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# AWS OpsWorks CM

## API Reference

**API Version 2016-11-01**



## **AWS OpsWorks CM: API Reference**

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# Welcome

AWS OpsWorks for configuration management (CM) is a service that runs and manages configuration management servers. You can use AWS OpsWorks CM to create and manage AWS OpsWorks for Chef Automate and AWS OpsWorks for Puppet Enterprise servers, and add or remove nodes for the servers to manage.

## Glossary of terms

- **Server:** A configuration management server that can be highly-available. The configuration management server runs on an Amazon Elastic Compute Cloud (EC2) instance, and may use various other AWS services, such as Amazon Relational Database Service (RDS) and Elastic Load Balancing. A server is a generic abstraction over the configuration manager that you want to use, much like Amazon RDS. In AWS OpsWorks CM, you do not start or stop servers. After you create servers, they continue to run until they are deleted.
- **Engine:** The engine is the specific configuration manager that you want to use. Valid values in this release include `Chef` and `Puppet`.
- **Backup:** This is an application-level backup of the data that the configuration manager stores. AWS OpsWorks CM creates an S3 bucket for backups when you launch the first server. A backup maintains a snapshot of a server's configuration-related attributes at the time the backup starts.
- **Events:** Events are always related to a server. Events are written during server creation, when health checks run, when backups are created, when system maintenance is performed, etc. When you delete a server, the server's events are also deleted.
- **Account attributes:** Every account has attributes that are assigned in the AWS OpsWorks CM database. These attributes store information about configuration limits (servers, backups, etc.) and your customer account.

## Endpoints

AWS OpsWorks CM supports the following endpoints, all HTTPS. You must connect to one of the following endpoints. Your servers can only be accessed or managed within the endpoint in which they are created.

- `opsworks-cm.us-east-1.amazonaws.com`
- `opsworks-cm.us-east-2.amazonaws.com`
- `opsworks-cm.us-west-1.amazonaws.com`
- `opsworks-cm.us-west-2.amazonaws.com`
- `opsworks-cm.ap-northeast-1.amazonaws.com`
- `opsworks-cm.ap-southeast-1.amazonaws.com`
- `opsworks-cm.ap-southeast-2.amazonaws.com`
- `opsworks-cm.eu-central-1.amazonaws.com`
- `opsworks-cm.eu-west-1.amazonaws.com`

## Throttling limits

All API operations allow for five requests per second with a burst of 10 requests per second.

This document was last published on March 19, 2019.

# Actions

The following actions are supported:

- [AssociateNode](#) (p. 3)
- [CreateBackup](#) (p. 6)
- [CreateServer](#) (p. 9)
- [DeleteBackup](#) (p. 16)
- [DeleteServer](#) (p. 18)
- [DescribeAccountAttributes](#) (p. 20)
- [DescribeBackups](#) (p. 21)
- [DescribeEvents](#) (p. 24)
- [DescribeNodeAssociationStatus](#) (p. 27)
- [DescribeServers](#) (p. 29)
- [DisassociateNode](#) (p. 32)
- [ExportServerEngineAttribute](#) (p. 35)
- [RestoreServer](#) (p. 38)
- [StartMaintenance](#) (p. 40)
- [UpdateServer](#) (p. 43)
- [UpdateServerEngineAttributes](#) (p. 46)

# AssociateNode

Associates a new node with the server. For more information about how to disassociate a node, see [DisassociateNode \(p. 32\)](#).

On a Chef server: This command is an alternative to `knife bootstrap`.

```
Example (Chef): aws opsworks-cm associate-node --server-name MyServer --node-name MyManagedNode --engine-attributes "Name=CHEF_ORGANIZATION,Value=default" "Name=CHEF_NODE_PUBLIC_KEY,Value=public-key-pem"
```

On a Puppet server, this command is an alternative to the `puppet cert sign` command that signs a Puppet node CSR.

```
Example (Chef): aws opsworks-cm associate-node --server-name MyServer --node-name MyManagedNode --engine-attributes "Name=PUPPET_NODE_CSR,Value=csr-pem"
```

A node can only be associated with servers that are in a `HEALTHY` state. Otherwise, an `InvalidStateException` is thrown. A `ResourceNotFoundException` is thrown when the server does not exist. A `ValidationException` is raised when parameters of the request are not valid. The `AssociateNode` API call can be integrated into Auto Scaling configurations, AWS CloudFormation templates, or the user data of a server's instance.

## Request Syntax

```
{
  "EngineAttributes": [
    {
      "Name": "string",
      "Value": "string"
    }
  ],
  "NodeName": "string",
  "ServerName": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 61\)](#).

The request accepts the following data in JSON format.

### EngineAttributes (p. 3)

Engine attributes used for associating the node.

#### Attributes accepted in a `AssociateNode` request for Chef

- `CHEF_ORGANIZATION`: The Chef organization with which the node is associated. By default only one organization named `default` can exist.
- `CHEF_NODE_PUBLIC_KEY`: A PEM-formatted public key. This key is required for the `chef-client` agent to access the Chef API.

#### Attributes accepted in a `AssociateNode` request for Puppet

- `PUPPET_NODE_CSR`: A PEM-formatted certificate-signing request (CSR) that is created by the node.



Type: Array of [EngineAttribute \(p. 55\)](#) objects

Required: Yes

#### **nodeName (p. 3)**

The name of the node.

Type: String

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

Required: Yes

#### **serverName (p. 3)**

The name of the server with which to associate the node.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: `[a-zA-Z][a-zA-Z0-9-]*`

Required: Yes

## Response Syntax

```
{  
  "NodeAssociationStatusToken": "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.

#### **NodeAssociationStatusToken (p. 4)**

Contains a token which can be passed to the `DescribeNodeAssociationStatus` API call to get the status of the association request.

Type: String

## Errors

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

#### **InvalidStateException**

The resource is in a state that does not allow you to perform a specified action.

HTTP Status Code: 400

#### **ResourceNotFoundException**

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

**ValidationException**

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

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

## CreateBackup

Creates an application-level backup of a server. While the server is in the `BACKING_UP` state, the server cannot be changed, and no additional backup can be created.

Backups can be created for servers in `RUNNING`, `HEALTHY`, and `UNHEALTHY` states. By default, you can create a maximum of 50 manual backups.

This operation is asynchronous.

A `LimitExceededException` is thrown when the maximum number of manual backups is reached. An `InvalidStateException` is thrown when the server is not in any of the following states: `RUNNING`, `HEALTHY`, or `UNHEALTHY`. A `ResourceNotFoundException` is thrown when the server is not found. A `ValidationException` is thrown when parameters of the request are not valid.

## Request Syntax

```
{
  "Description": "string",
  "ServerName": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 61\)](#).

The request accepts the following data in JSON format.

### Description (p. 6)

A user-defined description of the backup.

Type: String

Required: No

### ServerName (p. 6)

The name of the server that you want to back up.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: `[a-zA-Z][a-zA-Z0-9\-\ ]*`

Required: Yes

## Response Syntax

```
{
  "Backup": {
    "BackupArn": "string",
    "BackupId": "string",
    "BackupType": "string",
    "CreatedAt": number,
  }
}
```

```
"Description": "string",
"Engine": "string",
"EngineModel": "string",
"EngineVersion": "string",
"InstanceProfileArn": "string",
"InstanceType": "string",
"KeyPair": "string",
"PreferredBackupWindow": "string",
"PreferredMaintenanceWindow": "string",
"S3DataSize": number,
"S3DataUrl": "string",
"S3LogUrl": "string",
"SecurityGroupIds": [ "string" ],
"ServerName": "string",
"ServiceRoleArn": "string",
"Status": "string",
"StatusDescription": "string",
"SubnetIds": [ "string" ],
"ToolsVersion": "string",
"UserArn": "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.

### Backup (p. 6)

Backup created by request.

Type: [Backup \(p. 51\)](#) object

## Errors

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

### InvalidStateException

The resource is in a state that does not allow you to perform a specified action.

HTTP Status Code: 400

### LimitExceededException

The limit of servers or backups has been reached.

HTTP Status Code: 400

### ResourceNotFoundException

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

### ValidationException

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

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

# CreateServer

Creates and immediately starts a new server. The server is ready to use when it is in the `HEALTHY` state. By default, you can create a maximum of 10 servers.

This operation is asynchronous.

A `LimitExceededException` is thrown when you have created the maximum number of servers (10). A `ResourceAlreadyExistsException` is thrown when a server with the same name already exists in the account. A `ResourceNotFoundException` is thrown when you specify a backup ID that is not valid or is for a backup that does not exist. A `ValidationException` is thrown when parameters of the request are not valid.

If you do not specify a security group by adding the `SecurityGroupIds` parameter, AWS OpsWorks creates a new security group.

*Chef Automate:* The default security group opens the Chef server to the world on TCP port 443. If a `KeyName` is present, AWS OpsWorks enables SSH access. SSH is also open to the world on TCP port 22.

*Puppet Enterprise:* The default security group opens TCP ports 22, 443, 4433, 8140, 8142, 8143, and 8170. If a `KeyName` is present, AWS OpsWorks enables SSH access. SSH is also open to the world on TCP port 22.

By default, your server is accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses and address ranges only. To edit security group rules, open Security Groups in the navigation pane of the EC2 management console.

## Request Syntax

```
{
  "AssociatePublicIpAddress": boolean,
  "BackupId": "string",
  "BackupRetentionCount": number,
  "DisableAutomatedBackup": boolean,
  "Engine": "string",
  "EngineAttributes": [
    {
      "Name": "string",
      "Value": "string"
    }
  ],
  "EngineModel": "string",
  "EngineVersion": "string",
  "InstanceProfileArn": "string",
  "InstanceType": "string",
  "KeyPair": "string",
  "PreferredBackupWindow": "string",
  "PreferredMaintenanceWindow": "string",
  "SecurityGroupIds": [ "string" ],
  "ServerName": "string",
  "ServiceRoleArn": "string",
  "SubnetIds": [ "string" ]
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 61\)](#).

The request accepts the following data in JSON format.

#### **AssociatePublicIpAddress (p. 9)**

Associate a public IP address with a server that you are launching. Valid values are `true` or `false`. The default value is `true`.

Type: Boolean

Required: No

#### **BackupId (p. 9)**

If you specify this field, AWS OpsWorks CM creates the server by using the backup represented by `BackupId`.

Type: String

Length Constraints: Maximum length of 79.

Required: No

#### **BackupRetentionCount (p. 9)**

The number of automated backups that you want to keep. Whenever a new backup is created, AWS OpsWorks CM deletes the oldest backups if this number is exceeded. The default value is 1.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

#### **DisableAutomatedBackup (p. 9)**

Enable or disable scheduled backups. Valid values are `true` or `false`. The default value is `true`.

Type: Boolean

Required: No

#### **Engine (p. 9)**

The configuration management engine to use. Valid values include `Chef` and `Puppet`.

Type: String

Required: No

#### **EngineAttributes (p. 9)**

Optional engine attributes on a specified server.

##### **Attributes accepted in a Chef createServer request:**

- **CHEF\_PIVOTAL\_KEY:** A base64-encoded RSA public key. The corresponding private key is required to access the Chef API. When no `CHEF_PIVOTAL_KEY` is set, a private key is generated and returned in the response.
- **CHEF\_DELIVERY\_ADMIN\_PASSWORD:** The password for the administrative user in the Chef Automate GUI. The password length is a minimum of eight characters, and a maximum of 32. The password can contain letters, numbers, and special characters (`!/@#$$%^&+=_`). The password must contain at least one lower case letter, one upper case letter, one number, and one special character. When no `CHEF_DELIVERY_ADMIN_PASSWORD` is set, one is generated and returned in the response.

**Attributes accepted in a Puppet createServer request:**

- `PUPPET_ADMIN_PASSWORD`: To work with the Puppet Enterprise console, a password must use ASCII characters.
- `PUPPET_R10K_REMOTE`: The r10k remote is the URL of your control repository (for example, `ssh://git@your.git-repo.com:user/control-repo.git`). Specifying an r10k remote opens TCP port 8170.
- `PUPPET_R10K_PRIVATE_KEY`: If you are using a private Git repository, add `PUPPET_R10K_PRIVATE_KEY` to specify an SSH URL and a PEM-encoded private SSH key.

Type: Array of [EngineAttribute \(p. 55\)](#) objects

Required: No

**EngineModel (p. 9)**

The engine model of the server. Valid values in this release include `Monolithic` for Puppet and `Single` for Chef.

Type: String

Required: No

**EngineVersion (p. 9)**

The major release version of the engine that you want to use. For a Chef server, the valid value for `EngineVersion` is currently 12. For a Puppet server, the valid value is 2017.

Type: String

Required: No

**InstanceProfileArn (p. 9)**

The ARN of the instance profile that your Amazon EC2 instances use. Although the AWS OpsWorks console typically creates the instance profile for you, if you are using API commands instead, run the `service-role-creation.yaml` AWS CloudFormation template, located at <https://s3.amazonaws.com/opsworks-cm-us-east-1-prod-default-assets/misc/opsworks-cm-roles.yaml>. This template creates a CloudFormation stack that includes the instance profile you need.

Type: String

Pattern: `arn:aws:iam::[0-9]{12}:instance-profile/.*`

Required: Yes

**InstanceType (p. 9)**

The Amazon EC2 instance type to use. For example, `m4.large`. Recommended instance types include `t2.medium` and greater, `m4.*`, or `c4.xlarge` and greater.

Type: String

Required: Yes

**KeyPair (p. 9)**

The Amazon EC2 key pair to set for the instance. This parameter is optional; if desired, you may specify this parameter to connect to your instances by using SSH.

Type: String

Required: No



### PreferredBackupWindow (p. 9)

The start time for a one-hour period during which AWS OpsWorks CM backs up application-level data on your server if automated backups are enabled. Valid values must be specified in one of the following formats:

- HH:MM for daily backups
- DDD:HH:MM for weekly backups

The specified time is in coordinated universal time (UTC). The default value is a random, daily start time.

**Example:** 08:00, which represents a daily start time of 08:00 UTC.

**Example:** Mon:08:00, which represents a start time of every Monday at 08:00 UTC. (8:00 a.m.)

Type: String

Pattern: `^(Mon|Tue|Wed|Thu|Fri|Sat|Sun):?([0-1][0-9]|2[0-3]):[0-5][0-9]$`

Required: No

### PreferredMaintenanceWindow (p. 9)

The start time for a one-hour period each week during which AWS OpsWorks CM performs maintenance on the instance. Valid values must be specified in the following format: DDD:HH:MM. The specified time is in coordinated universal time (UTC). The default value is a random one-hour period on Tuesday, Wednesday, or Friday. See `TimeWindowDefinition` for more information.

**Example:** Mon:08:00, which represents a start time of every Monday at 08:00 UTC. (8:00 a.m.)

Type: String

Pattern: `^(Mon|Tue|Wed|Thu|Fri|Sat|Sun):?([0-1][0-9]|2[0-3]):[0-5][0-9]$`

Required: No

### SecurityGroupIds (p. 9)

A list of security group IDs to attach to the Amazon EC2 instance. If you add this parameter, the specified security groups must be within the VPC that is specified by `SubnetIds`.

If you do not specify this parameter, AWS OpsWorks CM creates one new security group that uses TCP ports 22 and 443, open to 0.0.0.0/0 (everyone).

Type: Array of strings

Required: No

### ServerName (p. 9)

The name of the server. The server name must be unique within your AWS account, within each region. Server names must start with a letter; then letters, numbers, or hyphens (-) are allowed, up to a maximum of 40 characters.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: `[a-zA-Z][a-zA-Z0-9\-\-]*`

Required: Yes

### ServiceRoleArn (p. 9)

The service role that the AWS OpsWorks CM service backend uses to work with your account. Although the AWS OpsWorks management console typically creates the service role for you, if you are using the AWS CLI or API commands, run the `service-role-creation.yaml` AWS CloudFormation template, located at <https://s3.amazonaws.com/opsworks-cm-us-east-1-prod-default-assets/misc/opsworks-cm-roles.yaml>. This template creates a CloudFormation stack that includes the service role and instance profile that you need.

Type: String

Pattern: `arn:aws:iam:[0-9]{12}:role/.*`

Required: Yes

### SubnetIds (p. 9)

The IDs of subnets in which to launch the server EC2 instance.

Amazon EC2-Classic customers: This field is required. All servers must run within a VPC. The VPC must have "Auto Assign Public IP" enabled.

EC2-VPC customers: This field is optional. If you do not specify subnet IDs, your EC2 instances are created in a default subnet that is selected by Amazon EC2. If you specify subnet IDs, the VPC must have "Auto Assign Public IP" enabled.

For more information about supported Amazon EC2 platforms, see [Supported Platforms](#).

Type: Array of strings

Required: No

## Response Syntax

```
{
  "Server": {
    "AssociatePublicIpAddress": boolean,
    "BackupRetentionCount": number,
    "CloudFormationStackArn": "string",
    "CreatedAt": number,
    "DisableAutomatedBackup": boolean,
    "Endpoint": "string",
    "Engine": "string",
    "EngineAttributes": [
      {
        "Name": "string",
        "Value": "string"
      }
    ],
    "EngineModel": "string",
    "EngineVersion": "string",
    "InstanceProfileArn": "string",
    "InstanceType": "string",
    "KeyPair": "string",
    "MaintenanceStatus": "string",
    "PreferredBackupWindow": "string",
    "PreferredMaintenanceWindow": "string",
    "SecurityGroupIds": [ "string" ],
    "ServerArn": "string",
    "ServerName": "string",
    "ServiceRoleArn": "string",
```

```
"Status": "string",  
"StatusReason": "string",  
"SubnetIds": [ "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.

### Server (p. 13)

The server that is created by the request.

Type: [Server \(p. 56\)](#) object

## Errors

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

### LimitExceededException

The limit of servers or backups has been reached.

HTTP Status Code: 400

### ResourceAlreadyExistsException

The requested resource cannot be created because it already exists.

HTTP Status Code: 400

### ResourceNotFoundException

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

### ValidationException

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

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

- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

# DeleteBackup

Deletes a backup. You can delete both manual and automated backups. This operation is asynchronous.

An `InvalidStateException` is thrown when a backup deletion is already in progress. A `ResourceNotFoundException` is thrown when the backup does not exist. A `ValidationException` is thrown when parameters of the request are not valid.

## Request Syntax

```
{  
  "BackupId": "string"  
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 61\)](#).

The request accepts the following data in JSON format.

### BackupId (p. 16)

The ID of the backup to delete. Run the `DescribeBackups` command to get a list of backup IDs. Backup IDs are in the format `ServerName-yyyyMMddHHmmssSSS`.

Type: String

Length Constraints: Maximum length of 79.

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 \(p. 63\)](#).

### InvalidStateException

The resource is in a state that does not allow you to perform a specified action.

HTTP Status Code: 400

### ResourceNotFoundException

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

### ValidationException

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

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

# DeleteServer

Deletes the server and the underlying AWS CloudFormation stacks (including the server's EC2 instance). When you run this command, the server state is updated to `DELETING`. After the server is deleted, it is no longer returned by `DescribeServer` requests. If the AWS CloudFormation stack cannot be deleted, the server cannot be deleted.

This operation is asynchronous.

An `InvalidStateException` is thrown when a server deletion is already in progress. A `ResourceNotFoundException` is thrown when the server does not exist. A `ValidationException` is raised when parameters of the request are not valid.

## Request Syntax

```
{  
  "ServerName": "string"  
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 61\)](#).

The request accepts the following data in JSON format.

### ServerName (p. 18)

The ID of the server to delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: `[a-zA-Z][a-zA-Z0-9\-\ ]*`

Required: Yes

## Response Elements

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

## Errors

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

### InvalidStateException

The resource is in a state that does not allow you to perform a specified action.

HTTP Status Code: 400

### ResourceNotFoundException

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

**ValidationException**

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

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



# DescribeAccountAttributes

Describes your account attributes, and creates requests to increase limits before they are reached or exceeded.

This operation is synchronous.

## Response Syntax

```
{
  "Attributes": [
    {
      "Maximum": number,
      "Name": "string",
      "Used": number
    }
  ]
}
```

## Response Elements

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

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

### Attributes (p. 20)

The attributes that are currently set for the account.

Type: Array of [AccountAttribute \(p. 50\)](#) objects

## Errors

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

## 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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## DescribeBackups

Describes backups. The results are ordered by time, with newest backups first. If you do not specify a BackupId or ServerName, the command returns all backups.

This operation is synchronous.

A `ResourceNotFoundException` is thrown when the backup does not exist. A `ValidationException` is raised when parameters of the request are not valid.

### Request Syntax

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

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 61\)](#).

The request accepts the following data in JSON format.

#### BackupId (p. 21)

Describes a single backup.

Type: String

Length Constraints: Maximum length of 79.

Required: No

#### MaxResults (p. 21)

This is not currently implemented for `DescribeBackups` requests.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

#### NextToken (p. 21)

This is not currently implemented for `DescribeBackups` requests.

Type: String

Required: No

#### ServerName (p. 21)

Returns backups for the server with the specified `ServerName`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: [a-zA-Z][a-zA-Z0-9\-\-]\*

Required: No

## Response Syntax

```
{
  "Backups": [
    {
      "BackupArn": "string",
      "BackupId": "string",
      "BackupType": "string",
      "CreatedAt": number,
      "Description": "string",
      "Engine": "string",
      "EngineModel": "string",
      "EngineVersion": "string",
      "InstanceProfileArn": "string",
      "InstanceType": "string",
      "KeyPair": "string",
      "PreferredBackupWindow": "string",
      "PreferredMaintenanceWindow": "string",
      "S3DataSize": number,
      "S3DataUrl": "string",
      "S3LogUrl": "string",
      "SecurityGroupIds": [ "string" ],
      "ServerName": "string",
      "ServiceRoleArn": "string",
      "Status": "string",
      "StatusDescription": "string",
      "SubnetIds": [ "string" ],
      "ToolsVersion": "string",
      "UserArn": "string"
    }
  ],
  "NextToken": "string"
}
```

## Response Elements

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

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

### Backups (p. 22)

Contains the response to a `DescribeBackups` request.

Type: Array of [Backup \(p. 51\)](#) objects

### NextToken (p. 22)

This is not currently implemented for `DescribeBackups` requests.

Type: String

## Errors

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

### **InvalidNextTokenException**

This occurs when the provided nextToken is not valid.

HTTP Status Code: 400

### **ResourceNotFoundException**

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

### **ValidationException**

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

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

# DescribeEvents

Describes events for a specified server. Results are ordered by time, with newest events first.

This operation is synchronous.

A `ResourceNotFoundException` is thrown when the server does not exist. A `ValidationException` is raised when parameters of the request are not valid.

## Request Syntax

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

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 61\)](#).

The request accepts the following data in JSON format.

### MaxResults (p. 24)

To receive a paginated response, use this parameter to specify the maximum number of results to be returned with a single call. If the number of available results exceeds this maximum, the response includes a `NextToken` value that you can assign to the `NextToken` request parameter to get the next set of results.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

### NextToken (p. 24)

`NextToken` is a string that is returned in some command responses. It indicates that not all entries have been returned, and that you must run at least one more request to get remaining items. To get remaining results, call `DescribeEvents` again, and assign the token from the previous results as the value of the `nextToken` parameter. If there are no more results, the response object's `nextToken` parameter value is `null`. Setting a `nextToken` value that was not returned in your previous results causes an `InvalidNextTokenException` to occur.

Type: String

Required: No

### ServerName (p. 24)

The name of the server for which you want to view events.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: `[a-zA-Z][a-zA-Z0-9\-\ ]*`

Required: Yes

## Response Syntax

```
{
  "NextToken": "string",
  "ServerEvents": [
    {
      "CreatedAt": number,
      "LogUrl": "string",
      "Message": "string",
      "ServerName": "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. 25)

NextToken is a string that is returned in some command responses. It indicates that not all entries have been returned, and that you must run at least one more request to get remaining items. To get remaining results, call `DescribeEvents` again, and assign the token from the previous results as the value of the `nextToken` parameter. If there are no more results, the response object's `nextToken` parameter value is `null`. Setting a `nextToken` value that was not returned in your previous results causes an `InvalidNextTokenException` to occur.

Type: String

### ServerEvents (p. 25)

Contains the response to a `DescribeEvents` request.

Type: Array of [ServerEvent \(p. 60\)](#) objects

## Errors

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

### InvalidNextTokenException

This occurs when the provided `nextToken` is not valid.

HTTP Status Code: 400

### ResourceNotFoundException

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

### ValidationException

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

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

# DescribeNodeAssociationStatus

Returns the current status of an existing association or disassociation request.

A `ResourceNotFoundException` is thrown when no recent association or disassociation request with the specified token is found, or when the server does not exist. A `ValidationException` is raised when parameters of the request are not valid.

## Request Syntax

```
{
  "NodeAssociationStatusToken": "string",
  "ServerName": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 61\)](#).

The request accepts the following data in JSON format.

### NodeAssociationStatusToken (p. 27)

The token returned in either the `AssociateNodeResponse` or the `DisassociateNodeResponse`.

Type: String

Required: Yes

### ServerName (p. 27)

The name of the server from which to disassociate the node.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: `[a-zA-Z][a-zA-Z0-9\-\ ]*`

Required: Yes

## Response Syntax

```
{
  "EngineAttributes": [
    {
      "Name": "string",
      "Value": "string"
    }
  ],
  "NodeAssociationStatus": "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.

#### **EngineAttributes** (p. 27)

Attributes specific to the node association. In Puppet, the attribute PUPPET\_NODE\_CERT contains the signed certificate (the result of the CSR).

Type: Array of [EngineAttribute](#) (p. 55) objects

#### **NodeAssociationStatus** (p. 27)

The status of the association or disassociation request.

##### **Possible values:**

- **SUCCESS:** The association or disassociation succeeded.
- **FAILED:** The association or disassociation failed.
- **IN\_PROGRESS:** The association or disassociation is still in progress.

Type: String

Valid Values: SUCCESS | FAILED | IN\_PROGRESS

## Errors

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

#### **ResourceNotFoundException**

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

#### **ValidationException**

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

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

## DescribeServers

Lists all configuration management servers that are identified with your account. Only the stored results from Amazon DynamoDB are returned. AWS OpsWorks CM does not query other services.

This operation is synchronous.

A `ResourceNotFoundException` is thrown when the server does not exist. A `ValidationException` is raised when parameters of the request are not valid.

## Request Syntax

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

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 61\)](#).

The request accepts the following data in JSON format.

### MaxResults (p. 29)

This is not currently implemented for `DescribeServers` requests.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

### NextToken (p. 29)

This is not currently implemented for `DescribeServers` requests.

Type: String

Required: No

### ServerName (p. 29)

Describes the server with the specified `ServerName`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: `[a-zA-Z][a-zA-Z0-9\-\ ]*`

Required: No

## Response Syntax

```
{
```

```

"NextToken": "string",
"Servers": [
  {
    "AssociatePublicIpAddress": boolean,
    "BackupRetentionCount": number,
    "CloudFormationStackArn": "string",
    "CreatedAt": number,
    "DisableAutomatedBackup": boolean,
    "Endpoint": "string",
    "Engine": "string",
    "EngineAttributes": [
      {
        "Name": "string",
        "Value": "string"
      }
    ],
    "EngineModel": "string",
    "EngineVersion": "string",
    "InstanceProfileArn": "string",
    "InstanceType": "string",
    "KeyPair": "string",
    "MaintenanceStatus": "string",
    "PreferredBackupWindow": "string",
    "PreferredMaintenanceWindow": "string",
    "SecurityGroupIds": [ "string" ],
    "ServerArn": "string",
    "ServerName": "string",
    "ServiceRoleArn": "string",
    "Status": "string",
    "StatusReason": "string",
    "SubnetIds": [ "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. 29)

This is not currently implemented for DescribeServers requests.

Type: String

### Servers (p. 29)

Contains the response to a DescribeServers request.

*For Puppet Server:* DescribeServersResponse\$Servers\$EngineAttributes contains PUPPET\_API\_CA\_CERT. This is the PEM-encoded CA certificate that is used by the Puppet API over TCP port number 8140. The CA certificate is also used to sign node certificates.

Type: Array of [Server \(p. 56\)](#) objects

## Errors

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

### **InvalidNextTokenException**

This occurs when the provided nextToken is not valid.

HTTP Status Code: 400

### **ResourceNotFoundException**

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

### **ValidationException**

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

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

# DisassociateNode

Disassociates a node from an AWS OpsWorks CM server, and removes the node from the server's managed nodes. After a node is disassociated, the node key pair is no longer valid for accessing the configuration manager's API. For more information about how to associate a node, see [AssociateNode \(p. 3\)](#).

A node can only be disassociated from a server that is in a `HEALTHY` state. Otherwise, an `InvalidStateException` is thrown. A `ResourceNotFoundException` is thrown when the server does not exist. A `ValidationException` is raised when parameters of the request are not valid.

## Request Syntax

```
{
  "EngineAttributes": [
    {
      "Name": "string",
      "Value": "string"
    }
  ],
  "NodeName": "string",
  "ServerName": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 61\)](#).

The request accepts the following data in JSON format.

### [EngineAttributes \(p. 32\)](#)

Engine attributes that are used for disassociating the node. No attributes are required for Puppet.

#### **Attributes required in a DisassociateNode request for Chef**

- `CHEF_ORGANIZATION`: The Chef organization with which the node was associated. By default only one organization named `default` can exist.

Type: Array of [EngineAttribute \(p. 55\)](#) objects

Required: No

### [NodeName \(p. 32\)](#)

The name of the client node.

Type: String

Pattern: `^[\\-\\p{Alnum}_.:]+`

Required: Yes

### [ServerName \(p. 32\)](#)

The name of the server from which to disassociate the node.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: `[a-zA-Z][a-zA-Z0-9\-\ ]*`

Required: Yes

## Response Syntax

```
{  
  "NodeAssociationStatusToken": "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.

### NodeAssociationStatusToken (p. 33)

Contains a token which can be passed to the `DescribeNodeAssociationStatus` API call to get the status of the disassociation request.

Type: String

## Errors

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

### InvalidStateException

The resource is in a state that does not allow you to perform a specified action.

HTTP Status Code: 400

### ResourceNotFoundException

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

### ValidationException

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)

- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## ExportServerEngineAttribute

Exports a specified server engine attribute as a base64-encoded string. For example, you can export user data that you can use in EC2 to associate nodes with a server.

This operation is synchronous.

A `ValidationException` is raised when parameters of the request are not valid.

A `ResourceNotFoundException` is thrown when the server does not exist. An

`InvalidStateException` is thrown when the server is in any of the following states: `CREATING`, `TERMINATED`, `FAILED` or `DELETING`.

### Request Syntax

```
{
  "ExportAttributeName": "string",
  "InputAttributes": [
    {
      "Name": "string",
      "Value": "string"
    }
  ],
  "ServerName": "string"
}
```

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 61\)](#).

The request accepts the following data in JSON format.

#### [ExportAttributeName \(p. 35\)](#)

The name of the export attribute. Currently, the supported export attribute is `Userdata`. This exports a user data script that includes parameters and values provided in the `InputAttributes` list.

Type: String

Required: Yes

#### [InputAttributes \(p. 35\)](#)

The list of engine attributes. The list type is `EngineAttribute`. An `EngineAttribute` list item is a pair that includes an attribute name and its value. For the `Userdata` `ExportAttributeName`, the following are supported engine attribute names.

- **RunList** In Chef, a list of roles or recipes that are run in the specified order. In Puppet, this parameter is ignored.
- **OrganizationName** In Chef, an organization name. AWS OpsWorks for Chef Automate always creates the organization `default`. In Puppet, this parameter is ignored.
- **NodeEnvironment** In Chef, a node environment (for example, development, staging, or one-box). In Puppet, this parameter is ignored.
- **NodeClientVersion** In Chef, the version of the Chef engine (three numbers separated by dots, such as 13.8.5). If this attribute is empty, OpsWorks for Chef Automate uses the most current version. In Puppet, this parameter is ignored.



Type: Array of [EngineAttribute \(p. 55\)](#) objects

Required: No

#### **ServerName (p. 35)**

The name of the server from which you are exporting the attribute.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: [a-zA-Z][a-zA-Z0-9\-\*]

Required: Yes

## Response Syntax

```
{
  "EngineAttribute": {
    "Name": "string",
    "Value": "string"
  },
  "ServerName": "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.

#### **EngineAttribute (p. 36)**

The requested engine attribute pair with attribute name and value.

Type: [EngineAttribute \(p. 55\)](#) object

#### **ServerName (p. 36)**

The server name used in the request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: [a-zA-Z][a-zA-Z0-9\-\*]

## Errors

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

#### **InvalidStateException**

The resource is in a state that does not allow you to perform a specified action.

HTTP Status Code: 400

### **ResourceNotFoundException**

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

### **ValidationException**

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

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

# RestoreServer

Restores a backup to a server that is in a `CONNECTION_LOST`, `HEALTHY`, `RUNNING`, `UNHEALTHY`, or `TERMINATED` state. When you run `RestoreServer`, the server's EC2 instance is deleted, and a new EC2 instance is configured. `RestoreServer` maintains the existing server endpoint, so configuration management of the server's client devices (nodes) should continue to work.

This operation is asynchronous.

An `InvalidStateException` is thrown when the server is not in a valid state. A `ResourceNotFoundException` is thrown when the server does not exist. A `ValidationException` is raised when parameters of the request are not valid.

## Request Syntax

```
{
  "BackupId": "string",
  "InstanceType": "string",
  "KeyPair": "string",
  "ServerName": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 61).

The request accepts the following data in JSON format.

### [BackupId](#) (p. 38)

The ID of the backup that you want to use to restore a server.

Type: String

Length Constraints: Maximum length of 79.

Required: Yes

### [InstanceType](#) (p. 38)

The type of the instance to create. Valid values must be specified in the following format: `^[cm][34]|t2).*` For example, `m4.large`. Valid values are `t2.medium`, `m4.large`, and `m4.2xlarge`. If you do not specify this parameter, `RestoreServer` uses the instance type from the specified backup.

Type: String

Required: No

### [KeyPair](#) (p. 38)

The name of the key pair to set on the new EC2 instance. This can be helpful if the administrator no longer has the SSH key.

Type: String

Required: No

### ServerName (p. 38)

The name of the server that you want to restore.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: [a-zA-Z][a-zA-Z0-9\-\*]

Required: Yes

## Response Elements

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

## Errors

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

### InvalidStateException

The resource is in a state that does not allow you to perform a specified action.

HTTP Status Code: 400

### ResourceNotFoundException

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

### ValidationException

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

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

# StartMaintenance

Manually starts server maintenance. This command can be useful if an earlier maintenance attempt failed, and the underlying cause of maintenance failure has been resolved. The server is in an `UNDER_MAINTENANCE` state while maintenance is in progress.

Maintenance can only be started on servers in `HEALTHY` and `UNHEALTHY` states. Otherwise, an `InvalidStateException` is thrown. A `ResourceNotFoundException` is thrown when the server does not exist. A `ValidationException` is raised when parameters of the request are not valid.

## Request Syntax

```
{
  "EngineAttributes": [
    {
      "Name": "string",
      "Value": "string"
    }
  ],
  "ServerName": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 61\)](#).

The request accepts the following data in JSON format.

### EngineAttributes (p. 40)

Engine attributes that are specific to the server on which you want to run maintenance.

Type: Array of [EngineAttribute \(p. 55\)](#) objects

Required: No

### ServerName (p. 40)

The name of the server on which to run maintenance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: `[a-zA-Z][a-zA-Z0-9\-\-]*`

Required: Yes

## Response Syntax

```
{
  "Server": {
    "AssociatePublicIpAddress": boolean,
    "BackupRetentionCount": number,
    "CloudFormationStackArn": "string",
  }
}
```

```
"CreatedAt": number,
"DisableAutomatedBackup": boolean,
"Endpoint": "string",
"Engine": "string",
"EngineAttributes": [
  {
    "Name": "string",
    "Value": "string"
  }
],
"EngineModel": "string",
"EngineVersion": "string",
"InstanceProfileArn": "string",
"InstanceType": "string",
"KeyPair": "string",
"MaintenanceStatus": "string",
"PreferredBackupWindow": "string",
"PreferredMaintenanceWindow": "string",
"SecurityGroupIds": [ "string" ],
"ServerArn": "string",
"ServerName": "string",
"ServiceRoleArn": "string",
>Status": "string",
>StatusReason": "string",
"SubnetIds": [ "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.

### Server (p. 40)

Contains the response to a `StartMaintenance` request.

Type: [Server \(p. 56\)](#) object

## Errors

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

### InvalidStateException

The resource is in a state that does not allow you to perform a specified action.

HTTP Status Code: 400

### ResourceNotFoundException

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

### ValidationException

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

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

# UpdateServer

Updates settings for a server.

This operation is synchronous.

## Request Syntax

```
{
  "BackupRetentionCount": number,
  "DisableAutomatedBackup": boolean,
  "PreferredBackupWindow": "string",
  "PreferredMaintenanceWindow": "string",
  "ServerName": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 61\)](#).

The request accepts the following data in JSON format.

### BackupRetentionCount (p. 43)

Sets the number of automated backups that you want to keep.

Type: Integer

Required: No

### DisableAutomatedBackup (p. 43)

Setting `DisableAutomatedBackup` to `true` disables automated or scheduled backups. Automated backups are enabled by default.

Type: Boolean

Required: No

### PreferredBackupWindow (p. 43)

DDD:HH:MM (weekly start time) or HH:MM (daily start time).

Time windows always use coordinated universal time (UTC). Valid strings for day of week (DDD) are: Mon, Tue, Wed, Thr, Fri, Sat, or Sun.

Type: String

Pattern: `^((Mon|Tue|Wed|Thu|Fri|Sat|Sun):)?([0-1][0-9]|2[0-3]):[0-5][0-9]$`

Required: No

### PreferredMaintenanceWindow (p. 43)

DDD:HH:MM (weekly start time) or HH:MM (daily start time).

Time windows always use coordinated universal time (UTC). Valid strings for day of week (DDD) are: Mon, Tue, Wed, Thr, Fri, Sat, or Sun.

Type: String



Pattern: `^(Mon|Tue|Wed|Thu|Fri|Sat|Sun):?([0-1][0-9]|2[0-3]):[0-5][0-9]#`

Required: No

### ServerName (p. 43)

The name of the server to update.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: `[a-zA-Z][a-zA-Z0-9\-\-]*`

Required: Yes

## Response Syntax

```
{
  "Server": {
    "AssociatePublicIpAddress": boolean,
    "BackupRetentionCount": number,
    "CloudFormationStackArn": "string",
    "CreatedAt": number,
    "DisableAutomatedBackup": boolean,
    "Endpoint": "string",
    "Engine": "string",
    "EngineAttributes": [
      {
        "Name": "string",
        "Value": "string"
      }
    ],
    "EngineModel": "string",
    "EngineVersion": "string",
    "InstanceProfileArn": "string",
    "InstanceType": "string",
    "KeyPair": "string",
    "MaintenanceStatus": "string",
    "PreferredBackupWindow": "string",
    "PreferredMaintenanceWindow": "string",
    "SecurityGroupIds": [ "string" ],
    "ServerArn": "string",
    "ServerName": "string",
    "ServiceRoleArn": "string",
    "Status": "string",
    "StatusReason": "string",
    "SubnetIds": [ "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.

### Server (p. 44)

Contains the response to a `UpdateServer` request.

Type: [Server \(p. 56\)](#) object

## Errors

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

### **InvalidStateException**

The resource is in a state that does not allow you to perform a specified action.

HTTP Status Code: 400

### **ResourceNotFoundException**

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

### **ValidationException**

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

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

# UpdateServerEngineAttributes

Updates engine-specific attributes on a specified server. The server enters the `MODIFYING` state when this operation is in progress. Only one update can occur at a time. You can use this command to reset a Chef server's public key (`CHEF_PIVOTAL_KEY`) or a Puppet server's admin password (`PUPPET_ADMIN_PASSWORD`).

This operation is asynchronous.

This operation can only be called for servers in `HEALTHY` or `UNHEALTHY` states. Otherwise, an `InvalidStateException` is raised. A `ResourceNotFoundException` is thrown when the server does not exist. A `ValidationException` is raised when parameters of the request are not valid.

## Request Syntax

```
{
  "AttributeName": "string",
  "AttributeValue": "string",
  "ServerName": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 61\)](#).

The request accepts the following data in JSON format.

### [AttributeName \(p. 46\)](#)

The name of the engine attribute to update.

Type: String

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

Pattern: `[A-Z][A-Z0-9_]*`

Required: Yes

### [AttributeValue \(p. 46\)](#)

The value to set for the attribute.

Type: String

Required: No

### [ServerName \(p. 46\)](#)

The name of the server to update.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: `[a-zA-Z][a-zA-Z0-9\-*]`

Required: Yes

## Response Syntax

```
{
  "Server": {
    "AssociatePublicIpAddress": boolean,
    "BackupRetentionCount": number,
    "CloudFormationStackArn": "string",
    "CreatedAt": number,
    "DisableAutomatedBackup": boolean,
    "Endpoint": "string",
    "Engine": "string",
    "EngineAttributes": [
      {
        "Name": "string",
        "Value": "string"
      }
    ],
    "EngineModel": "string",
    "EngineVersion": "string",
    "InstanceProfileArn": "string",
    "InstanceType": "string",
    "KeyPair": "string",
    "MaintenanceStatus": "string",
    "PreferredBackupWindow": "string",
    "PreferredMaintenanceWindow": "string",
    "SecurityGroupIds": [ "string" ],
    "ServerArn": "string",
    "ServerName": "string",
    "ServiceRoleArn": "string",
    "Status": "string",
    "StatusReason": "string",
    "SubnetIds": [ "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.

### Server (p. 47)

Contains the response to an `UpdateServerEngineAttributes` request.

Type: [Server \(p. 56\)](#) object

## Errors

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

### InvalidStateException

The resource is in a state that does not allow you to perform a specified action.

HTTP Status Code: 400

### ResourceNotFoundException

The requested resource does not exist, or access was denied.

HTTP Status Code: 400

**ValidationException**

One or more of the provided request parameters are not valid.

HTTP Status Code: 400

## See Also

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

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

# Data Types

The AWS OpsWorks CM 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:

- [AccountAttribute \(p. 50\)](#)
- [Backup \(p. 51\)](#)
- [EngineAttribute \(p. 55\)](#)
- [Server \(p. 56\)](#)
- [ServerEvent \(p. 60\)](#)

# AccountAttribute

Stores account attributes.

## Contents

### Maximum

The maximum allowed value.

Type: Integer

Required: No

### Name

The attribute name. The following are supported attribute names.

- *ServerLimit*: The number of current servers/maximum number of servers allowed. By default, you can have a maximum of 10 servers.
- *ManualBackupLimit*: The number of current manual backups/maximum number of backups allowed. By default, you can have a maximum of 50 manual backups saved.

Type: String

Required: No

### Used

The current usage, such as the current number of servers that are associated with the account.

Type: Integer

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

# Backup

Describes a single backup.

## Contents

### **BackupArn**

The ARN of the backup.

Type: String

Required: No

### **BackupId**

The generated ID of the backup. Example: `myServerName-yyyyMMddHHmssSSS`

Type: String

Length Constraints: Maximum length of 79.

Required: No

### **BackupType**

The backup type. Valid values are `automated` or `manual`.

Type: String

Valid Values: `AUTOMATED` | `MANUAL`

Required: No

### **CreatedAt**

The time stamp when the backup was created in the database. Example:  
`2016-07-29T13:38:47.520Z`

Type: Timestamp

Required: No

### **Description**

A user-provided description for a manual backup. This field is empty for automated backups.

Type: String

Required: No

### **Engine**

The engine type that is obtained from the server when the backup is created.

Type: String

Required: No

### **EngineModel**

The engine model that is obtained from the server when the backup is created.

Type: String



Required: No

**EngineVersion**

The engine version that is obtained from the server when the backup is created.

Type: String

Required: No

**InstanceProfileArn**

The EC2 instance profile ARN that is obtained from the server when the backup is created. Because this value is stored, you are not required to provide the InstanceProfileArn again if you restore a backup.

Type: String

Required: No

**InstanceType**

The instance type that is obtained from the server when the backup is created.

Type: String

Required: No

**KeyPair**

The key pair that is obtained from the server when the backup is created.

Type: String

Required: No

**PreferredBackupWindow**

The preferred backup period that is obtained from the server when the backup is created.

Type: String

Pattern: `^(Mon|Tue|Wed|Thu|Fri|Sat|Sun):?([0-1][0-9]|2[0-3]):[0-5][0-9]$`

Required: No

**PreferredMaintenanceWindow**

The preferred maintenance period that is obtained from the server when the backup is created.

Type: String

Pattern: `^(Mon|Tue|Wed|Thu|Fri|Sat|Sun):?([0-1][0-9]|2[0-3]):[0-5][0-9]$`

Required: No

**S3DataSize**

This field is deprecated and is no longer used.

Type: Integer

Required: No

**S3DataUrl**

This field is deprecated and is no longer used.

Type: String

Required: No

**S3LogUrl**

The Amazon S3 URL of the backup's log file.

Type: String

Required: No

**SecurityGroupIds**

The security group IDs that are obtained from the server when the backup is created.

Type: Array of strings

Required: No

**ServerName**

The name of the server from which the backup was made.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 40.

Pattern: [a-zA-Z][a-zA-Z0-9\-\*]

Required: No

**ServiceRoleArn**

The service role ARN that is obtained from the server when the backup is created.

Type: String

Required: No

**Status**

The status of a backup while in progress.

Type: String

Valid Values: IN\_PROGRESS | OK | FAILED | DELETING

Required: No

**StatusDescription**

An informational message about backup status.

Type: String

Required: No

**SubnetIds**

The subnet IDs that are obtained from the server when the backup is created.

Type: Array of strings

Required: No

### **ToolsVersion**

The version of AWS OpsWorks CM-specific tools that is obtained from the server when the backup is created.

Type: String

Required: No

### **UserArn**

The IAM user ARN of the requester for manual backups. This field is empty for automated backups.

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

# EngineAttribute

A name and value pair that is specific to the engine of the server.

## Contents

### Name

The name of the engine attribute.

Type: String

Required: No

### Value

The value of the engine attribute.

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

# Server

Describes a configuration management server.

## Contents

### **AssociatePublicIpAddress**

Associate a public IP address with a server that you are launching.

Type: Boolean

Required: No

### **BackupRetentionCount**

The number of automated backups to keep.

Type: Integer

Required: No

### **CloudFormationStackArn**

The ARN of the CloudFormation stack that was used to create the server.

Type: String

Required: No

### **CreatedAt**

Time stamp of server creation. Example 2016-07-29T13:38:47.520Z

Type: Timestamp

Required: No

### **DisableAutomatedBackup**

Disables automated backups. The number of stored backups is dependent on the value of PreferredBackupCount.

Type: Boolean

Required: No

### **Endpoint**

A DNS name that can be used to access the engine. Example: myserver-asdfghjkl.us-east-1.opsworks.io

Type: String

Required: No

### **Engine**

The engine type of the server. Valid values in this release include Chef and Puppet.

Type: String

Required: No

## EngineAttributes

The response of a `createServer()` request returns the master credential to access the server in `EngineAttributes`. These credentials are not stored by AWS OpsWorks CM; they are returned only as part of the result of `createServer()`.

### Attributes returned in a `createServer` response for Chef

- `CHEF_PIVOTAL_KEY`: A base64-encoded RSA private key that is generated by AWS OpsWorks for Chef Automate. This private key is required to access the Chef API.
- `CHEF_STARTER_KIT`: A base64-encoded ZIP file. The ZIP file contains a Chef starter kit, which includes a README, a configuration file, and the required RSA private key. Save this file, unzip it, and then change to the directory where you've unzipped the file contents. From this directory, you can run Knife commands.

### Attributes returned in a `createServer` response for Puppet

- `PUPPET_STARTER_KIT`: A base64-encoded ZIP file. The ZIP file contains a Puppet starter kit, including a README and a required private key. Save this file, unzip it, and then change to the directory where you've unzipped the file contents.
- `PUPPET_ADMIN_PASSWORD`: An administrator password that you can use to sign in to the Puppet Enterprise console after the server is online.

Type: Array of [EngineAttribute \(p. 55\)](#) objects

Required: No

## EngineModel

The engine model of the server. Valid values in this release include `Monolithic` for Puppet and `Single` for Chef.

Type: String

Required: No

## EngineVersion

The engine version of the server. For a Chef server, the valid value for `EngineVersion` is currently 12. For a Puppet server, the valid value is 2017.

Type: String

Required: No

## InstanceProfileArn

The instance profile ARN of the server.

Type: String

Required: No

## InstanceType

The instance type for the server, as specified in the CloudFormation stack. This might not be the same instance type that is shown in the EC2 console.

Type: String

Required: No

## KeyPair

The key pair associated with the server.

Type: String

Required: No

#### **MaintenanceStatus**

The status of the most recent server maintenance run. Shows `SUCCESS` or `FAILED`.

Type: String

Valid Values: `SUCCESS` | `FAILED`

Required: No

#### **PreferredBackupWindow**

The preferred backup period specified for the server.

Type: String

Pattern: `^(Mon|Tue|Wed|Thu|Fri|Sat|Sun):?([0-1][0-9]|2[0-3]):[0-5][0-9]#`

Required: No

#### **PreferredMaintenanceWindow**

The preferred maintenance period specified for the server.

Type: String

Pattern: `^(Mon|Tue|Wed|Thu|Fri|Sat|Sun):?([0-1][0-9]|2[0-3]):[0-5][0-9]#`

Required: No

#### **SecurityGroupIds**

The security group IDs for the server, as specified in the CloudFormation stack. These might not be the same security groups that are shown in the EC2 console.

Type: Array of strings

Required: No

#### **ServerArn**

The ARN of the server.

Type: String

Required: No

#### **ServerName**

The name of the server.

Type: String

Required: No

#### **ServiceRoleArn**

The service role ARN used to create the server.

Type: String

Required: No

### Status

The server's status. This field displays the states of actions in progress, such as creating, running, or backing up the server, as well as the server's health state.

Type: String

Valid Values: BACKING\_UP | CONNECTION\_LOST | CREATING | DELETING | MODIFYING  
| FAILED | HEALTHY | RUNNING | RESTORING | SETUP | UNDER\_MAINTENANCE |  
UNHEALTHY | TERMINATED

Required: No

### StatusReason

Depending on the server status, this field has either a human-readable message (such as a create or backup error), or an escaped block of JSON (used for health check results).

Type: String

Required: No

### SubnetIds

The subnet IDs specified in a CreateServer request.

Type: Array of strings

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)



# ServerEvent

An event that is related to the server, such as the start of maintenance or backup.

## Contents

### CreatedAt

The time when the event occurred.

Type: Timestamp

Required: No

### LogUrl

The Amazon S3 URL of the event's log file.

Type: String

Required: No

### Message

A human-readable informational or status message.

Type: String

Required: No

### ServerName

The name of the server on or for which the event occurred.

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

# 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'THHMMSS'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