

Amazon Batch



Amazon Batch: API Reference

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Welcome

Using Amazon Batch, you can run batch computing workloads on the Amazon Web Services Cloud. Batch computing is a common means for developers, scientists, and engineers to access large amounts of compute resources. Amazon Batch uses the advantages of the batch computing to remove the undifferentiated heavy lifting of configuring and managing required infrastructure. At the same time, it also adopts a familiar batch computing software approach. You can use Amazon Batch to efficiently provision resources, and work toward eliminating capacity constraints, reducing your overall compute costs, and delivering results more quickly.

As a fully managed service, Amazon Batch can run batch computing workloads of any scale. Amazon Batch automatically provisions compute resources and optimizes workload distribution based on the quantity and scale of your specific workloads. With Amazon Batch, there's no need to install or manage batch computing software. This means that you can focus on analyzing results and solving your specific problems instead.

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Actions

The following actions are supported:

- [CancelJob](#)
- [CreateComputeEnvironment](#)
- [CreateConsumableResource](#)
- [CreateJobQueue](#)
- [CreateSchedulingPolicy](#)
- [DeleteComputeEnvironment](#)
- [DeleteConsumableResource](#)
- [DeleteJobQueue](#)
- [DeleteSchedulingPolicy](#)
- [DeregisterJobDefinition](#)
- [DescribeComputeEnvironments](#)
- [DescribeConsumableResource](#)
- [DescribeJobDefinitions](#)
- [DescribeJobQueues](#)
- [DescribeJobs](#)
- [DescribeSchedulingPolicies](#)
- [GetJobQueueSnapshot](#)
- [ListConsumableResources](#)
- [ListJobs](#)
- [ListJobsByConsumableResource](#)
- [ListSchedulingPolicies](#)
- [ListTagsForResource](#)
- [RegisterJobDefinition](#)
- [SubmitJob](#)
- [TagResource](#)
- [TerminateJob](#)
- [UntagResource](#)

- [UpdateComputeEnvironment](#)
- [UpdateConsumableResource](#)
- [UpdateJobQueue](#)
- [UpdateSchedulingPolicy](#)

CancelJob

Cancel a job in an Amazon Batch job queue. Jobs that are in a SUBMITTED, PENDING, or RUNNABLE state are cancelled and the job status is updated to FAILED.

Note

A PENDING job is canceled after all dependency jobs are completed. Therefore, it may take longer than expected to cancel a job in PENDING status.

When you try to cancel an array parent job in PENDING, Amazon Batch attempts to cancel all child jobs. The array parent job is canceled when all child jobs are completed.

Jobs that progressed to the STARTING or RUNNING state aren't canceled. However, the API operation still succeeds, even if no job is canceled. These jobs must be terminated with the [TerminateJob](#) operation.

Request Syntax

```
POST /v1/canceljob HTTP/1.1
Content-type: application/json
```

```
{
  "jobId": "string",
  "reason": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

jobId

The Amazon Batch job ID of the job to cancel.

Type: String

Required: Yes

reason

A message to attach to the job that explains the reason for canceling it. This message is returned by future [DescribeJobs](#) operations on the job. It is also recorded in the Amazon Batch activity logs.

This parameter has as limit of 1024 characters.

Type: String

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (`[authorization-params]`) must be replaced with an Amazon Signature Version 4 signature. For more information

about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example cancels a job with the specified job ID.

Sample Request

```
POST /v1/canceljob HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161130T001258Z
User-Agent: aws-cli/1.11.22 Python/2.7.12 Darwin/16.1.0 botocore/1.4.79

{
  "reason": "Cancelling job.",
  "jobId": "1d828f65-7a4d-42e8-996d-3b900ed59dc4"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: 2
Connection: keep-alive
Date: Wed, 30 Nov 2016 00:12:59 GMT
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 bfdd5909914586f5bc4851846228c27f.cloudfront.net (CloudFront)
X-Amz-Cf-Id: whn1dX1uTx34Lvao7-7ZdkDXEbCZ_sjn3v3hHVFgbo10RJtXyeggSw==

{}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

CreateComputeEnvironment

Creates an Amazon Batch compute environment. You can create MANAGED or UNMANAGED compute environments. MANAGED compute environments can use Amazon EC2 or Amazon Fargate resources. UNMANAGED compute environments can only use EC2 resources.

In a managed compute environment, Amazon Batch manages the capacity and instance types of the compute resources within the environment. This is based on the compute resource specification that you define or the [launch template](#) that you specify when you create the compute environment. Either, you can choose to use EC2 On-Demand Instances and EC2 Spot Instances. Or, you can use Fargate and Fargate Spot capacity in your managed compute environment. You can optionally set a maximum price so that Spot Instances only launch when the Spot Instance price is less than a specified percentage of the On-Demand price.

Note

Multi-node parallel jobs aren't supported on Spot Instances.

In an unmanaged compute environment, you can manage your own EC2 compute resources and have flexibility with how you configure your compute resources. For example, you can use custom AMIs. However, you must verify that each of your AMIs meet the Amazon ECS container instance AMI specification. For more information, see [container instance AMIs](#) in the *Amazon Elastic Container Service Developer Guide*. After you created your unmanaged compute environment, you can use the [DescribeComputeEnvironments](#) operation to find the Amazon ECS cluster that's associated with it. Then, launch your container instances into that Amazon ECS cluster. For more information, see [Launching an Amazon ECS container instance](#) in the *Amazon Elastic Container Service Developer Guide*.

Note

To create a compute environment that uses EKS resources, the caller must have permissions to call `eks:DescribeCluster`.

Note

Amazon Batch doesn't automatically upgrade the AMIs in a compute environment after it's created. For example, it also doesn't update the AMIs in your compute environment when a newer version of the Amazon ECS optimized AMI is available. You're responsible for the management of the guest operating system. This includes any updates and security patches. You're also responsible for any additional application software or utilities that you install on the compute resources. There are two ways to use a new AMI for your Amazon Batch jobs. The original method is to complete these steps:

1. Create a new compute environment with the new AMI.
2. Add the compute environment to an existing job queue.
3. Remove the earlier compute environment from your job queue.
4. Delete the earlier compute environment.

In April 2022, Amazon Batch added enhanced support for updating compute environments. For more information, see [Updating compute environments](#). To use the enhanced updating of compute environments to update AMIs, follow these rules:

- Either don't set the service role (`serviceRole`) parameter or set it to the **AWSBatchServiceRole** service-linked role.
- Set the allocation strategy (`allocationStrategy`) parameter to `BEST_FIT_PROGRESSIVE`, `SPOT_CAPACITY_OPTIMIZED`, or `SPOT_PRICE_CAPACITY_OPTIMIZED`.
- Set the update to latest image version (`updateToLatestImageVersion`) parameter to `true`. The `updateToLatestImageVersion` parameter is used when you update a compute environment. This parameter is ignored when you create a compute environment.
- Don't specify an AMI ID in `imageId`, `imageIdOverride` (in [ec2Configuration](#)), or in the launch template (`launchTemplate`). In that case, Amazon Batch selects the latest Amazon ECS optimized AMI that's supported by Amazon Batch at the time the infrastructure update is initiated. Alternatively, you can specify the AMI ID in the `imageId` or `imageIdOverride` parameters, or the launch template identified by the `LaunchTemplate` properties. Changing any of these properties starts an infrastructure update. If the AMI ID is specified in the launch template, it can't be replaced by specifying an AMI ID in either the `imageId` or `imageIdOverride` parameters. It can only be

replaced by specifying a different launch template, or if the launch template version is set to `$Default` or `$Latest`, by setting either a new default version for the launch template (if `$Default`) or by adding a new version to the launch template (if `$Latest`).

If these rules are followed, any update that starts an infrastructure update causes the AMI ID to be re-selected. If the version setting in the launch template (`launchTemplate`) is set to `$Latest` or `$Default`, the latest or default version of the launch template is evaluated up at the time of the infrastructure update, even if the `launchTemplate` wasn't updated.

Request Syntax

```
POST /v1/createcomputeenvironment HTTP/1.1
```

```
Content-type: application/json
```

```
{
  "computeEnvironmentName": "string",
  "computeResources": {
    "allocationStrategy": "string",
    "bidPercentage": number,
    "desiredvCpus": number,
    "ec2Configuration": [
      {
        "imageIdOverride": "string",
        "imageKubernetesVersion": "string",
        "imageType": "string"
      }
    ],
    "ec2KeyPair": "string",
    "imageId": "string",
    "instanceRole": "string",
    "instanceTypes": [ "string" ],
    "launchTemplate": {
      "launchTemplateId": "string",
      "launchTemplateName": "string",
      "overrides": [
        {
          "launchTemplateId": "string",
          "launchTemplateName": "string",
          "targetInstanceTypes": [ "string" ],
```

```
        "userDataType": "string",
        "version": "string"
    }
],
"userDataType": "string",
"version": "string"
},
"maxvCpus": number,
"minvCpus": number,
"placementGroup": "string",
"securityGroupIds": [ "string" ],
"spotIamFleetRole": "string",
"subnets": [ "string" ],
"tags": {
    "string" : "string"
},
"type": "string"
},
"context": "string",
"eksConfiguration": {
    "eksClusterArn": "string",
    "kubernetesNamespace": "string"
},
"serviceRole": "string",
"state": "string",
"tags": {
    "string" : "string"
},
"type": "string",
"unmanagedvCpus": number
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

computeEnvironmentName

The name for your compute environment. It can be up to 128 characters long. It can contain uppercase and lowercase letters, numbers, hyphens (-), and underscores (_).

Type: String

Required: Yes

computeResources

Details about the compute resources managed by the compute environment. This parameter is required for managed compute environments. For more information, see [Compute Environments](#) in the *Amazon Batch User Guide*.

Type: [ComputeResource](#) object

Required: No

context

Reserved.

Type: String

Required: No

eksConfiguration

The details for the Amazon EKS cluster that supports the compute environment.

Type: [EksConfiguration](#) object

Required: No

serviceRole

The full Amazon Resource Name (ARN) of the IAM role that allows Amazon Batch to make calls to other Amazon services on your behalf. For more information, see [Amazon Batch service IAM role](#) in the *Amazon Batch User Guide*.

Important

If your account already created the Amazon Batch service-linked role, that role is used by default for your compute environment unless you specify a different role here.

If the Amazon Batch service-linked role doesn't exist in your account, and no role is specified here, the service attempts to create the Amazon Batch service-linked role in your account.

If your specified role has a path other than `/`, then you must specify either the full role ARN (recommended) or prefix the role name with the path. For example, if a role with the name `bar` has a path of `/foo/`, specify `/foo/bar` as the role name. For more information, see [Friendly names and paths](#) in the *IAM User Guide*.

Note

Depending on how you created your Amazon Batch service role, its ARN might contain the `service-role` path prefix. When you only specify the name of the service role, Amazon Batch assumes that your ARN doesn't use the `service-role` path prefix. Because of this, we recommend that you specify the full ARN of your service role when you create compute environments.

Type: String

Required: No

state

The state of the compute environment. If the state is `ENABLED`, then the compute environment accepts jobs from a queue and can scale out automatically based on queues.

If the state is `ENABLED`, then the Amazon Batch scheduler can attempt to place jobs from an associated job queue on the compute resources within the environment. If the compute environment is managed, then it can scale its instances out or in automatically, based on the job queue demand.

If the state is `DISABLED`, then the Amazon Batch scheduler doesn't attempt to place jobs within the environment. Jobs in a `STARTING` or `RUNNING` state continue to progress normally. Managed compute environments in the `DISABLED` state don't scale out.

Note

Compute environments in a DISABLED state may continue to incur billing charges. To prevent additional charges, turn off and then delete the compute environment. For more information, see [State](#) in the *Amazon Batch User Guide*.

When an instance is idle, the instance scales down to the `minvCpus` value. However, the instance size doesn't change. For example, consider a `c5.8xlarge` instance with a `minvCpus` value of 4 and a `desiredvCpus` value of 36. This instance doesn't scale down to a `c5.large` instance.

Type: String

Valid Values: ENABLED | DISABLED

Required: No

tags

The tags that you apply to the compute environment to help you categorize and organize your resources. Each tag consists of a key and an optional value. For more information, see [Tagging Amazon Resources](#) in *Amazon General Reference*.

These tags can be updated or removed using the [TagResource](#) and [UntagResource](#) API operations. These tags don't propagate to the underlying compute resources.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Value Length Constraints: Maximum length of 256.

Required: No

type

The type of the compute environment: MANAGED or UNMANAGED. For more information, see [Compute Environments](#) in the *Amazon Batch User Guide*.

Type: String

Valid Values: MANAGED | UNMANAGED

Required: Yes

unmanagedvCpus

The maximum number of vCPUs for an unmanaged compute environment. This parameter is only used for fair-share scheduling to reserve vCPU capacity for new share identifiers. If this parameter isn't provided for a fair-share job queue, no vCPU capacity is reserved.

Note

This parameter is only supported when the type parameter is set to UNMANAGED.

Type: Integer

Required: No

Response Syntax

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

{
  "computeEnvironmentArn": "string",
  "computeEnvironmentName": "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.

computeEnvironmentArn

The Amazon Resource Name (ARN) of the compute environment.

Type: String

computeEnvironmentName

The name of the compute environment. It can be up to 128 characters long. It can contain uppercase and lowercase letters, numbers, hyphens (-), and underscores (_).

Type: String

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example creates a managed compute environment with specific C4 instance types that are launched on demand. The compute environment is called C4OnDemand.

Sample Request

```
POST /v1/createcomputeenvironment HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161128T223128Z
User-Agent: aws-cli/1.11.21 Python/2.7.12 Darwin/16.1.0 botocore/1.4.78
```

```
{
  "computeEnvironmentName": "C4OnDemand",
  "state": "ENABLED",
  "type": "MANAGED",
  "computeResources": {
    "subnets": [
      "subnet-220c0e0a",
      "subnet-1a95556d",
      "subnet-978f6dce"
    ],
    "tags": {
      "Name": "Batch Instance - C4OnDemand",
      "Department": "Engineering"
    },
    "desiredvCpus": 48,
    "minvCpus": 0,
    "instanceTypes": [
      "c4.large",
      "c4.xlarge",
      "c4.2xlarge",
      "c4.4xlarge",
      "c4.8xlarge"
    ],
    "securityGroupIds": [
      "sg-cf5093b2"
    ],
    "instanceRole": "ecsInstanceRole",
    "maxvCpus": 128,
    "type": "EC2",
    "ec2KeyPair": "id_rsa"
  },
  "serviceRole": "arn:aws:iam::123456789012:role/AWSBatchServiceRole"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Mon, 28 Nov 2016 22:31:28 GMT
Content-Type: application/json
Content-Length: [content-length]
Connection: keep-alive
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 7e587c722adb25336835ccb4e5814e4e.cloudfront.net (CloudFront)
X-Amz-Cf-Id: GwQRsxxvmiuj1HYwbYq9MAEsQfJpN6BknGQlNX1jAd5qLQFXyHBw0UQ==

{
  "computeEnvironmentName": "C4OnDemand",
  "computeEnvironmentArn": "arn:aws:batch:us-east-1:123456789012:compute-environment/
C4OnDemand"
}
```

Example

This example creates a managed compute environment with the M4 instance type that's launched when the Spot Instance price less than or equal to 20% of the On-Demand price for the instance type. The compute environment is called M4Spot.

Sample Request

```
POST /v1/createcomputeenvironment HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161128T223813Z
User-Agent: aws-cli/1.11.21 Python/2.7.12 Darwin/16.1.0 botocore/1.4.78

{
  "computeEnvironmentName": "M4Spot",
  "state": "ENABLED",
  "type": "MANAGED",
  "computeResources": {
    "subnets": [
      "subnet-220c0e0a",
```

```
    "subnet-1a95556d",
    "subnet-978f6dce"
  ],
  "type": "SPOT",
  "spotIamFleetRole": "arn:aws:iam::123456789012:role/aws-ec2-spot-fleet-role",
  "tags": {
    "Name": "Batch Instance - M4Spot",
    "Department": "Marketing"
  },
  "desiredvCpus": 4,
  "minvCpus": 0,
  "instanceTypes": [
    "m4"
  ],
  "securityGroupIds": [
    "sg-cf5093b2"
  ],
  "instanceRole": "ecsInstanceRole",
  "maxvCpus": 128,
  "bidPercentage": 20,
  "ec2KeyPair": "id_rsa"
},
"serviceRole": "arn:aws:iam::123456789012:role/AWSBatchServiceRole"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Mon, 28 Nov 2016 22:38:16 GMT
Content-Type: application/json
Content-Length: [content-length]
Connection: keep-alive
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 8455edd9286a1292a39c993fdecccce65.cloudfront.net (CloudFront)
X-Amz-Cf-Id: 4mklLyUpygUko86fMNzPgA8_D64lSwPmG6iIKhAZkGp0p2e-3cKg_w==

{
  "computeEnvironmentName": "M4Spot",
  "computeEnvironmentArn": "arn:aws:batch:us-east-1:123456789012:compute-environment/
M4Spot"
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

CreateConsumableResource

Creates an Amazon Batch consumable resource.

Request Syntax

```
POST /v1/createconsumableresource HTTP/1.1
Content-type: application/json
```

```
{
  "consumableResourceName": "string",
  "resourceType": "string",
  "tags": {
    "string" : "string"
  },
  "totalQuantity": number
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

consumableResourceName

The name of the consumable resource. Must be unique.

Type: String

Required: Yes

resourceType

Indicates whether the resource is available to be re-used after a job completes. Can be one of:

- REPLENISHABLE (default)
- NON_REPLENISHABLE

Type: String

Required: No

tags

The tags that you apply to the consumable resource to help you categorize and organize your resources. Each tag consists of a key and an optional value. For more information, see [Tagging your Amazon Batch resources](#).

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Value Length Constraints: Maximum length of 256.

Required: No

totalQuantity

The total amount of the consumable resource that is available. Must be non-negative.

Type: Long

Required: No

Response Syntax

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

{
  "consumableResourceArn": "string",
  "consumableResourceName": "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.

consumableResourceArn

The Amazon Resource Name (ARN) of the consumable resource.

Type: String

consumableResourceName

The name of the consumable resource.

Type: String

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)

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

CreateJobQueue

Creates an Amazon Batch job queue. When you create a job queue, you associate one or more compute environments to the queue and assign an order of preference for the compute environments.

You also set a priority to the job queue that determines the order that the Amazon Batch scheduler places jobs onto its associated compute environments. For example, if a compute environment is associated with more than one job queue, the job queue with a higher priority is given preference for scheduling jobs to that compute environment.

Request Syntax

```
POST /v1/createjobqueue HTTP/1.1
Content-type: application/json
```

```
{
  "computeEnvironmentOrder": [
    {
      "computeEnvironment": "string",
      "order": number
    }
  ],
  "jobQueueName": "string",
  "jobStateTimeLimitActions": [
    {
      "action": "string",
      "maxTimeSeconds": number,
      "reason": "string",
      "state": "string"
    }
  ],
  "priority": number,
  "schedulingPolicyArn": "string",
  "state": "string",
  "tags": {
    "string" : "string"
  }
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

[computeEnvironmentOrder](#)

The set of compute environments mapped to a job queue and their order relative to each other. The job scheduler uses this parameter to determine which compute environment runs a specific job. Compute environments must be in the VALID state before you can associate them with a job queue. You can associate up to three compute environments with a job queue. All of the compute environments must be either EC2 (EC2 or SPOT) or Fargate (FARGATE or FARGATE_SPOT); EC2 and Fargate compute environments can't be mixed.

Note

All compute environments that are associated with a job queue must share the same architecture. Amazon Batch doesn't support mixing compute environment architecture types in a single job queue.

Type: Array of [ComputeEnvironmentOrder](#) objects

Required: Yes

[jobQueueName](#)

The name of the job queue. It can be up to 128 letters long. It can contain uppercase and lowercase letters, numbers, hyphens (-), and underscores (_).

Type: String

Required: Yes

[jobStateTimeLimitActions](#)

The set of actions that Amazon Batch performs on jobs that remain at the head of the job queue in the specified state longer than specified times. Amazon Batch will perform each action

after `maxTimeSeconds` has passed. (**Note:** The minimum value for `maxTimeSeconds` is 600 (10 minutes) and its maximum value is 86,400 (24 hours).)

Type: Array of [JobStateTimeLimitAction](#) objects

Required: No

[priority](#)

The priority of the job queue. Job queues with a higher priority (or a higher integer value for the `priority` parameter) are evaluated first when associated with the same compute environment. Priority is determined in descending order. For example, a job queue with a priority value of 10 is given scheduling preference over a job queue with a priority value of 1. All of the compute environments must be either EC2 (EC2 or SPOT) or Fargate (FARGATE or FARGATE_SPOT); EC2 and Fargate compute environments can't be mixed.

Type: Integer

Required: Yes

[schedulingPolicyArn](#)

The Amazon Resource Name (ARN) of the fair-share scheduling policy. Job queues that don't have a fair-share scheduling policy are scheduled in a first-in, first-out (FIFO) model. After a job queue has a fair-share scheduling policy, it can be replaced but can't be removed.

The format is `aws:Partition:batch:Region:Account:scheduling-policy/Name` .

An example is `aws:aws:batch:us-west-2:123456789012:scheduling-policy/MySchedulingPolicy`.

A job queue without a fair-share scheduling policy is scheduled as a FIFO job queue and can't have a fair-share scheduling policy added. Jobs queues with a fair-share scheduling policy can have a maximum of 500 active share identifiers. When the limit has been reached, submissions of any jobs that add a new share identifier fail.

Type: String

Required: No

state

The state of the job queue. If the job queue state is `ENABLED`, it is able to accept jobs. If the job queue state is `DISABLED`, new jobs can't be added to the queue, but jobs already in the queue can finish.

Type: String

Valid Values: `ENABLED` | `DISABLED`

Required: No

tags

The tags that you apply to the job queue to help you categorize and organize your resources. Each tag consists of a key and an optional value. For more information, see [Tagging your Amazon Batch resources](#) in *Amazon Batch User Guide*.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Value Length Constraints: Maximum length of 256.

Required: No

Response Syntax

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

{
  "jobQueueArn": "string",
  "jobQueueName": "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.

jobQueueArn

The Amazon Resource Name (ARN) of the job queue.

Type: String

jobQueueName

The name of the job queue.

Type: String

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example creates a job queue called `LowPriority` that uses the `M4Spot` compute environment.

Sample Request

```
POST /v1/createjobqueue HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161128T234201Z
User-Agent: aws-cli/1.11.21 Python/2.7.12 Darwin/16.1.0 botocore/1.4.78

{
  "priority": 1,
  "state": "ENABLED",
  "computeEnvironmentOrder": [
    {
      "computeEnvironment": "M4Spot",
      "order": 1
    }
  ],
  "jobQueueName": "LowPriority"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: [content-length]
Connection: keep-alive
Date: Mon, 28 Nov 2016 23:42:02 GMT
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 a44b4468444ef3ee67472bd5c5016098.cloudfront.net (CloudFront)
X-Amz-Cf-Id: bz9IuCM5FNkDfge5y-Zw7nFEjDdTHDYFwbEY2AKUqrt9l2XeKUcuyA==

{
  "jobQueueName": "LowPriority",
  "jobQueueArn": "arn:aws:batch:us-east-1:123456789012:job-queue/LowPriority"
```

```
}
```

Example

This example creates a job queue called `HighPriority` that uses the `C4OnDemand` compute environment with an order of 1 and the `M4Spot` compute environment with an order of 2.

Sample Request

```
POST /v1/createjobqueue HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161128T234933Z
User-Agent: aws-cli/1.11.21 Python/2.7.12 Darwin/16.1.0 botocore/1.4.78
```

```
{
  "priority": 10,
  "state": "ENABLED",
  "computeEnvironmentOrder": [
    {
      "computeEnvironment": "C4OnDemand",
      "order": 1
    },
    {
      "computeEnvironment": "M4Spot",
      "order": 2
    }
  ],
  "jobQueueName": "HighPriority"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Mon, 28 Nov 2016 23:49:34 GMT
Content-Type: application/json
Content-Length: [content-length]
Connection: keep-alive
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
```

```
X-Cache: Miss from cloudfront
Via: 1.1 e81bbcbc86832b655de5b9a19317ad01.cloudfront.net (CloudFront)
X-Amz-Cf-Id: 8NB20odDPMaKy9zHa6GPaGN_r562QsynDTRYPuhKwHSvQrMG70IHSQ==

{
  "jobQueueName": "HighPriority",
  "jobQueueArn": "arn:aws:batch:us-east-1:123456789012:job-queue/HighPriority"
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

CreateSchedulingPolicy

Creates an Amazon Batch scheduling policy.

Request Syntax

```
POST /v1/createschedulingpolicy HTTP/1.1
Content-type: application/json
```

```
{
  "fairsharePolicy": {
    "computeReservation": number,
    "shareDecaySeconds": number,
    "shareDistribution": [
      {
        "shareIdentifier": "string",
        "weightFactor": number
      }
    ]
  },
  "name": "string",
  "tags": {
    "string" : "string"
  }
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

fairsharePolicy

The fair-share scheduling policy details.

Type: [FairsharePolicy](#) object

Required: No

name

The name of the fair-share scheduling policy. It can be up to 128 letters long. It can contain uppercase and lowercase letters, numbers, hyphens (-), and underscores (_).

Type: String

Required: Yes

tags

The tags that you apply to the scheduling policy to help you categorize and organize your resources. Each tag consists of a key and an optional value. For more information, see [Tagging Amazon Resources](#) in *Amazon General Reference*.

These tags can be updated or removed using the [TagResource](#) and [UntagResource](#) API operations.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Value Length Constraints: Maximum length of 256.

Required: No

Response Syntax

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

{
  "arn": "string",
  "name": "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.

arn

The Amazon Resource Name (ARN) of the scheduling policy. The format is `aws:Partition:batch:Region:Account:scheduling-policy/Name` . For example, `aws:aws:batch:us-west-2:123456789012:scheduling-policy/MySchedulingPolicy`.

Type: String

name

The name of the scheduling policy.

Type: String

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (`[authorization-params]`) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make

requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example creates a scheduling policy with the specified share identifiers and share identifier prefixes.

Sample Request

```
POST /v1/createschedulingpolicy HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.20.21 Python/3.6.9 Linux/4.4.0-19041-Microsoft botocore/1.21.21
X-Amz-Date: 20210928T231724Z
X-Amz-Security-Token: [security-token]
Authorization: [authorization-params]
Content-Length: [content-length]

{
  "name": "ExampleFairSharePolicy",
  "fairsharePolicy": {
    "shareDecaySeconds": 3600,
    "computeReservation": 1,
    "shareDistribution": [
      {
        "shareIdentifier": "A1*",
        "weightFactor": 0.1
      },
      {
        "shareIdentifier": "A2",
        "weightFactor": 0.2
      },
      {
        "shareIdentifier": "B*",
        "weightFactor": 0.8
      },
      {
        "shareIdentifier": "C",
        "weightFactor": 1.2
      },
      {
```

```
    "shareIdentifier": "D*",
    "weightFactor": 1.5
  },
  {
    "shareIdentifier": "E",
    "weightFactor": 1.8
  }
]
},
"tags": {
  "Hot": "Dog",
  "Beef": "Brisket",
  "Pork": "Ribs",
  "Department": "Engineering"
}
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 28 Sep 2021 23:17:50 GMT
Content-Type: application/json
Content-Length: [content-length]
x-amzn-RequestId: [request-id]
Access-Control-Allow-Origin: *
x-amz-apigw-id: [apigw-id]
Access-Control-Expose-Headers: X-amzn-errortype,X-amzn-requestid,X-amzn-errormessage,X-
amzn-trace-id,X-amz-apigw-id,date
X-Amzn-Trace-Id: [trace-id]
Connection: keep-alive

{
  "schedulingPolicies": [{
    "arn": "arn:aws:batch:us-east-1:123456789012:scheduling-policy/
ExampleFairSharePolicy"
  }]
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

DeleteComputeEnvironment

Deletes an Amazon Batch compute environment.

Before you can delete a compute environment, you must set its state to DISABLED with the [UpdateComputeEnvironment](#) API operation and disassociate it from any job queues with the [UpdateJobQueue](#) API operation. Compute environments that use Amazon Fargate resources must terminate all active jobs on that compute environment before deleting the compute environment. If this isn't done, the compute environment enters an invalid state.

Request Syntax

```
POST /v1/deletecomputeenvironment HTTP/1.1
Content-type: application/json
```

```
{
  "computeEnvironment": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

[computeEnvironment](#)

The name or Amazon Resource Name (ARN) of the compute environment to delete.

Type: String

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example deletes the P30nDemand compute environment.

Sample Request

```
POST /v1/deletecomputeenvironment HTTP/1.1
```

```
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161128T202219Z
User-Agent: aws-cli/1.11.21 Python/2.7.12 Darwin/16.1.0 botocore/1.4.78
```

```
{
  "computeEnvironment": "P3OnDemand"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: 2
Connection: keep-alive
Date: Mon, 28 Nov 2016 20:22:20 GMT
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 b63769e2d89c89274acd908e4bfc9f4.cloudfront.net (CloudFront)
X-Amz-Cf-Id: mqHP9krdcBsbT0pivub4bJEM0_XCTTfENz0xPwwye-USu1CVG1j-nw==

{}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)

- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

DeleteConsumableResource

Deletes the specified consumable resource.

Request Syntax

```
POST /v1/deleteconsumableresource HTTP/1.1
Content-type: application/json

{
  "consumableResource": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

consumableResource

The name or ARN of the consumable resource that will be deleted.

Type: String

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

DeleteJobQueue

Deletes the specified job queue. You must first disable submissions for a queue with the [UpdateJobQueue](#) operation. All jobs in the queue are eventually terminated when you delete a job queue. The jobs are terminated at a rate of about 16 jobs each second.

It's not necessary to disassociate compute environments from a queue before submitting a DeleteJobQueue request.

Request Syntax

```
POST /v1/deletejobqueue HTTP/1.1
Content-type: application/json
```

```
{
  "jobQueue": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

[jobQueue](#)

The short name or full Amazon Resource Name (ARN) of the queue to delete.

Type: String

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example deletes the GPGPU job queue.

Sample Request

```
POST /v1/deletejobqueue HTTP/1.1
```

```
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161128T201857Z
User-Agent: aws-cli/1.11.21 Python/2.7.12 Darwin/16.1.0 botocore/1.4.78

{
  "jobQueue": "GPGPU"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: 2
Connection: keep-alive
Date: Mon, 28 Nov 2016 20:18:57 GMT
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 56908f89e8d17ba579c0607313114955.cloudfront.net (CloudFront)
X-Amz-Cf-Id: UnpbX7PjdrV3N-Y79pD6eV3DfqYUXdEx3HAI9VYhUZ8h7yRBi5_ZVQ==

{}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)

- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

DeleteSchedulingPolicy

Deletes the specified scheduling policy.

You can't delete a scheduling policy that's used in any job queues.

Request Syntax

```
POST /v1/deleteschedulingpolicy HTTP/1.1
Content-type: application/json
```

```
{
  "arn": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

arn

The Amazon Resource Name (ARN) of the scheduling policy to delete.

Type: String

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example deletes a scheduling policy with the specified ARN.

Sample Request

```
POST /v1/deleteschedulingpolicy HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.20.21 Python/3.6.9 Linux/4.4.0-19041-Microsoft botocore/1.21.21
X-Amz-Date: 20210929T005824Z
X-Amz-Security-Token: [security-token]
```

Authorization: *[authorization-params]*

Content-Length: *[content-length]*

```
{
  "arn": "arn:aws:batch:us-east-1:123456789012:scheduling-policy/
ExampleFairSharePolicy2"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Wed, 29 Sep 2021 00:58:26 GMT
Content-Type: application/json
Content-Length: 2
x-amzn-RequestId: [request-id]
Access-Control-Allow-Origin: *
x-amz-apigw-id: [apigw-id]
Access-Control-Expose-Headers: X-amzn-errortype,X-amzn-requestid,X-amzn-errormessage,X-
amzn-trace-id,X-amz-apigw-id,date
X-Amzn-Trace-Id: [trace-id]
Connection: keep-alive

{}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)

- [Amazon SDK for Ruby V3](#)

DeregisterJobDefinition

Deregisters an Amazon Batch job definition. Job definitions are permanently deleted after 180 days.

Request Syntax

```
POST /v1/deregisterjobdefinition HTTP/1.1
Content-type: application/json
```

```
{
  "jobDefinition": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

jobDefinition

The name and revision (`name:revision`) or full Amazon Resource Name (ARN) of the job definition to deregister.

Type: String

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example deregisters a job definition called `sleep10`.

Sample Request

```
POST /v1/deregisterjobdefinition HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161128T215745Z
```

```
User-Agent: aws-cli/1.11.21 Python/2.7.12 Darwin/16.1.0 botocore/1.4.78
```

```
{  
  "jobDefinition": "sleep10:1"  
}
```

Sample Response

```
HTTP/1.1 200 OK  
Content-Type: application/json  
Content-Length: 2  
Connection: keep-alive  
Date: Mon, 28 Nov 2016 21:57:45 GMT  
x-amzn-RequestId: [request-id]  
X-Amzn-Trace-Id: [trace-id]  
X-Cache: Miss from cloudfront  
Via: 1.1 e892630891779ff1ccadccf205a776f3.cloudfront.net (CloudFront)  
X-Amz-Cf-Id: wKAY_N0TbvY8PFcmo1aGja0xqGLxsTJgEtuc1KosPYAPYL8icYwvKw==
```

```
{}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

DescribeComputeEnvironments

Describes one or more of your compute environments.

If you're using an unmanaged compute environment, you can use the `DescribeComputeEnvironment` operation to determine the `ecsClusterArn` that you launch your Amazon ECS container instances into.

Request Syntax

```
POST /v1/describecomputeenvironments HTTP/1.1
Content-type: application/json

{
  "computeEnvironments": [ "string" ],
  "maxResults": number,
  "nextToken": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

computeEnvironments

A list of up to 100 compute environment names or full Amazon Resource Name (ARN) entries.

Type: Array of strings

Required: No

maxResults

The maximum number of cluster results returned by `DescribeComputeEnvironments` in paginated output. When this parameter is used, `DescribeComputeEnvironments` only returns `maxResults` results in a single page along with a `nextToken` response element. The remaining results of the initial request can be seen by sending another `DescribeComputeEnvironments` request with the returned `nextToken` value. This value can

be between 1 and 100. If this parameter isn't used, then `DescribeComputeEnvironments` returns up to 100 results and a `nextToken` value if applicable.

Type: Integer

Required: No

nextToken

The `nextToken` value returned from a previous paginated `DescribeComputeEnvironments` request where `maxResults` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value. This value is `null` when there are no more results to return.

Note

Treat this token as an opaque identifier that's only used to retrieve the next items in a list and not for other programmatic purposes.

Type: String

Required: No

Response Syntax

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

{
  "computeEnvironments": [
    {
      "computeEnvironmentArn": "string",
      "computeEnvironmentName": "string",
      "computeResources": {
        "allocationStrategy": "string",
        "bidPercentage": number,
        "desiredvCpus": number,
        "ec2Configuration": [
          {
            "imageIdOverride": "string",
            "imageKubernetesVersion": "string",
```

```
        "imageType": "string"
      }
    ],
    "ec2KeyPair": "string",
    "imageId": "string",
    "instanceRole": "string",
    "instanceTypes": [ "string" ],
    "launchTemplate": {
      "launchTemplateId": "string",
      "launchTemplateName": "string",
      "overrides": [
        {
          "launchTemplateId": "string",
          "launchTemplateName": "string",
          "targetInstanceTypes": [ "string" ],
          "userDataType": "string",
          "version": "string"
        }
      ]
    },
    "userDataType": "string",
    "version": "string"
  },
  "maxvCpus": number,
  "minvCpus": number,
  "placementGroup": "string",
  "securityGroupIds": [ "string" ],
  "spotIamFleetRole": "string",
  "subnets": [ "string" ],
  "tags": {
    "string" : "string"
  },
  "type": "string"
},
"containerOrchestrationType": "string",
"context": "string",
"ecsClusterArn": "string",
"eksConfiguration": {
  "eksClusterArn": "string",
  "kubernetesNamespace": "string"
},
"serviceRole": "string",
"state": "string",
"status": "string",
"statusReason": "string",
```

```
    "tags": {
      "string" : "string"
    },
    "type": "string",
    "unmanagedvCpus": number,
    "updatePolicy": {
      "jobExecutionTimeoutMinutes": number,
      "terminateJobsOnUpdate": boolean
    },
    "uuid": "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.

[computeEnvironments](#)

The list of compute environments.

Type: Array of [ComputeEnvironmentDetail](#) objects

[nextToken](#)

The nextToken value to include in a future DescribeComputeEnvironments request. When the results of a DescribeComputeEnvironments request exceed maxResults, this value can be used to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example describes the P3OnDemand compute environment.

Sample Request

```
POST /v1/describecomputeenvironments HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: AUTHPARAMS
X-Amz-Date: 20161128T193355Z
User-Agent: aws-cli/1.11.21 Python/2.7.12 Darwin/16.1.0 botocore/1.4.78

{
  "computeEnvironments": [
    "P3OnDemand"
  ]
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: [content-length]
Connection: keep-alive
Date: Mon, 28 Nov 2016 19:33:56 GMT
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 56908f89e8d17ba579c0607313114955.cloudfront.net (CloudFront)
X-Amz-Cf-Id: FbgslaatWhj_yGhfkSCTPpPtjiuVuF0Bns-kK5EsaasYQC5p2FnpiQ==

{
  "computeEnvironments": [{
    "computeEnvironmentName": "P3OnDemand",
    "computeEnvironmentArn": "arn:aws:batch:us-east-1:123456789012:compute-environment/
P3OnDemand",
    "ecsClusterArn": "arn:aws:ecs:us-east-1:123456789012:cluster/
P3OnDemand_Batch_2c06f29d-d1fe-3a49-879d-42394c86effc",
    "type": "MANAGED",
    "state": "ENABLED",
    "status": "VALID",
    "statusReason": "ComputeEnvironment Healthy",
    "computeResources": {
      "type": "EC2",
      "minvCpus": 0,
      "maxvCpus": 128,
      "desiredvCpus": 48,
      "instanceTypes": ["p3"],
      "subnets": ["subnet-220c0e0a", "subnet-1a95556d", "subnet-978f6dce"],
      "securityGroupIds": ["sg-cf5093b2"],
      "ec2KeyPair": "id_rsa",
      "instanceRole": "ecsInstanceRole",
      "tags": {
        "Name": "Batch Instance - P3OnDemand",
        "Department": "Management"
      }
    },
    "serviceRole": "arn:aws:iam::123456789012:role/AWSBatchServiceRole"
  }]
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

DescribeConsumableResource

Returns a description of the specified consumable resource.

Request Syntax

```
POST /v1/describeconsumableresource HTTP/1.1
Content-type: application/json
```

```
{
  "consumableResource": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

consumableResource

The name or ARN of the consumable resource whose description will be returned.

Type: String

Required: Yes

Response Syntax

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

```
{
  "availableQuantity": number,
  "consumableResourceArn": "string",
  "consumableResourceName": "string",
  "createdAt": number,
  "inUseQuantity": number,
  "resourceType": "string",
```

```
"tags": {  
  "string" : "string"  
},  
"totalQuantity": 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.

availableQuantity

The amount of the consumable resource that is currently available to use.

Type: Long

consumableResourceArn

The Amazon Resource Name (ARN) of the consumable resource.

Type: String

consumableResourceName

The name of the consumable resource.

Type: String

createdAt

The Unix timestamp (in milliseconds) for when the consumable resource was created.

Type: Long

inUseQuantity

The amount of the consumable resource that is currently in use.

Type: Long

resourceType

Indicates whether the resource is available to be re-used after a job completes. Can be one of:

- REPLENISHABLE

- NON_REPLENISHABLE

Type: String

tags

The tags that you apply to the consumable resource to help you categorize and organize your resources. Each tag consists of a key and an optional value. For more information, see [Tagging your Amazon Batch resources](#).

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Value Length Constraints: Maximum length of 256.

totalQuantity

The total amount of the consumable resource that is available.

Type: Long

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

DescribeJobDefinitions

Describes a list of job definitions. You can specify a status (such as ACTIVE) to only return job definitions that match that status.

Request Syntax

```
POST /v1/describejobdefinitions HTTP/1.1
Content-type: application/json
```

```
{
  "jobDefinitionName": "string",
  "jobDefinitions": [ "string" ],
  "maxResults": number,
  "nextToken": "string",
  "status": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

jobDefinitionName

The name of the job definition to describe.

Type: String

Required: No

jobDefinitions

A list of up to 100 job definitions. Each entry in the list can either be an ARN in the format `arn:aws:batch:${Region}:${Account}:job-definition/${JobDefinitionName}:${Revision}` or a short version using the form `${JobDefinitionName}:${Revision}`.

This parameter can't be used with other parameters.

Type: Array of strings

Required: No

maxResults

The maximum number of results returned by `DescribeJobDefinitions` in paginated output. When this parameter is used, `DescribeJobDefinitions` only returns `maxResults` results in a single page and a `nextToken` response element. The remaining results of the initial request can be seen by sending another `DescribeJobDefinitions` request with the returned `nextToken` value. This value can be between 1 and 100. If this parameter isn't used, then `DescribeJobDefinitions` returns up to 100 results and a `nextToken` value if applicable.

Type: Integer

Required: No

nextToken

The `nextToken` value returned from a previous paginated `DescribeJobDefinitions` request where `maxResults` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value. This value is `null` when there are no more results to return.

Note

Treat this token as an opaque identifier that's only used to retrieve the next items in a list and not for other programmatic purposes.

Type: String

Required: No

status

The status used to filter job definitions.

Type: String

Required: No

Response Syntax

HTTP/1.1 200

Content-type: application/json

```
{
  "jobDefinitions": [
    {
      "consumableResourceProperties": {
        "consumableResourceList": [
          {
            "consumableResource": "string",
            "quantity": number
          }
        ]
      },
      "containerOrchestrationType": "string",
      "containerProperties": {
        "command": [ "string ],
        "enableExecuteCommand": boolean,
        "environment": [
          {
            "name": "string",
            "value": "string"
          }
        ],
        "ephemeralStorage": {
          "sizeInGiB": number
        },
        "executionRoleArn": "string",
        "fargatePlatformConfiguration": {
          "platformVersion": "string"
        },
        "image": "string",
        "instanceType": "string",
        "jobRoleArn": "string",
        "linuxParameters": {
          "devices": [
            {
              "containerPath": "string",
              "hostPath": "string",
              "permissions": [ "string ]
            }
          ]
        }
      }
    }
  ]
}
```

```
    ],
    "initProcessEnabled": boolean,
    "maxSwap": number,
    "sharedMemorySize": number,
    "swappiness": number,
    "tmpfs": [
      {
        "containerPath": "string",
        "mountOptions": [ "string" ],
        "size": number
      }
    ]
  },
  "logConfiguration": {
    "logDriver": "string",
    "options": {
      "string" : "string"
    },
    "secretOptions": [
      {
        "name": "string",
        "valueFrom": "string"
      }
    ]
  },
  "memory": number,
  "mountPoints": [
    {
      "containerPath": "string",
      "readOnly": boolean,
      "sourceVolume": "string"
    }
  ],
  "networkConfiguration": {
    "assignPublicIp": "string"
  },
  "privileged": boolean,
  "readonlyRootFilesystem": boolean,
  "repositoryCredentials": {
    "credentialsParameter": "string"
  },
  "resourceRequirements": [
    {
      "type": "string",
```

```
        "value": "string"
      }
    ],
    "runtimePlatform": {
      "cpuArchitecture": "string",
      "operatingSystemFamily": "string"
    },
    "secrets": [
      {
        "name": "string",
        "valueFrom": "string"
      }
    ],
    "ulimits": [
      {
        "hardLimit": number,
        "name": "string",
        "softLimit": number
      }
    ],
    "user": "string",
    "vcpus": number,
    "volumes": [
      {
        "efsVolumeConfiguration": {
          "authorizationConfig": {
            "accessPointId": "string",
            "iam": "string"
          },
          "fileSystemId": "string",
          "rootDirectory": "string",
          "transitEncryption": "string",
          "transitEncryptionPort": number
        },
        "host": {
          "sourcePath": "string"
        },
        "name": "string"
      }
    ]
  },
  "ecsProperties": {
    "taskProperties": [
      {
```

```
"containers": [  
  {  
    "command": [ "string ],  
    "dependsOn": [  
      {  
        "condition": "string",  
        "containerName": "string"  
      }  
    ],  
    "environment": [  
      {  
        "name": "string",  
        "value": "string"  
      }  
    ],  
    "essential": boolean,  
    "firelensConfiguration": {  
      "options": {  
        "string": "string"  
      },  
      "type": "string"  
    },  
    "image": "string",  
    "linuxParameters": {  
      "devices": [  
        {  
          "containerPath": "string",  
          "hostPath": "string",  
          "permissions": [ "string ]  
        }  
      ],  
      "initProcessEnabled": boolean,  
      "maxSwap": number,  
      "sharedMemorySize": number,  
      "swappiness": number,  
      "tmpfs": [  
        {  
          "containerPath": "string",  
          "mountOptions": [ "string ],  
          "size": number  
        }  
      ]  
    },  
    "logConfiguration": {
```

```
    "logDriver": "string",
    "options": {
      "string": "string"
    },
    "secretOptions": [
      {
        "name": "string",
        "valueFrom": "string"
      }
    ],
    "mountPoints": [
      {
        "containerPath": "string",
        "readOnly": boolean,
        "sourceVolume": "string"
      }
    ],
    "name": "string",
    "privileged": boolean,
    "readonlyRootFilesystem": boolean,
    "repositoryCredentials": {
      "credentialsParameter": "string"
    },
    "resourceRequirements": [
      {
        "type": "string",
        "value": "string"
      }
    ],
    "secrets": [
      {
        "name": "string",
        "valueFrom": "string"
      }
    ],
    "ulimits": [
      {
        "hardLimit": number,
        "name": "string",
        "softLimit": number
      }
    ],
    "user": "string"
```

```

    }
  ],
  "enableExecuteCommand": boolean,
  "ephemeralStorage": {
    "sizeInGiB": number
  },
  "executionRoleArn": "string",
  "ipcMode": "string",
  "networkConfiguration": {
    "assignPublicIp": "string"
  },
  "pidMode": "string",
  "platformVersion": "string",
  "runtimePlatform": {
    "cpuArchitecture": "string",
    "operatingSystemFamily": "string"
  },
  "taskRoleArn": "string",
  "volumes": [
    {
      "efsVolumeConfiguration": {
        "authorizationConfig": {
          "accessPointId": "string",
          "iam": "string"
        },
        "fileSystemId": "string",
        "rootDirectory": "string",
        "transitEncryption": "string",
        "transitEncryptionPort": number
      },
      "host": {
        "sourcePath": "string"
      },
      "name": "string"
    }
  ]
}
]
},
"eksProperties": {
  "podProperties": {
    "containers": [
      {
        "args": [ "string " ],

```

```
    "command": [ "string" ],
    "env": [
      {
        "name": "string",
        "value": "string"
      }
    ],
    "image": "string",
    "imagePullPolicy": "string",
    "name": "string",
    "resources": {
      "limits": {
        "string" : "string"
      },
      "requests": {
        "string" : "string"
      }
    },
    "securityContext": {
      "allowPrivilegeEscalation": boolean,
      "privileged": boolean,
      "readOnlyRootFilesystem": boolean,
      "runAsGroup": number,
      "runAsNonRoot": boolean,
      "runAsUser": number
    },
    "volumeMounts": [
      {
        "mountPath": "string",
        "name": "string",
        "readOnly": boolean,
        "subPath": "string"
      }
    ]
  }
],
"dnsPolicy": "string",
"hostNetwork": boolean,
"imagePullSecrets": [
  {
    "name": "string"
  }
],
"initContainers": [
```

```
{
  "args": [ "string" ],
  "command": [ "string" ],
  "env": [
    {
      "name": "string",
      "value": "string"
    }
  ],
  "image": "string",
  "imagePullPolicy": "string",
  "name": "string",
  "resources": {
    "limits": {
      "string" : "string"
    },
    "requests": {
      "string" : "string"
    }
  },
  "securityContext": {
    "allowPrivilegeEscalation": boolean,
    "privileged": boolean,
    "readOnlyRootFilesystem": boolean,
    "runAsGroup": number,
    "runAsNonRoot": boolean,
    "runAsUser": number
  },
  "volumeMounts": [
    {
      "mountPath": "string",
      "name": "string",
      "readOnly": boolean,
      "subPath": "string"
    }
  ]
},
"metadata": {
  "annotations": {
    "string" : "string"
  },
  "labels": {
    "string" : "string"
  }
}
```

```

    },
    "namespace": "string"
  },
  "serviceAccountName": "string",
  "shareProcessNamespace": boolean,
  "volumes": [
    {
      "emptyDir": {
        "medium": "string",
        "sizeLimit": "string"
      },
      "hostPath": {
        "path": "string"
      },
      "name": "string",
      "persistentVolumeClaim": {
        "claimName": "string",
        "readOnly": boolean
      },
      "secret": {
        "optional": boolean,
        "secretName": "string"
      }
    }
  ]
}
},
"jobDefinitionArn": "string",
"jobDefinitionName": "string",
"nodeProperties": {
  "mainNode": number,
  "nodeRangeProperties": [
    {
      "consumableResourceProperties": {
        "consumableResourceList": [
          {
            "consumableResource": "string",
            "quantity": number
          }
        ]
      }
    }
  ],
  "container": {
    "command": [ "string" ],
    "enableExecuteCommand": boolean,

```

```
"environment": [
  {
    "name": "string",
    "value": "string"
  }
],
"ephemeralStorage": {
  "sizeInGiB": number
},
"executionRoleArn": "string",
"fargatePlatformConfiguration": {
  "platformVersion": "string"
},
"image": "string",
"instanceType": "string",
"jobRoleArn": "string",
"linuxParameters": {
  "devices": [
    {
      "containerPath": "string",
      "hostPath": "string",
      "permissions": [ "string" ]
    }
  ],
  "initProcessEnabled": boolean,
  "maxSwap": number,
  "sharedMemorySize": number,
  "swappiness": number,
  "tmpfs": [
    {
      "containerPath": "string",
      "mountOptions": [ "string" ],
      "size": number
    }
  ]
},
"logConfiguration": {
  "logDriver": "string",
  "options": {
    "string": "string"
  },
  "secretOptions": [
    {
      "name": "string",
```

```
        "valueFrom": "string"
      }
    ]
  },
  "memory": number,
  "mountPoints": [
    {
      "containerPath": "string",
      "readOnly": boolean,
      "sourceVolume": "string"
    }
  ],
  "networkConfiguration": {
    "assignPublicIp": "string"
  },
  "privileged": boolean,
  "readonlyRootFilesystem": boolean,
  "repositoryCredentials": {
    "credentialsParameter": "string"
  },
  "resourceRequirements": [
    {
      "type": "string",
      "value": "string"
    }
  ],
  "runtimePlatform": {
    "cpuArchitecture": "string",
    "operatingSystemFamily": "string"
  },
  "secrets": [
    {
      "name": "string",
      "valueFrom": "string"
    }
  ],
  "ulimits": [
    {
      "hardLimit": number,
      "name": "string",
      "softLimit": number
    }
  ],
  "user": "string",
```

```
"vcpus": number,
"volumes": [
  {
    "efsVolumeConfiguration": {
      "authorizationConfig": {
        "accessPointId": "string",
        "iam": "string"
      },
      "fileSystemId": "string",
      "rootDirectory": "string",
      "transitEncryption": "string",
      "transitEncryptionPort": number
    },
    "host": {
      "sourcePath": "string"
    },
    "name": "string"
  }
],
"ecsProperties": {
  "taskProperties": [
    {
      "containers": [
        {
          "command": [ "string " ],
          "dependsOn": [
            {
              "condition": "string",
              "containerName": "string"
            }
          ],
          "environment": [
            {
              "name": "string",
              "value": "string"
            }
          ],
          "essential": boolean,
          "firelensConfiguration": {
            "options": {
              "string": "string"
            },
            "type": "string"
          }
        }
      ]
    }
  ]
}
```

```
},
  "image": "string",
  "linuxParameters": {
    "devices": [
      {
        "containerPath": "string",
        "hostPath": "string",
        "permissions": [ "string" ]
      }
    ],
    "initProcessEnabled": boolean,
    "maxSwap": number,
    "sharedMemorySize": number,
    "swappiness": number,
    "tmpfs": [
      {
        "containerPath": "string",
        "mountOptions": [ "string" ],
        "size": number
      }
    ]
  },
  "logConfiguration": {
    "logDriver": "string",
    "options": {
      "string" : "string"
    },
    "secretOptions": [
      {
        "name": "string",
        "valueFrom": "string"
      }
    ]
  },
  "mountPoints": [
    {
      "containerPath": "string",
      "readOnly": boolean,
      "sourceVolume": "string"
    }
  ],
  "name": "string",
  "privileged": boolean,
  "readonlyRootFilesystem": boolean,
```

```
    "repositoryCredentials": {
      "credentialsParameter": "string"
    },
    "resourceRequirements": [
      {
        "type": "string",
        "value": "string"
      }
    ],
    "secrets": [
      {
        "name": "string",
        "valueFrom": "string"
      }
    ],
    "ulimits": [
      {
        "hardLimit": number,
        "name": "string",
        "softLimit": number
      }
    ],
    "user": "string"
  }
],
"enableExecuteCommand": boolean,
"ephemeralStorage": {
  "sizeInGiB": number
},
"executionRoleArn": "string",
"ipcMode": "string",
"networkConfiguration": {
  "assignPublicIp": "string"
},
"pidMode": "string",
"platformVersion": "string",
"runtimePlatform": {
  "cpuArchitecture": "string",
  "operatingSystemFamily": "string"
},
"taskRoleArn": "string",
"volumes": [
  {
    "efsVolumeConfiguration": {
```

```

        "authorizationConfig": {
            "accessPointId": "string",
            "iam": "string"
        },
        "fileSystemId": "string",
        "rootDirectory": "string",
        "transitEncryption": "string",
        "transitEncryptionPort": number
    },
    "host": {
        "sourcePath": "string"
    },
    "name": "string"
}
]
}
],
},
"eksProperties": {
    "podProperties": {
        "containers": [
            {
                "args": [ "string" ],
                "command": [ "string" ],
                "env": [
                    {
                        "name": "string",
                        "value": "string"
                    }
                ],
                "image": "string",
                "imagePullPolicy": "string",
                "name": "string",
                "resources": {
                    "limits": {
                        "string" : "string"
                    },
                    "requests": {
                        "string" : "string"
                    }
                }
            },
            "securityContext": {
                "allowPrivilegeEscalation": boolean,
                "privileged": boolean,

```

```
        "readOnlyRootFilesystem": boolean,
        "runAsGroup": number,
        "runAsNonRoot": boolean,
        "runAsUser": number
    },
    "volumeMounts": [
        {
            "mountPath": "string",
            "name": "string",
            "readOnly": boolean,
            "subPath": "string"
        }
    ]
},
"dnsPolicy": "string",
"hostNetwork": boolean,
"imagePullSecrets": [
    {
        "name": "string"
    }
],
"initContainers": [
    {
        "args": [ "string " ],
        "command": [ "string " ],
        "env": [
            {
                "name": "string",
                "value": "string"
            }
        ],
        "image": "string",
        "imagePullPolicy": "string",
        "name": "string",
        "resources": {
            "limits": {
                "string": "string"
            },
            "requests": {
                "string": "string"
            }
        }
    },
    "securityContext": {
```

```
        "allowPrivilegeEscalation": boolean,
        "privileged": boolean,
        "readOnlyRootFilesystem": boolean,
        "runAsGroup": number,
        "runAsNonRoot": boolean,
        "runAsUser": number
    },
    "volumeMounts": [
        {
            "mountPath": "string",
            "name": "string",
            "readOnly": boolean,
            "subPath": "string"
        }
    ]
},
"metadata": {
    "annotations": {
        "string" : "string"
    },
    "labels": {
        "string" : "string"
    },
    "namespace": "string"
},
"serviceAccountName": "string",
"shareProcessNamespace": boolean,
"volumes": [
    {
        "emptyDir": {
            "medium": "string",
            "sizeLimit": "string"
        },
        "hostPath": {
            "path": "string"
        },
        "name": "string",
        "persistentVolumeClaim": {
            "claimName": "string",
            "readOnly": boolean
        },
        "secret": {
            "optional": boolean,
```

```

        "secretName": "string"
      }
    }
  ],
  "instanceTypes": [ "string" ],
  "targetNodes": "string"
}
],
"numNodes": number
},
"parameters": {
  "string" : "string"
},
"platformCapabilities": [ "string" ],
"propagateTags": boolean,
"retryStrategy": {
  "attempts": number,
  "evaluateOnExit": [
    {
      "action": "string",
      "onExitCode": "string",
      "onReason": "string",
      "onStatusReason": "string"
    }
  ]
},
"revision": number,
"schedulingPriority": number,
"status": "string",
"tags": {
  "string" : "string"
},
"timeout": {
  "attemptDurationSeconds": number
},
"type": "string"
}
],
"nextToken": "string"
}

```

Response Elements

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

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

jobDefinitions

The list of job definitions.

Type: Array of [JobDefinition](#) objects

nextToken

The nextToken value to include in a future DescribeJobDefinitions request. When the results of a DescribeJobDefinitions request exceed maxResults, this value can be used to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example describes all of your active job definitions.

Sample Request

```
POST /v1/describjobdefinitions HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161128T221855Z
User-Agent: aws-cli/1.11.21 Python/2.7.12 Darwin/16.1.0 botocore/1.4.78

{
  "status": "ACTIVE"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: [content-length]
Connection: keep-alive
Date: Mon, 28 Nov 2016 22:18:55 GMT
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 688936cc730f240888e6a59a81892a3d.cloudfront.net (CloudFront)
X-Amz-Cf-Id: hd-CAMqfaCJt-1oH7tBu9j5c-IhLQuMjFHFpck6F0MMt5CBea8mQBQ==

{
  "jobDefinitions": [{
    "jobDefinitionName": "sleep60",
    "jobDefinitionArn": "arn:aws:batch:us-east-1:123456789012:job-definition/sleep60:1",
```

```
"revision": 1,
"status": "ACTIVE",
"type": "container",
"containerProperties": {
  "image": "busybox",
  "vcpus": 1,
  "memory": 128,
  "command": ["sleep", "60"],
  "volumes": [],
  "environment": [],
  "mountPoints": [],
  "ulimits": []
}
}]
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

DescribeJobQueues

Describes one or more of your job queues.

Request Syntax

```
POST /v1/describejobqueues HTTP/1.1
Content-type: application/json
```

```
{
  "jobQueues": [ "string" ],
  "maxResults": number,
  "nextToken": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

jobQueues

A list of up to 100 queue names or full queue Amazon Resource Name (ARN) entries.

Type: Array of strings

Required: No

maxResults

The maximum number of results returned by DescribeJobQueues in paginated output. When this parameter is used, DescribeJobQueues only returns maxResults results in a single page and a nextToken response element. The remaining results of the initial request can be seen by sending another DescribeJobQueues request with the returned nextToken value. This value can be between 1 and 100. If this parameter isn't used, then DescribeJobQueues returns up to 100 results and a nextToken value if applicable.

Type: Integer

Required: No

nextToken

The `nextToken` value returned from a previous paginated `DescribeJobQueues` request where `maxResults` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value. This value is `null` when there are no more results to return.

Note

Treat this token as an opaque identifier that's only used to retrieve the next items in a list and not for other programmatic purposes.

Type: String

Required: No

Response Syntax

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

{
  "jobQueues": [
    {
      "computeEnvironmentOrder": [
        {
          "computeEnvironment": "string",
          "order": number
        }
      ],
      "jobQueueArn": "string",
      "jobQueueName": "string",
      "jobStateTimeLimitActions": [
        {
          "action": "string",
          "maxTimeSeconds": number,
          "reason": "string",
          "state": "string"
        }
      ]
    }
  ]
}
```

```
    }
  ],
  "priority": number,
  "schedulingPolicyArn": "string",
  "state": "string",
  "status": "string",
  "statusReason": "string",
  "tags": {
    "string" : "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.

[jobQueues](#)

The list of job queues.

Type: Array of [JobQueueDetail](#) objects

[nextToken](#)

The nextToken value to include in a future DescribeJobQueues request. When the results of a DescribeJobQueues request exceed maxResults, this value can be used to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example describes the HighPriority job queue.

Sample Request

```
POST /v1/describejobqueues HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161128T194731Z
User-Agent: aws-cli/1.11.21 Python/2.7.12 Darwin/16.1.0 botocore/1.4.78
```

```
{
  "jobQueues": [
    "HighPriority"
  ]
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Mon, 28 Nov 2016 19:47:32 GMT
Content-Type: application/json
Content-Length: [content-length]
Connection: keep-alive
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 7bfcc2251021d9dc94a87ff179d69731.cloudfront.net (CloudFront)
X-Amz-Cf-Id: dwf7P2pnEYCxN1C3XdApqDtqzLfjpwAjbHvskd9oUqz40Un9pvtx3Q==

{
  "jobQueues": [{
    "jobQueueName": "HighPriority",
    "jobQueueArn": "arn:aws:batch:us-east-1:123456789012:job-queue/HighPriority",
    "state": "ENABLED",
    "status": "VALID",
    "statusReason": "JobQueue Healthy",
    "priority": 10,
    "computeEnvironmentOrder": [{
      "order": 1,
      "computeEnvironment": "arn:aws:batch:us-east-1:123456789012:compute-environment/C4OnDemand"
    }]
  }]
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)

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

DescribeJobs

Describes a list of Amazon Batch jobs.

Request Syntax

```
POST /v1/describejobs HTTP/1.1
Content-type: application/json
```

```
{
  "jobs": [ "string" ]
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

jobs

A list of up to 100 job IDs.

Type: Array of strings

Required: Yes

Response Syntax

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

```
{
  "jobs": [
    {
      "arrayProperties": {
        "index": number,
        "size": number,
        "statusSummary": {
```

```
    "string" : number
  }
},
"attempts": [
  {
    "container": {
      "containerInstanceArn": "string",
      "exitCode": number,
      "logStreamName": "string",
      "networkInterfaces": [
        {
          "attachmentId": "string",
          "ipv6Address": "string",
          "privateIpv4Address": "string"
        }
      ],
      "reason": "string",
      "taskArn": "string"
    },
    "startedAt": number,
    "statusReason": "string",
    "stoppedAt": number,
    "taskProperties": [
      {
        "containerInstanceArn": "string",
        "containers": [
          {
            "exitCode": number,
            "logStreamName": "string",
            "name": "string",
            "networkInterfaces": [
              {
                "attachmentId": "string",
                "ipv6Address": "string",
                "privateIpv4Address": "string"
              }
            ],
            "reason": "string"
          }
        ],
        "taskArn": "string"
      }
    ]
  }
]
```

```
],
  "consumableResourceProperties": {
    "consumableResourceList": [
      {
        "consumableResource": "string",
        "quantity": number
      }
    ]
  },
  "container": {
    "command": [ "string" ],
    "containerInstanceArn": "string",
    "enableExecuteCommand": boolean,
    "environment": [
      {
        "name": "string",
        "value": "string"
      }
    ],
    "ephemeralStorage": {
      "sizeInGiB": number
    },
    "executionRoleArn": "string",
    "exitCode": number,
    "fargatePlatformConfiguration": {
      "platformVersion": "string"
    },
    "image": "string",
    "instanceType": "string",
    "jobRoleArn": "string",
    "linuxParameters": {
      "devices": [
        {
          "containerPath": "string",
          "hostPath": "string",
          "permissions": [ "string" ]
        }
      ]
    },
    "initProcessEnabled": boolean,
    "maxSwap": number,
    "sharedMemorySize": number,
    "swappiness": number,
    "tmpfs": [
      {
```

```
        "containerPath": "string",
        "mountOptions": [ "string" ],
        "size": number
    }
]
},
"logConfiguration": {
    "logDriver": "string",
    "options": {
        "string" : "string"
    },
    "secretOptions": [
        {
            "name": "string",
            "valueFrom": "string"
        }
    ]
},
"logStreamName": "string",
"memory": number,
"mountPoints": [
    {
        "containerPath": "string",
        "readOnly": boolean,
        "sourceVolume": "string"
    }
],
"networkConfiguration": {
    "assignPublicIp": "string"
},
"networkInterfaces": [
    {
        "attachmentId": "string",
        "ipv6Address": "string",
        "privateIpv4Address": "string"
    }
],
"privileged": boolean,
"readonlyRootFilesystem": boolean,
"reason": "string",
"repositoryCredentials": {
    "credentialsParameter": "string"
},
"resourceRequirements": [
```

```
    {
      "type": "string",
      "value": "string"
    }
  ],
  "runtimePlatform": {
    "cpuArchitecture": "string",
    "operatingSystemFamily": "string"
  },
  "secrets": [
    {
      "name": "string",
      "valueFrom": "string"
    }
  ],
  "taskArn": "string",
  "ulimits": [
    {
      "hardLimit": number,
      "name": "string",
      "softLimit": number
    }
  ],
  "user": "string",
  "vcpus": number,
  "volumes": [
    {
      "efsVolumeConfiguration": {
        "authorizationConfig": {
          "accessPointId": "string",
          "iam": "string"
        },
        "fileSystemId": "string",
        "rootDirectory": "string",
        "transitEncryption": "string",
        "transitEncryptionPort": number
      },
      "host": {
        "sourcePath": "string"
      },
      "name": "string"
    }
  ]
},
```

```
"createdAt": number,
"dependsOn": [
  {
    "jobId": "string",
    "type": "string"
  }
],
"ecsProperties": {
  "taskProperties": [
    {
      "containerInstanceArn": "string",
      "containers": [
        {
          "command": [ "string " ],
          "dependsOn": [
            {
              "condition": "string",
              "containerName": "string"
            }
          ],
          "environment": [
            {
              "name": "string",
              "value": "string"
            }
          ],
          "essential": boolean,
          "exitCode": number,
          "firelensConfiguration": {
            "options": {
              "string" : "string"
            },
            "type": "string"
          },
          "image": "string",
          "linuxParameters": {
            "devices": [
              {
                "containerPath": "string",
                "hostPath": "string",
                "permissions": [ "string " ]
              }
            ],
            "initProcessEnabled": boolean,
```

```
    "maxSwap": number,
    "sharedMemorySize": number,
    "swappiness": number,
    "tmpfs": [
      {
        "containerPath": "string",
        "mountOptions": [ "string" ],
        "size": number
      }
    ]
  },
  "logConfiguration": {
    "logDriver": "string",
    "options": {
      "string" : "string"
    },
    "secretOptions": [
      {
        "name": "string",
        "valueFrom": "string"
      }
    ]
  },
  "logStreamName": "string",
  "mountPoints": [
    {
      "containerPath": "string",
      "readOnly": boolean,
      "sourceVolume": "string"
    }
  ],
  "name": "string",
  "networkInterfaces": [
    {
      "attachmentId": "string",
      "ipv6Address": "string",
      "privateIpv4Address": "string"
    }
  ],
  "privileged": boolean,
  "readonlyRootFilesystem": boolean,
  "reason": "string",
  "repositoryCredentials": {
    "credentialsParameter": "string"
  }
}
```

```
    },
    "resourceRequirements": [
      {
        "type": "string",
        "value": "string"
      }
    ],
    "secrets": [
      {
        "name": "string",
        "valueFrom": "string"
      }
    ],
    "ulimits": [
      {
        "hardLimit": number,
        "name": "string",
        "softLimit": number
      }
    ],
    "user": "string"
  }
],
"enableExecuteCommand": boolean,
"ephemeralStorage": {
  "sizeInGiB": number
},
"executionRoleArn": "string",
"ipcMode": "string",
"networkConfiguration": {
  "assignPublicIp": "string"
},
"pidMode": "string",
"platformVersion": "string",
"runtimePlatform": {
  "cpuArchitecture": "string",
  "operatingSystemFamily": "string"
},
"taskArn": "string",
"taskRoleArn": "string",
"volumes": [
  {
    "efsVolumeConfiguration": {
      "authorizationConfig": {
```

```
        "accessPointId": "string",
        "iam": "string"
    },
    "fileSystemId": "string",
    "rootDirectory": "string",
    "transitEncryption": "string",
    "transitEncryptionPort": number
},
"host": {
    "sourcePath": "string"
},
"name": "string"
}
]
}
],
"eksAttempts": [
    {
        "containers": [
            {
                "containerID": "string",
                "exitCode": number,
                "name": "string",
                "reason": "string"
            }
        ],
        "eksClusterArn": "string",
        "initContainers": [
            {
                "containerID": "string",
                "exitCode": number,
                "name": "string",
                "reason": "string"
            }
        ],
        "nodeName": "string",
        "podName": "string",
        "podNamespace": "string",
        "startedAt": number,
        "statusReason": "string",
        "stoppedAt": number
    }
],
```

```
"eksProperties": {
  "podProperties": {
    "containers": [
      {
        "args": [ "string" ],
        "command": [ "string" ],
        "env": [
          {
            "name": "string",
            "value": "string"
          }
        ],
        "exitCode": number,
        "image": "string",
        "imagePullPolicy": "string",
        "name": "string",
        "reason": "string",
        "resources": {
          "limits": {
            "string" : "string"
          },
          "requests": {
            "string" : "string"
          }
        },
        "securityContext": {
          "allowPrivilegeEscalation": boolean,
          "privileged": boolean,
          "readOnlyRootFilesystem": boolean,
          "runAsGroup": number,
          "runAsNonRoot": boolean,
          "runAsUser": number
        },
        "volumeMounts": [
          {
            "mountPath": "string",
            "name": "string",
            "readOnly": boolean,
            "subPath": "string"
          }
        ]
      }
    ],
    "dnsPolicy": "string",
```

```
"hostNetwork": boolean,
"imagePullSecrets": [
  {
    "name": "string"
  }
],
"initContainers": [
  {
    "args": [ "string " ],
    "command": [ "string " ],
    "env": [
      {
        "name": "string",
        "value": "string"
      }
    ],
    "exitCode": number,
    "image": "string",
    "imagePullPolicy": "string",
    "name": "string",
    "reason": "string",
    "resources": {
      "limits": {
        "string" : "string"
      },
      "requests": {
        "string" : "string"
      }
    },
    "securityContext": {
      "allowPrivilegeEscalation": boolean,
      "privileged": boolean,
      "readOnlyRootFilesystem": boolean,
      "runAsGroup": number,
      "runAsNonRoot": boolean,
      "runAsUser": number
    },
    "volumeMounts": [
      {
        "mountPath": "string",
        "name": "string",
        "readOnly": boolean,
        "subPath": "string"
      }
    ]
  }
]
```

```

    ]
  }
],
"metadata": {
  "annotations": {
    "string": "string"
  },
  "labels": {
    "string": "string"
  },
  "namespace": "string"
},
"nodeName": "string",
"podName": "string",
"serviceAccountName": "string",
"shareProcessNamespace": boolean,
"volumes": [
  {
    "emptyDir": {
      "medium": "string",
      "sizeLimit": "string"
    },
    "hostPath": {
      "path": "string"
    },
    "name": "string",
    "persistentVolumeClaim": {
      "claimName": "string",
      "readOnly": boolean
    },
    "secret": {
      "optional": boolean,
      "secretName": "string"
    }
  }
]
},
"isCancelled": boolean,
"isTerminated": boolean,
"jobArn": "string",
"jobDefinition": "string",
"jobId": "string",
"jobName": "string",

```

```
"jobQueue": "string",
"nodeDetails": {
  "isMainNode": boolean,
  "nodeIndex": number
},
"nodeProperties": {
  "mainNode": number,
  "nodeRangeProperties": [
    {
      "consumableResourceProperties": {
        "consumableResourceList": [
          {
            "consumableResource": "string",
            "quantity": number
          }
        ]
      },
    },
    "container": {
      "command": [ "string" ],
      "enableExecuteCommand": boolean,
      "environment": [
        {
          "name": "string",
          "value": "string"
        }
      ],
      "ephemeralStorage": {
        "sizeInGiB": number
      },
      "executionRoleArn": "string",
      "fargatePlatformConfiguration": {
        "platformVersion": "string"
      },
      "image": "string",
      "instanceType": "string",
      "jobRoleArn": "string",
      "linuxParameters": {
        "devices": [
          {
            "containerPath": "string",
            "hostPath": "string",
            "permissions": [ "string" ]
          }
        ]
      }
    }
  ],

```

```
    "initProcessEnabled": boolean,
    "maxSwap": number,
    "sharedMemorySize": number,
    "swappiness": number,
    "tmpfs": [
      {
        "containerPath": "string",
        "mountOptions": [ "string" ],
        "size": number
      }
    ]
  },
  "logConfiguration": {
    "logDriver": "string",
    "options": {
      "string" : "string"
    },
    "secretOptions": [
      {
        "name": "string",
        "valueFrom": "string"
      }
    ]
  },
  "memory": number,
  "mountPoints": [
    {
      "containerPath": "string",
      "readOnly": boolean,
      "sourceVolume": "string"
    }
  ],
  "networkConfiguration": {
    "assignPublicIp": "string"
  },
  "privileged": boolean,
  "readonlyRootFilesystem": boolean,
  "repositoryCredentials": {
    "credentialsParameter": "string"
  },
  "resourceRequirements": [
    {
      "type": "string",
      "value": "string"
    }
  ]
}
```

```
    }
  ],
  "runtimePlatform": {
    "cpuArchitecture": "string",
    "operatingSystemFamily": "string"
  },
  "secrets": [
    {
      "name": "string",
      "valueFrom": "string"
    }
  ],
  "ulimits": [
    {
      "hardLimit": number,
      "name": "string",
      "softLimit": number
    }
  ],
  "user": "string",
  "vcpus": number,
  "volumes": [
    {
      "efsVolumeConfiguration": {
        "authorizationConfig": {
          "accessPointId": "string",
          "iam": "string"
        },
        "fileSystemId": "string",
        "rootDirectory": "string",
        "transitEncryption": "string",
        "transitEncryptionPort": number
      },
      "host": {
        "sourcePath": "string"
      },
      "name": "string"
    }
  ]
},
"ecsProperties": {
  "taskProperties": [
    {
      "containers": [
```

```
{
  "command": [ "string" ],
  "dependsOn": [
    {
      "condition": "string",
      "containerName": "string"
    }
  ],
  "environment": [
    {
      "name": "string",
      "value": "string"
    }
  ],
  "essential": boolean,
  "firelensConfiguration": {
    "options": {
      "string": "string"
    },
    "type": "string"
  },
  "image": "string",
  "linuxParameters": {
    "devices": [
      {
        "containerPath": "string",
        "hostPath": "string",
        "permissions": [ "string" ]
      }
    ],
    "initProcessEnabled": boolean,
    "maxSwap": number,
    "sharedMemorySize": number,
    "swappiness": number,
    "tmpfs": [
      {
        "containerPath": "string",
        "mountOptions": [ "string" ],
        "size": number
      }
    ]
  },
  "logConfiguration": {
    "logDriver": "string",
```

```
    "options": {
      "string": "string"
    },
    "secretOptions": [
      {
        "name": "string",
        "valueFrom": "string"
      }
    ]
  },
  "mountPoints": [
    {
      "containerPath": "string",
      "readOnly": boolean,
      "sourceVolume": "string"
    }
  ],
  "name": "string",
  "privileged": boolean,
  "readonlyRootFilesystem": boolean,
  "repositoryCredentials": {
    "credentialsParameter": "string"
  },
  "resourceRequirements": [
    {
      "type": "string",
      "value": "string"
    }
  ],
  "secrets": [
    {
      "name": "string",
      "valueFrom": "string"
    }
  ],
  "ulimits": [
    {
      "hardLimit": number,
      "name": "string",
      "softLimit": number
    }
  ],
  "user": "string"
}
```

```

    ],
    "enableExecuteCommand": boolean,
    "ephemeralStorage": {
      "sizeInGiB": number
    },
    "executionRoleArn": "string",
    "ipcMode": "string",
    "networkConfiguration": {
      "assignPublicIp": "string"
    },
    "pidMode": "string",
    "platformVersion": "string",
    "runtimePlatform": {
      "cpuArchitecture": "string",
      "operatingSystemFamily": "string"
    },
    "taskRoleArn": "string",
    "volumes": [
      {
        "efsVolumeConfiguration": {
          "authorizationConfig": {
            "accessPointId": "string",
            "iam": "string"
          },
          "fileSystemId": "string",
          "rootDirectory": "string",
          "transitEncryption": "string",
          "transitEncryptionPort": number
        },
        "host": {
          "sourcePath": "string"
        },
        "name": "string"
      }
    ]
  }
],
},
"eksProperties": {
  "podProperties": {
    "containers": [
      {
        "args": [ "string " ],
        "command": [ "string " ],

```

```
    "env": [
      {
        "name": "string",
        "value": "string"
      }
    ],
    "image": "string",
    "imagePullPolicy": "string",
    "name": "string",
    "resources": {
      "limits": {
        "string": "string"
      },
      "requests": {
        "string": "string"
      }
    },
    "securityContext": {
      "allowPrivilegeEscalation": boolean,
      "privileged": boolean,
      "readOnlyRootFilesystem": boolean,
      "runAsGroup": number,
      "runAsNonRoot": boolean,
      "runAsUser": number
    },
    "volumeMounts": [
      {
        "mountPath": "string",
        "name": "string",
        "readOnly": boolean,
        "subPath": "string"
      }
    ]
  },
  "dnsPolicy": "string",
  "hostNetwork": boolean,
  "imagePullSecrets": [
    {
      "name": "string"
    }
  ],
  "initContainers": [
    {
```

```
    "args": [ "string" ],
    "command": [ "string" ],
    "env": [
      {
        "name": "string",
        "value": "string"
      }
    ],
    "image": "string",
    "imagePullPolicy": "string",
    "name": "string",
    "resources": {
      "limits": {
        "string" : "string"
      },
      "requests": {
        "string" : "string"
      }
    },
    "securityContext": {
      "allowPrivilegeEscalation": boolean,
      "privileged": boolean,
      "readOnlyRootFilesystem": boolean,
      "runAsGroup": number,
      "runAsNonRoot": boolean,
      "runAsUser": number
    },
    "volumeMounts": [
      {
        "mountPath": "string",
        "name": "string",
        "readOnly": boolean,
        "subPath": "string"
      }
    ]
  }
],
"metadata": {
  "annotations": {
    "string" : "string"
  },
  "labels": {
    "string" : "string"
  }
},
```

```

        "namespace": "string"
    },
    "serviceAccountName": "string",
    "shareProcessNamespace": boolean,
    "volumes": [
        {
            "emptyDir": {
                "medium": "string",
                "sizeLimit": "string"
            },
            "hostPath": {
                "path": "string"
            },
            "name": "string",
            "persistentVolumeClaim": {
                "claimName": "string",
                "readOnly": boolean
            },
            "secret": {
                "optional": boolean,
                "secretName": "string"
            }
        }
    ]
},
"instanceTypes": [ "string" ],
"targetNodes": "string"
}
],
"numNodes": number
},
"parameters": {
    "string" : "string"
},
"platformCapabilities": [ "string" ],
"propagateTags": boolean,
"retryStrategy": {
    "attempts": number,
    "evaluateOnExit": [
        {
            "action": "string",
            "onExitCode": "string",
            "onReason": "string",

```

```
        "onStatusReason": "string"
    }
]
},
"schedulingPriority": number,
"shareIdentifier": "string",
"startedAt": number,
"status": "string",
"statusReason": "string",
"stoppedAt": number,
"tags": {
    "string" : "string"
},
"timeout": {
    "attemptDurationSeconds": 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.

[jobs](#)

The list of jobs.

Type: Array of [JobDetail](#) objects

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example describes a job with the specified job ID.

Sample Request

```
POST /v1/describejobs HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20170327T151323Z
User-Agent: aws-cli/1.11.22 Python/2.7.12 Darwin/16.1.0 botocore/1.4.79

{
  "jobs": [
    "0668da57-1bcc-478b-bc14-5d4f1c1cef48"
  ]
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Mon, 27 Mar 2017 15:13:13 GMT
Content-Type: application/json
Content-Length: [content-length]
Connection: keep-alive
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 8a78b675adb2cce925860f2fe4383e71.cloudfront.net (CloudFront)
X-Amz-Cf-Id: TaW8k7yrDyXHgEU2udEE0AbliIY1iPmQr4LpN80ULdqyVGR6qP0q4Q==

{
  "jobs": [
    {
      "jobName": "EchoAttemptNumber",
      "jobId": "0668da57-1bcc-478b-bc14-5d4f1c1cef48",
      "jobQueue": "arn:aws:batch:us-east-1:123456789012:job-queue/HighPriority",
      "status": "FAILED",
      "attempts": [
        {
          "container": {
            "containerInstanceArn": "arn:aws:ecs:us-east-1:123456789012:container-
instance/90bfe527-119c-494a-b8fe-f5999c66d214",
            "taskArn": "arn:aws:ecs:us-east-1:123456789012:task/af37d830-6978-4a2b-
b796-e890e9b477b3",
            "exitCode": 1
          },
          "startedAt": 1490627002951,
          "stoppedAt": 1490627003065,
          "statusReason": "Essential container in task exited"
        },
        {
          "container": {
            "containerInstanceArn": "arn:aws:ecs:us-east-1:123456789012:container-
instance/90bfe527-119c-494a-b8fe-f5999c66d214",
            "taskArn": "arn:aws:ecs:us-east-1:123456789012:task/3dfd4d0e-
a177-4798-9c13-21b7148217bc",
            "exitCode": 2
          },
          "startedAt": 1490627019948,
          "stoppedAt": 1490627020059,
          "statusReason": "Essential container in task exited"
        }
      ]
    }
  ]
}
```

```
    },
    {
      "container": {
        "containerInstanceArn": "arn:aws:ecs:us-east-1:123456789012:container-
instance/90bfe527-119c-494a-b8fe-f5999c66d214",
        "taskArn": "arn:aws:ecs:us-
east-1:123456789012:task/22857040-182c-4af3-85f5-bb2c71edd282",
        "exitCode": 3
      },
      "startedAt": 1490627034798,
      "stoppedAt": 1490627034949,
      "statusReason": "Essential container in task exited"
    }
  ],
  "statusReason": "Essential container in task exited",
  "createdAt": 1490626709525,
  "retryStrategy": {
    "attempts": 3
  },
  "startedAt": 1490627034798,
  "stoppedAt": 1490627034949,
  "dependsOn": [],
  "jobDefinition": "arn:aws:batch:us-east-1:123456789012:job-definition/
EchoAttemptNumber:1",
  "parameters": {},
  "container": {
    "image": "amazonlinux",
    "vcpus": 1,
    "memory": 2,
    "command": [
      "/bin/bash",
      "-c",
      "exit $AWS_BATCH_JOB_ATTEMPT"
    ],
    "volumes": [],
    "environment": [],
    "mountPoints": [],
    "ulimits": [],
    "exitCode": 3,
    "containerInstanceArn": "arn:aws:ecs:us-east-1:123456789012:container-
instance/90bfe527-119c-494a-b8fe-f5999c66d214",
    "taskArn": "arn:aws:ecs:us-east-1:123456789012:task/22857040-182c-4af3-85f5-
bb2c71edd282"
  }
}
```

```
    }  
  ]  
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

DescribeSchedulingPolicies

Describes one or more of your scheduling policies.

Request Syntax

```
POST /v1/describeschedulingpolicies HTTP/1.1
Content-type: application/json
```

```
{
  "arns": [ "string" ]
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

arns

A list of up to 100 scheduling policy Amazon Resource Name (ARN) entries.

Type: Array of strings

Required: Yes

Response Syntax

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

```
{
  "schedulingPolicies": [
    {
      "arn": "string",
      "fairsharePolicy": {
        "computeReservation": number,

```

```
    "shareDecaySeconds": number,
    "shareDistribution": [
      {
        "shareIdentifier": "string",
        "weightFactor": number
      }
    ]
  },
  "name": "string",
  "tags": {
    "string" : "string"
  }
}
]
```

Response Elements

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

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

schedulingPolicies

The list of scheduling policies.

Type: Array of [SchedulingPolicyDetail](#) objects

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example describes the specified scheduling policies.

Sample Request

```
POST /v1/describeschedulingpolicies HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.20.21 Python/3.6.9 Linux/4.4.0-19041-Microsoft botocore/1.21.21
X-Amz-Date: 20210929T002059Z
X-Amz-Security-Token: [security-token]
Authorization: [authorization-params]
Content-Length: [content-length]

{
  "arns": [
    "arn:aws:batch:us-east-1:123456789012:scheduling-policy/ExampleFairSharePolicy",
    "arn:aws:batch:us-east-1:123456789012:scheduling-policy/ExampleFairSharePolicy2"
  ]
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Wed, 29 Sep 2021 00:21:00 GMT
Content-Type: application/json
Content-Length: [content-length]
x-amzn-RequestId: [request-id]
```

```

Access-Control-Allow-Origin: *
x-amz-apigw-id: [apigw-id]
Access-Control-Expose-Headers: X-amzn-errortype,X-amzn-requestid,X-amzn-errormessage,X-
amzn-trace-id,X-amz-apigw-id,date
X-Amzn-Trace-Id: [trace-id]
Connection: keep-alive

{
  "schedulingPolicies" : [ {
    "name" : "ExampleFairSharePolicy2",
    "arn" : "arn:aws:batch:us-east-1:123456789012:scheduling-policy/
ExampleFairSharePolicy2",
    "fairsharePolicy" : {
      "shareDecaySeconds" : 3600,
      "computeReservation" : 1,
      "shareDistribution" : [ {
        "shareIdentifier" : "MostImportant",
        "weightFactor" : 1.0E-4
      }, {
        "shareIdentifier" : "LeastImportant",
        "weightFactor" : 999.9999
      } ]
    },
    "tags" : {
      "Department" : "Documentation",
      "Beef" : "Ribs",
      "Hot" : "Dogs",
      "Pork" : "Shoulder"
    }
  }, {
    "name" : "ExampleFairSharePolicy",
    "arn" : "arn:aws:batch:us-east-1:123456789012:scheduling-policy/
ExampleFairSharePolicy",
    "fairsharePolicy" : {
      "shareDecaySeconds" : 3600,
      "computeReservation" : 1,
      "shareDistribution" : [ {
        "shareIdentifier" : "A1*",
        "weightFactor" : 0.1
      }, {
        "shareIdentifier" : "A2",
        "weightFactor" : 0.2
      }, {
        "shareIdentifier" : "B*",

```

```
    "weightFactor" : 0.8
  }, {
    "shareIdentifier" : "C",
    "weightFactor" : 1.2
  }, {
    "shareIdentifier" : "D*",
    "weightFactor" : 1.5
  }, {
    "shareIdentifier" : "E",
    "weightFactor" : 1.8
  } ]
},
"tags" : {
  "Department" : "Engineering",
  "Beef" : "Brisket",
  "Hot" : "Dog",
  "Pork" : "Ribs"
}
} ]
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

GetJobQueueSnapshot

Provides a list of the first 100 RUNNABLE jobs associated to a single job queue.

Request Syntax

```
POST /v1/getjobqueuesnapshot HTTP/1.1
Content-type: application/json
```

```
{
  "jobQueue": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

jobQueue

The job queue's name or full queue Amazon Resource Name (ARN).

Type: String

Required: Yes

Response Syntax

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

```
{
  "frontOfQueue": {
    "jobs": [
      {
        "earliestTimeAtPosition": number,
        "jobArn": "string"
      }
    ]
  }
}
```

```
    }  
  ],  
  "lastUpdatedAt": 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.

frontOfQueue

The list of the first 100 RUNNABLE jobs in each job queue. For first-in-first-out (FIFO) job queues, jobs are ordered based on their submission time. For fair-share scheduling (FSS) job queues, jobs are ordered based on their job priority and share usage.

Type: [FrontOfQueueDetail](#) object

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

ListConsumableResources

Returns a list of Amazon Batch consumable resources.

Request Syntax

```
POST /v1/listconsumableresources HTTP/1.1
Content-type: application/json
```

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

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

filters

The filters to apply to the consumable resource list query. If used, only those consumable resources that match the filter are listed. Filter names and values can be:

- name: CONSUMABLE_RESOURCE_NAME

values: case-insensitive matches for the consumable resource name. If a filter value ends with an asterisk (*), it matches any consumable resource name that begins with the string before the '*'.

Type: Array of [KeyValuesPair](#) objects

Required: No

maxResults

The maximum number of results returned by `ListConsumableResources` in paginated output. When this parameter is used, `ListConsumableResources` only returns `maxResults` results in a single page and a `nextToken` response element. The remaining results of the initial request can be seen by sending another `ListConsumableResources` request with the returned `nextToken` value. This value can be between 1 and 100. If this parameter isn't used, then `ListConsumableResources` returns up to 100 results and a `nextToken` value if applicable.

Type: Integer

Required: No

nextToken

The `nextToken` value returned from a previous paginated `ListConsumableResources` request where `maxResults` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value. This value is `null` when there are no more results to return.

Note

Treat this token as an opaque identifier that's only used to retrieve the next items in a list and not for other programmatic purposes.

Type: String

Required: No

Response Syntax

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

{
  "consumableResources": [
    {
      "consumableResourceArn": "string",
```

```
    "consumableResourceName": "string",
    "inUseQuantity": number,
    "resourceType": "string",
    "totalQuantity": number
  }
],
"nextToken": "string"
}
```

Response Elements

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

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

consumableResources

A list of consumable resources that match the request.

Type: Array of [ConsumableResourceSummary](#) objects

nextToken

The nextToken value to include in a future ListConsumableResources request. When the results of a ListConsumableResources request exceed maxResults, this value can be used to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

ListJobs

Returns a list of Amazon Batch jobs.

You must specify only one of the following items:

- A job queue ID to return a list of jobs in that job queue
- A multi-node parallel job ID to return a list of nodes for that job
- An array job ID to return a list of the children for that job

You can filter the results by job status with the `jobStatus` parameter. If you don't specify a status, only `RUNNING` jobs are returned.

Request Syntax

```
POST /v1/listjobs HTTP/1.1
Content-type: application/json

{
  "arrayJobId": "string",
  "filters": [
    {
      "name": "string",
      "values": [ "string" ]
    }
  ],
  "jobQueue": "string",
  "jobStatus": "string",
  "maxResults": number,
  "multiNodeJobId": "string",
  "nextToken": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

arrayJobId

The job ID for an array job. Specifying an array job ID with this parameter lists all child jobs from within the specified array.

Type: String

Required: No

filters

The filter to apply to the query. Only one filter can be used at a time. When the filter is used, `jobStatus` is ignored. The filter doesn't apply to child jobs in an array or multi-node parallel (MNP) jobs. The results are sorted by the `createdAt` field, with the most recent jobs being first.

JOB_NAME

The value of the filter is a case-insensitive match for the job name. If the value ends with an asterisk (*), the filter matches any job name that begins with the string before the '*'. This corresponds to the `jobName` value. For example, `test1` matches both `Test1` and `test1`, and `test1*` matches both `test1` and `Test10`. When the `JOB_NAME` filter is used, the results are grouped by the job name and version.

JOB_DEFINITION

The value for the filter is the name or Amazon Resource Name (ARN) of the job definition. This corresponds to the `jobDefinition` value. The value is case sensitive. When the value for the filter is the job definition name, the results include all the jobs that used any revision of that job definition name. If the value ends with an asterisk (*), the filter matches any job definition name that begins with the string before the '*'. For example, `jd1` matches only `jd1`, and `jd1*` matches both `jd1` and `jd1A`. The version of the job definition that's used doesn't affect the sort order. When the `JOB_DEFINITION` filter is used and the ARN is used (which is in the form `arn:${Partition}:batch:${Region}:${Account}:job-definition/${JobDefinitionName}:${Revision}`), the results include jobs that used the specified revision of the job definition. Asterisk (*) isn't supported when the ARN is used.

BEFORE_CREATED_AT

The value for the filter is the time that's before the job was created. This corresponds to the `createdAt` value. The value is a string representation of the number of milliseconds since 00:00:00 UTC (midnight) on January 1, 1970.

AFTER_CREATED_AT

The value for the filter is the time that's after the job was created. This corresponds to the `createdAt` value. The value is a string representation of the number of milliseconds since 00:00:00 UTC (midnight) on January 1, 1970.

Type: Array of [KeyValuesPair](#) objects

Required: No

[jobQueue](#)

The name or full Amazon Resource Name (ARN) of the job queue used to list jobs.

Type: String

Required: No

[jobStatus](#)

The job status used to filter jobs in the specified queue. If the `filters` parameter is specified, the `jobStatus` parameter is ignored and jobs with any status are returned. If you don't specify a status, only `RUNNING` jobs are returned.

Type: String

Valid Values: `SUBMITTED` | `PENDING` | `RUNNABLE` | `STARTING` | `RUNNING` | `SUCCEEDED` | `FAILED`

Required: No

[maxResults](#)

The maximum number of results returned by `ListJobs` in a paginated output. When this parameter is used, `ListJobs` returns up to `maxResults` results in a single page and a `nextToken` response element, if applicable. The remaining results of the initial request can be seen by sending another `ListJobs` request with the returned `nextToken` value.

The following outlines key parameters and limitations:

- The minimum value is 1.
- When `--job-status` is used, Amazon Batch returns up to 1000 values.
- When `--filters` is used, Amazon Batch returns up to 100 values.

- If neither parameter is used, then `ListJobs` returns up to 1000 results (jobs that are in the `RUNNING` status) and a `nextToken` value, if applicable.

Type: Integer

Required: No

[multiNodeJobId](#)

The job ID for a multi-node parallel job. Specifying a multi-node parallel job ID with this parameter lists all nodes that are associated with the specified job.

Type: String

Required: No

[nextToken](#)

The `nextToken` value returned from a previous paginated `ListJobs` request where `maxResults` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value. This value is `null` when there are no more results to return.

Note

Treat this token as an opaque identifier that's only used to retrieve the next items in a list and not for other programmatic purposes.

Type: String

Required: No

Response Syntax

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

{
  "jobSummaryList": [
    {
      "arrayProperties": {
```

```
    "index": number,
    "size": number
  },
  "container": {
    "exitCode": number,
    "reason": string
  },
  "createdAt": number,
  "jobArn": string,
  "jobDefinition": string,
  "jobId": string,
  "jobName": string,
  "nodeProperties": {
    "isMainNode": boolean,
    "nodeIndex": number,
    "numNodes": number
  },
  "startedAt": number,
  "status": string,
  "statusReason": string,
  "stoppedAt": number
}
],
"nextToken": string
}
```

Response Elements

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

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

[jobSummaryList](#)

A list of job summaries that match the request.

Type: Array of [JobSummary](#) objects

[nextToken](#)

The nextToken value to include in a future ListJobs request. When the results of a ListJobs request exceed maxResults, this value can be used to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (`[authorization-params]`) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example lists the running jobs in the HighPriority job queue.

Sample Request

```
POST /v1/listjobs HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
```

```
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161129T201622Z
User-Agent: aws-cli/1.11.22 Python/2.7.12 Darwin/16.1.0 botocore/1.4.79

{
  "jobQueue": "HighPriority"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: [content-length]
Connection: keep-alive
Date: Tue, 29 Nov 2016 20:16:22 GMT
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 7f3f42df8af148df1f9f1ee7175987ad.cloudfront.net (CloudFront)
X-Amz-Cf-Id: idKR5mD8f7Luom03P9DV1bFGXsq_SIFNy_nMrTC0qZrRc0nXgHqZfg==

{
  "jobSummaryList": [{
    "jobId": "e66ff5fd-a1ff-4640-b1a2-0b0a142f49bb",
    "jobName": "example"
  }]
}
```

Example

This example lists jobs in the HighPriority job queue that are in the SUBMITTED job status.

Sample Request

```
POST /v1/listjobs HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161129T201642Z
User-Agent: aws-cli/1.11.22 Python/2.7.12 Darwin/16.1.0 botocore/1.4.79
```

```
{
  "jobQueue": "HighPriority",
  "jobStatus": "SUBMITTED"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Tue, 29 Nov 2016 20:16:42 GMT
Content-Type: application/json
Content-Length: [content-length]
Connection: keep-alive
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 ebc28fb0ad14691ee5d6c1a49f41b878.cloudfront.net (CloudFront)
X-Amz-Cf-Id: Ngsjm0gBg2y4cDFG4uwpAmaKaT6Dejh7oGlVdmewQrUaeW_SPst_Bw==

{
  "jobSummaryList": [{
    "jobId": "68f0c163-fbd4-44e6-9fd1-25b14a434786",
    "jobName": "example"
  }]
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)

- [Amazon SDK for Ruby V3](#)

ListJobsByConsumableResource

Returns a list of Amazon Batch jobs that require a specific consumable resource.

Request Syntax

```
POST /v1/listjobsbyconsumableresource HTTP/1.1
Content-type: application/json
```

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

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

consumableResource

The name or ARN of the consumable resource.

Type: String

Required: Yes

filters

The filters to apply to the job list query. If used, only those jobs requiring the specified consumable resource (`consumableResource`) and that match the value of the filters are listed. The filter names and values can be:

- name: JOB_STATUS

values: SUBMITTED | PENDING | RUNNABLE | STARTING | RUNNING | SUCCEEDED | FAILED

- name: JOB_NAME

The values are case-insensitive matches for the job name. If a filter value ends with an asterisk (*), it matches any job name that begins with the string before the '*'.

Type: Array of [KeyValuesPair](#) objects

Required: No

[maxResults](#)

The maximum number of results returned by `ListJobsByConsumableResource` in paginated output. When this parameter is used, `ListJobsByConsumableResource` only returns `maxResults` results in a single page and a `nextToken` response element. The remaining results of the initial request can be seen by sending another `ListJobsByConsumableResource` request with the returned `nextToken` value. This value can be between 1 and 100. If this parameter isn't used, then `ListJobsByConsumableResource` returns up to 100 results and a `nextToken` value if applicable.

Type: Integer

Required: No

[nextToken](#)

The `nextToken` value returned from a previous paginated `ListJobsByConsumableResource` request where `maxResults` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value. This value is `null` when there are no more results to return.

Note

Treat this token as an opaque identifier that's only used to retrieve the next items in a list and not for other programmatic purposes.

Type: String

Required: No

Response Syntax

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

{
  "jobs": [
    {
      "consumableResourceProperties": {
        "consumableResourceList": [
          {
            "consumableResource": "string",
            "quantity": number
          }
        ]
      },
      "createdAt": number,
      "jobArn": "string",
      "jobDefinitionArn": "string",
      "jobName": "string",
      "jobQueueArn": "string",
      "jobStatus": "string",
      "quantity": number,
      "shareIdentifier": "string",
      "startedAt": number,
      "statusReason": "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.

jobs

The list of jobs that require the specified consumable resources.

Type: Array of [ListJobsByConsumableResourceSummary](#) objects

nextToken

The `nextToken` value to include in a future `ListJobsByConsumableResource` request. When the results of a `ListJobsByConsumableResource` request exceed `maxResults`, this value can be used to retrieve the next page of results. This value is `null` when there are no more results to return.

Type: String

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)

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

ListSchedulingPolicies

Returns a list of Amazon Batch scheduling policies.

Request Syntax

```
POST /v1/listschedulingpolicies HTTP/1.1
Content-type: application/json
```

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

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

maxResults

The maximum number of results that's returned by `ListSchedulingPolicies` in paginated output. When this parameter is used, `ListSchedulingPolicies` only returns `maxResults` results in a single page and a `nextToken` response element. You can see the remaining results of the initial request by sending another `ListSchedulingPolicies` request with the returned `nextToken` value. This value can be between 1 and 100. If this parameter isn't used, `ListSchedulingPolicies` returns up to 100 results and a `nextToken` value if applicable.

Type: Integer

Required: No

nextToken

The `nextToken` value that's returned from a previous paginated `ListSchedulingPolicies` request where `maxResults` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value. This value is `null` when there are no more results to return.

Note

Treat this token as an opaque identifier that's only used to retrieve the next items in a list and not for other programmatic purposes.

Type: String

Required: No

Response Syntax

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

{
  "nextToken": "string",
  "schedulingPolicies": [
    {
      "arn": "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

The nextToken value to include in a future ListSchedulingPolicies request. When the results of a ListSchedulingPolicies request exceed maxResults, this value can be used to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

schedulingPolicies

A list of scheduling policies that match the request.

Type: Array of [SchedulingPolicyListingDetail](#) objects

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example lists the scheduling policies.

Sample Request

```
POST /v1/listschedulingpolicies HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
```

```
User-Agent: aws-cli/1.20.21 Python/3.6.9 Linux/4.4.0-19041-Microsoft boto3/1.21.21
X-Amz-Date: 20210929T001942Z
X-Amz-Security-Token: [security-token]
Authorization: [authorization-params]
Content-Length: 0
```

Sample Response

```
HTTP/1.1 200 OK
Date: Wed, 29 Sep 2021 00:19:43 GMT
Content-Type: application/json
Content-Length: [content-length]
x-amzn-RequestId: [request-id]
Access-Control-Allow-Origin: *
x-amz-apigw-id: [apigw-id]
Access-Control-Expose-Headers: X-amzn-errortype,X-amzn-requestid,X-amzn-errormessage,X-
amzn-trace-id,X-amz-apigw-id,date
X-Amzn-Trace-Id: [trace-id]
Connection: keep-alive

{
  "schedulingPolicies": [{
    "arn": "arn:aws:batch:us-east-1:123456789012:scheduling-policy/
ExampleFairSharePolicy"
  }, {
    "arn": "arn:aws:batch:us-east-1:123456789012:scheduling-policy/
ExampleFairSharePolicy2"
  }]
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)

- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

ListTagsForResource

Lists the tags for an Amazon Batch resource. Amazon Batch resources that support tags are compute environments, jobs, job definitions, job queues, and scheduling policies. ARNs for child jobs of array and multi-node parallel (MNP) jobs aren't supported.

Request Syntax

```
GET /v1/tags/resourceArn HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

resourceArn

The Amazon Resource Name (ARN) that identifies the resource that tags are listed for. Amazon Batch resources that support tags are compute environments, jobs, job definitions, job queues, and scheduling policies. ARNs for child jobs of array and multi-node parallel (MNP) jobs aren't supported.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
  "tags": {
    "string" : "string"
  }
}
```

Response Elements

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

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

tags

The tags for the resource.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Value Length Constraints: Maximum length of 256.

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example lists tags on the job definition with an ARN of `"arn:aws:batch:us-east-1:123456789012:job-definition/sleep30:1"`.

Sample Request

```
GET /v1/tags/arn%3Aaws%3Abatch%3Aus-east-1%3A123456789012%3Ajob-definition%2Fsleep30%3A1 HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
X-Amz-Date: 20200604T172419Z
X-Amz-Security-Token: [security-token]
Authorization: [authorization-params]
```

Sample Response

```
HTTP/1.1 200 OK
Date: Thu, 05 Jun 2020 17:24:20 GMT
Content-Type: application/json

x-amzn-RequestId: [request-id]
Access-Control-Allow-Origin: *
x-amz-apigw-id: [apigw-id]
X-Amzn-Trace-Id: [trace-id]
Connection: keep-alive

{
  "tags": {
    "Stage": "Alpha",
    "Department": "Engineering",
    "User": "JaneDoe"
  }
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

RegisterJobDefinition

Registers an Amazon Batch job definition.

Request Syntax

```
POST /v1/registerjobdefinition HTTP/1.1
```

```
Content-type: application/json
```

```
{
  "consumableResourceProperties": {
    "consumableResourceList": [
      {
        "consumableResource": "string",
        "quantity": number
      }
    ]
  },
  "containerProperties": {
    "command": [ "string" ],
    "enableExecuteCommand": boolean,
    "environment": [
      {
        "name": "string",
        "value": "string"
      }
    ],
    "ephemeralStorage": {
      "sizeInGiB": number
    },
    "executionRoleArn": "string",
    "fargatePlatformConfiguration": {
      "platformVersion": "string"
    },
    "image": "string",
    "instanceType": "string",
    "jobRoleArn": "string",
    "linuxParameters": {
      "devices": [
        {
          "containerPath": "string",
          "hostPath": "string",
          "permissions": [ "string" ]
        }
      ]
    }
  }
}
```

```
    }
  ],
  "initProcessEnabled": boolean,
  "maxSwap": number,
  "sharedMemorySize": number,
  "swappiness": number,
  "tmpfs": [
    {
      "containerPath": "string",
      "mountOptions": [ "string" ],
      "size": number
    }
  ]
},
"logConfiguration": {
  "logDriver": "string",
  "options": {
    "string" : "string"
  },
  "secretOptions": [
    {
      "name": "string",
      "valueFrom": "string"
    }
  ]
},
"memory": number,
"mountPoints": [
  {
    "containerPath": "string",
    "readOnly": boolean,
    "sourceVolume": "string"
  }
],
"networkConfiguration": {
  "assignPublicIp": "string"
},
"privileged": boolean,
"readonlyRootFilesystem": boolean,
"repositoryCredentials": {
  "credentialsParameter": "string"
},
"resourceRequirements": [
  {
```

```
        "type": "string",
        "value": "string"
    }
],
"runtimePlatform": {
    "cpuArchitecture": "string",
    "operatingSystemFamily": "string"
},
"secrets": [
    {
        "name": "string",
        "valueFrom": "string"
    }
],
"ulimits": [
    {
        "hardLimit": number,
        "name": "string",
        "softLimit": number
    }
],
"user": "string",
"vcpus": number,
"volumes": [
    {
        "efsVolumeConfiguration": {
            "authorizationConfig": {
                "accessPointId": "string",
                "iam": "string"
            },
            "fileSystemId": "string",
            "rootDirectory": "string",
            "transitEncryption": "string",
            "transitEncryptionPort": number
        },
        "host": {
            "sourcePath": "string"
        },
        "name": "string"
    }
]
},
"ecsProperties": {
    "taskProperties": [
```

```
{
  "containers": [
    {
      "command": [ "string" ],
      "dependsOn": [
        {
          "condition": "string",
          "containerName": "string"
        }
      ],
      "environment": [
        {
          "name": "string",
          "value": "string"
        }
      ],
      "essential": boolean,
      "firelensConfiguration": {
        "options": {
          "string" : "string"
        },
        "type": "string"
      },
      "image": "string",
      "linuxParameters": {
        "devices": [
          {
            "containerPath": "string",
            "hostPath": "string",
            "permissions": [ "string" ]
          }
        ],
        "initProcessEnabled": boolean,
        "maxSwap": number,
        "sharedMemorySize": number,
        "swappiness": number,
        "tmpfs": [
          {
            "containerPath": "string",
            "mountOptions": [ "string" ],
            "size": number
          }
        ]
      }
    }
  ],
}
```

```
"logConfiguration": {
  "logDriver": "string",
  "options": {
    "string" : "string"
  },
  "secretOptions": [
    {
      "name": "string",
      "valueFrom": "string"
    }
  ]
},
"mountPoints": [
  {
    "containerPath": "string",
    "readOnly": boolean,
    "sourceVolume": "string"
  }
],
"name": "string",
"privileged": boolean,
"readonlyRootFilesystem": boolean,
"repositoryCredentials": {
  "credentialsParameter": "string"
},
"resourceRequirements": [
  {
    "type": "string",
    "value": "string"
  }
],
"secrets": [
  {
    "name": "string",
    "valueFrom": "string"
  }
],
"ulimits": [
  {
    "hardLimit": number,
    "name": "string",
    "softLimit": number
  }
],
```

```

        "user": "string"
    }
],
"enableExecuteCommand": boolean,
"ephemeralStorage": {
    "sizeInGiB": number
},
"executionRoleArn": "string",
"ipcMode": "string",
"networkConfiguration": {
    "assignPublicIp": "string"
},
"pidMode": "string",
"platformVersion": "string",
"runtimePlatform": {
    "cpuArchitecture": "string",
    "operatingSystemFamily": "string"
},
"taskRoleArn": "string",
"volumes": [
    {
        "efsVolumeConfiguration": {
            "authorizationConfig": {
                "accessPointId": "string",
                "iam": "string"
            },
            "fileSystemId": "string",
            "rootDirectory": "string",
            "transitEncryption": "string",
            "transitEncryptionPort": number
        },
        "host": {
            "sourcePath": "string"
        },
        "name": "string"
    }
]
}
],
},
"eksProperties": {
    "podProperties": {
        "containers": [
            {

```

```
    "args": [ "string" ],
    "command": [ "string" ],
    "env": [
      {
        "name": "string",
        "value": "string"
      }
    ],
    "image": "string",
    "imagePullPolicy": "string",
    "name": "string",
    "resources": {
      "limits": {
        "string" : "string"
      },
      "requests": {
        "string" : "string"
      }
    },
    "securityContext": {
      "allowPrivilegeEscalation": boolean,
      "privileged": boolean,
      "readOnlyRootFilesystem": boolean,
      "runAsGroup": number,
      "runAsNonRoot": boolean,
      "runAsUser": number
    },
    "volumeMounts": [
      {
        "mountPath": "string",
        "name": "string",
        "readOnly": boolean,
        "subPath": "string"
      }
    ]
  }
],
"dnspolicy": "string",
"hostNetwork": boolean,
"imagePullSecrets": [
  {
    "name": "string"
  }
],
```

```
"initContainers": [  
  {  
    "args": [ "string" ],  
    "command": [ "string" ],  
    "env": [  
      {  
        "name": "string",  
        "value": "string"  
      }  
    ],  
    "image": "string",  
    "imagePullPolicy": "string",  
    "name": "string",  
    "resources": {  
      "limits": {  
        "string" : "string"  
      },  
      "requests": {  
        "string" : "string"  
      }  
    },  
    "securityContext": {  
      "allowPrivilegeEscalation": boolean,  
      "privileged": boolean,  
      "readOnlyRootFilesystem": boolean,  
      "runAsGroup": number,  
      "runAsNonRoot": boolean,  
      "runAsUser": number  
    },  
    "volumeMounts": [  
      {  
        "mountPath": "string",  
        "name": "string",  
        "readOnly": boolean,  
        "subPath": "string"  
      }  
    ]  
  }  
],  
"metadata": {  
  "annotations": {  
    "string" : "string"  
  },  
  "labels": {
```

```

        "string" : "string"
    },
    "namespace": "string"
},
"serviceAccountName": "string",
"shareProcessNamespace": boolean,
"volumes": [
    {
        "emptyDir": {
            "medium": "string",
            "sizeLimit": "string"
        },
        "hostPath": {
            "path": "string"
        },
        "name": "string",
        "persistentVolumeClaim": {
            "claimName": "string",
            "readOnly": boolean
        },
        "secret": {
            "optional": boolean,
            "secretName": "string"
        }
    }
]
},
"jobDefinitionName": "string",
"nodeProperties": {
    "mainNode": number,
    "nodeRangeProperties": [
        {
            "consumableResourceProperties": {
                "consumableResourceList": [
                    {
                        "consumableResource": "string",
                        "quantity": number
                    }
                ]
            },
            "container": {
                "command": [ "string" ],
                "enableExecuteCommand": boolean,

```

```
"environment": [
  {
    "name": "string",
    "value": "string"
  }
],
"ephemeralStorage": {
  "sizeInGiB": number
},
"executionRoleArn": "string",
"fargatePlatformConfiguration": {
  "platformVersion": "string"
},
"image": "string",
"instanceType": "string",
"jobRoleArn": "string",
"linuxParameters": {
  "devices": [
    {
      "containerPath": "string",
      "hostPath": "string",
      "permissions": [ "string" ]
    }
  ],
  "initProcessEnabled": boolean,
  "maxSwap": number,
  "sharedMemorySize": number,
  "swappiness": number,
  "tmpfs": [
    {
      "containerPath": "string",
      "mountOptions": [ "string" ],
      "size": number
    }
  ]
},
"logConfiguration": {
  "logDriver": "string",
  "options": {
    "string": "string"
  },
  "secretOptions": [
    {
      "name": "string",
```

```
        "valueFrom": "string"
      }
    ]
  },
  "memory": number,
  "mountPoints": [
    {
      "containerPath": "string",
      "readOnly": boolean,
      "sourceVolume": "string"
    }
  ],
  "networkConfiguration": {
    "assignPublicIp": "string"
  },
  "privileged": boolean,
  "readonlyRootFilesystem": boolean,
  "repositoryCredentials": {
    "credentialsParameter": "string"
  },
  "resourceRequirements": [
    {
      "type": "string",
      "value": "string"
    }
  ],
  "runtimePlatform": {
    "cpuArchitecture": "string",
    "operatingSystemFamily": "string"
  },
  "secrets": [
    {
      "name": "string",
      "valueFrom": "string"
    }
  ],
  "ulimits": [
    {
      "hardLimit": number,
      "name": "string",
      "softLimit": number
    }
  ],
  "user": "string",
```

```
"vcpus": number,
"volumes": [
  {
    "efsVolumeConfiguration": {
      "authorizationConfig": {
        "accessPointId": "string",
        "iam": "string"
      },
      "fileSystemId": "string",
      "rootDirectory": "string",
      "transitEncryption": "string",
      "transitEncryptionPort": number
    },
    "host": {
      "sourcePath": "string"
    },
    "name": "string"
  }
],
"ecsProperties": {
  "taskProperties": [
    {
      "containers": [
        {
          "command": [ "string" ],
          "dependsOn": [
            {
              "condition": "string",
              "containerName": "string"
            }
          ],
          "environment": [
            {
              "name": "string",
              "value": "string"
            }
          ],
          "essential": boolean,
          "firelensConfiguration": {
            "options": {
              "string": "string"
            },
            "type": "string"
          }
        }
      ]
    }
  ]
}
```

```
},
  "image": "string",
  "linuxParameters": {
    "devices": [
      {
        "containerPath": "string",
        "hostPath": "string",
        "permissions": [ "string" ]
      }
    ],
    "initProcessEnabled": boolean,
    "maxSwap": number,
    "sharedMemorySize": number,
    "swappiness": number,
    "tmpfs": [
      {
        "containerPath": "string",
        "mountOptions": [ "string" ],
        "size": number
      }
    ]
  },
  "logConfiguration": {
    "logDriver": "string",
    "options": {
      "string" : "string"
    },
    "secretOptions": [
      {
        "name": "string",
        "valueFrom": "string"
      }
    ]
  },
  "mountPoints": [
    {
      "containerPath": "string",
      "readOnly": boolean,
      "sourceVolume": "string"
    }
  ],
  "name": "string",
  "privileged": boolean,
  "readonlyRootFilesystem": boolean,
```

```
    "repositoryCredentials": {
      "credentialsParameter": "string"
    },
    "resourceRequirements": [
      {
        "type": "string",
        "value": "string"
      }
    ],
    "secrets": [
      {
        "name": "string",
        "valueFrom": "string"
      }
    ],
    "ulimits": [
      {
        "hardLimit": number,
        "name": "string",
        "softLimit": number
      }
    ],
    "user": "string"
  }
],
"enableExecuteCommand": boolean,
"ephemeralStorage": {
  "sizeInGiB": number
},
"executionRoleArn": "string",
"ipcMode": "string",
"networkConfiguration": {
  "assignPublicIp": "string"
},
"pidMode": "string",
"platformVersion": "string",
"runtimePlatform": {
  "cpuArchitecture": "string",
  "operatingSystemFamily": "string"
},
"taskRoleArn": "string",
"volumes": [
  {
    "efsVolumeConfiguration": {
```

```

        "authorizationConfig": {
            "accessPointId": "string",
            "iam": "string"
        },
        "filesystemId": "string",
        "rootDirectory": "string",
        "transitEncryption": "string",
        "transitEncryptionPort": number
    },
    "host": {
        "sourcePath": "string"
    },
    "name": "string"
}
]
}
],
},
"eksProperties": {
    "podProperties": {
        "containers": [
            {
                "args": [ "string" ],
                "command": [ "string" ],
                "env": [
                    {
                        "name": "string",
                        "value": "string"
                    }
                ],
                "image": "string",
                "imagePullPolicy": "string",
                "name": "string",
                "resources": {
                    "limits": {
                        "string" : "string"
                    },
                    "requests": {
                        "string" : "string"
                    }
                }
            },
            "securityContext": {
                "allowPrivilegeEscalation": boolean,
                "privileged": boolean,

```

```
        "readOnlyRootFilesystem": boolean,
        "runAsGroup": number,
        "runAsNonRoot": boolean,
        "runAsUser": number
    },
    "volumeMounts": [
        {
            "mountPath": "string",
            "name": "string",
            "readOnly": boolean,
            "subPath": "string"
        }
    ]
},
"dnsPolicy": "string",
"hostNetwork": boolean,
"imagePullSecrets": [
    {
        "name": "string"
    }
],
"initContainers": [
    {
        "args": [ "string" ],
        "command": [ "string" ],
        "env": [
            {
                "name": "string",
                "value": "string"
            }
        ],
        "image": "string",
        "imagePullPolicy": "string",
        "name": "string",
        "resources": {
            "limits": {
                "string" : "string"
            },
            "requests": {
                "string" : "string"
            }
        }
    },
    "securityContext": {
```

```
    "allowPrivilegeEscalation": boolean,
    "privileged": boolean,
    "readOnlyRootFilesystem": boolean,
    "runAsGroup": number,
    "runAsNonRoot": boolean,
    "runAsUser": number
  },
  "volumeMounts": [
    {
      "mountPath": "string",
      "name": "string",
      "readOnly": boolean,
      "subPath": "string"
    }
  ]
},
"metadata": {
  "annotations": {
    "string" : "string"
  },
  "labels": {
    "string" : "string"
  },
  "namespace": "string"
},
"serviceAccountName": "string",
"shareProcessNamespace": boolean,
"volumes": [
  {
    "emptyDir": {
      "medium": "string",
      "sizeLimit": "string"
    },
    "hostPath": {
      "path": "string"
    },
    "name": "string",
    "persistentVolumeClaim": {
      "claimName": "string",
      "readOnly": boolean
    },
    "secret": {
      "optional": boolean,
```

```
        "secretName": "string"
      }
    }
  ],
  "instanceTypes": [ "string" ],
  "targetNodes": "string"
}
],
"numNodes": number
},
"parameters": {
  "string" : "string"
},
"platformCapabilities": [ "string" ],
"propagateTags": boolean,
"retryStrategy": {
  "attempts": number,
  "evaluateOnExit": [
    {
      "action": "string",
      "onExitCode": "string",
      "onReason": "string",
      "onStatusReason": "string"
    }
  ]
},
"schedulingPriority": number,
"tags": {
  "string" : "string"
},
"timeout": {
  "attemptDurationSeconds": number
},
"type": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

consumableResourceProperties

Contains a list of consumable resources required by the job.

Type: [ConsumableResourceProperties](#) object

Required: No

containerProperties

An object with properties specific to Amazon ECS-based single-node container-based jobs. If the job definition's `type` parameter is `container`, then you must specify either `containerProperties` or `nodeProperties`. This must not be specified for Amazon EKS-based job definitions.

Note

If the job runs on Fargate resources, then you must not specify `nodeProperties`; use only `containerProperties`.

Type: [ContainerProperties](#) object

Required: No

ecsProperties

An object with properties that are specific to Amazon ECS-based jobs. This must not be specified for Amazon EKS-based job definitions.

Type: [EcsProperties](#) object

Required: No

eksProperties

An object with properties that are specific to Amazon EKS-based jobs. This must not be specified for Amazon ECS based job definitions.

Type: [EksProperties](#) object

Required: No

[jobDefinitionName](#)

The name of the job definition to register. It can be up to 128 letters long. It can contain uppercase and lowercase letters, numbers, hyphens (-), and underscores (_).

Type: String

Required: Yes

[nodeProperties](#)

An object with properties specific to multi-node parallel jobs. If you specify node properties for a job, it becomes a multi-node parallel job. For more information, see [Multi-node Parallel Jobs](#) in the *Amazon Batch User Guide*.

Note

If the job runs on Fargate resources, then you must not specify `nodeProperties`; use `containerProperties` instead.

Note

If the job runs on Amazon EKS resources, then you must not specify `nodeProperties`.

Type: [NodeProperties](#) object

Required: No

[parameters](#)

Default parameter substitution placeholders to set in the job definition. Parameters are specified as a key-value pair mapping. Parameters in a `SubmitJob` request override any corresponding parameter defaults from the job definition.

Type: String to string map

Required: No

platformCapabilities

The platform capabilities required by the job definition. If no value is specified, it defaults to EC2. To run the job on Fargate resources, specify FARGATE.

Note

If the job runs on Amazon EKS resources, then you must not specify `platformCapabilities`.

Type: Array of strings

Valid Values: EC2 | FARGATE

Required: No

propagateTags

Specifies whether to propagate the tags from the job or job definition to the corresponding Amazon ECS task. If no value is specified, the tags are not propagated. Tags can only be propagated to the tasks during task creation. For tags with the same name, job tags are given priority over job definitions tags. If the total number of combined tags from the job and job definition is over 50, the job is moved to the FAILED state.

Note

If the job runs on Amazon EKS resources, then you must not specify `propagateTags`.

Type: Boolean

Required: No

retryStrategy

The retry strategy to use for failed jobs that are submitted with this job definition. Any retry strategy that's specified during a [SubmitJob](#) operation overrides the retry strategy defined here. If a job is terminated due to a timeout, it isn't retried.

Type: [RetryStrategy](#) object

Required: No

schedulingPriority

The scheduling priority for jobs that are submitted with this job definition. This only affects jobs in job queues with a fair-share policy. Jobs with a higher scheduling priority are scheduled before jobs with a lower scheduling priority.

The minimum supported value is 0 and the maximum supported value is 9999.

Type: Integer

Required: No

tags

The tags that you apply to the job definition to help you categorize and organize your resources. Each tag consists of a key and an optional value. For more information, see [Tagging Amazon Resources](#) in *Amazon Batch User Guide*.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Value Length Constraints: Maximum length of 256.

Required: No

timeout

The timeout configuration for jobs that are submitted with this job definition, after which Amazon Batch terminates your jobs if they have not finished. If a job is terminated due to a timeout, it isn't retried. The minimum value for the timeout is 60 seconds. Any timeout configuration that's specified during a [SubmitJob](#) operation overrides the timeout configuration defined here. For more information, see [Job Timeouts](#) in the *Amazon Batch User Guide*.

Type: [JobTimeout](#) object

Required: No

type

The type of job definition. For more information about multi-node parallel jobs, see [Creating a multi-node parallel job definition](#) in the *Amazon Batch User Guide*.

- If the value is `container`, then one of the following is required: `containerProperties`, `ecsProperties`, or `eksProperties`.
- If the value is `multinode`, then `nodeProperties` is required.

Note

If the job is run on Fargate resources, then `multinode` isn't supported.

Type: String

Valid Values: `container` | `multinode`

Required: Yes

Response Syntax

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

{
  "jobDefinitionArn": "string",
  "jobDefinitionName": "string",
  "revision": 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.

jobDefinitionArn

The Amazon Resource Name (ARN) of the job definition.

Type: String

jobDefinitionName

The name of the job definition.

Type: String

revision

The revision of the job definition.

Type: Integer

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example registers a job definition for a simple container job.

Sample Request

```
POST /v1/registerjobdefinition HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20201128T215526Z
User-Agent: aws-cli/1.11.21 Python/2.7.12 Darwin/16.1.0 botocore/1.4.78
```

```
{
  "containerProperties": {
    "image": "busybox",
    "command": [
      "sleep",
      "10"
    ],
    "resourceRequirements": [
      {
        "type": "MEMORY",
        "value": "128"
      },
      {
        "type": "VCPU",
        "value": "1"
      }
    ]
  },
  "type": "container",
  "jobDefinitionName": "sleep10"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: [content-length]
Connection: keep-alive
Date: Mon, 28 Nov 2020 21:55:27 GMT
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 7a06af51e583997d8673ab89482dd45a.cloudfront.net (CloudFront)
```

```
X-Amz-Cf-Id: Y14HPNWWcKgm1U0wJPfLBzLDvrMSdyuHo4GMi0oQwI0ukruLpi0nFw==

{
  "jobDefinitionName": "sleep10",
  "jobDefinitionArn": "arn:aws:batch:us-east-1:123456789012:job-definition/sleep10:1",
  "revision": 1
}
```

Example

This example registers a job definition for a simple container job with retries.

Sample Request

```
POST /v1/registerjobdefinition HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20170327T145208Z
User-Agent: aws-cli/1.11.66 Python/2.7.10 Darwin/16.4.0 botocore/1.5.29

{
  "containerProperties": {
    "mountPoints": [],
    "image": "amazonlinux",
    "environment": [],
    "command": [
      "/bin/bash",
      "-c",
      "exit $AWS_BATCH_JOB_ATTEMPT"
    ],
    "volumes": [],
    "resourceRequirements": [
      {
        "type": "MEMORY",
        "value": "8"
      },
      {
        "type": "VCPU",
        "value": "1"
      }
    ],
  },
}
```

```
    "ulimits": []
  },
  "retryStrategy": {
    "attempts": 3
  },
  "jobDefinitionName": "EchoAttemptNumber",
  "parameters": {},
  "type": "container"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Mon, 27 Mar 2017 14:51:58 GMT
Content-Type: application/json
Content-Length: [content-length]
Connection: keep-alive
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 861b49a34b383ce3ac4ea8b7117b8953.cloudfront.net (CloudFront)
X-Amz-Cf-Id: l3zCxHt1Ix4c1-RN2vkqIlpSbU9tsZNxfMSg6oIf700wg1BX0V5f_A==

{
  "jobDefinitionName": "EchoAttemptNumber",
  "jobDefinitionArn": "arn:aws:batch:us-east-1:123456789012:job-definition/
EchoAttemptNumber:1",
  "revision": 1
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)

- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

SubmitJob

Submits an Amazon Batch job from a job definition. Parameters that are specified during [SubmitJob](#) override parameters defined in the job definition. vCPU and memory requirements that are specified in the `resourceRequirements` objects in the job definition are the exception. They can't be overridden this way using the `memory` and `vcpus` parameters. Rather, you must specify updates to job definition parameters in a `resourceRequirements` object that's included in the `containerOverrides` parameter.

Note

Job queues with a scheduling policy are limited to 500 active share identifiers at a time.

Important

Jobs that run on Fargate resources can't be guaranteed to run for more than 14 days. This is because, after 14 days, Fargate resources might become unavailable and job might be terminated.

Request Syntax

```
POST /v1/submitjob HTTP/1.1
Content-type: application/json
```

```
{
  "arrayProperties": {
    "size": number
  },
  "consumableResourcePropertiesOverride": {
    "consumableResourceList": [
      {
        "consumableResource": "string",
        "quantity": number
      }
    ]
  },
  "containerOverrides": {
    "command": [ "string" ],

```

```
    "environment": [
      {
        "name": "string",
        "value": "string"
      }
    ],
    "instanceType": "string",
    "memory": number,
    "resourceRequirements": [
      {
        "type": "string",
        "value": "string"
      }
    ],
    "vcpus": number
  },
  "dependsOn": [
    {
      "jobId": "string",
      "type": "string"
    }
  ],
  "ecsPropertiesOverride": {
    "taskProperties": [
      {
        "containers": [
          {
            "command": [ "string" ],
            "environment": [
              {
                "name": "string",
                "value": "string"
              }
            ],
            "name": "string",
            "resourceRequirements": [
              {
                "type": "string",
                "value": "string"
              }
            ]
          }
        ]
      }
    ]
  }
}
```

```
]
},
"eksPropertiesOverride": {
  "podProperties": {
    "containers": [
      {
        "args": [ "string" ],
        "command": [ "string" ],
        "env": [
          {
            "name": "string",
            "value": "string"
          }
        ],
        "image": "string",
        "name": "string",
        "resources": {
          "limits": {
            "string" : "string"
          },
          "requests": {
            "string" : "string"
          }
        }
      }
    ],
    "initContainers": [
      {
        "args": [ "string" ],
        "command": [ "string" ],
        "env": [
          {
            "name": "string",
            "value": "string"
          }
        ],
        "image": "string",
        "name": "string",
        "resources": {
          "limits": {
            "string" : "string"
          },
          "requests": {
            "string" : "string"
          }
        }
      }
    ]
  }
}
```

```

    }
  }
}
],
"metadata": {
  "annotations": {
    "string": "string"
  },
  "labels": {
    "string": "string"
  },
  "namespace": "string"
}
}
},
"jobDefinition": "string",
"jobName": "string",
"jobQueue": "string",
"nodeOverrides": {
  "nodePropertyOverrides": [
    {
      "consumableResourcePropertiesOverride": {
        "consumableResourceList": [
          {
            "consumableResource": "string",
            "quantity": number
          }
        ]
      },
      "containerOverrides": {
        "command": [ "string" ],
        "environment": [
          {
            "name": "string",
            "value": "string"
          }
        ]
      },
      "instanceType": "string",
      "memory": number,
      "resourceRequirements": [
        {
          "type": "string",
          "value": "string"
        }
      ]
    }
  ]
}

```

```

    ],
    "vcpus": number
  },
  "ecsPropertiesOverride": {
    "taskProperties": [
      {
        "containers": [
          {
            "command": [ "string" ],
            "environment": [
              {
                "name": "string",
                "value": "string"
              }
            ],
            "name": "string",
            "resourceRequirements": [
              {
                "type": "string",
                "value": "string"
              }
            ]
          }
        ]
      }
    ]
  },
  "eksPropertiesOverride": {
    "podProperties": {
      "containers": [
        {
          "args": [ "string" ],
          "command": [ "string" ],
          "env": [
            {
              "name": "string",
              "value": "string"
            }
          ],
          "image": "string",
          "name": "string",
          "resources": {
            "limits": {
              "string": "string"
            }
          }
        }
      ]
    }
  }
}

```

```
    },
    "requests": {
      "string" : "string"
    }
  }
},
"initContainers": [
  {
    "args": [ "string" ],
    "command": [ "string" ],
    "env": [
      {
        "name": "string",
        "value": "string"
      }
    ],
    "image": "string",
    "name": "string",
    "resources": {
      "limits": {
        "string" : "string"
      },
      "requests": {
        "string" : "string"
      }
    }
  }
],
"metadata": {
  "annotations": {
    "string" : "string"
  },
  "labels": {
    "string" : "string"
  },
  "namespace": "string"
}
},
"instanceTypes": [ "string" ],
"targetNodes": "string"
},
],
```

```
    "numNodes": number
  },
  "parameters": {
    "string" : "string"
  },
  "propagateTags": boolean,
  "retryStrategy": {
    "attempts": number,
    "evaluateOnExit": [
      {
        "action": "string",
        "onExitCode": "string",
        "onReason": "string",
        "onStatusReason": "string"
      }
    ]
  },
  "schedulingPriorityOverride": number,
  "shareIdentifier": "string",
  "tags": {
    "string" : "string"
  },
  "timeout": {
    "attemptDurationSeconds": number
  }
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

arrayProperties

The array properties for the submitted job, such as the size of the array. The array size can be between 2 and 10,000. If you specify array properties for a job, it becomes an array job. For more information, see [Array Jobs](#) in the *Amazon Batch User Guide*.

Type: [ArrayProperties](#) object

Required: No

[consumableResourcePropertiesOverride](#)

An object that contains overrides for the consumable resources of a job.

Type: [ConsumableResourceProperties](#) object

Required: No

[containerOverrides](#)

An object with properties that override the defaults for the job definition that specify the name of a container in the specified job definition and the overrides it should receive. You can override the default command for a container, which is specified in the job definition or the Docker image, with a command override. You can also override existing environment variables on a container or add new environment variables to it with an environment override.

Type: [ContainerOverrides](#) object

Required: No

[dependsOn](#)

A list of dependencies for the job. A job can depend upon a maximum of 20 jobs. You can specify a SEQUENTIAL type dependency without specifying a job ID for array jobs so that each child array job completes sequentially, starting at index 0. You can also specify an N_TO_N type dependency with a job ID for array jobs. In that case, each index child of this job must wait for the corresponding index child of each dependency to complete before it can begin.

Type: Array of [JobDependency](#) objects

Required: No

[ecsPropertiesOverride](#)

An object, with properties that override defaults for the job definition, can only be specified for jobs that are run on Amazon ECS resources.

Type: [EcsPropertiesOverride](#) object

Required: No

eksPropertiesOverride

An object, with properties that override defaults for the job definition, can only be specified for jobs that are run on Amazon EKS resources.

Type: [EksPropertiesOverride](#) object

Required: No

jobDefinition

The job definition used by this job. This value can be one of `definition-name`, `definition-name:revision`, or the Amazon Resource Name (ARN) for the job definition, with or without the revision (`arn:aws:batch:region:account:job-definition/definition-name:revision` , or `arn:aws:batch:region:account:job-definition/definition-name`).

If the revision is not specified, then the latest active revision is used.

Type: String

Required: Yes

jobName

The name of the job. It can be up to 128 letters long. The first character must be alphanumeric, can contain uppercase and lowercase letters, numbers, hyphens (-), and underscores (_).

Type: String

Required: Yes

jobQueue

The job queue where the job is submitted. You can specify either the name or the Amazon Resource Name (ARN) of the queue.

Type: String

Required: Yes

nodeOverrides

A list of node overrides in JSON format that specify the node range to target and the container overrides for that node range.

Note

This parameter isn't applicable to jobs that are running on Fargate resources; use `containerOverrides` instead.

Type: [NodeOverrides](#) object

Required: No

parameters

Additional parameters passed to the job that replace parameter substitution placeholders that are set in the job definition. Parameters are specified as a key and value pair mapping. Parameters in a `SubmitJob` request override any corresponding parameter defaults from the job definition.

Type: String to string map

Required: No

propagateTags

Specifies whether to propagate the tags from the job or job definition to the corresponding Amazon ECS task. If no value is specified, the tags aren't propagated. Tags can only be propagated to the tasks during task creation. For tags with the same name, job tags are given priority over job definitions tags. If the total number of combined tags from the job and job definition is over 50, the job is moved to the `FAILED` state. When specified, this overrides the tag propagation setting in the job definition.

Type: Boolean

Required: No

retryStrategy

The retry strategy to use for failed jobs from this [SubmitJob](#) operation. When a retry strategy is specified here, it overrides the retry strategy defined in the job definition.

Type: [RetryStrategy](#) object

Required: No

schedulingPriorityOverride

The scheduling priority for the job. This only affects jobs in job queues with a fair-share policy. Jobs with a higher scheduling priority are scheduled before jobs with a lower scheduling priority. This overrides any scheduling priority in the job definition and works only within a single share identifier.

The minimum supported value is 0 and the maximum supported value is 9999.

Type: Integer

Required: No

shareIdentifier

The share identifier for the job. Don't specify this parameter if the job queue doesn't have a fair-share scheduling policy. If the job queue has a fair-share scheduling policy, then this parameter must be specified.

This string is limited to 255 alphanumeric characters, and can be followed by an asterisk (*).

Type: String

Required: No

tags

The tags that you apply to the job request to help you categorize and organize your resources. Each tag consists of a key and an optional value. For more information, see [Tagging Amazon Resources](#) in *Amazon General Reference*.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Value Length Constraints: Maximum length of 256.

Required: No

timeout

The timeout configuration for this [SubmitJob](#) operation. You can specify a timeout duration after which Amazon Batch terminates your jobs if they haven't finished. If a job is terminated

due to a timeout, it isn't retried. The minimum value for the timeout is 60 seconds. This configuration overrides any timeout configuration specified in the job definition. For array jobs, child jobs have the same timeout configuration as the parent job. For more information, see [Job Timeouts](#) in the *Amazon Elastic Container Service Developer Guide*.

Type: [JobTimeout](#) object

Required: No

Response Syntax

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

{
  "jobArn": "string",
  "jobId": "string",
  "jobName": "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.

[jobArn](#)

The Amazon Resource Name (ARN) for the job.

Type: String

[jobId](#)

The unique identifier for the job.

Type: String

[jobName](#)

The name of the job.

Type: String

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example submits a simple container job called `example` to the `HighPriority` job queue.

Sample Request

```
POST /v1/submitjob HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161129T201034Z
```

```
User-Agent: aws-cli/1.11.22 Python/2.7.12 Darwin/16.1.0 botocore/1.4.79
```

```
{  
  "jobName": "example",  
  "jobQueue": "HighPriority",  
  "jobDefinition": "sleep60"  
}
```

Sample Response

```
HTTP/1.1 200 OK  
Content-Type: application/json  
Content-Length: [content-length]  
Connection: keep-alive  
Date: Tue, 29 Nov 2016 20:10:34 GMT  
x-amzn-RequestId: [request-id]  
X-Amzn-Trace-Id: [trace-id]  
X-Cache: Miss from cloudfront  
Via: 1.1 6ba12aeff47e3e7677e084594bfce5e1.cloudfront.net (CloudFront)  
X-Amz-Cf-Id: QoWCvISTvYBbaP2hAoxC8_TWT12JN-kNASYCjCJ5HztN0e10uzvpSA==  
  
{  
  "jobName": "example",  
  "jobId": "876da822-4198-45f2-a252-6cea32512ea8"  
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)

- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

TagResource

Associates the specified tags to a resource with the specified `resourceArn`. If existing tags on a resource aren't specified in the request parameters, they aren't changed. When a resource is deleted, the tags that are associated with that resource are deleted as well. Amazon Batch resources that support tags are compute environments, jobs, job definitions, job queues, and scheduling policies. ARNs for child jobs of array and multi-node parallel (MNP) jobs aren't supported.

Request Syntax

```
POST /v1/tags/resourceArn HTTP/1.1
Content-type: application/json

{
  "tags": {
    "string" : "string"
  }
}
```

URI Request Parameters

The request uses the following URI parameters.

resourceArn

The Amazon Resource Name (ARN) of the resource that tags are added to. Amazon Batch resources that support tags are compute environments, jobs, job definitions, job queues, and scheduling policies. ARNs for child jobs of array and multi-node parallel (MNP) jobs aren't supported.

Required: Yes

Request Body

The request accepts the following data in JSON format.

tags

The tags that you apply to the resource to help you categorize and organize your resources. Each tag consists of a key and an optional value. For more information, see [Tagging Amazon Resources](#) in *Amazon General Reference*.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Value Length Constraints: Maximum length of 256.

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example adds a tag to the job definition with an ARN of "arn:aws:batch:us-east-1:123456789012:job-definition/sleep30:1".

Sample Request

```
POST /v1/tags/arn%3Aaws%3Abatch%3Aus-east-1%3A123456789012%3Ajob-definition%2Fsleep30%3A1 HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
X-Amz-Date: 20200604T172359Z
X-Amz-Security-Token: [security-token]
Authorization: [authorization-params]
Content-Length: [length-of-JSON]

{
  "tags": {
    "Stage": "alpha"
  }
}
```

Sample Response

```
HTTP/1.1 204 No Content
Date: Thu, 05 Jun 2020 17:24:04 GMT
Content-Type: application/json
Content-Length: 0
```

```
x-amzn-RequestId: [request-id]
Access-Control-Allow-Origin: *
x-amz-apigw-id: [apigw-id]
X-Amzn-Trace-Id: [trace-id]
Connection: keep-alive
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

TerminateJob

Terminates a job in a job queue. Jobs that are in the `STARTING` or `RUNNING` state are terminated, which causes them to transition to `FAILED`. Jobs that have not progressed to the `STARTING` state are cancelled.

Request Syntax

```
POST /v1/terminatejob HTTP/1.1
Content-type: application/json

{
  "jobId": "string",
  "reason": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

jobId

The Amazon Batch job ID of the job to terminate.

Type: String

Required: Yes

reason

A message to attach to the job that explains the reason for canceling it. This message is returned by future [DescribeJobs](#) operations on the job. It is also recorded in the Amazon Batch activity logs.

This parameter has as limit of 1024 characters.

Type: String

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example terminates a job with the specified job ID.

Sample Request

```
POST /v1/terminatejob HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161129T202905Z
User-Agent: aws-cli/1.11.22 Python/2.7.12 Darwin/16.1.0 botocore/1.4.79

{
  "reason": "Terminating job.",
  "jobId": "61e743ed-35e4-48da-b2de-5c8333821c84"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: 2
Connection: keep-alive
Date: Tue, 29 Nov 2016 20:29:06 GMT
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 16d2657cebef5191828b055567b4efeb.cloudfront.net (CloudFront)
X-Amz-Cf-Id: 681NTs_bPulMwja2HekWMwngcUzx2a8w_oaG27W0L4Pjct7W1T-Fvw==

{}
```

See Also

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

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

UntagResource

Deletes specified tags from an Amazon Batch resource.

Request Syntax

```
DELETE /v1/tags/resourceArn?tagKeys=tagKeys HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

resourceArn

The Amazon Resource Name (ARN) of the resource from which to delete tags. Amazon Batch resources that support tags are compute environments, jobs, job definitions, job queues, and scheduling policies. ARNs for child jobs of array and multi-node parallel (MNP) jobs aren't supported.

Required: Yes

tagKeys

The keys of the tags to be removed.

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

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example removes the "Stage" tag from the job definition with an ARN of "arn:aws:batch:us-east-1:123456789012:job-definition/sleep30:1".

Sample Request

```
DELETE /v1/tags/arn%3Aaws%3Abatch%3Aus-east-1%3A123456789012%3Ajob-definition%2Fsleep30%3A1?tagKeys=Stage HTTP/1.1
```

```
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
X-Amz-Date: 20200604T174552Z
X-Amz-Security-Token: [security-token]
Authorization: [authorization-params]
Content-Length: 0
```

Sample Response

```
HTTP/1.1 204 No Content
Date: Thu, 05 Jun 2020 17:45:55 GMT
Content-Type: application/json
Content-Length: 0
x-amzn-RequestId: [request-id]
Access-Control-Allow-Origin: *
x-amz-apigw-id: [apigw-id]
X-Amzn-Trace-Id: [trace-id]
Connection: keep-alive
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

UpdateComputeEnvironment

Updates an Amazon Batch compute environment.

Request Syntax

```
POST /v1/updatecomputeenvironment HTTP/1.1
```

```
Content-type: application/json
```

```
{
  "computeEnvironment": "string",
  "computeResources": {
    "allocationStrategy": "string",
    "bidPercentage": number,
    "desiredvCpus": number,
    "ec2Configuration": [
      {
        "imageIdOverride": "string",
        "imageKubernetesVersion": "string",
        "imageType": "string"
      }
    ],
    "ec2KeyPair": "string",
    "imageId": "string",
    "instanceRole": "string",
    "instanceTypes": [ "string" ],
    "launchTemplate": {
      "launchTemplateId": "string",
      "launchTemplateName": "string",
      "overrides": [
        {
          "launchTemplateId": "string",
          "launchTemplateName": "string",
          "targetInstanceTypes": [ "string" ],
          "userDataType": "string",
          "version": "string"
        }
      ]
    },
    "userDataType": "string",
    "version": "string"
  },
  "maxvCpus": number,
  "minvCpus": number,
```

```
    "placementGroup": "string",
    "securityGroupIds": [ "string" ],
    "subnets": [ "string" ],
    "tags": {
      "string" : "string"
    },
    "type": "string",
    "updateToLatestImageVersion": boolean
  },
  "context": "string",
  "serviceRole": "string",
  "state": "string",
  "unmanagedvCpus": number,
  "updatePolicy": {
    "jobExecutionTimeoutMinutes": number,
    "terminateJobsOnUpdate": boolean
  }
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

computeEnvironment

The name or full Amazon Resource Name (ARN) of the compute environment to update.

Type: String

Required: Yes

computeResources

Details of the compute resources managed by the compute environment. Required for a managed compute environment. For more information, see [Compute Environments](#) in the *Amazon Batch User Guide*.

Type: [ComputeResourceUpdate](#) object

Required: No

context

Reserved.

Type: String

Required: No

serviceRole

The full Amazon Resource Name (ARN) of the IAM role that allows Amazon Batch to make calls to other Amazon services on your behalf. For more information, see [Amazon Batch service IAM role](#) in the *Amazon Batch User Guide*.

Important

If the compute environment has a service-linked role, it can't be changed to use a regular IAM role. Likewise, if the compute environment has a regular IAM role, it can't be changed to use a service-linked role. To update the parameters for the compute environment that require an infrastructure update to change, the **AWSServiceRoleForBatch** service-linked role must be used. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

If your specified role has a path other than `/`, then you must either specify the full role ARN (recommended) or prefix the role name with the path.

Note

Depending on how you created your Amazon Batch service role, its ARN might contain the `service-role` path prefix. When you only specify the name of the service role, Amazon Batch assumes that your ARN doesn't use the `service-role` path prefix. Because of this, we recommend that you specify the full ARN of your service role when you create compute environments.

Type: String

Required: No

state

The state of the compute environment. Compute environments in the `ENABLED` state can accept jobs from a queue and scale in or out automatically based on the workload demand of its associated queues.

If the state is `ENABLED`, then the Amazon Batch scheduler can attempt to place jobs from an associated job queue on the compute resources within the environment. If the compute environment is managed, then it can scale its instances out or in automatically, based on the job queue demand.

If the state is `DISABLED`, then the Amazon Batch scheduler doesn't attempt to place jobs within the environment. Jobs in a `STARTING` or `RUNNING` state continue to progress normally. Managed compute environments in the `DISABLED` state don't scale out.

Note

Compute environments in a `DISABLED` state may continue to incur billing charges. To prevent additional charges, turn off and then delete the compute environment. For more information, see [State](#) in the *Amazon Batch User Guide*.

When an instance is idle, the instance scales down to the `minvCpus` value. However, the instance size doesn't change. For example, consider a `c5.8xlarge` instance with a `minvCpus` value of 4 and a `desiredvCpus` value of 36. This instance doesn't scale down to a `c5.large` instance.

Type: String

Valid Values: `ENABLED` | `DISABLED`

Required: No

unmanagedvCpus

The maximum number of vCPUs expected to be used for an unmanaged compute environment. Don't specify this parameter for a managed compute environment. This parameter is only used for fair-share scheduling to reserve vCPU capacity for new share identifiers. If this parameter isn't provided for a fair-share job queue, no vCPU capacity is reserved.

Type: Integer

Required: No

updatePolicy

Specifies the updated infrastructure update policy for the compute environment. For more information about infrastructure updates, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Type: [UpdatePolicy](#) object

Required: No

Response Syntax

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

{
  "computeEnvironmentArn": "string",
  "computeEnvironmentName": "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.

computeEnvironmentArn

The Amazon Resource Name (ARN) of the compute environment.

Type: String

computeEnvironmentName

The name of the compute environment. It can be up to 128 characters long. It can contain uppercase and lowercase letters, numbers, hyphens (-), and underscores (_).

Type: String

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example disables the P3OnDemand compute environment so it can be deleted.

Sample Request

```
POST /v1/updatecomputeenvironment HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: AUTHPARAMS
X-Amz-Date: 20161128T194248Z
```

```
User-Agent: aws-cli/1.11.21 Python/2.7.12 Darwin/16.1.0 botocore/1.4.78
```

```
{  
  "computeEnvironment": "P3OnDemand",  
  "state": "DISABLED"  
}
```

Sample Response

```
HTTP/1.1 200 OK  
Content-Type: application/json  
Content-Length: [content-length]  
Connection: keep-alive  
Date: Mon, 28 Nov 2016 19:42:49 GMT  
x-amzn-RequestId: [request-id]  
X-Amzn-Trace-Id: [trace-id]  
X-Cache: Miss from cloudfront  
Via: 1.1 7f3f42df8af148df1f9f1ee7175987ad.cloudfront.net (CloudFront)  
X-Amz-Cf-Id: uxJn0P7cg_1RTx0s15FkCItWfmCeniKMZdXlFWa0fPfjqATHw3j-AA==  
  
{  
  "computeEnvironmentName": "P3OnDemand",  
  "computeEnvironmentArn": "arn:aws:batch:us-east-1:123456789012:compute-environment/  
P3OnDemand"  
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)

- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

UpdateConsumableResource

Updates a consumable resource.

Request Syntax

```
POST /v1/updateconsumableresource HTTP/1.1
Content-type: application/json
```

```
{
  "clientToken": "string",
  "consumableResource": "string",
  "operation": "string",
  "quantity": number
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

clientToken

If this parameter is specified and two update requests with identical payloads and `clientTokens` are received, these requests are considered the same request and the second request is rejected. A `clientToken` is valid for 8 hours or until one hour after the consumable resource is deleted, whichever is less.

Type: String

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

Required: No

consumableResource

The name or ARN of the consumable resource to be updated.

Type: String

Required: Yes

operation

Indicates how the quantity of the consumable resource will be updated. Must be one of:

- SET

Sets the quantity of the resource to the value specified by the `quantity` parameter.

- ADD

Increases the quantity of the resource by the value specified by the `quantity` parameter.

- REMOVE

Reduces the quantity of the resource by the value specified by the `quantity` parameter.

Type: String

Required: No

quantity

The change in the total quantity of the consumable resource. The `operation` parameter determines whether the value specified here will be the new total quantity, or the amount by which the total quantity will be increased or reduced. Must be a non-negative value.

Type: Long

Required: No

Response Syntax

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

{
  "consumableResourceArn": "string",
  "consumableResourceName": "string",
  "totalQuantity": 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.

consumableResourceArn

The Amazon Resource Name (ARN) of the consumable resource.

Type: String

consumableResourceName

The name of the consumable resource to be updated.

Type: String

totalQuantity

The total amount of the consumable resource that is available.

Type: Long

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

UpdateJobQueue

Updates a job queue.

Request Syntax

```
POST /v1/updatejobqueue HTTP/1.1
Content-type: application/json

{
  "computeEnvironmentOrder": [
    {
      "computeEnvironment": "string",
      "order": number
    }
  ],
  "jobQueue": "string",
  "jobStateTimeLimitActions": [
    {
      "action": "string",
      "maxTimeSeconds": number,
      "reason": "string",
      "state": "string"
    }
  ],
  "priority": number,
  "schedulingPolicyArn": "string",
  "state": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

computeEnvironmentOrder

Details the set of compute environments mapped to a job queue and their order relative to each other. This is one of the parameters used by the job scheduler to determine which compute

environment runs a given job. Compute environments must be in the VALID state before you can associate them with a job queue. All of the compute environments must be either EC2 (EC2 or SPOT) or Fargate (FARGATE or FARGATE_SPOT). EC2 and Fargate compute environments can't be mixed.

Note

All compute environments that are associated with a job queue must share the same architecture. Amazon Batch doesn't support mixing compute environment architecture types in a single job queue.

Type: Array of [ComputeEnvironmentOrder](#) objects

Required: No

[jobQueue](#)

The name or the Amazon Resource Name (ARN) of the job queue.

Type: String

Required: Yes

[jobStateTimeLimitActions](#)

The set of actions that Amazon Batch perform on jobs that remain at the head of the job queue in the specified state longer than specified times. Amazon Batch will perform each action after `maxTimeSeconds` has passed. (**Note:** The minimum value for `maxTimeSeconds` is 600 (10 minutes) and its maximum value is 86,400 (24 hours).)

Type: Array of [JobStateTimeLimitAction](#) objects

Required: No

[priority](#)

The priority of the job queue. Job queues with a higher priority (or a higher integer value for the `priority` parameter) are evaluated first when associated with the same compute environment. Priority is determined in descending order. For example, a job queue with a priority value of 10 is given scheduling preference over a job queue with a priority value of 1. All of the compute environments must be either EC2 (EC2 or SPOT) or Fargate (FARGATE or FARGATE_SPOT). EC2 and Fargate compute environments can't be mixed.

Type: Integer

Required: No

schedulingPolicyArn

Amazon Resource Name (ARN) of the fair-share scheduling policy. Once a job queue is created, the fair-share scheduling policy can be replaced but not removed. The format is `aws:Partition:batch:Region:Account:scheduling-policy/Name` . For example, `aws:aws:batch:us-west-2:123456789012:scheduling-policy/MySchedulingPolicy`.

Type: String

Required: No

state

Describes the queue's ability to accept new jobs. If the job queue state is ENABLED, it can accept jobs. If the job queue state is DISABLED, new jobs can't be added to the queue, but jobs already in the queue can finish.

Type: String

Valid Values: ENABLED | DISABLED

Required: No

Response Syntax

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

{
  "jobQueueArn": "string",
  "jobQueueName": "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.

jobQueueArn

The Amazon Resource Name (ARN) of the job queue.

Type: String

jobQueueName

The name of the job queue.

Type: String

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example disables a job queue so that it can be deleted.

Sample Request

```
POST /v1/updatejobqueue HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
Content-Length: [content-length]
Authorization: [authorization-params]
X-Amz-Date: 20161128T201802Z
User-Agent: aws-cli/1.11.21 Python/2.7.12 Darwin/16.1.0 botocore/1.4.78

{
  "state": "DISABLED",
  "jobQueue": "GPGPU"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Mon, 28 Nov 2016 20:18:03 GMT
Content-Type: application/json
Content-Length: [content-length]
Connection: keep-alive
x-amzn-RequestId: [request-id]
X-Amzn-Trace-Id: [trace-id]
X-Cache: Miss from cloudfront
Via: 1.1 17de248e6d780f737234d37cc490dbe3.cloudfront.net (CloudFront)
X-Amz-Cf-Id: aVju0hE8eLpjSF18Y3f0uxg0ZXdigQ1LcDMw00plxnynw0dEs0sEgw==

{
  "jobQueueName": "GPGPU",
  "jobQueueArn": "arn:aws:batch:us-east-1:123456789012:job-queue/GPGPU"
}
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

UpdateSchedulingPolicy

Updates a scheduling policy.

Request Syntax

```
POST /v1/updateschedulingpolicy HTTP/1.1
Content-type: application/json
```

```
{
  "arn": "string",
  "fairsharePolicy": {
    "computeReservation": number,
    "shareDecaySeconds": number,
    "shareDistribution": [
      {
        "shareIdentifier": "string",
        "weightFactor": number
      }
    ]
  }
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

arn

The Amazon Resource Name (ARN) of the scheduling policy to update.

Type: String

Required: Yes

fairsharePolicy

The fair-share policy scheduling details.

Type: [FairsharePolicy](#) object

Required: No

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

ClientException

These errors are usually caused by a client action. One example cause is using an action or resource on behalf of a user that doesn't have permissions to use the action or resource. Another cause is specifying an identifier that's not valid.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (*[authorization-params]*) must be replaced with an Amazon Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *Amazon General Reference*.

You only need to learn how to sign HTTP requests if you intend to manually create them. When you use the [Amazon Command Line Interface \(Amazon CLI\)](#) or one of the [Amazon SDKs](#) to make requests to Amazon, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

This example removes the "Stage" tag from the job definition with an ARN of "arn:aws:batch:us-east-1:123456789012:job-definition/sleep30:1".

Sample Request

```
POST /v1/updateschedulingpolicy HTTP/1.1
Host: batch.us-east-1.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.20.21 Python/3.6.9 Linux/4.4.0-19041-Microsoft botocore/1.21.21
X-Amz-Date: 20210929T022142Z
X-Amz-Security-Token: [security-token]
Authorization: [authorization-params]
```

```
{
  "arn": "arn:aws:batch:us-east-1:123456789012:scheduling-policy/
ExampleFairSharePolicy3",
  "fairsharePolicy": {
    "shareDecaySeconds": 3600,
    "computeReservation": 1,
    "shareDistribution": [
      {
        "shareIdentifier": "MostImportant",
        "weightFactor": 0.0001
      },{
        "shareIdentifier": "Normal",
        "weightFactor": 1.0
      },{
        "shareIdentifier": "LeastImportant",
        "weightFactor": 999.9999
      }
    ]
  }
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Wed, 29 Sep 2021 02:21:43 GMT
Content-Type: application/json
```

```
Content-Length: 2
x-amzn-RequestId: [request-id]
Access-Control-Allow-Origin: *
x-amz-apigw-id: [apigw-id]
Access-Control-Expose-Headers: X-amzn-errortype,X-amzn-requestid,X-amzn-errormessage,X-
amzn-trace-id,X-amz-apigw-id,date
X-Amzn-Trace-Id: [trace-id]
Connection: keep-alive

{ }
```

See Also

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

- [Amazon Command Line Interface](#)
- [Amazon SDK for .NET](#)
- [Amazon SDK for C++](#)
- [Amazon SDK for Go v2](#)
- [Amazon SDK for Java V2](#)
- [Amazon SDK for JavaScript V3](#)
- [Amazon SDK for Kotlin](#)
- [Amazon SDK for PHP V3](#)
- [Amazon SDK for Python](#)
- [Amazon SDK for Ruby V3](#)

Data Types

The Amazon Batch 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:

- [ArrayProperties](#)
- [ArrayPropertiesDetail](#)
- [ArrayPropertiesSummary](#)
- [AttemptContainerDetail](#)
- [AttemptDetail](#)
- [AttemptEcsTaskDetails](#)
- [AttemptTaskContainerDetails](#)
- [ComputeEnvironmentDetail](#)
- [ComputeEnvironmentOrder](#)
- [ComputeResource](#)
- [ComputeResourceUpdate](#)
- [ConsumableResourceProperties](#)
- [ConsumableResourceRequirement](#)
- [ConsumableResourceSummary](#)
- [ContainerDetail](#)
- [ContainerOverrides](#)
- [ContainerProperties](#)
- [ContainerSummary](#)
- [Device](#)
- [Ec2Configuration](#)

- [EcsProperties](#)
- [EcsPropertiesDetail](#)
- [EcsPropertiesOverride](#)
- [EcsTaskDetails](#)
- [EcsTaskProperties](#)
- [EFSAuthorizationConfig](#)
- [EFSVolumeConfiguration](#)
- [EksAttemptContainerDetail](#)
- [EksAttemptDetail](#)
- [EksConfiguration](#)
- [EksContainer](#)
- [EksContainerDetail](#)
- [EksContainerEnvironmentVariable](#)
- [EksContainerOverride](#)
- [EksContainerResourceRequirements](#)
- [EksContainerSecurityContext](#)
- [EksContainerVolumeMount](#)
- [EksEmptyDir](#)
- [EksHostPath](#)
- [EksMetadata](#)
- [EksPersistentVolumeClaim](#)
- [EksPodProperties](#)
- [EksPodPropertiesDetail](#)
- [EksPodPropertiesOverride](#)
- [EksProperties](#)
- [EksPropertiesDetail](#)
- [EksPropertiesOverride](#)
- [EksSecret](#)
- [EksVolume](#)
- [EphemeralStorage](#)

- [EvaluateOnExit](#)
- [FairsharePolicy](#)
- [FargatePlatformConfiguration](#)
- [FirelensConfiguration](#)
- [FrontOfQueueDetail](#)
- [FrontOfQueueJobSummary](#)
- [Host](#)
- [ImagePullSecret](#)
- [JobDefinition](#)
- [JobDependency](#)
- [JobDetail](#)
- [JobQueueDetail](#)
- [JobStateTimeLimitAction](#)
- [JobSummary](#)
- [JobTimeout](#)
- [KeyValuePair](#)
- [KeyValuesPair](#)
- [LaunchTemplateSpecification](#)
- [LaunchTemplateSpecificationOverride](#)
- [LinuxParameters](#)
- [ListJobsByConsumableResourceSummary](#)
- [LogConfiguration](#)
- [MountPoint](#)
- [NetworkConfiguration](#)
- [NetworkInterface](#)
- [NodeDetails](#)
- [NodeOverrides](#)
- [NodeProperties](#)
- [NodePropertiesSummary](#)
- [NodePropertyOverride](#)

- [NodeRangeProperty](#)
- [RepositoryCredentials](#)
- [ResourceRequirement](#)
- [RetryStrategy](#)
- [RuntimePlatform](#)
- [SchedulingPolicyDetail](#)
- [SchedulingPolicyListingDetail](#)
- [Secret](#)
- [ShareAttributes](#)
- [TaskContainerDependency](#)
- [TaskContainerDetails](#)
- [TaskContainerOverrides](#)
- [TaskContainerProperties](#)
- [TaskPropertiesOverride](#)
- [Tmpfs](#)
- [Ulimit](#)
- [UpdatePolicy](#)
- [Volume](#)

ArrayProperties

An object that represents an Amazon Batch array job.

Contents

size

The size of the array job.

Type: Integer

Required: No

See Also

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

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

ArrayPropertiesDetail

An object that represents the array properties of a job.

Contents

index

The job index within the array that's associated with this job. This parameter is returned for array job children.

Type: Integer

Required: No

size

The size of the array job. This parameter is returned for parent array jobs.

Type: Integer

Required: No

statusSummary

A summary of the number of array job children in each available job status. This parameter is returned for parent array jobs.

Type: String to integer map

Required: No

See Also

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

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

ArrayPropertiesSummary

An object that represents the array properties of a job.

Contents

index

The job index within the array that's associated with this job. This parameter is returned for children of array jobs.

Type: Integer

Required: No

size

The size of the array job. This parameter is returned for parent array jobs.

Type: Integer

Required: No

See Also

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

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

AttemptContainerDetail

An object that represents the details of a container that's part of a job attempt.

Contents

containerInstanceArn

The Amazon Resource Name (ARN) of the Amazon ECS container instance that hosts the job attempt.

Type: String

Required: No

exitCode

The exit code for the job attempt. A non-zero exit code is considered failed.

Type: Integer

Required: No

logStreamName

The name of the CloudWatch Logs log stream that's associated with the container. The log group for Amazon Batch jobs is `/aws/batch/job`. Each container attempt receives a log stream name when they reach the `RUNNING` status.

Type: String

Required: No

networkInterfaces

The network interfaces that are associated with the job attempt.

Type: Array of [NetworkInterface](#) objects

Required: No

reason

A short (255 max characters) human-readable string to provide additional details for a running or stopped container.

Type: String

Required: No

taskArn

The Amazon Resource Name (ARN) of the Amazon ECS task that's associated with the job attempt. Each container attempt receives a task ARN when they reach the STARTING status.

Type: String

Required: No

See Also

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

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

AttemptDetail

An object that represents a job attempt.

Contents

container

The details for the container in this job attempt.

Type: [AttemptContainerDetail](#) object

Required: No

startedAt

The Unix timestamp (in milliseconds) for when the attempt was started (when the attempt transitioned from the STARTING state to the RUNNING state).

Type: Long

Required: No

statusReason

A short, human-readable string to provide additional details for the current status of the job attempt.

Type: String

Required: No

stoppedAt

The Unix timestamp (in milliseconds) for when the attempt was stopped (when the attempt transitioned from the RUNNING state to a terminal state, such as SUCCEEDED or FAILED).

Type: Long

Required: No

taskProperties

The properties for a task definition that describes the container and volume definitions of an Amazon ECS task.

Type: Array of [AttemptEcsTaskDetails](#) objects

Required: No

See Also

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

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

AttemptEcsTaskDetails

An object that represents the details of a task.

Contents

containerInstanceArn

The Amazon Resource Name (ARN) of the container instance that hosts the task.

Type: String

Required: No

containers

A list of containers that are included in the `taskProperties` list.

Type: Array of [AttemptTaskContainerDetails](#) objects

Required: No

taskArn

The ARN of the Amazon ECS task.

Type: String

Required: No

See Also

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

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

AttemptTaskContainerDetails

An object that represents the details of a container that's part of a job attempt.

Contents

exitCode

The exit code for the container's attempt. A non-zero exit code is considered failed.

Type: Integer

Required: No

logStreamName

The name of the Amazon CloudWatch Logs log stream that's associated with the container. The log group for Amazon Batch jobs is `/aws/batch/job`. Each container attempt receives a log stream name when they reach the `RUNNING` status.

Type: String

Required: No

name

The name of a container.

Type: String

Required: No

networkInterfaces

The network interfaces that are associated with the job attempt.

Type: Array of [NetworkInterface](#) objects

Required: No

reason

A short (255 max characters) string that's easy to understand and provides additional details for a running or stopped container.

Type: String

Required: No

See Also

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

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

ComputeEnvironmentDetail

An object that represents an Amazon Batch compute environment.

Contents

computeEnvironmentArn

The Amazon Resource Name (ARN) of the compute environment.

Type: String

Required: Yes

computeEnvironmentName

The name of the compute environment. It can be up to 128 characters long. It can contain uppercase and lowercase letters, numbers, hyphens (-), and underscores (_).

Type: String

Required: Yes

computeResources

The compute resources defined for the compute environment. For more information, see [Compute environments](#) in the *Amazon Batch User Guide*.

Type: [ComputeResource](#) object

Required: No

containerOrchestrationType

The orchestration type of the compute environment. The valid values are ECS (default) or EKS.

Type: String

Valid Values: ECS | EKS

Required: No

context

Reserved.

Type: String

Required: No

ecsClusterArn

The Amazon Resource Name (ARN) of the underlying Amazon ECS cluster that the compute environment uses.

Type: String

Required: No

eksConfiguration

The configuration for the Amazon EKS cluster that supports the Amazon Batch compute environment. Only specify this parameter if the `containerOrchestrationType` is EKS.

Type: [EksConfiguration](#) object

Required: No

serviceRole

The service role that's associated with the compute environment that allows Amazon Batch to make calls to Amazon API operations on your behalf. For more information, see [Batch service IAM role](#) in the *Amazon Batch User Guide*.

Type: String

Required: No

state

The state of the compute environment. The valid values are `ENABLED` or `DISABLED`.

If the state is `ENABLED`, then the Amazon Batch scheduler can attempt to place jobs from an associated job queue on the compute resources within the environment. If the compute environment is managed, then it can scale its instances out or in automatically based on the job queue demand.

If the state is `DISABLED`, then the Amazon Batch scheduler doesn't attempt to place jobs within the environment. Jobs in a `STARTING` or `RUNNING` state continue to progress normally. Managed compute environments in the `DISABLED` state don't scale out.

Note

Compute environments in a DISABLED state may continue to incur billing charges. To prevent additional charges, turn off and then delete the compute environment. For more information, see [State](#) in the *Amazon Batch User Guide*.

When an instance is idle, the instance scales down to the `minvCpus` value. However, the instance size doesn't change. For example, consider a `c5.8xlarge` instance with a `minvCpus` value of 4 and a `desiredvCpus` value of 36. This instance doesn't scale down to a `c5.large` instance.

Type: String

Valid Values: ENABLED | DISABLED

Required: No

status

The current status of the compute environment (for example, CREATING or VALID).

Type: String

Valid Values: CREATING | UPDATING | DELETING | DELETED | VALID | INVALID

Required: No

statusReason

A short, human-readable string to provide additional details for the current status of the compute environment.

Type: String

Required: No

tags

The tags applied to the compute environment.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Value Length Constraints: Maximum length of 256.

Required: No

type

The type of the compute environment: MANAGED or UNMANAGED. For more information, see [Compute environments](#) in the *Amazon Batch User Guide*.

Type: String

Valid Values: MANAGED | UNMANAGED

Required: No

unmanagedvCpus

The maximum number of VCPUs expected to be used for an unmanaged compute environment.

Type: Integer

Required: No

updatePolicy

Specifies the infrastructure update policy for the compute environment. For more information about infrastructure updates, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Type: [UpdatePolicy](#) object

Required: No

uuid

Unique identifier for the compute environment.

Type: String

Required: No

See Also

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

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

ComputeEnvironmentOrder

The order that compute environments are tried in for job placement within a queue. Compute environments are tried in ascending order. For example, if two compute environments are associated with a job queue, the compute environment with a lower order integer value is tried for job placement first. Compute environments must be in the `VALID` state before you can associate them with a job queue. All of the compute environments must be either EC2 (EC2 or SPOT) or Fargate (FARGATE or FARGATE_SPOT); Amazon EC2 and Fargate compute environments can't be mixed.

Note

All compute environments that are associated with a job queue must share the same architecture. Amazon Batch doesn't support mixing compute environment architecture types in a single job queue.

Contents

computeEnvironment

The Amazon Resource Name (ARN) of the compute environment.

Type: String

Required: Yes

order

The order of the compute environment. Compute environments are tried in ascending order. For example, if two compute environments are associated with a job queue, the compute environment with a lower `order` integer value is tried for job placement first.

Type: Integer

Required: Yes

See Also

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

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

ComputeResource

An object that represents an Amazon Batch compute resource. For more information, see [Compute environments](#) in the *Amazon Batch User Guide*.

Contents

maxvCpus

The maximum number of vCPUs that a compute environment can support.

Note

With `BEST_FIT_PROGRESSIVE`, `SPOT_CAPACITY_OPTIMIZED` and `SPOT_PRICE_CAPACITY_OPTIMIZED` (recommended) strategies using On-Demand or Spot Instances, and the `BEST_FIT` strategy using Spot Instances, Amazon Batch might need to exceed `maxvCpus` to meet your capacity requirements. In this event, Amazon Batch never exceeds `maxvCpus` by more than a single instance.

Type: Integer

Required: Yes

subnets

The VPC subnets where the compute resources are launched. These subnets must be within the same VPC. Fargate compute resources can contain up to 16 subnets. For more information, see [VPCs and subnets](#) in the *Amazon VPC User Guide*.

Note

Amazon Batch on Amazon EC2 and Amazon Batch on Amazon EKS support Local Zones. For more information, see [Local Zones](#) in the *Amazon EC2 User Guide for Linux Instances*, [Amazon EKS and Amazon Local Zones](#) in the *Amazon EKS User Guide* and [Amazon ECS clusters in Local Zones, Wavelength Zones, and Amazon Outposts](#) in the *Amazon ECS Developer Guide*.

Amazon Batch on Fargate doesn't currently support Local Zones.

Type: Array of strings

Required: Yes

type

The type of compute environment: EC2, SPOT, FARGATE, or FARGATE_SPOT. For more information, see [Compute environments](#) in the *Amazon Batch User Guide*.

If you choose SPOT, you must also specify an Amazon EC2 Spot Fleet role with the `spotIamFleetRole` parameter. For more information, see [Amazon EC2 spot fleet role](#) in the *Amazon Batch User Guide*.

Type: String

Valid Values: EC2 | SPOT | FARGATE | FARGATE_SPOT

Required: Yes

allocationStrategy

The allocation strategy to use for the compute resource if not enough instances of the best fitting instance type can be allocated. This might be because of availability of the instance type in the Region or [Amazon EC2 service limits](#). For more information, see [Allocation strategies](#) in the *Amazon Batch User Guide*.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

BEST_FIT (default)

Amazon Batch selects an instance type that best fits the needs of the jobs with a preference for the lowest-cost instance type. If additional instances of the selected instance type aren't available, Amazon Batch waits for the additional instances to be available. If there aren't enough instances available or the user is reaching [Amazon EC2 service limits](#), additional jobs aren't run until the currently running jobs are completed. This allocation strategy keeps costs lower but can limit scaling. If you're using Spot Fleets with BEST_FIT, the Spot Fleet IAM Role must be specified. Compute resources that use a BEST_FIT allocation strategy don't

support infrastructure updates and can't update some parameters. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

BEST_FIT_PROGRESSIVE

Amazon Batch selects additional instance types that are large enough to meet the requirements of the jobs in the queue. Its preference is for instance types with lower cost vCPUs. If additional instances of the previously selected instance types aren't available, Amazon Batch selects new instance types.

SPOT_CAPACITY_OPTIMIZED

Amazon Batch selects one or more instance types that are large enough to meet the requirements of the jobs in the queue. Its preference is for instance types that are less likely to be interrupted. This allocation strategy is only available for Spot Instance compute resources.

SPOT_PRICE_CAPACITY_OPTIMIZED

The price and capacity optimized allocation strategy looks at both price and capacity to select the Spot Instance pools that are the least likely to be interrupted and have the lowest possible price. This allocation strategy is only available for Spot Instance compute resources.

With BEST_FIT_PROGRESSIVE, SPOT_CAPACITY_OPTIMIZED and SPOT_PRICE_CAPACITY_OPTIMIZED (recommended) strategies using On-Demand or Spot Instances, and the BEST_FIT strategy using Spot Instances, Amazon Batch might need to exceed `maxvCpus` to meet your capacity requirements. In this event, Amazon Batch never exceeds `maxvCpus` by more than a single instance.

Type: String

Valid Values: BEST_FIT | BEST_FIT_PROGRESSIVE | SPOT_CAPACITY_OPTIMIZED | SPOT_PRICE_CAPACITY_OPTIMIZED

Required: No

bidPercentage

The maximum percentage that a Spot Instance price can be when compared with the On-Demand price for that instance type before instances are launched. For example, if your maximum percentage is 20%, then the Spot price must be less than 20% of the current On-Demand price for that Amazon EC2 instance. You always pay the lowest (market) price and

never more than your maximum percentage. If you leave this field empty, the default value is 100% of the On-Demand price. For most use cases, we recommend leaving this field empty.

 **Note**

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: Integer

Required: No

desiredVCpus

The desired number of vCPUS in the compute environment. Amazon Batch modifies this value between the minimum and maximum values based on job queue demand.

 **Note**

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: Integer

Required: No

ec2Configuration

Provides information that's used to select Amazon Machine Images (AMIs) for Amazon EC2 instances in the compute environment. If `Ec2Configuration` isn't specified, the default is `ECS_AL2`.

One or two values can be provided.

 **Note**

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: Array of [Ec2Configuration](#) objects

Required: No

ec2KeyPair

The Amazon EC2 key pair that's used for instances launched in the compute environment. You can use this key pair to log in to your instances with SSH.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: String

Required: No

imageId

This member has been deprecated.

The Amazon Machine Image (AMI) ID used for instances launched in the compute environment. This parameter is overridden by the `imageIdOverride` member of the `Ec2Configuration` structure.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Note

The AMI that you choose for a compute environment must match the architecture of the instance types that you intend to use for that compute environment. For example, if your compute environment uses A1 instance types, the compute resource AMI that you choose must support ARM instances. Amazon ECS vendors both x86 and ARM versions of the Amazon ECS-optimized Amazon Linux 2 AMI. For more information, see [Amazon](#)

[ECS-optimized Amazon Linux 2 AMI](#) in the *Amazon Elastic Container Service Developer Guide*.

Type: String

Required: No

instanceRole

The Amazon ECS instance profile applied to Amazon EC2 instances in a compute environment. This parameter is required for Amazon EC2 instances types. You can specify the short name or full Amazon Resource Name (ARN) of an instance profile. For example, `ecsInstanceRole` or `arn:aws:iam::<aws_account_id>:instance-profile/ecsInstanceRole` . For more information, see [Amazon ECS instance role](#) in the *Amazon Batch User Guide*.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: String

Required: No

instanceTypes

The instances types that can be launched. You can specify instance families to launch any instance type within those families (for example, `c5` or `p3`), or you can specify specific sizes within a family (such as `c5.8xlarge`). You can also choose `optimal` to select instance types (from the C4, M4, and R4 instance families) that match the demand of your job queues.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Note

When you create a compute environment, the instance types that you select for the compute environment must share the same architecture. For example, you can't mix x86 and ARM instances in the same compute environment.

Note

Currently, `optimal` uses instance types from the C4, M4, and R4 instance families. In Regions that don't have instance types from those instance families, instance types from the C5, M5, and R5 instance families are used.

Type: Array of strings

Required: No

launchTemplate

The launch template to use for your compute resources. Any other compute resource parameters that you specify in a [CreateComputeEnvironment](#) API operation override the same parameters in the launch template. You must specify either the launch template ID or launch template name in the request, but not both. For more information, see [Launch template support](#) in the *Amazon Batch User Guide*.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: [LaunchTemplateSpecification](#) object

Required: No

minvCpus

The minimum number of vCPUs that a compute environment should maintain (even if the compute environment is DISABLED).

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: Integer

Required: No

placementGroup

The Amazon EC2 placement group to associate with your compute resources. If you intend to submit multi-node parallel jobs to your compute environment, you should consider creating a cluster placement group and associate it with your compute resources. This keeps your multi-node parallel job on a logical grouping of instances within a single Availability Zone with high network flow potential. For more information, see [Placement groups](#) in the *Amazon EC2 User Guide for Linux Instances*.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: String

Required: No

securityGroupIds

The Amazon EC2 security groups that are associated with instances launched in the compute environment. One or more security groups must be specified, either in `securityGroupIds` or using a launch template referenced in `launchTemplate`. This parameter is required for jobs that are running on Fargate resources and must contain at least one security group. Fargate doesn't support launch templates. If security groups are specified using both `securityGroupIds` and `launchTemplate`, the values in `securityGroupIds` are used.

Type: Array of strings

Required: No

spotIamFleetRole

The Amazon Resource Name (ARN) of the Amazon EC2 Spot Fleet IAM role applied to a SPOT compute environment. This role is required if the allocation strategy is set to BEST_FIT or if the allocation strategy isn't specified. For more information, see [Amazon EC2 spot fleet role](#) in the *Amazon Batch User Guide*.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Important

To tag your Spot Instances on creation, the Spot Fleet IAM role specified here must use the newer **AmazonEC2SpotFleetTaggingRole** managed policy. The previously recommended **AmazonEC2SpotFleetRole** managed policy doesn't have the required permissions to tag Spot Instances. For more information, see [Spot instances not tagged on creation](#) in the *Amazon Batch User Guide*.

Type: String

Required: No

tags

Key-value pair tags to be applied to Amazon EC2 resources that are launched in the compute environment. For Amazon Batch, these take the form of "String1": "String2", where String1 is the tag key and String2 is the tag value (for example, { "Name": "Batch Instance - C4OnDemand" }). This is helpful for recognizing your Amazon Batch instances in the Amazon EC2 console. Updating these tags requires an infrastructure update to the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*. These tags aren't seen when using the Amazon Batch `ListTagsForResource` API operation.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: String to string map

Required: No

See Also

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

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

ComputeResourceUpdate

An object that represents the attributes of a compute environment that can be updated. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Contents

allocationStrategy

The allocation strategy to use for the compute resource if there's not enough instances of the best fitting instance type that can be allocated. This might be because of availability of the instance type in the Region or [Amazon EC2 service limits](#). For more information, see [Allocation strategies](#) in the *Amazon Batch User Guide*.

When updating a compute environment, changing the allocation strategy requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*. BEST_FIT isn't supported when updating a compute environment.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

BEST_FIT_PROGRESSIVE

Amazon Batch selects additional instance types that are large enough to meet the requirements of the jobs in the queue. Its preference is for instance types with lower cost vCPUs. If additional instances of the previously selected instance types aren't available, Amazon Batch selects new instance types.

SPOT_CAPACITY_OPTIMIZED

Amazon Batch selects one or more instance types that are large enough to meet the requirements of the jobs in the queue. Its preference is for instance types that are less likely to be interrupted. This allocation strategy is only available for Spot Instance compute resources.

SPOT_PRICE_CAPACITY_OPTIMIZED

The price and capacity optimized allocation strategy looks at both price and capacity to select the Spot Instance pools that are the least likely to be interrupted and have the lowest possible price. This allocation strategy is only available for Spot Instance compute resources.

With `BEST_FIT_PROGRESSIVE`, `SPOT_CAPACITY_OPTIMIZED` and `SPOT_PRICE_CAPACITY_OPTIMIZED` (recommended) strategies using On-Demand or Spot Instances, and the `BEST_FIT` strategy using Spot Instances, Amazon Batch might need to exceed `maxvCpus` to meet your capacity requirements. In this event, Amazon Batch never exceeds `maxvCpus` by more than a single instance.

Type: String

Valid Values: `BEST_FIT_PROGRESSIVE` | `SPOT_CAPACITY_OPTIMIZED` | `SPOT_PRICE_CAPACITY_OPTIMIZED`

Required: No

bidPercentage

The maximum percentage that a Spot Instance price can be when compared with the On-Demand price for that instance type before instances are launched. For example, if your maximum percentage is 20%, the Spot price must be less than 20% of the current On-Demand price for that Amazon EC2 instance. You always pay the lowest (market) price and never more than your maximum percentage. For most use cases, we recommend leaving this field empty.

When updating a compute environment, changing the bid percentage requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: Integer

Required: No

desiredvCpus

The desired number of vCPUS in the compute environment. Amazon Batch modifies this value between the minimum and maximum values based on job queue demand.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Note

Amazon Batch doesn't support changing the desired number of vCPUs of an existing compute environment. Don't specify this parameter for compute environments using Amazon EKS clusters.

Note

When you update the `desiredvCpus` setting, the value must be between the `minvCpus` and `maxvCpus` values.

Additionally, the updated `desiredvCpus` value must be greater than or equal to the current `desiredvCpus` value. For more information, see [Troubleshooting Amazon Batch](#) in the *Amazon Batch User Guide*.

Type: Integer

Required: No

ec2Configuration

Provides information used to select Amazon Machine Images (AMIs) for Amazon EC2 instances in the compute environment. If `Ec2Configuration` isn't specified, the default is `ECS_AL2`.

When updating a compute environment, changing this setting requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*. To remove the Amazon EC2 configuration and any custom AMI ID specified in `imageIdOverride`, set this value to an empty string.

One or two values can be provided.

 **Note**

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: Array of [Ec2Configuration](#) objects

Required: No

ec2KeyPair

The Amazon EC2 key pair that's used for instances launched in the compute environment. You can use this key pair to log in to your instances with SSH. To remove the Amazon EC2 key pair, set this value to an empty string.

When updating a compute environment, changing the Amazon EC2 key pair requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

 **Note**

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: String

Required: No

imageId

The Amazon Machine Image (AMI) ID used for instances launched in the compute environment. This parameter is overridden by the `imageIdOverride` member of the `Ec2Configuration` structure. To remove the custom AMI ID and use the default AMI ID, set this value to an empty string.

When updating a compute environment, changing the AMI ID requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Note

The AMI that you choose for a compute environment must match the architecture of the instance types that you intend to use for that compute environment. For example, if your compute environment uses A1 instance types, the compute resource AMI that you choose must support ARM instances. Amazon ECS vends both x86 and ARM versions of the Amazon ECS-optimized Amazon Linux 2 AMI. For more information, see [Amazon ECS-optimized Amazon Linux 2 AMI](#) in the *Amazon Elastic Container Service Developer Guide*.

Type: String

Required: No

instanceRole

The Amazon ECS instance profile applied to Amazon EC2 instances in a compute environment. Required for Amazon EC2 instances. You can specify the short name or full Amazon Resource Name (ARN) of an instance profile. For example, `ecsInstanceRole` or `arn:aws:iam::<aws_account_id>:instance-profile/ecsInstanceRole` . For more information, see [Amazon ECS instance role](#) in the *Amazon Batch User Guide*.

When updating a compute environment, changing this setting requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: String

Required: No

instanceTypes

The instances types that can be launched. You can specify instance families to launch any instance type within those families (for example, c5 or p3), or you can specify specific sizes within a family (such as c5.8xlarge). You can also choose `optimal` to select instance types (from the C4, M4, and R4 instance families) that match the demand of your job queues.

When updating a compute environment, changing this setting requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Note

When you create a compute environment, the instance types that you select for the compute environment must share the same architecture. For example, you can't mix x86 and ARM instances in the same compute environment.

Note

Currently, `optimal` uses instance types from the C4, M4, and R4 instance families. In Regions that don't have instance types from those instance families, instance types from the C5, M5, and R5 instance families are used.

Type: Array of strings

Required: No

launchTemplate

The updated launch template to use for your compute resources. You must specify either the launch template ID or launch template name in the request, but not both. For more

information, see [Launch template support](#) in the *Amazon Batch User Guide*. To remove the custom launch template and use the default launch template, set `launchTemplateId` or `launchTemplateName` member of the launch template specification to an empty string. Removing the launch template from a compute environment will not remove the AMI specified in the launch template. In order to update the AMI specified in a launch template, the `updateToLatestImageVersion` parameter must be set to `true`.

When updating a compute environment, changing the launch template requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: [LaunchTemplateSpecification](#) object

Required: No

maxvCpus

The maximum number of Amazon EC2 vCPUs that an environment can reach.

Note

With `BEST_FIT_PROGRESSIVE`, `SPOT_CAPACITY_OPTIMIZED` and `SPOT_PRICE_CAPACITY_OPTIMIZED` (recommended) strategies using On-Demand or Spot Instances, and the `BEST_FIT` strategy using Spot Instances, Amazon Batch might need to exceed `maxvCpus` to meet your capacity requirements. In this event, Amazon Batch never exceeds `maxvCpus` by more than a single instance.

Type: Integer

Required: No

minvCpus

The minimum number of vCPUs that an environment should maintain (even if the compute environment is DISABLED).

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: Integer

Required: No

placementGroup

The Amazon EC2 placement group to associate with your compute resources. If you intend to submit multi-node parallel jobs to your compute environment, you should consider creating a cluster placement group and associate it with your compute resources. This keeps your multi-node parallel job on a logical grouping of instances within a single Availability Zone with high network flow potential. For more information, see [Placement groups](#) in the *Amazon EC2 User Guide for Linux Instances*.

When updating a compute environment, changing the placement group requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: String

Required: No

securityGroupIds

The Amazon EC2 security groups that are associated with instances launched in the compute environment. This parameter is required for Fargate compute resources, where it can contain

up to 5 security groups. For Fargate compute resources, providing an empty list is handled as if this parameter wasn't specified and no change is made. For Amazon EC2 compute resources, providing an empty list removes the security groups from the compute resource.

When updating a compute environment, changing the Amazon EC2 security groups requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Type: Array of strings

Required: No

subnets

The VPC subnets where the compute resources are launched. Fargate compute resources can contain up to 16 subnets. For Fargate compute resources, providing an empty list will be handled as if this parameter wasn't specified and no change is made. For Amazon EC2 compute resources, providing an empty list removes the VPC subnets from the compute resource. For more information, see [VPCs and subnets](#) in the *Amazon VPC User Guide*.

When updating a compute environment, changing the VPC subnets requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Note

Amazon Batch on Amazon EC2 and Amazon Batch on Amazon EKS support Local Zones. For more information, see [Local Zones](#) in the *Amazon EC2 User Guide for Linux Instances*, [Amazon EKS and Amazon Local Zones](#) in the *Amazon EKS User Guide* and [Amazon ECS clusters in Local Zones, Wavelength Zones, and Amazon Outposts](#) in the *Amazon ECS Developer Guide*.

Amazon Batch on Fargate doesn't currently support Local Zones.

Type: Array of strings

Required: No

tags

Key-value pair tags to be applied to Amazon EC2 resources that are launched in the compute environment. For Amazon Batch, these take the form of "String1": "String2",

where `String1` is the tag key and `String2` is the tag value (for example, { "Name": "Batch Instance - C4OnDemand" }). This is helpful for recognizing your Batch instances in the Amazon EC2 console. These tags aren't seen when using the Amazon Batch `ListTagsForResource` API operation.

When updating a compute environment, changing this setting requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

 **Note**

This parameter isn't applicable to jobs that are running on Fargate resources. Don't specify it.

Type: String to string map

Required: No

type

The type of compute environment: EC2, SPOT, FARGATE, or FARGATE_SPOT. For more information, see [Compute environments](#) in the *Amazon Batch User Guide*.

If you choose SPOT, you must also specify an Amazon EC2 Spot Fleet role with the `spotIamFleetRole` parameter. For more information, see [Amazon EC2 spot fleet role](#) in the *Amazon Batch User Guide*.

When updating a compute environment, changing the type of a compute environment requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Type: String

Valid Values: EC2 | SPOT | FARGATE | FARGATE_SPOT

Required: No

updateToLatestImageVersion

Specifies whether the AMI ID is updated to the latest one that's supported by Amazon Batch when the compute environment has an infrastructure update. The default value is `false`.

Note

An AMI ID can either be specified in the `imageId` or `imageIdOverride` parameters or be determined by the launch template that's specified in the `launchTemplate` parameter. If an AMI ID is specified any of these ways, this parameter is ignored. For more information about to update AMI IDs during an infrastructure update, see [Updating the AMI ID](#) in the *Amazon Batch User Guide*.

When updating a compute environment, changing this setting requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Type: Boolean

Required: No

See Also

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

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

ConsumableResourceProperties

Contains a list of consumable resources required by a job.

Contents

`consumableResourceList`

The list of consumable resources required by a job.

Type: Array of [ConsumableResourceRequirement](#) objects

Required: No

See Also

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

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

ConsumableResourceRequirement

Information about a consumable resource required to run a job.

Contents

consumableResource

The name or ARN of the consumable resource.

Type: String

Required: No

quantity

The quantity of the consumable resource that is needed.

Type: Long

Required: No

See Also

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

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

ConsumableResourceSummary

Current information about a consumable resource.

Contents

consumableResourceArn

The Amazon Resource Name (ARN) of the consumable resource.

Type: String

Required: Yes

consumableResourceName

The name of the consumable resource.

Type: String

Required: Yes

inUseQuantity

The amount of the consumable resource that is currently in use.

Type: Long

Required: No

resourceType

Indicates whether the resource is available to be re-used after a job completes. Can be one of:

- REPLENISHABLE
- NON_REPLENISHABLE

Type: String

Required: No

totalQuantity

The total amount of the consumable resource that is available.

Type: Long

Required: No

See Also

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

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

ContainerDetail

An object that represents the details of a container that's part of a job.

Contents

command

The command that's passed to the container.

Type: Array of strings

Required: No

containerInstanceArn

The Amazon Resource Name (ARN) of the container instance that the container is running on.

Type: String

Required: No

enableExecuteCommand

Determines whether execute command functionality is turned on for this task. If `true`, execute command functionality is turned on all the containers in the task.

Type: Boolean

Required: No

environment

The environment variables to pass to a container.

Note

Environment variables cannot start with "AWS_BATCH". This naming convention is reserved for variables that Amazon Batch sets.

Type: Array of [KeyValuePair](#) objects

Required: No

ephemeralStorage

The amount of ephemeral storage allocated for the task. This parameter is used to expand the total amount of ephemeral storage available, beyond the default amount, for tasks hosted on Amazon Fargate.

Type: [EphemeralStorage](#) object

Required: No

executionRoleArn

The Amazon Resource Name (ARN) of the execution role that Amazon Batch can assume. For more information, see [Batch execution IAM role](#) in the *Amazon Batch User Guide*.

Type: String

Required: No

exitCode

The exit code returned upon completion.

Type: Integer

Required: No

fargatePlatformConfiguration

The platform configuration for jobs that are running on Fargate resources. Jobs that are running on Amazon EC2 resources must not specify this parameter.

Type: [FargatePlatformConfiguration](#) object

Required: No

image

The image used to start the container.

Type: String

Required: No

instanceType

The instance type of the underlying host infrastructure of a multi-node parallel job.

Note

This parameter isn't applicable to jobs that are running on Fargate resources.

Type: String

Required: No

jobRoleArn

The Amazon Resource Name (ARN) that's associated with the job when run.

Type: String

Required: No

linuxParameters

Linux-specific modifications that are applied to the container, such as details for device mappings.

Type: [LinuxParameters](#) object

Required: No

logConfiguration

The log configuration specification for the container.

This parameter maps to LogConfig in the [Create a container](#) section of the [Docker Remote API](#) and the `--log-driver` option to [docker run](#). By default, containers use the same logging driver that the Docker daemon uses. However, the container might use a different logging driver than the Docker daemon by specifying a log driver with this parameter in the container definition. To use a different logging driver for a container, the log system must be configured properly on the container instance. Or, alternatively, it must be configured on a different log server for remote logging options. For more information on the options for different supported log drivers, see [Configure logging drivers](#) in the Docker documentation.

Note

Amazon Batch currently supports a subset of the logging drivers available to the Docker daemon (shown in the [LogConfiguration](#) data type). Additional log drivers might be available in future releases of the Amazon ECS container agent.

This parameter requires version 1.18 of the Docker Remote API or greater on your container instance. To check the Docker Remote API version on your container instance, log in to your container instance and run the following command: `sudo docker version | grep "Server API version"`

Note

The Amazon ECS container agent running on a container instance must register the logging drivers available on that instance with the `ECS_AVAILABLE_LOGGING_DRIVERS` environment variable before containers placed on that instance can use these log configuration options. For more information, see [Amazon ECS container agent configuration](#) in the *Amazon Elastic Container Service Developer Guide*.

Type: [LogConfiguration](#) object

Required: No

logStreamName

The name of the Amazon CloudWatch Logs log stream that's associated with the container. The log group for Amazon Batch jobs is `/aws/batch/job`. Each container attempt receives a log stream name when they reach the `RUNNING` status.

Type: String

Required: No

memory

For jobs running on Amazon EC2 resources that didn't specify memory requirements using `resourceRequirements`, the number of MiB of memory reserved for the job. For other jobs, including all run on Fargate resources, see `resourceRequirements`.

Type: Integer

Required: No

mountPoints

The mount points for data volumes in your container.

Type: Array of [MountPoint](#) objects

Required: No

networkConfiguration

The network configuration for jobs that are running on Fargate resources. Jobs that are running on Amazon EC2 resources must not specify this parameter.

Type: [NetworkConfiguration](#) object

Required: No

networkInterfaces

The network interfaces that are associated with the job.

Type: Array of [NetworkInterface](#) objects

Required: No

privileged

When this parameter is true, the container is given elevated permissions on the host container instance (similar to the `root` user). The default value is `false`.

Note

This parameter isn't applicable to jobs that are running on Fargate resources and shouldn't be provided, or specified as `false`.

Type: Boolean

Required: No

readonlyRootFilesystem

When this parameter is true, the container is given read-only access to its root file system. This parameter maps to `ReadOnlyRootfs` in the [Create a container](#) section of the [Docker Remote API](#) and the `--read-only` option to [docker run](#).

Type: Boolean

Required: No

reason

A short (255 max characters) human-readable string to provide additional details for a running or stopped container.

Type: String

Required: No

repositoryCredentials

The private repository authentication credentials to use.

Type: [RepositoryCredentials](#) object

Required: No

resourceRequirements

The type and amount of resources to assign to a container. The supported resources include GPU, MEMORY, and VCPU.

Type: Array of [ResourceRequirement](#) objects

Required: No

runtimePlatform

An object that represents the compute environment architecture for Amazon Batch jobs on Fargate.

Type: [RuntimePlatform](#) object

Required: No

secrets

The secrets to pass to the container. For more information, see [Specifying sensitive data](#) in the *Amazon Batch User Guide*.

Type: Array of [Secret](#) objects

Required: No

taskArn

The Amazon Resource Name (ARN) of the Amazon ECS task that's associated with the container job. Each container attempt receives a task ARN when they reach the STARTING status.

Type: String

Required: No

ulimits

A list of `ulimit` values to set in the container. This parameter maps to `Ulimits` in the [Create a container](#) section of the [Docker Remote API](#) and the `--ulimit` option to [docker run](#).

Note

This parameter isn't applicable to jobs that are running on Fargate resources.

Type: Array of [Ulimit](#) objects

Required: No

user

The user name to use inside the container. This parameter maps to `User` in the [Create a container](#) section of the [Docker Remote API](#) and the `--user` option to [docker run](#).

Type: String

Required: No

vcpus

The number of vCPUs reserved for the container. For jobs that run on Amazon EC2 resources, you can specify the vCPU requirement for the job using `resourceRequirements`, but you

can't specify the vCPU requirements in both the `vcpus` and `resourceRequirements` object. This parameter maps to `CpuShares` in the [Create a container](#) section of the [Docker Remote API](#) and the `--cpu-shares` option to [docker run](#). Each vCPU is equivalent to 1,024 CPU shares. You must specify at least one vCPU. This is required but can be specified in several places. It must be specified for each node at least once.

 **Note**

This parameter isn't applicable to jobs that run on Fargate resources. For jobs that run on Fargate resources, you must specify the vCPU requirement for the job using `resourceRequirements`.

Type: Integer

Required: No

volumes

A list of volumes that are associated with the job.

Type: Array of [Volume](#) objects

Required: No

See Also

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

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

ContainerOverrides

The overrides that should be sent to a container.

For information about using Amazon Batch overrides when you connect event sources to targets, see [BatchContainerOverrides](#).

Contents

command

The command to send to the container that overrides the default command from the Docker image or the job definition.

Note

This parameter can't contain an empty string.

Type: Array of strings

Required: No

environment

The environment variables to send to the container. You can add new environment variables, which are added to the container at launch, or you can override the existing environment variables from the Docker image or the job definition.

Note

Environment variables cannot start with "AWS_BATCH". This naming convention is reserved for variables that Amazon Batch sets.

Type: Array of [KeyValuePair](#) objects

Required: No

instanceType

The instance type to use for a multi-node parallel job.

Note

This parameter isn't applicable to single-node container jobs or jobs that run on Fargate resources, and shouldn't be provided.

Type: String

Required: No

memory

This parameter is deprecated, use `resourceRequirements` to override the memory requirements specified in the job definition. It's not supported for jobs running on Fargate resources. For jobs that run on Amazon EC2 resources, it overrides the `memory` parameter set in the job definition, but doesn't override any memory requirement that's specified in the `resourceRequirements` structure in the job definition. To override memory requirements that are specified in the `resourceRequirements` structure in the job definition, `resourceRequirements` must be specified in the `SubmitJob` request, with `type` set to `MEMORY` and `value` set to the new value. For more information, see [Can't override job definition resource requirements](#) in the *Amazon Batch User Guide*.

Type: Integer

Required: No

resourceRequirements

The type and amount of resources to assign to a container. This overrides the settings in the job definition. The supported resources include GPU, MEMORY, and VCPU.

Type: Array of [ResourceRequirement](#) objects

Required: No

vcpus

This parameter is deprecated, use `resourceRequirements` to override the `vcpus` parameter that's set in the job definition. It's not supported for jobs running on Fargate resources. For jobs that run on Amazon EC2 resources, it overrides the `vcpus` parameter set in the job definition, but doesn't override any vCPU requirement specified in the `resourceRequirements` structure in the job definition. To override vCPU requirements that are specified in the

`resourceRequirements` structure in the job definition, `resourceRequirements` must be specified in the `SubmitJob` request, with `type` set to `VCPU` and `value` set to the new value. For more information, see [Can't override job definition resource requirements](#) in the *Amazon Batch User Guide*.

Type: Integer

Required: No

See Also

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

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

ContainerProperties

Container properties are used for Amazon ECS based job definitions. These properties describe the container that's launched as part of a job.

Contents

command

The command that's passed to the container. This parameter maps to `Cmd` in the [Create a container](#) section of the [Docker Remote API](#) and the `COMMAND` parameter to [docker run](#). For more information, see <https://docs.docker.com/engine/reference/builder/#cmd>.

Type: Array of strings

Required: No

enableExecuteCommand

Determines whether execute command functionality is turned on for this task. If `true`, execute command functionality is turned on all the containers in the task.

Type: Boolean

Required: No

environment

The environment variables to pass to a container. This parameter maps to `Env` in the [Create a container](#) section of the [Docker Remote API](#) and the `--env` option to [docker run](#).

Important

We don't recommend using plaintext environment variables for sensitive information, such as credential data.

Note

Environment variables cannot start with `"AWS_BATCH"`. This naming convention is reserved for variables that Amazon Batch sets.

Type: Array of [KeyValuePair](#) objects

Required: No

ephemeralStorage

The amount of ephemeral storage to allocate for the task. This parameter is used to expand the total amount of ephemeral storage available, beyond the default amount, for tasks hosted on Amazon Fargate.

Type: [EphemeralStorage](#) object

Required: No

executionRoleArn

The Amazon Resource Name (ARN) of the execution role that Amazon Batch can assume. For jobs that run on Fargate resources, you must provide an execution role. For more information, see [Amazon Batch execution IAM role](#) in the *Amazon Batch User Guide*.

Type: String

Required: No

fargatePlatformConfiguration

The platform configuration for jobs that are running on Fargate resources. Jobs that are running on Amazon EC2 resources must not specify this parameter.

Type: [FargatePlatformConfiguration](#) object

Required: No

image

Required. The image used to start a container. This string is passed directly to the Docker daemon. Images in the Docker Hub registry are available by default. Other repositories are specified with `repository-url/image:tag`. It can be 255 characters long. It can contain uppercase and lowercase letters, numbers, hyphens (-), underscores (_), colons (:), periods (.), forward slashes (/), and number signs (#). This parameter maps to Image in the [Create a container](#) section of the [Docker Remote API](#) and the IMAGE parameter of [docker run](#).

Note

Docker image architecture must match the processor architecture of the compute resources that they're scheduled on. For example, ARM-based Docker images can only run on ARM-based compute resources.

- Images in Amazon ECR Public repositories use the full `registry/repository[:tag]` or `registry/repository[@digest]` naming conventions. For example, `public.ecr.aws/registry_alias/my-web-app:latest` .
- Images in Amazon ECR repositories use the full registry and repository URI (for example, `123456789012.dkr.ecr.<region-name>.amazonaws.com/<repository-name>`).
- Images in official repositories on Docker Hub use a single name (for example, `ubuntu` or `mongo`).
- Images in other repositories on Docker Hub are qualified with an organization name (for example, `amazon/amazon-ecs-agent`).
- Images in other online repositories are qualified further by a domain name (for example, `quay.io/assemblyline/ubuntu`).

Type: String

Required: No

instanceType

The instance type to use for a multi-node parallel job. All node groups in a multi-node parallel job must use the same instance type.

Note

This parameter isn't applicable to single-node container jobs or jobs that run on Fargate resources, and shouldn't be provided.

Type: String

Required: No

jobRoleArn

The Amazon Resource Name (ARN) of the IAM role that the container can assume for Amazon permissions. For more information, see [IAM roles for tasks](#) in the *Amazon Elastic Container Service Developer Guide*.

Type: String

Required: No

linuxParameters

Linux-specific modifications that are applied to the container, such as details for device mappings.

Type: [LinuxParameters](#) object

Required: No

logConfiguration

The log configuration specification for the container.

This parameter maps to LogConfig in the [Create a container](#) section of the [Docker Remote API](#) and the `--log-driver` option to [docker run](#). By default, containers use the same logging driver that the Docker daemon uses. However the container might use a different logging driver than the Docker daemon by specifying a log driver with this parameter in the container definition. To use a different logging driver for a container, the log system must be configured properly on the container instance (or on a different log server for remote logging options). For more information on the options for different supported log drivers, see [Configure logging drivers](#) in the Docker documentation.

Note

Amazon Batch currently supports a subset of the logging drivers available to the Docker daemon (shown in the [LogConfiguration](#) data type).

This parameter requires version 1.18 of the Docker Remote API or greater on your container instance. To check the Docker Remote API version on your container instance, log in to your container instance and run the following command: `sudo docker version | grep "Server API version"`

Note

The Amazon ECS container agent running on a container instance must register the logging drivers available on that instance with the `ECS_AVAILABLE_LOGGING_DRIVERS` environment variable before containers placed on that instance can use these log configuration options. For more information, see [Amazon ECS container agent configuration](#) in the *Amazon Elastic Container Service Developer Guide*.

Type: [LogConfiguration](#) object

Required: No

memory

This parameter is deprecated, use `resourceRequirements` to specify the memory requirements for the job definition. It's not supported for jobs running on Fargate resources. For jobs that run on Amazon EC2 resources, it specifies the memory hard limit (in MiB) for a container. If your container attempts to exceed the specified number, it's terminated. You must specify at least 4 MiB of memory for a job using this parameter. The memory hard limit can be specified in several places. It must be specified for each node at least once.

Type: Integer

Required: No

mountPoints

The mount points for data volumes in your container. This parameter maps to `Volumes` in the [Create a container](#) section of the [Docker Remote API](#) and the `--volume` option to [docker run](#).

Type: Array of [MountPoint](#) objects

Required: No

networkConfiguration

The network configuration for jobs that are running on Fargate resources. Jobs that are running on Amazon EC2 resources must not specify this parameter.

Type: [NetworkConfiguration](#) object

Required: No

privileged

When this parameter is true, the container is given elevated permissions on the host container instance (similar to the `root` user). This parameter maps to `Privileged` in the [Create a container](#) section of the [Docker Remote API](#) and the `--privileged` option to [docker run](#). The default value is false.

Note

This parameter isn't applicable to jobs that are running on Fargate resources and shouldn't be provided, or specified as false.

Type: Boolean

Required: No

readonlyRootFilesystem

When this parameter is true, the container is given read-only access to its root file system. This parameter maps to `ReadonlyRootfs` in the [Create a container](#) section of the [Docker Remote API](#) and the `--read-only` option to `docker run`.

Type: Boolean

Required: No

repositoryCredentials

The private repository authentication credentials to use.

Type: [RepositoryCredentials](#) object

Required: No

resourceRequirements

The type and amount of resources to assign to a container. The supported resources include GPU, MEMORY, and VCPU.

Type: Array of [ResourceRequirement](#) objects

Required: No

runtimePlatform

An object that represents the compute environment architecture for Amazon Batch jobs on Fargate.

Type: [RuntimePlatform](#) object

Required: No

secrets

The secrets for the container. For more information, see [Specifying sensitive data](#) in the *Amazon Batch User Guide*.

Type: Array of [Secret](#) objects

Required: No

ulimits

A list of `ulimits` to set in the container. This parameter maps to `Ulimits` in the [Create a container](#) section of the [Docker Remote API](#) and the `--ulimit` option to [docker run](#).

Note

This parameter isn't applicable to jobs that are running on Fargate resources and shouldn't be provided.

Type: Array of [Ulimit](#) objects

Required: No

user

The user name to use inside the container. This parameter maps to `User` in the [Create a container](#) section of the [Docker Remote API](#) and the `--user` option to [docker run](#).

Type: String

Required: No

vcpus

This parameter is deprecated, use `resourceRequirements` to specify the vCPU requirements for the job definition. It's not supported for jobs running on Fargate resources. For jobs running on Amazon EC2 resources, it specifies the number of vCPUs reserved for the job.

Each vCPU is equivalent to 1,024 CPU shares. This parameter maps to `CpuShares` in the [Create a container](#) section of the [Docker Remote API](#) and the `--cpu-shares` option to [docker run](#). The number of vCPUs must be specified but can be specified in several places. You must specify it at least once for each node.

Type: Integer

Required: No

volumes

A list of data volumes used in a job.

Type: Array of [Volume](#) objects

Required: No

See Also

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

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

ContainerSummary

An object that represents summary details of a container within a job.

Contents

exitCode

The exit code to return upon completion.

Type: Integer

Required: No

reason

A short (255 max characters) human-readable string to provide additional details for a running or stopped container.

Type: String

Required: No

See Also

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

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

Device

An object that represents a container instance host device.

Note

This object isn't applicable to jobs that are running on Fargate resources and shouldn't be provided.

Contents

hostPath

The path for the device on the host container instance.

Type: String

Required: Yes

containerPath

The path inside the container that's used to expose the host device. By default, the `hostPath` value is used.

Type: String

Required: No

permissions

The explicit permissions to provide to the container for the device. By default, the container has permissions for `read`, `write`, and `mknod` for the device.

Type: Array of strings

Valid Values: `READ` | `WRITE` | `MKNOD`

Required: No

See Also

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

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

Ec2Configuration

Provides information used to select Amazon Machine Images (AMIs) for instances in the compute environment. If `Ec2Configuration` isn't specified, the default is `ECS_AL2` ([Amazon Linux 2](#)).

Note

This object isn't applicable to jobs that are running on Fargate resources.

Contents

imageType

The image type to match with the instance type to select an AMI. The supported values are different for ECS and EKS resources.

ECS

If the `imageIdOverride` parameter isn't specified, then a recent [Amazon ECS-optimized Amazon Linux 2 AMI](#) (`ECS_AL2`) is used. If a new image type is specified in an update, but neither an `imageId` nor a `imageIdOverride` parameter is specified, then the latest Amazon ECS optimized AMI for that image type that's supported by Amazon Batch is used.

ECS_AL2

[Amazon Linux 2](#): Default for all non-GPU instance families.

ECS_AL2_NVIDIA

[Amazon Linux 2 \(GPU\)](#): Default for all GPU instance families (for example P4 and G4) and can be used for all non Amazon Graviton-based instance types.

ECS_AL2023

[Amazon Linux 2023](#): Amazon Batch supports Amazon Linux 2023.

Note

Amazon Linux 2023 does not support A1 instances.

ECS_AL1

[Amazon Linux](#). Amazon Linux has reached the end-of-life of standard support. For more information, see [Amazon Linux AMI](#).

EKS

If the `imageIdOverride` parameter isn't specified, then a recent [Amazon EKS-optimized Amazon Linux AMI](#) (EKS_AL2) is used. If a new image type is specified in an update, but neither an `imageId` nor a `imageIdOverride` parameter is specified, then the latest Amazon EKS optimized AMI for that image type that Amazon Batch supports is used.

EKS_AL2

[Amazon Linux 2](#): Default for all non-GPU instance families.

EKS_AL2_NVIDIA

[Amazon Linux 2 \(accelerated\)](#): Default for all GPU instance families (for example, P4 and G4) and can be used for all non Amazon Graviton-based instance types.

EKS_AL2023

[Amazon Linux 2023](#): Amazon Batch supports Amazon Linux 2023.

Note

Amazon Linux 2023 does not support A1 instances.

EKS_AL2023_NVIDIA

[Amazon Linux 2023 \(accelerated\)](#): GPU instance families and can be used for all non Amazon Graviton-based instance types.

Type: String

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

Required: Yes

imageIdOverride

The AMI ID used for instances launched in the compute environment that match the image type. This setting overrides the `imageId` set in the `computeResource` object.

Note

The AMI that you choose for a compute environment must match the architecture of the instance types that you intend to use for that compute environment. For example, if your compute environment uses A1 instance types, the compute resource AMI that you choose must support ARM instances. Amazon ECS vends both x86 and ARM versions of the Amazon ECS-optimized Amazon Linux 2 AMI. For more information, see [Amazon ECS-optimized Amazon Linux 2 AMI](#) in the *Amazon Elastic Container Service Developer Guide*.

Type: String

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

Required: No

imageKubernetesVersion

The Kubernetes version for the compute environment. If you don't specify a value, the latest version that Amazon Batch supports is used.

Type: String

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

Required: No

See Also

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

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

EcsProperties

An object that contains the properties for the Amazon ECS resources of a job.

Contents

taskProperties

An object that contains the properties for the Amazon ECS task definition of a job.

Note

This object is currently limited to one task element. However, the task element can run up to 10 containers.

Type: Array of [EcsTaskProperties](#) objects

Required: Yes

See Also

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

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

EcsPropertiesDetail

An object that contains the details for the Amazon ECS resources of a job.

Contents

taskProperties

The properties for the Amazon ECS task definition of a job.

Type: Array of [EcsTaskDetails](#) objects

Required: No

See Also

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

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

EcsPropertiesOverride

An object that contains overrides for the Amazon ECS task definition of a job.

Contents

taskProperties

The overrides for the Amazon ECS task definition of a job.

Note

This object is currently limited to one element.

Type: Array of [TaskPropertiesOverride](#) objects

Required: No

See Also

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

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

EcsTaskDetails

The details of a task definition that describes the container and volume definitions of an Amazon ECS task.

Contents

containerInstanceArn

The Amazon Resource Name (ARN) of the container instance that hosts the task.

Type: String

Required: No

containers

A list of containers that are included in the `taskProperties` list.

Type: Array of [TaskContainerDetails](#) objects

Required: No

enableExecuteCommand

Determines whether execute command functionality is turned on for this task. If `true`, execute command functionality is turned on all the containers in the task.

Type: Boolean

Required: No

ephemeralStorage

The amount of ephemeral storage allocated for the task.

Type: [EphemeralStorage](#) object

Required: No

executionRoleArn

The Amazon Resource Name (ARN) of the execution role that Amazon Batch can assume. For more information, see [Batch execution IAM role](#) in the *Amazon Batch User Guide*.

Type: String

Required: No

ipcMode

The IPC resource namespace to use for the containers in the task.

Type: String

Required: No

networkConfiguration

The network configuration for jobs that are running on Fargate resources. Jobs that are running on Amazon EC2 resources must not specify this parameter.

Type: [NetworkConfiguration](#) object

Required: No

pidMode

The process namespace to use for the containers in the task.

Type: String

Required: No

platformVersion

The Fargate platform version where the jobs are running.

Type: String

Required: No

runtimePlatform

An object that represents the compute environment architecture for Amazon Batch jobs on Fargate.

Type: [RuntimePlatform](#) object

Required: No

taskArn

The ARN of the Amazon ECS task.

Type: String

Required: No

taskRoleArn

The Amazon Resource Name (ARN) of the IAM role that the container can assume for Amazon permissions. For more information, see [IAM roles for tasks](#) in the *Amazon Elastic Container Service Developer Guide*.

Note

This object is comparable to [ContainerProperties.jobRoleArn](#).

Type: String

Required: No

volumes

A list of data volumes used in a job.

Type: Array of [Volume](#) objects

Required: No

See Also

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

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

EcsTaskProperties

The properties for a task definition that describes the container and volume definitions of an Amazon ECS task. You can specify which Docker images to use, the required resources, and other configurations related to launching the task definition through an Amazon ECS service or task.

Contents

containers

This object is a list of containers.

Type: Array of [TaskContainerProperties](#) objects

Required: Yes

enableExecuteCommand

Determines whether execute command functionality is turned on for this task. If `true`, execute command functionality is turned on all the containers in the task.

Type: Boolean

Required: No

ephemeralStorage

The amount of ephemeral storage to allocate for the task. This parameter is used to expand the total amount of ephemeral storage available, beyond the default amount, for tasks hosted on Amazon Fargate.

Type: [EphemeralStorage](#) object

Required: No

executionRoleArn

The Amazon Resource Name (ARN) of the execution role that Amazon Batch can assume. For jobs that run on Fargate resources, you must provide an execution role. For more information, see [Amazon Batch execution IAM role](#) in the *Amazon Batch User Guide*.

Type: String

Required: No

ipcMode

The IPC resource namespace to use for the containers in the task. The valid values are `host`, `task`, or `none`.

If `host` is specified, all containers within the tasks that specified the `host` IPC mode on the same container instance share the same IPC resources with the host Amazon EC2 instance.

If `task` is specified, all containers within the specified `task` share the same IPC resources.

If `none` is specified, the IPC resources within the containers of a task are private, and are not shared with other containers in a task or on the container instance.

If no value is specified, then the IPC resource namespace sharing depends on the Docker daemon setting on the container instance. For more information, see [IPC settings](#) in the Docker run reference.

Type: String

Required: No

networkConfiguration

The network configuration for jobs that are running on Fargate resources. Jobs that are running on Amazon EC2 resources must not specify this parameter.

Type: [NetworkConfiguration](#) object

Required: No

pidMode

The process namespace to use for the containers in the task. The valid values are `host` or `task`. For example, monitoring sidecars might need `pidMode` to access information about other containers running in the same task.

If `host` is specified, all containers within the tasks that specified the `host` PID mode on the same container instance share the process namespace with the host Amazon EC2 instance.

If `task` is specified, all containers within the specified task share the same process namespace.

If no value is specified, the default is a private namespace for each container. For more information, see [PID settings](#) in the Docker run reference.

Type: String

Required: No

platformVersion

The Fargate platform version where the jobs are running. A platform version is specified only for jobs that are running on Fargate resources. If one isn't specified, the LATEST platform version is used by default. This uses a recent, approved version of the Fargate platform for compute resources. For more information, see [Amazon Fargate platform versions](#) in the *Amazon Elastic Container Service Developer Guide*.

Type: String

Required: No

runtimePlatform

An object that represents the compute environment architecture for Amazon Batch jobs on Fargate.

Type: [RuntimePlatform](#) object

Required: No

taskRoleArn

The Amazon Resource Name (ARN) that's associated with the Amazon ECS task.

Note

This object is comparable to [ContainerProperties:jobRoleArn](#).

Type: String

Required: No

volumes

A list of volumes that are associated with the job.

Type: Array of [Volume](#) objects

Required: No

See Also

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

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

EFSAuthorizationConfig

The authorization configuration details for the Amazon EFS file system.

Contents

accessPointId

The Amazon EFS access point ID to use. If an access point is specified, the root directory value specified in the `EFSVolumeConfiguration` must either be omitted or set to `/` which enforces the path set on the EFS access point. If an access point is used, transit encryption must be enabled in the `EFSVolumeConfiguration`. For more information, see [Working with Amazon EFS access points](#) in the *Amazon Elastic File System User Guide*.

Type: String

Required: No

iam

Whether or not to use the Amazon Batch job IAM role defined in a job definition when mounting the Amazon EFS file system. If enabled, transit encryption must be enabled in the `EFSVolumeConfiguration`. If this parameter is omitted, the default value of `DISABLED` is used. For more information, see [Using Amazon EFS access points](#) in the *Amazon Batch User Guide*. EFS IAM authorization requires that `TransitEncryption` be `ENABLED` and that a `JobRoleArn` is specified.

Type: String

Valid Values: `ENABLED` | `DISABLED`

Required: No

See Also

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

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

- [Amazon SDK for Ruby V3](#)

EFSVolumeConfiguration

This is used when you're using an Amazon Elastic File System file system for job storage. For more information, see [Amazon EFS Volumes](#) in the *Amazon Batch User Guide*.

Contents

fileSystemId

The Amazon EFS file system ID to use.

Type: String

Required: Yes

authorizationConfig

The authorization configuration details for the Amazon EFS file system.

Type: [EFSAuthorizationConfig](#) object

Required: No

rootDirectory

The directory within the Amazon EFS file system to mount as the root directory inside the host. If this parameter is omitted, the root of the Amazon EFS volume is used instead. Specifying `/` has the same effect as omitting this parameter. The maximum length is 4,096 characters.

Important

If an EFS access point is specified in the `authorizationConfig`, the `rootDirectory` parameter must either be omitted or set to `/`, which enforces the path set on the Amazon EFS access point.

Type: String

Required: No

transitEncryption

Determines whether to enable encryption for Amazon EFS data in transit between the Amazon ECS host and the Amazon EFS server. Transit encryption must be enabled if Amazon EFS IAM

authorization is used. If this parameter is omitted, the default value of DISABLED is used. For more information, see [Encrypting data in transit](#) in the *Amazon Elastic File System User Guide*.

Type: String

Valid Values: ENABLED | DISABLED

Required: No

transitEncryptionPort

The port to use when sending encrypted data between the Amazon ECS host and the Amazon EFS server. If you don't specify a transit encryption port, it uses the port selection strategy that the Amazon EFS mount helper uses. The value must be between 0 and 65,535. For more information, see [EFS mount helper](#) in the *Amazon Elastic File System User Guide*.

Type: Integer

Required: No

See Also

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

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

EksAttemptContainerDetail

An object that represents the details for an attempt for a job attempt that an Amazon EKS container runs.

Contents

containerID

The ID for the container.

Type: String

Required: No

exitCode

The exit code returned for the job attempt. A non-zero exit code is considered failed.

Type: Integer

Required: No

name

The name of a container.

Type: String

Required: No

reason

A short (255 max characters) human-readable string to provide additional details for a running or stopped container.

Type: String

Required: No

See Also

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

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

EksAttemptDetail

An object that represents the details of a job attempt for a job attempt by an Amazon EKS container.

Contents

containers

The details for the final status of the containers for this job attempt.

Type: Array of [EksAttemptContainerDetail](#) objects

Required: No

eksClusterArn

The Amazon Resource Name (ARN) of the Amazon EKS cluster.

Type: String

Required: No

initContainers

The details for the init containers.

Type: Array of [EksAttemptContainerDetail](#) objects

Required: No

nodeName

The name of the node for this job attempt.

Type: String

Required: No

podName

The name of the pod for this job attempt.

Type: String

Required: No

podNamespace

The namespace of the Amazon EKS cluster that the pod exists in.

Type: String

Required: No

startedAt

The Unix timestamp (in milliseconds) for when the attempt was started (when the attempt transitioned from the STARTING state to the RUNNING state).

Type: Long

Required: No

statusReason

A short, human-readable string to provide additional details for the current status of the job attempt.

Type: String

Required: No

stoppedAt

The Unix timestamp (in milliseconds) for when the attempt was stopped. This happens when the attempt transitioned from the RUNNING state to a terminal state, such as SUCCEEDED or FAILED.

Type: Long

Required: No

See Also

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

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

- [Amazon SDK for Ruby V3](#)

EksConfiguration

Configuration for the Amazon EKS cluster that supports the Amazon Batch compute environment. The cluster must exist before the compute environment can be created.

Contents

eksClusterArn

The Amazon Resource Name (ARN) of the Amazon EKS cluster. An example is `arn:aws:eks:us-east-1:123456789012:cluster/ClusterForBatch` .

Type: String

Required: Yes

kubernetesNamespace

The namespace of the Amazon EKS cluster. Amazon Batch manages pods in this namespace. The value can't left empty or null. It must be fewer than 64 characters long, can't be set to `default`, can't start with "kube-," and must match this regular expression: `^[a-z0-9]([-a-z0-9]*[a-z0-9])?$`. For more information, see [Namespaces](#) in the Kubernetes documentation.

Type: String

Required: Yes

See Also

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

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

EksContainer

EKS container properties are used in job definitions for Amazon EKS based job definitions to describe the properties for a container node in the pod that's launched as part of a job. This can't be specified for Amazon ECS based job definitions.

Contents

image

The Docker image used to start the container.

Type: String

Required: Yes

args

An array of arguments to the entrypoint. If this isn't specified, the CMD of the container image is used. This corresponds to the `args` member in the [Entrypoint](#) portion of the [Pod](#) in Kubernetes. Environment variable references are expanded using the container's environment.

If the referenced environment variable doesn't exist, the reference in the command isn't changed. For example, if the reference is to `$(NAME1)` and the `NAME1` environment variable doesn't exist, the command string will remain `$(NAME1)`. `$$` is replaced with `$`, and the resulting string isn't expanded. For example, `$(VAR_NAME)` is passed as `$(VAR_NAME)` whether or not the `VAR_NAME` environment variable exists. For more information, see [Dockerfile reference: CMD](#) and [Define a command and arguments for a pod](#) in the *Kubernetes documentation*.

Type: Array of strings

Required: No

command

The entrypoint for the container. This isn't run within a shell. If this isn't specified, the `ENTRYPOINT` of the container image is used. Environment variable references are expanded using the container's environment.

If the referenced environment variable doesn't exist, the reference in the command isn't changed. For example, if the reference is to `$(NAME1)` and the `NAME1` environment variable

doesn't exist, the command string will remain "\$ (NAME1)." \$\$ is replaced with \$ and the resulting string isn't expanded. For example, \$\$ (VAR_NAME) will be passed as \$ (VAR_NAME) whether or not the VAR_NAME environment variable exists. The entrypoint can't be updated. For more information, see [ENTRYPOINT](#) in the *Dockerfile reference* and [Define a command and arguments for a container](#) and [Entrypoint](#) in the *Kubernetes documentation*.

Type: Array of strings

Required: No

env

The environment variables to pass to a container.

Note

Environment variables cannot start with "AWS_BATCH". This naming convention is reserved for variables that Amazon Batch sets.

Type: Array of [EksContainerEnvironmentVariable](#) objects

Required: No

imagePullPolicy

The image pull policy for the container. Supported values are Always, IfNotPresent, and Never. This parameter defaults to IfNotPresent. However, if the :latest tag is specified, it defaults to Always. For more information, see [Updating images](#) in the *Kubernetes documentation*.

Type: String

Required: No

name

The name of the container. If the name isn't specified, the default name "Default" is used. Each container in a pod must have a unique name.

Type: String

Required: No

resources

The type and amount of resources to assign to a container. The supported resources include memory, cpu, and nvidia.com/gpu. For more information, see [Resource management for pods and containers](#) in the *Kubernetes documentation*.

Type: [EksContainerResourceRequirements](#) object

Required: No

securityContext

The security context for a job. For more information, see [Configure a security context for a pod or container](#) in the *Kubernetes documentation*.

Type: [EksContainerSecurityContext](#) object

Required: No

volumeMounts

The volume mounts for the container. Amazon Batch supports emptyDir, hostPath, and secret volume types. For more information about volumes and volume mounts in Kubernetes, see [Volumes](#) in the *Kubernetes documentation*.

Type: Array of [EksContainerVolumeMount](#) objects

Required: No

See Also

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

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

EksContainerDetail

The details for container properties that are returned by `DescribeJobs` for jobs that use Amazon EKS.

Contents

args

An array of arguments to the entrypoint. If this isn't specified, the CMD of the container image is used. This corresponds to the `args` member in the [Entrypoint](#) portion of the [Pod](#) in Kubernetes. Environment variable references are expanded using the container's environment.

If the referenced environment variable doesn't exist, the reference in the command isn't changed. For example, if the reference is to `$(NAME1)` and the `NAME1` environment variable doesn't exist, the command string will remain `$(NAME1)`. `$$` is replaced with `$` and the resulting string isn't expanded. For example, `$(VAR_NAME)` is passed as `$(VAR_NAME)` whether or not the `VAR_NAME` environment variable exists. For more information, see [Dockerfile reference: CMD](#) and [Define a command and arguments for a pod](#) in the *Kubernetes documentation*.

Type: Array of strings

Required: No

command

The entrypoint for the container. For more information, see [Entrypoint](#) in the *Kubernetes documentation*.

Type: Array of strings

Required: No

env

The environment variables to pass to a container.

Note

Environment variables cannot start with "AWS_BATCH". This naming convention is reserved for variables that Amazon Batch sets.

Type: Array of [EksContainerEnvironmentVariable](#) objects

Required: No

exitCode

The exit code returned for the job attempt. A non-zero exit code is considered failed.

Type: Integer

Required: No

image

The Docker image used to start the container.

Type: String

Required: No

imagePullPolicy

The image pull policy for the container. Supported values are `Always`, `IfNotPresent`, and `Never`. This parameter defaults to `Always` if the `:latest` tag is specified, `IfNotPresent` otherwise. For more information, see [Updating images](#) in the *Kubernetes documentation*.

Type: String

Required: No

name

The name of the container. If the name isn't specified, the default name "Default" is used. Each container in a pod must have a unique name.

Type: String

Required: No

reason

A short human-readable string to provide additional details for a running or stopped container. It can be up to 255 characters long.

Type: String

Required: No

resources

The type and amount of resources to assign to a container. The supported resources include memory, cpu, and nvidia.com/gpu. For more information, see [Resource management for pods and containers](#) in the *Kubernetes documentation*.

Type: [EksContainerResourceRequirements](#) object

Required: No

securityContext

The security context for a job. For more information, see [Configure a security context for a pod or container](#) in the *Kubernetes documentation*.

Type: [EksContainerSecurityContext](#) object

Required: No

volumeMounts

The volume mounts for the container. Amazon Batch supports emptyDir, hostPath, and secret volume types. For more information about volumes and volume mounts in Kubernetes, see [Volumes](#) in the *Kubernetes documentation*.

Type: Array of [EksContainerVolumeMount](#) objects

Required: No

See Also

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

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

EksContainerEnvironmentVariable

An environment variable.

Contents

name

The name of the environment variable.

Type: String

Required: Yes

value

The value of the environment variable.

Type: String

Required: No

See Also

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

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

EksContainerOverride

Object representing any Kubernetes overrides to a job definition that's used in a [SubmitJob](#) API operation.

Contents

args

The arguments to the entrypoint to send to the container that overrides the default arguments from the Docker image or the job definition. For more information, see [Dockerfile reference: CMD](#) and [Define a command and arguments for a pod](#) in the *Kubernetes documentation*.

Type: Array of strings

Required: No

command

The command to send to the container that overrides the default command from the Docker image or the job definition.

Type: Array of strings

Required: No

env

The environment variables to send to the container. You can add new environment variables, which are added to the container at launch. Or, you can override the existing environment variables from the Docker image or the job definition.

Note

Environment variables cannot start with "AWS_BATCH". This naming convention is reserved for variables that Amazon Batch sets.

Type: Array of [EksContainerEnvironmentVariable](#) objects

Required: No

image

The override of the Docker image that's used to start the container.

Type: String

Required: No

name

A pointer to the container that you want to override. The name must match a unique container name that you wish to override.

Type: String

Required: No

resources

The type and amount of resources to assign to a container. These override the settings in the job definition. The supported resources include `memory`, `cpu`, and `nvidia.com/gpu`. For more information, see [Resource management for pods and containers](#) in the *Kubernetes documentation*.

Type: [EksContainerResourceRequirements](#) object

Required: No

See Also

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

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

EksContainerResourceRequirements

The type and amount of resources to assign to a container. The supported resources include `memory`, `cpu`, and `nvidia.com/gpu`. For more information, see [Resource management for pods and containers](#) in the *Kubernetes documentation*.

Contents

limits

The type and quantity of the resources to reserve for the container. The values vary based on the name that's specified. Resources can be requested using either the `limits` or the `requests` objects.

memory

The memory hard limit (in MiB) for the container, using whole integers, with a "Mi" suffix. If your container attempts to exceed the memory specified, the container is terminated. You must specify at least 4 MiB of memory for a job. `memory` can be specified in `limits`, `requests`, or both. If `memory` is specified in both places, then the value that's specified in `limits` must be equal to the value that's specified in `requests`.

Note

To maximize your resource utilization, provide your jobs with as much memory as possible for the specific instance type that you are using. To learn how, see [Memory management](#) in the *Amazon Batch User Guide*.

cpu

The number of CPUs that's reserved for the container. Values must be an even multiple of 0.25. `cpu` can be specified in `limits`, `requests`, or both. If `cpu` is specified in both places, then the value that's specified in `limits` must be at least as large as the value that's specified in `requests`.

nvidia.com/gpu

The number of GPUs that's reserved for the container. Values must be a whole integer. `memory` can be specified in `limits`, `requests`, or both. If `memory` is specified in both

places, then the value that's specified in `limits` must be equal to the value that's specified in `requests`.

Type: String to string map

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

Required: No

requests

The type and quantity of the resources to request for the container. The values vary based on the name that's specified. Resources can be requested by using either the `limits` or the `requests` objects.

memory

The memory hard limit (in MiB) for the container, using whole integers, with a "Mi" suffix. If your container attempts to exceed the memory specified, the container is terminated. You must specify at least 4 MiB of memory for a job. `memory` can be specified in `limits`, `requests`, or both. If `memory` is specified in both, then the value that's specified in `limits` must be equal to the value that's specified in `requests`.

Note

If you're trying to maximize your resource utilization by providing your jobs as much memory as possible for a particular instance type, see [Memory management](#) in the *Amazon Batch User Guide*.

cpu

The number of CPUs that are reserved for the container. Values must be an even multiple of 0.25. `cpu` can be specified in `limits`, `requests`, or both. If `cpu` is specified in both, then the value that's specified in `limits` must be at least as large as the value that's specified in `requests`.

nvidia.com/gpu

The number of GPUs that are reserved for the container. Values must be a whole integer. `nvidia.com/gpu` can be specified in `limits`, `requests`, or both. If `nvidia.com/gpu` is

specified in both, then the value that's specified in `limits` must be equal to the value that's specified in `requests`.

Type: String to string map

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

Required: No

See Also

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

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

EksContainerSecurityContext

The security context for a job. For more information, see [Configure a security context for a pod or container](#) in the *Kubernetes documentation*.

Contents

allowPrivilegeEscalation

Whether or not a container or a Kubernetes pod is allowed to gain more privileges than its parent process. The default value is `false`.

Type: Boolean

Required: No

privileged

When this parameter is `true`, the container is given elevated permissions on the host container instance. The level of permissions are similar to the root user permissions. The default value is `false`. This parameter maps to `privileged` policy in the [Privileged pod security policies](#) in the *Kubernetes documentation*.

Type: Boolean

Required: No

readOnlyRootFilesystem

When this parameter is `true`, the container is given read-only access to its root file system. The default value is `false`. This parameter maps to `ReadOnlyRootFilesystem` policy in the [Volumes and file systems pod security policies](#) in the *Kubernetes documentation*.

Type: Boolean

Required: No

runAsGroup

When this parameter is specified, the container is run as the specified group ID (`gid`). If this parameter isn't specified, the default is the group that's specified in the image metadata. This parameter maps to `RunAsGroup` and `MustRunAs` policy in the [Users and groups pod security policies](#) in the *Kubernetes documentation*.

Type: Long

Required: No

runAsNonRoot

When this parameter is specified, the container is run as a user with a `uid` other than 0. If this parameter isn't specified, so such rule is enforced. This parameter maps to `RunAsUser` and `MustRunAsNonRoot` policy in the [Users and groups pod security policies](#) in the *Kubernetes documentation*.

Type: Boolean

Required: No

runAsUser

When this parameter is specified, the container is run as the specified user ID (`uid`). If this parameter isn't specified, the default is the user that's specified in the image metadata. This parameter maps to `RunAsUser` and `MustRunAs` policy in the [Users and groups pod security policies](#) in the *Kubernetes documentation*.

Type: Long

Required: No

See Also

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

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

EksContainerVolumeMount

The volume mounts for a container for an Amazon EKS job. For more information about volumes and volume mounts in Kubernetes, see [Volumes](#) in the *Kubernetes documentation*.

Contents

mountPath

The path on the container where the volume is mounted.

Type: String

Required: No

name

The name the volume mount. This must match the name of one of the volumes in the pod.

Type: String

Required: No

readOnly

If this value is `true`, the container has read-only access to the volume. Otherwise, the container can write to the volume. The default value is `false`.

Type: Boolean

Required: No

subPath

A sub-path inside the referenced volume instead of its root.

Type: String

Required: No

See Also

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

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

EksEmptyDir

Specifies the configuration of a Kubernetes `emptyDir` volume. An `emptyDir` volume is first created when a pod is assigned to a node. It exists as long as that pod is running on that node. The `emptyDir` volume is initially empty. All containers in the pod can read and write the files in the `emptyDir` volume. However, the `emptyDir` volume can be mounted at the same or different paths in each container. When a pod is removed from a node for any reason, the data in the `emptyDir` is deleted permanently. For more information, see [emptyDir](#) in the *Kubernetes documentation*.

Contents

medium

The medium to store the volume. The default value is an empty string, which uses the storage of the node.

""

(Default) Use the disk storage of the node.

"Memory"

Use the `tmpfs` volume that's backed by the RAM of the node. Contents of the volume are lost when the node reboots, and any storage on the volume counts against the container's memory limit.

Type: String

Required: No

sizeLimit

The maximum size of the volume. By default, there's no maximum size defined.

Type: String

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

Required: No

See Also

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

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

EksHostPath

Specifies the configuration of a Kubernetes hostPath volume. A hostPath volume mounts an existing file or directory from the host node's filesystem into your pod. For more information, see [hostPath](#) in the *Kubernetes documentation*.

Contents

path

The path of the file or directory on the host to mount into containers on the pod.

Type: String

Required: No

See Also

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

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

EksMetadata

Describes and uniquely identifies Kubernetes resources. For example, the compute environment that a pod runs in or the jobID for a job running in the pod. For more information, see [Understanding Kubernetes Objects](#) in the *Kubernetes documentation*.

Contents

annotations

Key-value pairs used to attach arbitrary, non-identifying metadata to Kubernetes objects. Valid annotation keys have two segments: an optional prefix and a name, separated by a slash (/).

- The prefix is optional and must be 253 characters or less. If specified, the prefix must be a DNS subdomain– a series of DNS labels separated by dots (.), and it must end with a slash (/).
- The name segment is required and must be 63 characters or less. It can include alphanumeric characters ([a-z0-9A-Z]), dashes (-), underscores (_), and dots (.), but must begin and end with an alphanumeric character.

Note

Annotation values must be 255 characters or less.

Annotations can be added or modified at any time. Each resource can have multiple annotations.

Type: String to string map

Required: No

labels

Key-value pairs used to identify, sort, and organize kube resources. Can contain up to 63 uppercase letters, lowercase letters, numbers, hyphens (-), and underscores (_). Labels can be added or modified at any time. Each resource can have multiple labels, but each key must be unique for a given object.

Type: String to string map

Required: No

namespace

The namespace of the Amazon EKS cluster. In Kubernetes, namespaces provide a mechanism for isolating groups of resources within a single cluster. Names of resources need to be unique within a namespace, but not across namespaces. Amazon Batch places Batch Job pods in this namespace. If this field is provided, the value can't be empty or null. It must meet the following requirements:

- 1-63 characters long
- Can't be set to default
- Can't start with kube
- Must match the following regular expression: `^[a-z0-9]([-a-z0-9]*[a-z0-9])?$`

For more information, see [Namespaces](#) in the *Kubernetes documentation*. This namespace can be different from the `kubernetesNamespace` set in the compute environment's `EksConfiguration`, but must have identical role-based access control (RBAC) roles as the compute environment's `kubernetesNamespace`. For multi-node parallel jobs, the same value must be provided across all the node ranges.

Type: String

Required: No

See Also

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

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

EksPersistentVolumeClaim

A `persistentVolumeClaim` volume is used to mount a [PersistentVolume](#) into a Pod. PersistentVolumeClaims are a way for users to "claim" durable storage without knowing the details of the particular cloud environment. See the information about [PersistentVolumes](#) in the *Kubernetes documentation*.

Contents

claimName

The name of the `persistentVolumeClaim` bounded to a `persistentVolume`. For more information, see [Persistent Volume Claims](#) in the *Kubernetes documentation*.

Type: String

Required: Yes

readOnly

An optional boolean value indicating if the mount is read only. Default is false. For more information, see [Read Only Mounts](#) in the *Kubernetes documentation*.

Type: Boolean

Required: No

See Also

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

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

EksPodProperties

The properties for the pod.

Contents

containers

The properties of the container that's used on the Amazon EKS pod.

Note

This object is limited to 10 elements.

Type: Array of [EksContainer](#) objects

Required: No

dnsPolicy

The DNS policy for the pod. The default value is `ClusterFirst`. If the `hostNetwork` parameter is not specified, the default is `ClusterFirstWithHostNet`. `ClusterFirst` indicates that any DNS query that does not match the configured cluster domain suffix is forwarded to the upstream nameserver inherited from the node. For more information, see [Pod's DNS policy](#) in the *Kubernetes documentation*.

Valid values: `Default` | `ClusterFirst` | `ClusterFirstWithHostNet`

Type: String

Required: No

hostNetwork

Indicates if the pod uses the hosts' network IP address. The default value is `true`. Setting this to `false` enables the Kubernetes pod networking model. Most Amazon Batch workloads are egress-only and don't require the overhead of IP allocation for each pod for incoming connections. For more information, see [Host namespaces](#) and [Pod networking](#) in the *Kubernetes documentation*.

Type: Boolean

Required: No

imagePullSecrets

References a Kubernetes secret resource. It holds a list of secrets. These secrets help to gain access to pull an images from a private registry.

ImagePullSecret\$name is required when this object is used.

Type: Array of [ImagePullSecret](#) objects

Required: No

initContainers

These containers run before application containers, always runs to completion, and must complete successfully before the next container starts. These containers are registered with the Amazon EKS Connector agent and persists the registration information in the Kubernetes backend data store. For more information, see [Init Containers](#) in the *Kubernetes documentation*.

Note

This object is limited to 10 elements.

Type: Array of [EksContainer](#) objects

Required: No

metadata

Metadata about the Kubernetes pod. For more information, see [Understanding Kubernetes Objects](#) in the *Kubernetes documentation*.

Type: [EksMetadata](#) object

Required: No

serviceAccountName

The name of the service account that's used to run the pod. For more information, see [Kubernetes service accounts](#) and [Configure a Kubernetes service account to assume an IAM role](#) in the *Amazon EKS User Guide* and [Configure service accounts for pods](#) in the *Kubernetes documentation*.

Type: String

Required: No

shareProcessNamespace

Indicates if the processes in a container are shared, or visible, to other containers in the same pod. For more information, see [Share Process Namespace between Containers in a Pod](#).

Type: Boolean

Required: No

volumes

Specifies the volumes for a job definition that uses Amazon EKS resources.

Type: Array of [EksVolume](#) objects

Required: No

See Also

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

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

EksPodPropertiesDetail

The details for the pod.

Contents

containers

The properties of the container that's used on the Amazon EKS pod.

Type: Array of [EksContainerDetail](#) objects

Required: No

dnsPolicy

The DNS policy for the pod. The default value is `ClusterFirst`. If the `hostNetwork` parameter is not specified, the default is `ClusterFirstWithHostNet`. `ClusterFirst` indicates that any DNS query that does not match the configured cluster domain suffix is forwarded to the upstream nameserver inherited from the node. If no value was specified for `dnsPolicy` in the [RegisterJobDefinition](#) API operation, then no value will be returned for `dnsPolicy` by either of [DescribeJobDefinitions](#) or [DescribeJobs](#) API operations. The pod spec setting will contain either `ClusterFirst` or `ClusterFirstWithHostNet`, depending on the value of the `hostNetwork` parameter. For more information, see [Pod's DNS policy](#) in the *Kubernetes documentation*.

Valid values: `Default` | `ClusterFirst` | `ClusterFirstWithHostNet`

Type: String

Required: No

hostNetwork

Indicates if the pod uses the hosts' network IP address. The default value is `true`. Setting this to `false` enables the Kubernetes pod networking model. Most Amazon Batch workloads are egress-only and don't require the overhead of IP allocation for each pod for incoming connections. For more information, see [Host namespaces](#) and [Pod networking](#) in the *Kubernetes documentation*.

Type: Boolean

Required: No

imagePullSecrets

Displays the reference pointer to the Kubernetes secret resource. These secrets help to gain access to pull an images from a private registry.

Type: Array of [ImagePullSecret](#) objects

Required: No

initContainers

The container registered with the Amazon EKS Connector agent and persists the registration information in the Kubernetes backend data store.

Type: Array of [EksContainerDetail](#) objects

Required: No

metadata

Describes and uniquely identifies Kubernetes resources. For example, the compute environment that a pod runs in or the jobID for a job running in the pod. For more information, see [Understanding Kubernetes Objects](#) in the *Kubernetes documentation*.

Type: [EksMetadata](#) object

Required: No

nodeName

The name of the node for this job.

Type: String

Required: No

podName

The name of the pod for this job.

Type: String

Required: No

serviceAccountName

The name of the service account that's used to run the pod. For more information, see [Kubernetes service accounts](#) and [Configure a Kubernetes service account to assume an IAM role](#) in the *Amazon EKS User Guide* and [Configure service accounts for pods](#) in the *Kubernetes documentation*.

Type: String

Required: No

shareProcessNamespace

Indicates if the processes in a container are shared, or visible, to other containers in the same pod. For more information, see [Share Process Namespace between Containers in a Pod](#).

Type: Boolean

Required: No

volumes

Specifies the volumes for a job definition using Amazon EKS resources.

Type: Array of [EksVolume](#) objects

Required: No

See Also

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

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

EksPodPropertiesOverride

An object that contains overrides for the Kubernetes pod properties of a job.

Contents

containers

The overrides for the container that's used on the Amazon EKS pod.

Type: Array of [EksContainerOverride](#) objects

Required: No

initContainers

The overrides for the `initContainers` defined in the Amazon EKS pod. These containers run before application containers, always run to completion, and must complete successfully before the next container starts. These containers are registered with the Amazon EKS Connector agent and persists the registration information in the Kubernetes backend data store. For more information, see [Init Containers](#) in the *Kubernetes documentation*.

Type: Array of [EksContainerOverride](#) objects

Required: No

metadata

Metadata about the overrides for the container that's used on the Amazon EKS pod.

Type: [EksMetadata](#) object

Required: No

See Also

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

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

- [Amazon SDK for Ruby V3](#)

EksProperties

An object that contains the properties for the Kubernetes resources of a job.

Contents

podProperties

The properties for the Kubernetes pod resources of a job.

Type: [EksPodProperties](#) object

Required: No

See Also

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

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

EksPropertiesDetail

An object that contains the details for the Kubernetes resources of a job.

Contents

podProperties

The properties for the Kubernetes pod resources of a job.

Type: [EksPodPropertiesDetail](#) object

Required: No

See Also

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

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

EksPropertiesOverride

An object that contains overrides for the Kubernetes resources of a job.

Contents

podProperties

The overrides for the Kubernetes pod resources of a job.

Type: [EksPodPropertiesOverride](#) object

Required: No

See Also

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

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

EksSecret

Specifies the configuration of a Kubernetes secret volume. For more information, see [secret](#) in the *Kubernetes documentation*.

Contents

secretName

The name of the secret. The name must be allowed as a DNS subdomain name. For more information, see [DNS subdomain names](#) in the *Kubernetes documentation*.

Type: String

Required: Yes

optional

Specifies whether the secret or the secret's keys must be defined.

Type: Boolean

Required: No

See Also

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

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

EksVolume

Specifies an Amazon EKS volume for a job definition.

Contents

name

The name of the volume. The name must be allowed as a DNS subdomain name. For more information, see [DNS subdomain names](#) in the *Kubernetes documentation*.

Type: String

Required: Yes

emptyDir

Specifies the configuration of a Kubernetes `emptyDir` volume. For more information, see [emptyDir](#) in the *Kubernetes documentation*.

Type: [EksEmptyDir](#) object

Required: No

hostPath

Specifies the configuration of a Kubernetes `hostPath` volume. For more information, see [hostPath](#) in the *Kubernetes documentation*.

Type: [EksHostPath](#) object

Required: No

persistentVolumeClaim

Specifies the configuration of a Kubernetes `persistentVolumeClaim` bounded to a `persistentVolume`. For more information, see [Persistent Volume Claims](#) in the *Kubernetes documentation*.

Type: [EksPersistentVolumeClaim](#) object

Required: No

secret

Specifies the configuration of a Kubernetes `secret` volume. For more information, see [secret](#) in the *Kubernetes documentation*.

Type: [EksSecret](#) object

Required: No

See Also

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

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

EphemeralStorage

The amount of ephemeral storage to allocate for the task. This parameter is used to expand the total amount of ephemeral storage available, beyond the default amount, for tasks hosted on Amazon Fargate.

Contents

sizeInGiB

The total amount, in GiB, of ephemeral storage to set for the task. The minimum supported value is 21 GiB and the maximum supported value is 200 GiB.

Type: Integer

Required: Yes

See Also

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

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

EvaluateOnExit

Specifies an array of up to 5 conditions to be met, and an action to take (RETRY or EXIT) if all conditions are met. If none of the EvaluateOnExit conditions in a RetryStrategy match, then the job is retried.

Contents

action

Specifies the action to take if all of the specified conditions (onStatusReason, onReason, and onExitCode) are met. The values aren't case sensitive.

Type: String

Valid Values: RETRY | EXIT

Required: Yes

onExitCode

Contains a glob pattern to match against the decimal representation of the ExitCode returned for a job. The pattern can be up to 512 characters long. It can contain only numbers, and can end with an asterisk (*) so that only the start of the string needs to be an exact match.

The string can contain up to 512 characters.

Type: String

Required: No

onReason

Contains a glob pattern to match against the Reason returned for a job. The pattern can contain up to 512 characters. It can contain letters, numbers, periods (.), colons (:), and white space (including spaces and tabs). It can optionally end with an asterisk (*) so that only the start of the string needs to be an exact match.

Type: String

Required: No

onStatusReason

Contains a glob pattern to match against the StatusReason returned for a job. The pattern can contain up to 512 characters. It can contain letters, numbers, periods (.), colons (:), and white spaces (including spaces or tabs). It can optionally end with an asterisk (*) so that only the start of the string needs to be an exact match.

Type: String

Required: No

See Also

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

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

FairsharePolicy

The fair-share scheduling policy details.

Contents

computeReservation

A value used to reserve some of the available maximum vCPU for share identifiers that aren't already used.

The reserved ratio is $(\text{computeReservation}/100)^{\text{ActiveFairShares}}$ where *ActiveFairShares* is the number of active share identifiers.

For example, a `computeReservation` value of 50 indicates that Amazon Batch reserves 50% of the maximum available vCPU if there's only one share identifier. It reserves 25% if there are two share identifiers. It reserves 12.5% if there are three share identifiers. A `computeReservation` value of 25 indicates that Amazon Batch should reserve 25% of the maximum available vCPU if there's only one share identifier, 6.25% if there are two fair share identifiers, and 1.56% if there are three share identifiers.

The minimum value is 0 and the maximum value is 99.

Type: Integer

Required: No

shareDecaySeconds

The amount of time (in seconds) to use to calculate a fair-share percentage for each share identifier in use. A value of zero (0) indicates the default minimum time window (600 seconds). The maximum supported value is 604800 (1 week).

The decay allows for more recently run jobs to have more weight than jobs that ran earlier. Consider adjusting this number if you have jobs that (on average) run longer than ten minutes, or a large difference in job count or job run times between share identifiers, and the allocation of resources doesn't meet your needs.

Type: Integer

Required: No

shareDistribution

An array of `SharedIdentifier` objects that contain the weights for the share identifiers for the fair-share policy. Share identifiers that aren't included have a default weight of `1.0`.

Type: Array of [ShareAttributes](#) objects

Required: No

See Also

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

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

FargatePlatformConfiguration

The platform configuration for jobs that are running on Fargate resources. Jobs that run on Amazon EC2 resources must not specify this parameter.

Contents

platformVersion

The Amazon Fargate platform version where the jobs are running. A platform version is specified only for jobs that are running on Fargate resources. If one isn't specified, the LATEST platform version is used by default. This uses a recent, approved version of the Amazon Fargate platform for compute resources. For more information, see [Amazon Fargate platform versions](#) in the *Amazon Elastic Container Service Developer Guide*.

Type: String

Required: No

See Also

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

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

FireLensConfiguration

The FireLens configuration for the container. This is used to specify and configure a log router for container logs. For more information, see [Custom log](#) routing in the *Amazon Elastic Container Service Developer Guide*.

Contents

type

The log router to use. The valid values are `fluentd` or `fluentbit`.

Type: String

Valid Values: `fluentd` | `fluentbit`

Required: Yes

options

The options to use when configuring the log router. This field is optional and can be used to specify a custom configuration file or to add additional metadata, such as the task, task definition, cluster, and container instance details to the log event. If specified, the syntax to use is `"options":{"enable-ecs-log-metadata":"true|false", "config-file-type":"s3|file", "config-file-value":"arn:aws:s3:::mybucket/fluent.conf|filepath"}`. For more information, see [Creating a task definition that uses a FireLens configuration](#) in the *Amazon Elastic Container Service Developer Guide*.

Type: String to string map

Required: No

See Also

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

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

FrontOfQueueDetail

Contains a list of the first 100 RUNNABLE jobs associated to a single job queue.

Contents

jobs

The Amazon Resource Names (ARNs) of the first 100 RUNNABLE jobs in a named job queue. For first-in-first-out (FIFO) job queues, jobs are ordered based on their submission time. For fair-share scheduling (FSS) job queues, jobs are ordered based on their job priority and share usage.

Type: Array of [FrontOfQueueJobSummary](#) objects

Required: No

lastUpdatedAt

The Unix timestamp (in milliseconds) for when each of the first 100 RUNNABLE jobs were last updated.

Type: Long

Required: No

See Also

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

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

FrontOfQueueJobSummary

An object that represents summary details for the first 100 RUNNABLE jobs in a job queue.

Contents

earliestTimeAtPosition

The Unix timestamp (in milliseconds) for when the job transitioned to its current position in the job queue.

Type: Long

Required: No

jobArn

The ARN for a job in a named job queue.

Type: String

Required: No

See Also

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

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

Host

Determine whether your data volume persists on the host container instance and where it's stored. If this parameter is empty, then the Docker daemon assigns a host path for your data volume. However, the data isn't guaranteed to persist after the containers that are associated with it stop running.

Contents

sourcePath

The path on the host container instance that's presented to the container. If this parameter is empty, then the Docker daemon has assigned a host path for you. If this parameter contains a file location, then the data volume persists at the specified location on the host container instance until you delete it manually. If the source path location doesn't exist on the host container instance, the Docker daemon creates it. If the location does exist, the contents of the source path folder are exported.

Note

This parameter isn't applicable to jobs that run on Fargate resources. Don't provide this for these jobs.

Type: String

Required: No

See Also

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

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

ImagePullSecret

References a Kubernetes secret resource. This name of the secret must start and end with an alphanumeric character, is required to be lowercase, can include periods (.) and hyphens (-), and can't contain more than 253 characters.

Contents

name

Provides a unique identifier for the ImagePullSecret. This object is required when EksPodProperties\$imagePullSecrets is used.

Type: String

Required: Yes

See Also

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

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

JobDefinition

An object that represents an Amazon Batch job definition.

Contents

jobDefinitionArn

The Amazon Resource Name (ARN) for the job definition.

Type: String

Required: Yes

jobDefinitionName

The name of the job definition.

Type: String

Required: Yes

revision

The revision of the job definition.

Type: Integer

Required: Yes

type

The type of job definition. It's either `container` or `multinode`. If the job is run on Fargate resources, then `multinode` isn't supported. For more information about multi-node parallel jobs, see [Creating a multi-node parallel job definition](#) in the *Amazon Batch User Guide*.

Type: String

Required: Yes

consumableResourceProperties

Contains a list of consumable resources required by the job.

Type: [ConsumableResourceProperties](#) object

Required: No

containerOrchestrationType

The orchestration type of the compute environment. The valid values are ECS (default) or EKS.

Type: String

Valid Values: ECS | EKS

Required: No

containerProperties

An object with properties specific to Amazon ECS-based jobs. When `containerProperties` is used in the job definition, it can't be used in addition to `eksProperties`, `ecsProperties`, or `nodeProperties`.

Type: [ContainerProperties](#) object

Required: No

ecsProperties

An object that contains the properties for the Amazon ECS resources of a job. When `ecsProperties` is used in the job definition, it can't be used in addition to `containerProperties`, `eksProperties`, or `nodeProperties`.

Type: [EcsProperties](#) object

Required: No

eksProperties

An object with properties that are specific to Amazon EKS-based jobs. When `eksProperties` is used in the job definition, it can't be used in addition to `containerProperties`, `ecsProperties`, or `nodeProperties`.

Type: [EksProperties](#) object

Required: No

nodeProperties

An object with properties that are specific to multi-node parallel jobs. When `nodeProperties` is used in the job definition, it can't be used in addition to `containerProperties`, `ecsProperties`, or `eksProperties`.

Note

If the job runs on Fargate resources, don't specify `nodeProperties`. Use `containerProperties` instead.

Type: [NodeProperties](#) object

Required: No

parameters

Default parameters or parameter substitution placeholders that are set in the job definition. Parameters are specified as a key-value pair mapping. Parameters in a `SubmitJob` request override any corresponding parameter defaults from the job definition. For more information about specifying parameters, see [Job definition parameters](#) in the *Amazon Batch User Guide*.

Type: String to string map

Required: No

platformCapabilities

The platform capabilities required by the job definition. If no value is specified, it defaults to EC2. Jobs run on Fargate resources specify FARGATE.

Type: Array of strings

Valid Values: EC2 | FARGATE

Required: No

propagateTags

Specifies whether to propagate the tags from the job or job definition to the corresponding Amazon ECS task. If no value is specified, the tags aren't propagated. Tags can only be propagated to the tasks when the tasks are created. For tags with the same name, job tags are given priority over job definitions tags. If the total number of combined tags from the job and job definition is over 50, the job is moved to the FAILED state.

Type: Boolean

Required: No

retryStrategy

The retry strategy to use for failed jobs that are submitted with this job definition.

Type: [RetryStrategy](#) object

Required: No

schedulingPriority

The scheduling priority of the job definition. This only affects jobs in job queues with a fair-share policy. Jobs with a higher scheduling priority are scheduled before jobs with a lower scheduling priority.

Type: Integer

Required: No

status

The status of the job definition.

Type: String

Required: No

tags

The tags that are applied to the job definition.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Value Length Constraints: Maximum length of 256.

Required: No

timeout

The timeout time for jobs that are submitted with this job definition. After the amount of time you specify passes, Amazon Batch terminates your jobs if they aren't finished.

Type: [JobTimeout](#) object

Required: No

See Also

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

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

JobDependency

An object that represents an Amazon Batch job dependency.

Contents

jobId

The job ID of the Amazon Batch job that's associated with this dependency.

Type: String

Required: No

type

The type of the job dependency.

Type: String

Valid Values: N_TO_N | SEQUENTIAL

Required: No

See Also

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

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

JobDetail

An object that represents an Amazon Batch job.

Contents

jobDefinition

The Amazon Resource Name (ARN) of the job definition that this job uses.

Type: String

Required: Yes

jobId

The job ID.

Type: String

Required: Yes

jobName

The job name.

Type: String

Required: Yes

jobQueue

The Amazon Resource Name (ARN) of the job queue that the job is associated with.

Type: String

Required: Yes

startedAt

The Unix timestamp (in milliseconds) for when the job was started. More specifically, it's when the job transitioned from the STARTING state to the RUNNING state.

Type: Long

Required: Yes

status

The current status for the job.

Note

If your jobs don't progress to `STARTING`, see [Jobs stuck in `RUNNABLE` status](#) in the troubleshooting section of the *Amazon Batch User Guide*.

Type: String

Valid Values: `SUBMITTED` | `PENDING` | `RUNNABLE` | `STARTING` | `RUNNING` | `SUCCEEDED` | `FAILED`

Required: Yes

arrayProperties

The array properties of the job, if it's an array job.

Type: [ArrayPropertiesDetail](#) object

Required: No

attempts

A list of job attempts that are associated with this job.

Type: Array of [AttemptDetail](#) objects

Required: No

consumableResourceProperties

Contains a list of consumable resources required by the job.

Type: [ConsumableResourceProperties](#) object

Required: No

container

An object that represents the details for the container that's associated with the job. If the details are for a multiple-container job, this object will be empty.

Type: [ContainerDetail](#) object

Required: No

createdAt

The Unix timestamp (in milliseconds) for when the job was created. For non-array jobs and parent array jobs, this is when the job entered the SUBMITTED state. This is specifically at the time [SubmitJob](#) was called. For array child jobs, this is when the child job was spawned by its parent and entered the PENDING state.

Type: Long

Required: No

dependsOn

A list of job IDs that this job depends on.

Type: Array of [JobDependency](#) objects

Required: No

ecsProperties

An object with properties that are specific to Amazon ECS-based jobs.

Type: [EcsPropertiesDetail](#) object

Required: No

eksAttempts

A list of job attempts that are associated with this job.

Type: Array of [EksAttemptDetail](#) objects

Required: No

eksProperties

An object with various properties that are specific to Amazon EKS based jobs.

Type: [EksPropertiesDetail](#) object

Required: No

isCancelled

Indicates whether the job is canceled.

Type: Boolean

Required: No

isTerminated

Indicates whether the job is terminated.

Type: Boolean

Required: No

jobArn

The Amazon Resource Name (ARN) of the job.

Type: String

Required: No

nodeDetails

An object that represents the details of a node that's associated with a multi-node parallel job.

Type: [NodeDetails](#) object

Required: No

nodeProperties

An object that represents the node properties of a multi-node parallel job.

Note

This isn't applicable to jobs that are running on Fargate resources.

Type: [NodeProperties](#) object

Required: No

parameters

Additional parameters that are passed to the job that replace parameter substitution placeholders or override any corresponding parameter defaults from the job definition.

Type: String to string map

Required: No

platformCapabilities

The platform capabilities required by the job definition. If no value is specified, it defaults to EC2. Jobs run on Fargate resources specify FARGATE.

Type: Array of strings

Valid Values: EC2 | FARGATE

Required: No

propagateTags

Specifies whether to propagate the tags from the job or job definition to the corresponding Amazon ECS task. If no value is specified, the tags aren't propagated. Tags can only be propagated to the tasks when the tasks are created. For tags with the same name, job tags are given priority over job definitions tags. If the total number of combined tags from the job and job definition is over 50, the job is moved to the FAILED state.

Type: Boolean

Required: No

retryStrategy

The retry strategy to use for this job if an attempt fails.

Type: [RetryStrategy](#) object

Required: No

schedulingPriority

The scheduling policy of the job definition. This only affects jobs in job queues with a fair-share policy. Jobs with a higher scheduling priority are scheduled before jobs with a lower scheduling priority.

Type: Integer

Required: No

shareIdentifier

The share identifier for the job.

Type: String

Required: No

statusReason

A short, human-readable string to provide more details for the current status of the job.

- `CAPACITY:INSUFFICIENT_INSTANCE_CAPACITY` - All compute environments have insufficient capacity to service the job.
- `MISCONFIGURATION:COMPUTE_ENVIRONMENT_MAX_RESOURCE` - All compute environments have a `maxVcpu` setting that is smaller than the job requirements.
- `MISCONFIGURATION:JOB_RESOURCE_REQUIREMENT` - All compute environments have no connected instances that meet the job requirements.
- `MISCONFIGURATION:SERVICE_ROLE_PERMISSIONS` - All compute environments have problems with the service role permissions.

Type: String

Required: No

stoppedAt

The Unix timestamp (in milliseconds) for when the job was stopped. More specifically, it's when the job transitioned from the `RUNNING` state to a terminal state, such as `SUCCEEDED` or `FAILED`.

Type: Long

Required: No

tags

The tags that are applied to the job.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Value Length Constraints: Maximum length of 256.

Required: No

timeout

The timeout configuration for the job.

Type: [JobTimeout](#) object

Required: No

See Also

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

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

JobQueueDetail

An object that represents the details for an Amazon Batch job queue.

Contents

computeEnvironmentOrder

The compute environments that are attached to the job queue and the order that job placement is preferred. Compute environments are selected for job placement in ascending order.

Type: Array of [ComputeEnvironmentOrder](#) objects

Required: Yes

jobQueueArn

The Amazon Resource Name (ARN) of the job queue.

Type: String

Required: Yes

jobQueueName

The job queue name.

Type: String

Required: Yes

priority

The priority of the job queue. Job queue priority determines the order that job queues are evaluated when multiple queues dispatch jobs within a shared compute environment. A higher value for `priority` indicates a higher priority. Queues are evaluated in cycles, in descending order by priority. For example, a job queue with a priority value of 10 is evaluated before a queue with a priority value of 1. All of the compute environments must be either Amazon EC2 (EC2 or SPOT) or Fargate (FARGATE or FARGATE_SPOT). Amazon EC2 and Fargate compute environments can't be mixed.

Note

Job queue priority doesn't guarantee that a particular job executes before a job in a lower priority queue. Jobs added to higher priority queues during the queue evaluation cycle might not be evaluated until the next cycle. A job is dispatched from a queue only if resources are available when the queue is evaluated. If there are insufficient resources available at that time, the cycle proceeds to the next queue. This means that jobs added to higher priority queues might have to wait for jobs in multiple lower priority queues to complete before they are dispatched. You can use job dependencies to control the order for jobs from queues with different priorities. For more information, see [Job Dependencies](#) in the *Amazon Batch User Guide*.

Type: Integer

Required: Yes

state

Describes the ability of the queue to accept new jobs. If the job queue state is `ENABLED`, it can accept jobs. If the job queue state is `DISABLED`, new jobs can't be added to the queue, but jobs already in the queue can finish.

Type: String

Valid Values: `ENABLED` | `DISABLED`

Required: Yes

jobStateTimeLimitActions

The set of actions that Amazon Batch perform on jobs that remain at the head of the job queue in the specified state longer than specified times. Amazon Batch will perform each action after `maxTimeSeconds` has passed.

Type: Array of [JobStateTimeLimitAction](#) objects

Required: No

schedulingPolicyArn

The Amazon Resource Name (ARN) of the scheduling policy. The format is `aws:Partition:batch:Region:Account:scheduling-policy/Name` . For

example, `aws:aws:batch:us-west-2:123456789012:scheduling-policy/MySchedulingPolicy`.

Type: String

Required: No

status

The status of the job queue (for example, CREATING or VALID).

Type: String

Valid Values: CREATING | UPDATING | DELETING | DELETED | VALID | INVALID

Required: No

statusReason

A short, human-readable string to provide additional details for the current status of the job queue.

Type: String

Required: No

tags

The tags that are applied to the job queue. For more information, see [Tagging your Amazon Batch resources](#) in *Amazon Batch User Guide*.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Value Length Constraints: Maximum length of 256.

Required: No

See Also

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

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

JobStateTimeLimitAction

Specifies an action that Amazon Batch will take after the job has remained at the head of the queue in the specified state for longer than the specified time.

Contents

action

The action to take when a job is at the head of the job queue in the specified state for the specified period of time. The only supported value is CANCEL, which will cancel the job.

Type: String

Valid Values: CANCEL

Required: Yes

maxTimeSeconds

The approximate amount of time, in seconds, that must pass with the job in the specified state before the action is taken. The minimum value is 600 (10 minutes) and the maximum value is 86,400 (24 hours).

Type: Integer

Required: Yes

reason

The reason to log for the action being taken.

Type: String

Required: Yes

state

The state of the job needed to trigger the action. The only supported value is RUNNABLE.

Type: String

Valid Values: RUNNABLE

Required: Yes

See Also

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

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

JobSummary

An object that represents summary details of a job.

Contents

jobId

The job ID.

Type: String

Required: Yes

jobName

The job name.

Type: String

Required: Yes

arrayProperties

The array properties of the job, if it's an array job.

Type: [ArrayPropertiesSummary](#) object

Required: No

container

An object that represents the details of the container that's associated with the job.

Type: [ContainerSummary](#) object

Required: No

createdAt

The Unix timestamp (in milliseconds) for when the job was created. For non-array jobs and parent array jobs, this is when the job entered the SUBMITTED state (at the time [SubmitJob](#) was called). For array child jobs, this is when the child job was spawned by its parent and entered the PENDING state.

Type: Long

Required: No

jobArn

The Amazon Resource Name (ARN) of the job.

Type: String

Required: No

jobDefinition

The Amazon Resource Name (ARN) of the job definition.

Type: String

Required: No

nodeProperties

The node properties for a single node in a job summary list.

Note

This isn't applicable to jobs that are running on Fargate resources.

Type: [NodePropertiesSummary](#) object

Required: No

startedAt

The Unix timestamp for when the job was started. More specifically, it's when the job transitioned from the STARTING state to the RUNNING state.

Type: Long

Required: No

status

The current status for the job.

Type: String

Valid Values: SUBMITTED | PENDING | RUNNABLE | STARTING | RUNNING | SUCCEEDED | FAILED

Required: No

statusReason

A short, human-readable string to provide more details for the current status of the job.

Type: String

Required: No

stoppedAt

The Unix timestamp for when the job was stopped. More specifically, it's when the job transitioned from the RUNNING state to a terminal state, such as SUCCEEDED or FAILED.

Type: Long

Required: No

See Also

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

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

JobTimeout

An object that represents a job timeout configuration.

Contents

attemptDurationSeconds

The job timeout time (in seconds) that's measured from the job attempt's `startedAt` timestamp. After this time passes, Amazon Batch terminates your jobs if they aren't finished. The minimum value for the timeout is 60 seconds.

For array jobs, the timeout applies to the child jobs, not to the parent array job.

For multi-node parallel (MNP) jobs, the timeout applies to the whole job, not to the individual nodes.

Type: Integer

Required: No

See Also

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

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

KeyValuePair

A key-value pair object.

Contents

name

The name of the key-value pair. For environment variables, this is the name of the environment variable.

Type: String

Required: No

value

The value of the key-value pair. For environment variables, this is the value of the environment variable.

Type: String

Required: No

See Also

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

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

KeyValuesPair

A filter name and value pair that's used to return a more specific list of results from a `ListJobs` or `ListJobsByConsumableResource` API operation.

The filters supported are documented in the `ListJobs` API operation.

Contents

name

The name of the filter. Filter names are case sensitive.

Type: String

Required: No

values

The filter values.

Type: Array of strings

Required: No

See Also

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

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

LaunchTemplateSpecification

An object that represents a launch template that's associated with a compute resource. You must specify either the launch template ID or launch template name in the request, but not both.

If security groups are specified using both the `securityGroupIds` parameter of `CreateComputeEnvironment` and the launch template, the values in the `securityGroupIds` parameter of `CreateComputeEnvironment` will be used.

Note

This object isn't applicable to jobs that are running on Fargate resources.

Contents

launchTemplateId

The ID of the launch template.

Type: String

Required: No

launchTemplateName

The name of the launch template.

Type: String

Required: No

overrides

A launch template to use in place of the default launch template. You must specify either the launch template ID or launch template name in the request, but not both.

You can specify up to ten (10) launch template overrides that are associated to unique instance types or families for each compute environment.

Note

To unset all override templates for a compute environment, you can pass an empty array to the [UpdateComputeEnvironment.overrides](#) parameter, or not include the `overrides` parameter when submitting the `UpdateComputeEnvironment` API operation.

Type: Array of [LaunchTemplateSpecificationOverride](#) objects

Required: No

userDataType

The EKS node initialization process to use. You only need to specify this value if you are using a custom AMI. The default value is `EKS_BOOTSTRAP_SH`. If *imageType* is a custom AMI based on `EKS_AL2023` or `EKS_AL2023_NVIDIA` then you must choose `EKS_NODEADM`.

Type: String

Valid Values: `EKS_BOOTSTRAP_SH` | `EKS_NODEADM`

Required: No

version

The version number of the launch template, `$Default`, or `$Latest`.

If the value is `$Default`, the default version of the launch template is used. If the value is `$Latest`, the latest version of the launch template is used.

Important

If the AMI ID that's used in a compute environment is from the launch template, the AMI isn't changed when the compute environment is updated. It's only changed if the `updateToLatestImageVersion` parameter for the compute environment is set to `true`. During an infrastructure update, if either `$Default` or `$Latest` is specified, Amazon Batch re-evaluates the launch template version, and it might use a different version of the launch template. This is the case even if the launch template isn't specified in the update. When updating a compute environment, changing the launch

template requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Default: `$Default`

Latest: `$Latest`

Type: String

Required: No

See Also

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

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

LaunchTemplateSpecificationOverride

An object that represents a launch template to use in place of the default launch template. You must specify either the launch template ID or launch template name in the request, but not both.

If security groups are specified using both the `securityGroupIds` parameter of `CreateComputeEnvironment` and the launch template, the values in the `securityGroupIds` parameter of `CreateComputeEnvironment` will be used.

You can define up to ten (10) overrides for each compute environment.

Note

This object isn't applicable to jobs that are running on Fargate resources.

Note

To unset all override templates for a compute environment, you can pass an empty array to the [UpdateComputeEnvironment.overrides](#) parameter, or not include the `overrides` parameter when submitting the `UpdateComputeEnvironment` API operation.

Contents

launchTemplateId

The ID of the launch template.

Note: If you specify the `launchTemplateId` you can't specify the `launchTemplateName` as well.

Type: String

Required: No

launchTemplateName

The name of the launch template.

Note: If you specify the `launchTemplateName` you can't specify the `launchTemplateId` as well.

Type: String

Required: No

targetInstanceTypes

The instance type or family that this override launch template should be applied to.

This parameter is required when defining a launch template override.

Information included in this parameter must meet the following requirements:

- Must be a valid Amazon EC2 instance type or family.
- `optimal` isn't allowed.
- `targetInstanceTypes` can target only instance types and families that are included within the [ComputeResource.instanceTypes](#) set. `targetInstanceTypes` doesn't need to include all of the instances from the `instanceType` set, but at least a subset. For example, if `ComputeResource.instanceTypes` includes `[m5, g5]`, `targetInstanceTypes` can include `[m5.2xlarge]` and `[m5.large]` but not `[c5.large]`.
- `targetInstanceTypes` included within the same launch template override or across launch template overrides can't overlap for the same compute environment. For example, you can't define one launch template override to target an instance family and another define an instance type within this same family.

Type: Array of strings

Required: No

userDataType

The EKS node initialization process to use. You only need to specify this value if you are using a custom AMI. The default value is `EKS_BOOTSTRAP_SH`. If `imageType` is a custom AMI based on `EKS_AL2023` or `EKS_AL2023_NVIDIA` then you must choose `EKS_NODEADM`.

Type: String

Valid Values: `EKS_BOOTSTRAP_SH` | `EKS_NODEADM`

Required: No

version

The version number of the launch template, `$Default`, or `$Latest`.

If the value is `$Default`, the default version of the launch template is used. If the value is `$Latest`, the latest version of the launch template is used.

Important

If the AMI ID that's used in a compute environment is from the launch template, the AMI isn't changed when the compute environment is updated. It's only changed if the `updateToLatestImageVersion` parameter for the compute environment is set to `true`. During an infrastructure update, if either `$Default` or `$Latest` is specified, Amazon Batch re-evaluates the launch template version, and it might use a different version of the launch template. This is the case even if the launch template isn't specified in the update. When updating a compute environment, changing the launch template requires an infrastructure update of the compute environment. For more information, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Default: `$Default`

Latest: `$Latest`

Type: String

Required: No

See Also

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

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

LinuxParameters

Linux-specific modifications that are applied to the container, such as details for device mappings.

Contents

devices

Any of the host devices to expose to the container. This parameter maps to `Devices` in the [Create a container](#) section of the [Docker Remote API](#) and the `--device` option to [docker run](#).

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't provide it for these jobs.

Type: Array of [Device](#) objects

Required: No

initProcessEnabled

If true, run an `init` process inside the container that forwards signals and reaps processes. This parameter maps to the `--init` option to [docker run](#). This parameter requires version 1.25 of the Docker Remote API or greater on your container instance. To check the Docker Remote API version on your container instance, log in to your container instance and run the following command: `sudo docker version | grep "Server API version"`

Type: Boolean

Required: No

maxSwap

The total amount of swap memory (in MiB) a container can use. This parameter is translated to the `--memory-swap` option to [docker run](#) where the value is the sum of the container memory plus the `maxSwap` value. For more information, see [--memory-swap details](#) in the Docker documentation.

If a `maxSwap` value of `0` is specified, the container doesn't use swap. Accepted values are `0` or any positive integer. If the `maxSwap` parameter is omitted, the container doesn't use the swap

configuration for the container instance on which it runs. A `maxSwap` value must be set for the `swappiness` parameter to be used.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't provide it for these jobs.

Type: Integer

Required: No

sharedMemorySize

The value for the size (in MiB) of the `/dev/shm` volume. This parameter maps to the `--shm-size` option to [docker run](#).

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't provide it for these jobs.

Type: Integer

Required: No

swappiness

You can use this parameter to tune a container's memory swappiness behavior. A `swappiness` value of `0` causes swapping to not occur unless absolutely necessary. A `swappiness` value of `100` causes pages to be swapped aggressively. Valid values are whole numbers between `0` and `100`. If the `swappiness` parameter isn't specified, a default value of `60` is used. If a value isn't specified for `maxSwap`, then this parameter is ignored. If `maxSwap` is set to `0`, the container doesn't use swap. This parameter maps to the `--memory-swappiness` option to [docker run](#).

Consider the following when you use a per-container swap configuration.

- Swap space must be enabled and allocated on the container instance for the containers to use.

Note

By default, the Amazon ECS optimized AMIs don't have swap enabled. You must enable swap on the instance to use this feature. For more information, see [Instance store swap volumes](#) in the *Amazon EC2 User Guide for Linux Instances* or [How do I allocate memory to work as swap space in an Amazon EC2 instance by using a swap file?](#)

- The swap space parameters are only supported for job definitions using EC2 resources.
- If the `maxSwap` and `swappiness` parameters are omitted from a job definition, each container has a default `swappiness` value of 60. Moreover, the total swap usage is limited to two times the memory reservation of the container.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't provide it for these jobs.

Type: Integer

Required: No

tmpfs

The container path, mount options, and size (in MiB) of the `tmpfs` mount. This parameter maps to the `--tmpfs` option to [docker run](#).

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't provide this parameter for this resource type.

Type: Array of [Tmpfs](#) objects

Required: No

See Also

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

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

ListJobsByConsumableResourceSummary

Current information about a consumable resource required by a job.

Contents

consumableResourceProperties

Contains a list of consumable resources required by the job.

Type: [ConsumableResourceProperties](#) object

Required: Yes

createdAt

The Unix timestamp (in milliseconds) for when the consumable resource was created.

Type: Long

Required: Yes

jobArn

The Amazon Resource Name (ARN) of the job.

Type: String

Required: Yes

jobName

The name of the job.

Type: String

Required: Yes

jobQueueArn

The Amazon Resource Name (ARN) of the job queue.

Type: String

Required: Yes

jobStatus

The status of the job. Can be one of:

- SUBMITTED
- PENDING
- RUNNABLE
- STARTING
- RUNNING
- SUCCEEDED
- FAILED

Type: String

Required: Yes

quantity

The total amount of the consumable resource that is available.

Type: Long

Required: Yes

jobDefinitionArn

The Amazon Resource Name (ARN) of the job definition.

Type: String

Required: No

shareIdentifier

The fair-share scheduling policy identifier for the job.

Type: String

Required: No

startedAt

The Unix timestamp for when the job was started. More specifically, it's when the job transitioned from the STARTING state to the RUNNING state.

Type: Long

Required: No

statusReason

A short, human-readable string to provide more details for the current status of the job.

Type: String

Required: No

See Also

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

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

LogConfiguration

Log configuration options to send to a custom log driver for the container.

Contents

logDriver

The log driver to use for the container. The valid values that are listed for this parameter are log drivers that the Amazon ECS container agent can communicate with by default.

The supported log drivers are `awslogs`, `fluentd`, `gelf`, `json-file`, `journald`, `logentries`, `syslog`, and `splunk`.

Note

Jobs that are running on Fargate resources are restricted to the `awslogs` and `splunk` log drivers.

awsfirelens

Specifies the firelens logging driver. For more information on configuring Firelens, see [Send Amazon ECS logs to an Amazon service or Amazon Partner](#) in the *Amazon Elastic Container Service Developer Guide*.

awslogs

Specifies the Amazon CloudWatch Logs logging driver. For more information, see [Using the awslogs log driver](#) in the *Amazon Batch User Guide* and [Amazon CloudWatch Logs logging driver](#) in the Docker documentation.

fluentd

Specifies the Fluentd logging driver. For more information including usage and options, see [Fluentd logging driver](#) in the *Docker documentation*.

gelf

Specifies the Graylog Extended Format (GELF) logging driver. For more information including usage and options, see [Graylog Extended Format logging driver](#) in the *Docker documentation*.

journald

Specifies the journald logging driver. For more information including usage and options, see [Journald logging driver](#) in the *Docker documentation*.

json-file

Specifies the JSON file logging driver. For more information including usage and options, see [JSON File logging driver](#) in the *Docker documentation*.

splunk

Specifies the Splunk logging driver. For more information including usage and options, see [Splunk logging driver](#) in the *Docker documentation*.

syslog

Specifies the syslog logging driver. For more information including usage and options, see [Syslog logging driver](#) in the *Docker documentation*.

Note

If you have a custom driver that's not listed earlier that you want to work with the Amazon ECS container agent, you can fork the Amazon ECS container agent project that's [available on GitHub](#) and customize it to work with that driver. We encourage you to submit pull requests for changes that you want to have included. However, Amazon Web Services doesn't currently support running modified copies of this software.

This parameter requires version 1.18 of the Docker Remote API or greater on your container instance. To check the Docker Remote API version on your container instance, log in to your container instance and run the following command: `sudo docker version | grep "Server API version"`

Type: String

Valid Values: `json-file | syslog | journald | gelf | fluentd | awslogs | splunk | awsfirelens`

Required: Yes

options

The configuration options to send to the log driver. This parameter requires version 1.19 of the Docker Remote API or greater on your container instance. To check the Docker Remote API version on your container instance, log in to your container instance and run the following command: `sudo docker version | grep "Server API version"`

Type: String to string map

Required: No

secretOptions

The secrets to pass to the log configuration. For more information, see [Specifying sensitive data](#) in the *Amazon Batch User Guide*.

Type: Array of [Secret](#) objects

Required: No

See Also

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

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

MountPoint

Details for a Docker volume mount point that's used in a job's container properties. This parameter maps to `Volumes` in the [Create a container](#) section of the *Docker Remote API* and the `--volume` option to `docker run`.

Contents

containerPath

The path on the container where the host volume is mounted.

Type: String

Required: No

readOnly

If this value is `true`, the container has read-only access to the volume. Otherwise, the container can write to the volume. The default value is `false`.

Type: Boolean

Required: No

sourceVolume

The name of the volume to mount.

Type: String

Required: No

See Also

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

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

NetworkConfiguration

The network configuration for jobs that are running on Fargate resources. Jobs that are running on Amazon EC2 resources must not specify this parameter.

Contents

assignPublicIp

Indicates whether the job has a public IP address. For a job that's running on Fargate resources in a private subnet to send outbound traffic to the internet (for example, to pull container images), the private subnet requires a NAT gateway be attached to route requests to the internet. For more information, see [Amazon ECS task networking](#) in the *Amazon Elastic Container Service Developer Guide*. The default value is "DISABLED".

Type: String

Valid Values: ENABLED | DISABLED

Required: No

See Also

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

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

NetworkInterface

An object that represents the elastic network interface for a multi-node parallel job node.

Contents

attachmentId

The attachment ID for the network interface.

Type: String

Required: No

ipv6Address

The private IPv6 address for the network interface.

Type: String

Required: No

privateIpv4Address

The private IPv4 address for the network interface.

Type: String

Required: No

See Also

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

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

NodeDetails

An object that represents the details of a multi-node parallel job node.

Contents

isMainNode

Specifies whether the current node is the main node for a multi-node parallel job.

Type: Boolean

Required: No

nodeIndex

The node index for the node. Node index numbering starts at zero. This index is also available on the node with the `AWS_BATCH_JOB_NODE_INDEX` environment variable.

Type: Integer

Required: No

See Also

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

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

NodeOverrides

An object that represents any node overrides to a job definition that's used in a [SubmitJob](#) API operation.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. Don't provide it for these jobs. Rather, use `containerOverrides` instead.

Contents

nodePropertyOverrides

The node property overrides for the job.

Type: Array of [NodePropertyOverride](#) objects

Required: No

numNodes

The number of nodes to use with a multi-node parallel job. This value overrides the number of nodes that are specified in the job definition. To use this override, you must meet the following conditions:

- There must be at least one node range in your job definition that has an open upper boundary, such as `:` or `n:`.
- The lower boundary of the node range that's specified in the job definition must be fewer than the number of nodes specified in the override.
- The main node index that's specified in the job definition must be fewer than the number of nodes specified in the override.

Type: Integer

Required: No

See Also

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

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

NodeProperties

An object that represents the node properties of a multi-node parallel job.

Note

Node properties can't be specified for Amazon EKS based job definitions.

Contents

mainNode

Specifies the node index for the main node of a multi-node parallel job. This node index value must be fewer than the number of nodes.

Type: Integer

Required: Yes

nodeRangeProperties

A list of node ranges and their properties that are associated with a multi-node parallel job.

Type: Array of [NodeRangeProperty](#) objects

Required: Yes

numNodes

The number of nodes that are associated with a multi-node parallel job.

Type: Integer

Required: Yes

See Also

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

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

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

NodePropertiesSummary

An object that represents the properties of a node that's associated with a multi-node parallel job.

Contents

isMainNode

Specifies whether the current node is the main node for a multi-node parallel job.

Type: Boolean

Required: No

nodeIndex

The node index for the node. Node index numbering begins at zero. This index is also available on the node with the `AWS_BATCH_JOB_NODE_INDEX` environment variable.

Type: Integer

Required: No

numNodes

The number of nodes that are associated with a multi-node parallel job.

Type: Integer

Required: No

See Also

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

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

NodePropertyOverride

The object that represents any node overrides to a job definition that's used in a [SubmitJob](#) API operation.

Contents

targetNodes

The range of nodes, using node index values, that's used to override. A range of `0:3` indicates nodes with index values of `0` through `3`. If the starting range value is omitted (`:n`), then `0` is used to start the range. If the ending range value is omitted (`n:`), then the highest possible node index is used to end the range.

Type: String

Required: Yes

consumableResourcePropertiesOverride

An object that contains overrides for the consumable resources of a job.

Type: [ConsumableResourceProperties](#) object

Required: No

containerOverrides

The overrides that are sent to a node range.

Type: [ContainerOverrides](#) object

Required: No

ecsPropertiesOverride

An object that contains the properties that you want to replace for the existing Amazon ECS resources of a job.

Type: [EcsPropertiesOverride](#) object

Required: No

eksPropertiesOverride

An object that contains the properties that you want to replace for the existing Amazon EKS resources of a job.

Type: [EksPropertiesOverride](#) object

Required: No

instanceTypes

An object that contains the instance types that you want to replace for the existing resources of a job.

Type: Array of strings

Required: No

See Also

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

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

NodeRangeProperty

This is an object that represents the properties of the node range for a multi-node parallel job.

Contents

targetNodes

The range of nodes, using node index values. A range of `0:3` indicates nodes with index values of `0` through `3`. If the starting range value is omitted (`:n`), then `0` is used to start the range. If the ending range value is omitted (`n:`), then the highest possible node index is used to end the range. Your accumulative node ranges must account for all nodes (`0:n`). You can nest node ranges (for example, `0:10` and `4:5`). In this case, the `4:5` range properties override the `0:10` properties.

Type: String

Required: Yes

consumableResourceProperties

Contains a list of consumable resources required by a job.

Type: [ConsumableResourceProperties](#) object

Required: No

container

The container details for the node range.

Type: [ContainerProperties](#) object

Required: No

ecsProperties

This is an object that represents the properties of the node range for a multi-node parallel job.

Type: [EcsProperties](#) object

Required: No

eksProperties

This is an object that represents the properties of the node range for a multi-node parallel job.

Type: [EksProperties](#) object

Required: No

instanceTypes

The instance types of the underlying host infrastructure of a multi-node parallel job.

Note

This parameter isn't applicable to jobs that are running on Fargate resources. In addition, this list object is currently limited to one element.

Type: Array of strings

Required: No

See Also

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

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

RepositoryCredentials

The repository credentials for private registry authentication.

Contents

credentialsParameter

The Amazon Resource Name (ARN) of the secret containing the private repository credentials.

Type: String

Required: Yes

See Also

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

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

ResourceRequirement

The type and amount of a resource to assign to a container. The supported resources include GPU, MEMORY, and VCPU.

Contents

type

The type of resource to assign to a container. The supported resources include GPU, MEMORY, and VCPU.

Type: String

Valid Values: GPU | VCPU | MEMORY

Required: Yes

value

The quantity of the specified resource to reserve for the container. The values vary based on the type specified.

type="GPU"

The number of physical GPUs to reserve for the container. Make sure that the number of GPUs reserved for all containers in a job doesn't exceed the number of available GPUs on the compute resource that the job is launched on.

Note

GPUs aren't available for jobs that are running on Fargate resources.

type="MEMORY"

The memory hard limit (in MiB) present to the container. This parameter is supported for jobs that are running on Amazon EC2 resources. If your container attempts to exceed the memory specified, the container is terminated. This parameter maps to `Memory` in the [Create a container](#) section of the [Docker Remote API](#) and the `--memory` option to [docker run](#). You must specify at least 4 MiB of memory for a job. This is required but can be

specified in several places for multi-node parallel (MNP) jobs. It must be specified for each node at least once. This parameter maps to Memory in the [Create a container](#) section of the [Docker Remote API](#) and the `--memory` option to [docker run](#).

 **Note**

If you're trying to maximize your resource utilization by providing your jobs as much memory as possible for a particular instance type, see [Memory management](#) in the *Amazon Batch User Guide*.

For jobs that are running on Fargate resources, then `value` is the hard limit (in MiB), and must match one of the supported values and the VCPU values must be one of the values supported for that memory value.

`value` = 512

VCPU = 0.25

`value` = 1024

VCPU = 0.25 or 0.5

`value` = 2048

VCPU = 0.25, 0.5, or 1

`value` = 3072

VCPU = 0.5, or 1

`value` = 4096

VCPU = 0.5, 1, or 2

`value` = 5120, 6144, or 7168

VCPU = 1 or 2

`value` = 8192

VCPU = 1, 2, or 4

`value` = 9216, 10240, 11264, 12288, 13312, 14336, or 15360

VCPU = 2 or 4

value = 16384

VCPU = 2, 4, or 8

value = 17408, 18432, 19456, 21504, 22528, 23552, 25600, 26624, 27648, 29696, or 30720

VCPU = 4

value = 20480, 24576, or 28672

VCPU = 4 or 8

value = 36864, 45056, 53248, or 61440

VCPU = 8

value = 32768, 40960, 49152, or 57344

VCPU = 8 or 16

value = 65536, 73728, 81920, 90112, 98304, 106496, 114688, or 122880

VCPU = 16

type="VCPU"

The number of vCPUs reserved for the container. This parameter maps to `CpuShares` in the [Create a container](#) section of the [Docker Remote API](#) and the `--cpu-shares` option to [docker run](#). Each vCPU is equivalent to 1,024 CPU shares. For Amazon EC2 resources, you must specify at least one vCPU. This is required but can be specified in several places; it must be specified for each node at least once.

The default for the Fargate On-Demand vCPU resource count quota is 6 vCPUs. For more information about Fargate quotas, see [Amazon Fargate quotas](#) in the *Amazon General Reference*.

For jobs that are running on Fargate resources, then `value` must match one of the supported values and the `MEMORY` values must be one of the values supported for that VCPU value. The supported values are 0.25, 0.5, 1, 2, 4, 8, and 16

value = 0.25

MEMORY = 512, 1024, or 2048

value = 0.5

MEMORY = 1024, 2048, 3072, or 4096

value = 1

MEMORY = 2048, 3072, 4096, 5120, 6144, 7168, or 8192

value = 2

MEMORY = 4096, 5120, 6144, 7168, 8192, 9216, 10240, 11264, 12288, 13312, 14336, 15360, or 16384

value = 4

MEMORY = 8192, 9216, 10240, 11264, 12288, 13312, 14336, 15360, 16384, 17408, 18432, 19456, 20480, 21504, 22528, 23552, 24576, 25600, 26624, 27648, 28672, 29696, or 30720

value = 8

MEMORY = 16384, 20480, 24576, 28672, 32768, 36864, 40960, 45056, 49152, 53248, 57344, or 61440

value = 16

MEMORY = 32768, 40960, 49152, 57344, 65536, 73728, 81920, 90112, 98304, 106496, 114688, or 122880

Type: String

Required: Yes

See Also

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

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

RetryStrategy

The retry strategy that's associated with a job. For more information, see [Automated job retries](#) in the *Amazon Batch User Guide*.

Contents

attempts

The number of times to move a job to the RUNNABLE status. You can specify between 1 and 10 attempts. If the value of attempts is greater than one, the job is retried on failure the same number of attempts as the value.

Type: Integer

Required: No

evaluateOnExit

Array of up to 5 objects that specify the conditions where jobs are retried or failed. If this parameter is specified, then the attempts parameter must also be specified. If none of the listed conditions match, then the job is retried.

Type: Array of [EvaluateOnExit](#) objects

Required: No

See Also

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

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

RuntimePlatform

An object that represents the compute environment architecture for Amazon Batch jobs on Fargate.

Contents

cpuArchitecture

The vCPU architecture. The default value is X86_64. Valid values are X86_64 and ARM64.

Note

This parameter must be set to X86_64 for Windows containers.

Note

Fargate Spot is not supported for ARM64 and Windows-based containers on Fargate. A job queue will be blocked if a Fargate ARM64 or Windows job is submitted to a job queue with only Fargate Spot compute environments. However, you can attach both FARGATE and FARGATE_SPOT compute environments to the same job queue.

Type: String

Required: No

operatingSystemFamily

The operating system for the compute environment. Valid values are: LINUX (default), WINDOWS_SERVER_2019_CORE, WINDOWS_SERVER_2019_FULL, WINDOWS_SERVER_2022_CORE, and WINDOWS_SERVER_2022_FULL.

Note

The following parameters can't be set for Windows containers: `linuxParameters`, `privileged`, `user`, `ulimits`, `readonlyRootFilesystem`, and `efsVolumeConfiguration`.

Note

The Amazon Batch Scheduler checks the compute environments that are attached to the job queue before registering a task definition with Fargate. In this scenario, the job queue is where the job is submitted. If the job requires a Windows container and the first compute environment is LINUX, the compute environment is skipped and the next compute environment is checked until a Windows-based compute environment is found.

Note

Fargate Spot is not supported for ARM64 and Windows-based containers on Fargate. A job queue will be blocked if a Fargate ARM64 or Windows job is submitted to a job queue with only Fargate Spot compute environments. However, you can attach both FARGATE and FARGATE_SPOT compute environments to the same job queue.

Type: String

Required: No

See Also

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

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

SchedulingPolicyDetail

An object that represents a scheduling policy.

Contents

arn

The Amazon Resource Name (ARN) of the scheduling policy. An example is

`arn:aws:batch:us-east-1:123456789012:scheduling-policy/HighPriority` .

Type: String

Required: Yes

name

The name of the fair-share scheduling policy.

Type: String

Required: Yes

fairsharePolicy

The fair-share scheduling policy details.

Type: [FairsharePolicy](#) object

Required: No

tags

The tags that you apply to the fair-share scheduling policy to categorize and organize your resources. Each tag consists of a key and an optional value. For more information, see [Tagging Amazon resources](#) in *Amazon General Reference*.

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Value Length Constraints: Maximum length of 256.

Required: No

See Also

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

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

SchedulingPolicyListingDetail

An object that contains the details of a scheduling policy that's returned in a `ListSchedulingPolicy` action.

Contents

arn

Amazon Resource Name (ARN) of the scheduling policy.

Type: String

Required: Yes

See Also

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

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

Secret

An object that represents the secret to expose to your container. Secrets can be exposed to a container in the following ways:

- To inject sensitive data into your containers as environment variables, use the `secrets` container definition parameter.
- To reference sensitive information in the log configuration of a container, use the `secretOptions` container definition parameter.

For more information, see [Specifying sensitive data](#) in the *Amazon Batch User Guide*.

Contents

name

The name of the secret.

Type: String

Required: Yes

valueFrom

The secret to expose to the container. The supported values are either the full Amazon Resource Name (ARN) of the Amazon Secrets Manager secret or the full ARN of the parameter in the Amazon Systems Manager Parameter Store.

Note

If the Amazon Systems Manager Parameter Store parameter exists in the same Region as the job you're launching, then you can use either the full Amazon Resource Name (ARN) or name of the parameter. If the parameter exists in a different Region, then the full ARN must be specified.

Type: String

Required: Yes

See Also

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

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

ShareAttributes

Specifies the weights for the share identifiers for the fair-share policy. Share identifiers that aren't included have a default weight of 1.0.

Contents

shareIdentifier

A share identifier or share identifier prefix. If the string ends with an asterisk (*), this entry specifies the weight factor to use for share identifiers that start with that prefix. The list of share identifiers in a fair-share policy can't overlap. For example, you can't have one that specifies a shareIdentifier of UserA* and another that specifies a shareIdentifier of UserA-1.

There can be no more than 500 share identifiers active in a job queue.

The string is limited to 255 alphanumeric characters, and can be followed by an asterisk (*).

Type: String

Required: Yes

weightFactor

The weight factor for the share identifier. The default value is 1.0. A lower value has a higher priority for compute resources. For example, jobs that use a share identifier with a weight factor of 0.125 (1/8) get 8 times the compute resources of jobs that use a share identifier with a weight factor of 1.

The smallest supported value is 0.0001, and the largest supported value is 999.9999.

Type: Float

Required: No

See Also

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

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

TaskContainerDependency

A list of containers that this task depends on.

Contents

condition

The dependency condition of the container. The following are the available conditions and their behavior:

- **START** - This condition emulates the behavior of links and volumes today. It validates that a dependent container is started before permitting other containers to start.
- **COMPLETE** - This condition validates that a dependent container runs to completion (exits) before permitting other containers to start. This can be useful for nonessential containers that run a script and then exit. This condition can't be set on an essential container.
- **SUCCESS** - This condition is the same as **COMPLETE**, but it also requires that the container exits with a zero status. This condition can't be set on an essential container.

Type: String

Required: No

containerName

A unique identifier for the container.

Type: String

Required: No

See Also

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

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

TaskContainerDetails

The details for the container in this task attempt.

Contents

command

The command that's passed to the container. This parameter maps to `Cmd` in the [Create a container](#) section of the [Docker Remote API](#) and the `COMMAND` parameter to [docker run](#). For more information, see <https://docs.docker.com/engine/reference/builder/#cmd>.

Type: Array of strings

Required: No

dependsOn

A list of containers that this container depends on.

Type: Array of [TaskContainerDependency](#) objects

Required: No

environment

The environment variables to pass to a container. This parameter maps to `Env` in the [Create a container](#) section of the [Docker Remote API](#) and the `--env` option to [docker run](#).

Important

We don't recommend using plaintext environment variables for sensitive information, such as credential data.

Type: Array of [KeyValuePair](#) objects

Required: No

essential

If the `essential` parameter of a container is marked as `true`, and that container fails or stops for any reason, all other containers that are part of the task are stopped. If the `essential`

parameter of a container is marked as false, its failure doesn't affect the rest of the containers in a task. If this parameter is omitted, a container is assumed to be essential.

All jobs must have at least one essential container. If you have an application that's composed of multiple containers, group containers that are used for a common purpose into components, and separate the different components into multiple task definitions. For more information, see [Application Architecture](#) in the *Amazon Elastic Container Service Developer Guide*.

Type: Boolean

Required: No

exitCode

The exit code returned upon completion.

Type: Integer

Required: No

firelensConfiguration

The FireLens configuration for the container. This is used to specify and configure a log router for container logs. For more information, see [Custom log](#) routing in the *Amazon Elastic Container Service Developer Guide*.

Type: [FirelensConfiguration](#) object

Required: No

image

The image used to start a container. This string is passed directly to the Docker daemon. By default, images in the Docker Hub registry are available. Other repositories are specified with either `repository-url/image:tag` or `repository-url/image@digest`. Up to 255 letters (uppercase and lowercase), numbers, hyphens, underscores, colons, periods, forward slashes, and number signs are allowed. This parameter maps to Image in the [Create a container](#) section of the [Docker Remote API](#) and the IMAGE parameter of the [docker run](#).

Type: String

Required: No

linuxParameters

Linux-specific modifications that are applied to the container, such as Linux kernel capabilities. For more information, see [KernelCapabilities](#).

Note

This parameter is not supported for Windows containers.

Type: [LinuxParameters](#) object

Required: No

logConfiguration

The log configuration specification for the container.

This parameter maps to LogConfig in the [Create a container](#) section of the [Docker Remote API](#) and the `--log-driver` option to [docker run](#).

By default, containers use the same logging driver that the Docker daemon uses. However the container can use a different logging driver than the Docker daemon by specifying a log driver with this parameter in the container definition. To use a different logging driver for a container, the log system must be configured properly on the container instance (or on a different log server for remote logging options). For more information about the options for different supported log drivers, see [Configure logging drivers](#) in the *Docker documentation*.

Note

Amazon ECS currently supports a subset of the logging drivers available to the Docker daemon (shown in the LogConfiguration data type). Additional log drivers may be available in future releases of the Amazon ECS container agent.

This parameter requires version 1.18 of the Docker Remote API or greater on your container instance. To check the Docker Remote API version on your container instance, log in to your container instance and run the following command: `sudo docker version --format '{{.Server.APIVersion}}'`

Note

The Amazon ECS container agent running on a container instance must register the logging drivers available on that instance with the `ECS_AVAILABLE_LOGGING_DRIVERS` environment variable before containers placed on that instance can use these log configuration options. For more information, see [Amazon ECS container agent configuration](#) in the *Amazon Elastic Container Service Developer Guide*.

Type: [LogConfiguration](#) object

Required: No

logStreamName

The name of the CloudWatch Logs log stream that's associated with the container. The log group for Amazon Batch jobs is `/aws/batch/job`. Each container attempt receives a log stream name when they reach the `RUNNING` status.

Type: String

Required: No

mountPoints

The mount points for data volumes in your container.

This parameter maps to `Volumes` in the [Create a container](#) section of the [Docker Remote API](#) and the `--volume` option to [docker run](#).

Windows containers can mount whole directories on the same drive as `$env:ProgramData`. Windows containers can't mount directories on a different drive, and mount point can't be across drives.

Type: Array of [MountPoint](#) objects

Required: No

name

The name of a container.

Type: String

Required: No

networkInterfaces

The network interfaces that are associated with the job.

Type: Array of [NetworkInterface](#) objects

Required: No

privileged

When this parameter is `true`, the container is given elevated privileges on the host container instance (similar to the `root` user). This parameter maps to `Privileged` in the [Create a container](#) section of the [Docker Remote API](#) and the `--privileged` option to [docker run](#).

 **Note**

This parameter is not supported for Windows containers or tasks run on Fargate.

Type: Boolean

Required: No

readonlyRootFilesystem

When this parameter is `true`, the container is given read-only access to its root file system. This parameter maps to `ReadOnlyRootfs` in the [Create a container](#) section of the [Docker Remote API](#) and the `--read-only` option to [docker run](#).

 **Note**

This parameter is not supported for Windows containers.

Type: Boolean

Required: No

reason

A short (255 max characters) human-readable string to provide additional details for a running or stopped container.

Type: String

Required: No

repositoryCredentials

The private repository authentication credentials to use.

Type: [RepositoryCredentials](#) object

Required: No

resourceRequirements

The type and amount of a resource to assign to a container. The only supported resource is a GPU.

Type: Array of [ResourceRequirement](#) objects

Required: No

secrets

The secrets to pass to the container. For more information, see [Specifying Sensitive Data](#) in the Amazon Elastic Container Service Developer Guide.

Type: Array of [Secret](#) objects

Required: No

ulimits

A list of `ulimits` to set in the container. If a `ulimit` value is specified in a task definition, it overrides the default values set by Docker. This parameter maps to `Ulimits` in the [Create a container](#) section of the [Docker Remote API](#) and the `--ulimit` option to [docker run](#).

Amazon ECS tasks hosted on Fargate use the default resource limit values set by the operating system with the exception of the `nofile` resource limit parameter which Fargate overrides. The `nofile` resource limit sets a restriction on the number of open files that a container can use. The default `nofile` soft limit is 1024 and the default hard limit is 65535.

This parameter requires version 1.18 of the Docker Remote API or greater on your container instance. To check the Docker Remote API version on your container instance, log in to your container instance and run the following command: `sudo docker version --format '{{.Server.APIVersion}}'`

Note

This parameter is not supported for Windows containers.

Type: Array of [Ulimit](#) objects

Required: No

user

The user to use inside the container. This parameter maps to User in the Create a container section of the Docker Remote API and the `--user` option to `docker run`.

Note

When running tasks using the host network mode, don't run containers using the `root` user (UID `0`). We recommend using a non-root user for better security.

You can specify the user using the following formats. If specifying a UID or GID, you must specify it as a positive integer.

- `user`
- `user:group`
- `uid`
- `uid:gid`
- `user:gi`
- `uid:group`
-

Note

This parameter is not supported for Windows containers.

Type: String

Required: No

See Also

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

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

TaskContainerOverrides

The overrides that should be sent to a container.

For information about using Amazon Batch overrides when you connect event sources to targets, see [BatchContainerOverrides](#).

Contents

command

The command to send to the container that overrides the default command from the Docker image or the job definition.

 **Note**

This parameter can't contain an empty string.

Type: Array of strings

Required: No

environment

The environment variables to send to the container. You can add new environment variables, which are added to the container at launch, or you can override the existing environment variables from the Docker image or the job definition.

 **Note**

Environment variables cannot start with `AWS_BATCH`. This naming convention is reserved for variables that Amazon Batch sets.

Type: Array of [KeyValuePair](#) objects

Required: No

name

A pointer to the container that you want to override. The container's name provides a unique identifier for the container being used.

Type: String

Required: No

resourceRequirements

The type and amount of resources to assign to a container. This overrides the settings in the job definition. The supported resources include GPU, MEMORY, and VCPU.

Type: Array of [ResourceRequirement](#) objects

Required: No

See Also

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

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

TaskContainerProperties

Container properties are used for Amazon ECS-based job definitions. These properties describe the container that's launched as part of a job.

Contents

image

The image used to start a container. This string is passed directly to the Docker daemon. By default, images in the Docker Hub registry are available. Other repositories are specified with either `repository-url/image:tag` or `repository-url/image@digest`. Up to 255 letters (uppercase and lowercase), numbers, hyphens, underscores, colons, periods, forward slashes, and number signs are allowed. This parameter maps to `Image` in the [Create a container](#) section of the [Docker Remote API](#) and the `IMAGE` parameter of the [docker run](#).

Type: String

Required: Yes

command

The command that's passed to the container. This parameter maps to `Cmd` in the [Create a container](#) section of the [Docker Remote API](#) and the `COMMAND` parameter to [docker run](#). For more information, see [Dockerfile reference: CMD](#).

Type: Array of strings

Required: No

dependsOn

A list of containers that this container depends on.

Type: Array of [TaskContainerDependency](#) objects

Required: No

environment

The environment variables to pass to a container. This parameter maps to `Env` in the [Create a container](#) section of the [Docker Remote API](#) and the `--env` parameter to [docker run](#).

⚠ Important

We don't recommend using plaintext environment variables for sensitive information, such as credential data.

ℹ Note

Environment variables cannot start with `AWS_BATCH`. This naming convention is reserved for variables that Amazon Batch sets.

Type: Array of [KeyValuePair](#) objects

Required: No

essential

If the `essential` parameter of a container is marked as `true`, and that container fails or stops for any reason, all other containers that are part of the task are stopped. If the `essential` parameter of a container is marked as `false`, its failure doesn't affect the rest of the containers in a task. If this parameter is omitted, a container is assumed to be essential.

All jobs must have at least one essential container. If you have an application that's composed of multiple containers, group containers that are used for a common purpose into components, and separate the different components into multiple task definitions. For more information, see [Application Architecture](#) in the *Amazon Elastic Container Service Developer Guide*.

Type: Boolean

Required: No

firelensConfiguration

The FireLens configuration for the container. This is used to specify and configure a log router for container logs. For more information, see [Custom log](#) routing in the *Amazon Elastic Container Service Developer Guide*.

Type: [FirelensConfiguration](#) object

Required: No

linuxParameters

Linux-specific modifications that are applied to the container, such as Linux kernel capabilities. For more information, see [KernelCapabilities](#).

Type: [LinuxParameters](#) object

Required: No

logConfiguration

The log configuration specification for the container.

This parameter maps to LogConfig in the [Create a container](#) section of the [Docker Remote API](#) and the `--log-driver` option to [docker run](#).

By default, containers use the same logging driver that the Docker daemon uses. However the container can use a different logging driver than the Docker daemon by specifying a log driver with this parameter in the container definition. To use a different logging driver for a container, the log system must be configured properly on the container instance (or on a different log server for remote logging options). For more information about the options for different supported log drivers, see [Configure logging drivers](#) in the *Docker documentation*.

Note

Amazon ECS currently supports a subset of the logging drivers available to the Docker daemon (shown in the LogConfiguration data type). Additional log drivers may be available in future releases of the Amazon ECS container agent.

This parameter requires version 1.18 of the Docker Remote API or greater on your container instance. To check the Docker Remote API version on your container instance, log in to your container instance and run the following command: `sudo docker version --format '{{.Server.APIVersion}}'`

Note

The Amazon ECS container agent running on a container instance must register the logging drivers available on that instance with the `ECS_AVAILABLE_LOGGING_DRIVERS` environment variable before containers placed

on that instance can use these log configuration options. For more information, see [Amazon ECS container agent configuration](#) in the *Amazon Elastic Container Service Developer Guide*.

Type: [LogConfiguration](#) object

Required: No

mountPoints

The mount points for data volumes in your container.

This parameter maps to `Volumes` in the [Create a container](#) section of the [Docker Remote API](#) and the `--volume` option to [docker run](#).

Windows containers can mount whole directories on the same drive as `$env:ProgramData`. Windows containers can't mount directories on a different drive, and mount point can't be across drives.

Type: Array of [MountPoint](#) objects

Required: No

name

The name of a container. The name can be used as a unique identifier to target your `dependsOn` and `Overrides` objects.

Type: String

Required: No

privileged

When this parameter is `true`, the container is given elevated privileges on the host container instance (similar to the `root` user). This parameter maps to `Privileged` in the [Create a container](#) section of the [Docker Remote API](#) and the `--privileged` option to [docker run](#).

Note

This parameter is not supported for Windows containers or tasks run on Fargate.

Type: Boolean

Required: No

readonlyRootFilesystem

When this parameter is true, the container is given read-only access to its root file system. This parameter maps to `ReadOnlyRootfs` in the [Create a container](#) section of the [Docker Remote API](#) and the `--read-only` option to [docker run](#).

 **Note**

This parameter is not supported for Windows containers.

Type: Boolean

Required: No

repositoryCredentials

The private repository authentication credentials to use.

Type: [RepositoryCredentials](#) object

Required: No

resourceRequirements

The type and amount of a resource to assign to a container. The only supported resource is a GPU.

Type: Array of [ResourceRequirement](#) objects

Required: No

secrets

The secrets to pass to the container. For more information, see [Specifying Sensitive Data](#) in the Amazon Elastic Container Service Developer Guide.

Type: Array of [Secret](#) objects

Required: No

ulimits

A list of `ulimits` to set in the container. If a `ulimit` value is specified in a task definition, it overrides the default values set by Docker. This parameter maps to `Ulimits` in the [Create a container](#) section of the [Docker Remote API](#) and the `--ulimit` option to [docker run](#).

Amazon ECS tasks hosted on Fargate use the default resource limit values set by the operating system with the exception of the `nofile` resource limit parameter which Fargate overrides. The `nofile` resource limit sets a restriction on the number of open files that a container can use. The default `nofile` soft limit is 1024 and the default hard limit is 65535.

This parameter requires version 1.18 of the Docker Remote API or greater on your container instance. To check the Docker Remote API version on your container instance, log in to your container instance and run the following command: `sudo docker version --format '{{.Server.APIVersion}}'`

Note

This parameter is not supported for Windows containers.

Type: Array of [Ulimit](#) objects

Required: No

user

The user to use inside the container. This parameter maps to `User` in the [Create a container](#) section of the Docker Remote API and the `--user` option to `docker run`.

Note

When running tasks using the host network mode, don't run containers using the `root` user (UID 0). We recommend using a non-root user for better security.

You can specify the user using the following formats. If specifying a UID or GID, you must specify it as a positive integer.

- `user`
- `user:group`

- `uid`
- `uid:gid`
- `user:gi`
- `uid:group`

 **Note**

This parameter is not supported for Windows containers.

Type: String

Required: No

See Also

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

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

TaskPropertiesOverride

An object that contains overrides for the task definition of a job.

Contents

containers

The overrides for the container definition of a job.

Type: Array of [TaskContainerOverrides](#) objects

Required: No

See Also

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

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

Tmpfs

The container path, mount options, and size of the tmpfs mount.

Note

This object isn't applicable to jobs that are running on Fargate resources.

Contents

containerPath

The absolute file path in the container where the tmpfs volume is mounted.

Type: String

Required: Yes

size

The size (in MiB) of the tmpfs volume.

Type: Integer

Required: Yes

mountOptions

The list of tmpfs volume mount options.

Valid values: "defaults" | "ro" | "rw" | "suid" | "nosuid" | "dev" | "nodev" | "exec" | "noexec" | "sync" | "async" | "dirsync" | "remount" | "mand" | "nomand" | "atime" | "noatime" | "diratime" | "nodiratime" | "bind" | "rbind" | "unbindable" | "runbindable" | "private" | "rprivate" | "shared" | "rshared" | "slave" | "rslave" | "relatime" | "norelatime" | "strictatime" | "nostrictatime" | "mode" | "uid" | "gid" | "nr_inodes" | "nr_blocks" | "mpol"

Type: Array of strings

Required: No

See Also

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

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

Ulimit

The `ulimit` settings to pass to the container. For more information, see [Ulimit](#).

Note

This object isn't applicable to jobs that are running on Fargate resources.

Contents

hardLimit

The hard limit for the `ulimit` type.

Type: Integer

Required: Yes

name

The type of the `ulimit`. Valid values are: `core` | `cpu` | `data` | `FSIZE` | `locks` | `memlock` | `MSGQUEUE` | `nice` | `NOFILE` | `NPROC` | `RSS` | `RTPRIO` | `RTTIME` | `SIGPENDING` | `stack`.

Type: String

Required: Yes

softLimit

The soft limit for the `ulimit` type.

Type: Integer

Required: Yes

See Also

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

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

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

UpdatePolicy

Specifies the infrastructure update policy for the Amazon EC2 compute environment. For more information about infrastructure updates, see [Updating compute environments](#) in the *Amazon Batch User Guide*.

Contents

jobExecutionTimeoutMinutes

Specifies the job timeout (in minutes) when the compute environment infrastructure is updated. The default value is 30.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 360.

Required: No

terminateJobsOnUpdate

Specifies whether jobs are automatically terminated when the compute environment infrastructure is updated. The default value is `false`.

Type: Boolean

Required: No

See Also

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

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

Volume

A data volume that's used in a job's container properties.

Contents

efsVolumeConfiguration

This parameter is specified when you're using an Amazon Elastic File System file system for job storage. Jobs that are running on Fargate resources must specify a `platformVersion` of at least `1.4.0`.

Type: [EFSVolumeConfiguration](#) object

Required: No

host

The contents of the `host` parameter determine whether your data volume persists on the host container instance and where it's stored. If the `host` parameter is empty, then the Docker daemon assigns a host path for your data volume. However, the data isn't guaranteed to persist after the containers that are associated with it stop running.

Note

This parameter isn't applicable to jobs that are running on Fargate resources and shouldn't be provided.

Type: [Host](#) object

Required: No

name

The name of the volume. It can be up to 255 characters long. It can contain uppercase and lowercase letters, numbers, hyphens (-), and underscores (_). This name is referenced in the `sourceVolume` parameter of container definition `mountPoints`.

Type: String

Required: No

See Also

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

- [Amazon SDK for C++](#)
- [Amazon SDK for Java V2](#)
- [Amazon 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 [Signing Amazon API requests](#) in the *IAM User Guide*.

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 [Create a signed Amazon API request](#) in the *IAM User Guide*.

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 [Elements of an Amazon API request signature](#) in the *IAM User Guide*.

Type: string

Required: Conditional

X-Amz-Security-Token

The temporary security token that was obtained through a call to Amazon Security Token Service (Amazon STS). For a list of services that support temporary security credentials from Amazon STS, see [Amazon Web Services services that work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from Amazon STS, 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 [Create a signed Amazon API request](#) in the *IAM User Guide*.

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

Type: string

Required: Conditional