-]+)*`

Required: Yes

Tags (p. 71)

List of tags to be removed from the CA.

Type: Array of Tag (p. 90) objects

Array Members: Minimum number of 1 item. 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. 94).

InvalidArnException

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

InvalidStateException

The private CA is in a state during which a report or certificate cannot be generated.

HTTP Status Code: 400

InvalidTagException

The tag associated with the CA is not valid. The invalid argument is contained in the message field.

HTTP Status Code: 400

ResourceNotFoundException

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

Examples

Example

Sample Request

```bash
POST / HTTP/1.1
Host: acm-pca.amazonaws.com
Accept-Encoding: identity
Content-Length: 174
X-Amz-Target: ACMPrivateCA.UntagCertificateAuthority
X-Amz-Date: 20180226T171108Z
User-Agent: aws-cli/1.14.28 Python/2.7.9 Windows/8 botocore/1.8.32
Content-Type: application/x-amz-json-1.1
Authorization: AWS4-HMAC-SHA256 Credential=Access_KEY_ID/20180226/AWS_Region/acm-pca/aws4_request,
SignedHeaders=content-type;host;x-amz-date;x-amz-target,
Signature=a19a10be912304e7e36677a2e8e6f573dcc3bc506fb886a3e273d194cbfcb2e2

{
  "Tags": [{
    "Key": "Alice",
    "Value": "Admin"
  }]
}
```

Example

Sample Response

This function does not return a value.
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
UpdateCertificateAuthority

Updates the status or configuration of a private certificate authority (CA). Your private CA must be in the ACTIVE or DISABLED state before you can update it. You can disable a private CA that is in the ACTIVE state or make a CA that is in the DISABLED state active again.

**Note**

Both PCA and the IAM principal must have permission to write to the S3 bucket that you specify. If the IAM principal making the call does not have permission to write to the bucket, then an exception is thrown. For more information, see Configure Access to ACM Private CA.

**Request Syntax**

```json
{
  "CertificateAuthorityArn": "string",
  "RevocationConfiguration": {
    "CrlConfiguration": {
      "CustomCname": "string",
      "Enabled": boolean,
      "ExpirationInDays": number,
      "S3BucketName": "string"
    }
  },
  "Status": "string"
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 92).

The request accepts the following data in JSON format.

**CertificateAuthorityArn (p. 74)**

Amazon Resource Name (ARN) of the private CA that issued the certificate to be revoked. This must be of the form:

```
```

Type: String


Pattern: `arn:[\w+=/,.@-]+:[\w+=/,.@-]+:[\w+=/,.@-]*:[0-9]*:[\w+=/,.@-]+(/[\w+=/,.@-]+)*`

Required: Yes

**RevocationConfiguration (p. 74)**

Revocation information for your private CA.

Type: `RevocationConfiguration (p. 89)` object

Required: `RevocationConfiguration (p. 89)` object

**Status (p. 74)**

Status of your private CA.
Type: String
Valid Values: CREATING | PENDING_CERTIFICATE | ACTIVE | DELETED | DISABLED | EXPIRED | FAILED
Required: No

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. 94).

ConcurrentModificationException

A previous update to your private CA is still ongoing.

HTTP Status Code: 400

InvalidArgsException

One or more of the specified arguments was not valid.

HTTP Status Code: 400

InvalidArnException

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

InvalidPolicyException

The S3 bucket policy is not valid. The policy must give ACM Private CA rights to read from and write to the bucket and find the bucket location.

HTTP Status Code: 400

InvalidStateException

The private CA is in a state during which a report or certificate cannot be generated.

HTTP Status Code: 400

ResourceNotFoundException

A resource such as a private CA, S3 bucket, certificate, or audit report cannot be found.

HTTP Status Code: 400

Examples

Example

Sample Request

POST / HTTP/1.1
Example

Sample Response

This function does not return a value.

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
Data Types

The AWS Certificate Manager Private Certificate Authority 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:

- ASN1Subject (p. 78)
- CertificateAuthority (p. 81)
- CertificateAuthorityConfiguration (p. 84)
- CrlConfiguration (p. 85)
- Permission (p. 87)
- RevocationConfiguration (p. 89)
- Tag (p. 90)
- Validity (p. 91)
Contains information about the certificate subject. The certificate can be one issued by your private certificate authority (CA) or it can be your private CA certificate. The **Subject** field in the certificate identifies the entity that owns or controls the public key in the certificate. The entity can be a user, computer, device, or service. The **Subject** must contain an X.500 distinguished name (DN). A DN is a sequence of relative distinguished names (RDNs). The RDNs are separated by commas in the certificate. The DN must be unique for each entity, but your private CA can issue more than one certificate with the same DN to the same entity.

**Contents**

**CommonName**

Fully qualified domain name (FQDN) associated with the certificate subject.

Type: String

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

Required: No

**Country**

Two-digit code that specifies the country in which the certificate subject located.

Type: String

Pattern: `[A-Za-z]{2}`

Required: No

**DistinguishedNameQualifier**

Disambiguating information for the certificate subject.

Type: String

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

Pattern: `[a-zA-Z0-9-()+-.?:/= ]*`

Required: No

**GenerationQualifier**

Typically a qualifier appended to the name of an individual. Examples include Jr. for junior, Sr. for senior, and III for third.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 3.

Required: No

**GivenName**

First name.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 16.
Required: No

**Initials**

Concatenation that typically contains the first letter of the **GivenName**, the first letter of the middle name if one exists, and the first letter of the **SurName**.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 5.

Required: No

**Locality**

The locality (such as a city or town) in which the certificate subject is located.

Type: String

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

Required: No

**Organization**

Legal name of the organization with which the certificate subject is affiliated.

Type: String

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

Required: No

**OrganizationalUnit**

A subdivision or unit of the organization (such as sales or finance) with which the certificate subject is affiliated.

Type: String

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

Required: No

**Pseudonym**

Typically a shortened version of a longer **GivenName**. For example, Jonathan is often shortened to John. Elizabeth is often shortened to Beth, Liz, or Eliza.

Type: String

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

Required: No

**SerialNumber**

The certificate serial number.

Type: String

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

Pattern: `[a-zA-Z0-9\(\)+-.?/:\=]*` 

Required: No
State

State in which the subject of the certificate is located.

Type: String

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

Required: No

Surname

Family name. In the US and the UK, for example, the surname of an individual is ordered last. In Asian cultures the surname is typically ordered first.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 40.

Required: No

Title

A title such as Mr. or Ms., which is pre-pended to the name to refer formally to the certificate subject.

Type: String

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

Required: No

See Also

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

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

Contains information about your private certificate authority (CA). Your private CA can issue and revoke X.509 digital certificates. Digital certificates verify that the entity named in the certificate Subject field owns or controls the public key contained in the Subject Public Key Info field. Call the CreateCertificateAuthority action to create your private CA. You must then call the GetCertificateAuthorityCertificate action to retrieve a private CA certificate signing request (CSR). Sign the CSR with your ACM Private CA-hosted or on-premises root or subordinate CA certificate. Call the ImportCertificateAuthorityCertificate action to import the signed certificate into AWS Certificate Manager (ACM).

Contents

Arn

Amazon Resource Name (ARN) for your private certificate authority (CA). The format is 12345678-1234-1234-1234-123456789012.

Type: String
Pattern: arn:[\w+=/,.@-]+:[\w+=/,.@-]+:[\w+=/,.@-]*:[0-9]*:[\w+=,.@-]+(/[\w+=/,.@-]+)*
Required: No

CertificateAuthorityConfiguration

Your private CA configuration.

Type: CertificateAuthorityConfiguration (p. 84) object
Required: No

CreatedAt

Date and time at which your private CA was created.

Type: Timestamp
Required: No

FailureReason

Reason the request to create your private CA failed.

Type: String
Valid Values: REQUEST_TIMED_OUT | UNSUPPORTED_ALGORITHM | OTHER
Required: No

LastStateChangeAt

Date and time at which your private CA was last updated.

Type: Timestamp
Required: No

NotAfter

Date and time after which your private CA certificate is not valid.
Type: Timestamp
Required: No

**NotBefore**
Date and time before which your private CA certificate is not valid.
Type: Timestamp
Required: No

**RestorableUntil**
The period during which a deleted CA can be restored. For more information, see the
PermanentDeletionTimeInDays parameter of the DeleteCertificateAuthorityRequest action.
Type: Timestamp
Required: No

**RevocationConfiguration**
Information about the certificate revocation list (CRL) created and maintained by your private CA.
Type: RevocationConfiguration (p. 89) object
Required: No

**Serial**
Serial number of your private CA.
Type: String
Required: No

**Status**
Status of your private CA.
Type: String
Valid Values: CREATING | PENDING_CERTIFICATE | ACTIVE | DELETED | DISABLED | EXPIRED | FAILED
Required: No

**Type**
Type of your private CA.
Type: String
Valid Values: ROOT | SUBORDINATE
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
See Also

- AWS SDK for Java
- AWS SDK for Ruby V3
CertificateAuthorityConfiguration

Contains configuration information for your private certificate authority (CA). This includes information about the class of public key algorithm and the key pair that your private CA creates when it issues a certificate. It also includes the signature algorithm that it uses when issuing certificates, and its X.500 distinguished name. You must specify this information when you call the CreateCertificateAuthority action.

Contents

KeyAlgorithm

Type of the public key algorithm and size, in bits, of the key pair that your CA creates when it issues a certificate. When you create a subordinate CA, you must use a key algorithm supported by the parent CA.

Type: String

Valid Values: RSA_2048 | RSA_4096 | EC_prime256v1 | EC_secp384r1

Required: Yes

SigningAlgorithm

Name of the algorithm your private CA uses to sign certificate requests.

This parameter should not be confused with the SigningAlgorithm parameter used to sign certificates when they are issued.

Type: String

Valid Values: SHA256WITHECDSA | SHA384WITHECDSA | SHA512WITHECDSA | SHA256WITHRSA | SHA384WITHRSA | SHA512WITHRSA

Required: Yes

Subject

Structure that contains X.500 distinguished name information for your private CA.

Type: ASN1Subject (p. 78) object

Required: Yes

See Also

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

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

Contains configuration information for a certificate revocation list (CRL). Your private certificate authority (CA) creates base CRLs. Delta CRLs are not supported. You can enable CRLs for your new or an existing private CA by setting the **Enabled** parameter to **true**. Your private CA writes CRLs to an S3 bucket that you specify in the **S3BucketName** parameter. You can hide the name of your bucket by specifying a value for the **CustomCname** parameter. Your private CA copies the CNAME or the S3 bucket name to the **CRL Distribution Points** extension of each certificate it issues. Your S3 bucket policy must give write permission to ACM Private CA.

Your private CA uses the value in the **ExpirationInDays** parameter to calculate the **nextUpdate** field in the CRL. The CRL is refreshed at 1/2 the age of next update or when a certificate is revoked. When a certificate is revoked, it is recorded in the next CRL that is generated and in the next audit report. Only time valid certificates are listed in the CRL. Expired certificates are not included.

CRLs contain the following fields:

- **Version**: The current version number defined in RFC 5280 is V2. The integer value is 0x1.
- **Signature Algorithm**: The name of the algorithm used to sign the CRL.
- **Issuer**: The X.500 distinguished name of your private CA that issued the CRL.
- **Last Update**: The issue date and time of this CRL.
- **Next Update**: The day and time by which the next CRL will be issued.
- **Revoked Certificates**: List of revoked certificates. Each list item contains the following information.
  - **Serial Number**: The serial number, in hexadecimal format, of the revoked certificate.
  - **Revocation Date**: Date and time the certificate was revoked.
  - **CRL Entry Extensions**: Optional extensions for the CRL entry.
    - **X509v3 CRL Reason Code**: Reason the certificate was revoked.
  - **CRL Extensions**: Optional extensions for the CRL.
    - **X509v3 Authority Key Identifier**: Identifies the public key associated with the private key used to sign the certificate.
    - **X509v3 CRL Number**: Decimal sequence number for the CRL.
    - **Signature Algorithm**: Algorithm used by your private CA to sign the CRL.
    - **Signature Value**: Signature computed over the CRL.

Certificate revocation lists created by ACM Private CA are DER-encoded. You can use the following OpenSSL command to list a CRL.

```
openssl crl -inform DER -text -in crl_path -noout
```

Contents

CustomCname

Name inserted into the certificate **CRL Distribution Points** extension that enables the use of an alias for the CRL distribution point. Use this value if you don't want the name of your S3 bucket to be public.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 253.

Required: No
Enabled

Boolean value that specifies whether certificate revocation lists (CRLs) are enabled. You can use this value to enable certificate revocation for a new CA when you call the CreateCertificateAuthority action or for an existing CA when you call the UpdateCertificateAuthority action.

Type: Boolean
Required: Yes

ExpirationInDays

Number of days until a certificate expires.

Type: Integer
Valid Range: Minimum value of 1. Maximum value of 5000.
Required: No

S3BucketName

Name of the S3 bucket that contains the CRL. If you do not provide a value for the CustomCname argument, the name of your S3 bucket is placed into the CRL Distribution Points extension of the issued certificate. You can change the name of your bucket by calling the UpdateCertificateAuthority action. You must specify a bucket policy that allows ACM Private CA to write the CRL to your bucket.

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
Permission

Permissions designate which private CA actions can be performed by an AWS service or entity. In order for ACM to automatically renew private certificates, you must give the ACM service principal all available permissions (IssueCertificate, GetCertificate, and ListPermissions). Permissions can be assigned with the CreatePermission action, removed with the DeletePermission action, and listed with the ListPermissions action.

Contents

Actions

The private CA actions that can be performed by the designated AWS service.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 3 items.

Valid Values: IssueCertificate | GetCertificate | ListPermissions

Required: No

CertificateArn

The Amazon Resource Number (ARN) of the private CA from which the permission was issued.

Type: String


Pattern: arn:[:w+=/,.@-]+[:w+=/,.@-]+[:w+=/,.@-]*:[0-9]*[:w+=/,.@-]+(/[[:w+=/,.@-]+])*

Required: No

CreatedAt

The time at which the permission was created.

Type: Timestamp

Required: No

Policy

The name of the policy that is associated with the permission.

Type: String

Required: No

Principal

The AWS service or entity that holds the permission. At this time, the only valid principal is acm.amazonaws.com.

Type: String

Required: No

SourceAccount

The ID of the account that assigned the permission.
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
RevocationConfiguration

Certificate revocation information used by the `CreateCertificateAuthority` and `UpdateCertificateAuthority` actions. Your private certificate authority (CA) can create and maintain a certificate revocation list (CRL). A CRL contains information about certificates revoked by your CA. For more information, see `RevokeCertificate`.

Contents

CrlConfiguration

Configuration of the certificate revocation list (CRL), if any, maintained by your private CA.

Type: `CrlConfiguration` (p. 85) object

Required: No

See Also

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

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

Tags are labels that you can use to identify and organize your private CAs. Each tag consists of a key and an optional value. You can associate up to 50 tags with a private CA. To add one or more tags to a private CA, call the TagCertificateAuthority action. To remove a tag, call the UntagCertificateAuthority action.

Contents

Key

Key (name) of the tag.

Type: String


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

Required: Yes

Value

Value of the tag.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

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

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
Validity

The period of time during which a certificate issued by your private certificate authority (CA) is valid. The expiration can be absolute (expressed as an explicit date and time) or relative (expressed as a period of time after issuance in days, months, or years). For more information, see Validity in RFC 5280.

You can issue a certificate by calling the IssueCertificate action.

Contents

Type

Determines how ACM Private CA interprets the Value parameter, an integer. Supported validity types include those listed below. Type definitions with absolute values include a sample input value and the resulting output.

END_DATE: Absolute value, using UTCTime (YYMMDHHMMSS) or GeneralizedTime (YYYYMMDHHMMSS) format.
  • Sample input value: 491231235959 (UTCTime format)
  • Output date: 12/31/2049 23:59:59

ABSOLUTE: Absolute value, expressed as the number of seconds since the Unix epoch.
  • Sample input value: 2524608000
  • Output date: 01/01/2050 00:00:00

DAYS, MONTHS, YEARS: Relative values, setting expiration as a number of days, months, or years after certificate issuance.

Note: When UTCTime is used, if the year field (YY) is greater than or equal to 50, the year is interpreted as 19YY. If the year field is less than 50, the year is interpreted as 20YY.

Type: String

Valid Values: END_DATE | ABSOLUTE | DAYS | MONTHS | YEARS

Required: Yes

Value

Time period.

Type: Long

Valid Range: Minimum value of 1.

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
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