
Amazon WorkSpaces Service

API Reference

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Amazon WorkSpaces Service: API Reference

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Welcome to the Amazon WorkSpaces API Reference

This is the *Amazon WorkSpaces API Reference*. This guide provides detailed information about the Amazon WorkSpaces API.

Actions

The following actions are supported:

- [CreateTags](#) (p. 3)
- [CreateWorkspaces](#) (p. 5)
- [DeleteTags](#) (p. 8)
- [DescribeTags](#) (p. 10)
- [DescribeWorkspaceBundles](#) (p. 12)
- [DescribeWorkspaceDirectories](#) (p. 15)
- [DescribeWorkspaces](#) (p. 17)
- [DescribeWorkspacesConnectionStatus](#) (p. 21)
- [ModifyWorkspaceProperties](#) (p. 23)
- [RebootWorkspaces](#) (p. 25)
- [RebuildWorkspaces](#) (p. 27)
- [StartWorkspaces](#) (p. 29)
- [StopWorkspaces](#) (p. 31)
- [TerminateWorkspaces](#) (p. 33)

CreateTags

Creates the specified tags for the specified Workspace.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

ResourceId (p. 3)

The ID of the Workspace. To find this ID, use [DescribeWorkspaces \(p. 17\)](#).

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

Tags (p. 3)

The tags. Each Workspace can have a maximum of 50 tags.

Type: Array of [Tag \(p. 46\)](#) objects

Required: Yes

Response Elements

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

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 62\)](#).

InvalidParameterValuesException

One or more parameter values are not valid.

HTTP Status Code: 400

ResourceLimitExceededException

Your resource limits have been exceeded.

HTTP Status Code: 400

ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 400

See Also

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

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

CreateWorkspaces

Creates one or more WorkSpaces.

This operation is asynchronous and returns before the WorkSpaces are created.

Request Syntax

```
{
  "Workspaces": [
    {
      "BundleId": "string",
      "DirectoryId": "string",
      "RootVolumeEncryptionEnabled": boolean,
      "Tags": [
        {
          "Key": "string",
          "Value": "string"
        }
      ],
      "UserName": "string",
      "UserVolumeEncryptionEnabled": boolean,
      "VolumeEncryptionKey": "string",
      "WorkspaceProperties": {
        "ComputeTypeName": "string",
        "RootVolumeSizeGib": number,
        "RunningMode": "string",
        "RunningModeAutoStopTimeoutInMinutes": number,
        "UserVolumeSizeGib": number
      }
    }
  ]
}
```

Request Parameters

The request accepts the following data in JSON format.

Workspaces (p. 5)

The WorkSpaces to create. You can specify up to 25 WorkSpaces.

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

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Required: Yes

Response Syntax

```
{
  "FailedRequests": [
    {
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "WorkspaceRequest": {
        "BundleId": "string",
```

```

    "DirectoryId": "string",
    "RootVolumeEncryptionEnabled": boolean,
    "Tags": [
      {
        "Key": "string",
        "Value": "string"
      }
    ],
    "UserName": "string",
    "UserVolumeEncryptionEnabled": boolean,
    "VolumeEncryptionKey": "string",
    "WorkspaceProperties": {
      "ComputeTypeName": "string",
      "RootVolumeSizeGib": number,
      "RunningMode": "string",
      "RunningModeAutoStopTimeoutInMinutes": number,
      "UserVolumeSizeGib": number
    }
  }
},
"PendingRequests": [
  {
    "BundleId": "string",
    "ComputerName": "string",
    "DirectoryId": "string",
    "ErrorCode": "string",
    "ErrorMessage": "string",
    "IpAddress": "string",
    "ModificationStates": [
      {
        "Resource": "string",
        "State": "string"
      }
    ],
    "RootVolumeEncryptionEnabled": boolean,
    "State": "string",
    "SubnetId": "string",
    "UserName": "string",
    "UserVolumeEncryptionEnabled": boolean,
    "VolumeEncryptionKey": "string",
    "WorkspaceId": "string",
    "WorkspaceProperties": {
      "ComputeTypeName": "string",
      "RootVolumeSizeGib": number,
      "RunningMode": "string",
      "RunningModeAutoStopTimeoutInMinutes": number,
      "UserVolumeSizeGib": 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.

FailedRequests (p. 5)

Information about the WorkSpaces that could not be created.

Type: Array of [FailedCreateWorkspaceRequest \(p. 38\)](#) objects

[PendingRequests \(p. 5\)](#)

Information about the WorkSpaces that were created.

Because this operation is asynchronous, the identifier returned is not immediately available for use with other operations. For example, if you call [DescribeWorkspaces \(p. 17\)](#) before the WorkSpace is created, the information returned can be incomplete.

Type: Array of [Workspace \(p. 49\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 62\)](#).

InvalidParameterValuesException

One or more parameter values are not valid.

HTTP Status Code: 400

ResourceLimitExceededException

Your resource limits have been exceeded.

HTTP Status Code: 400

See Also

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

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

DeleteTags

Deletes the specified tags from the specified Workspace.

Request Syntax

```
{  
  "ResourceId": "string",  
  "TagKeys": [ "string" ]  
}
```

Request Parameters

The request accepts the following data in JSON format.

ResourceId (p. 8)

The ID of the Workspace. To find this ID, use [DescribeWorkspaces \(p. 17\)](#).

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

TagKeys (p. 8)

The tag keys.

Type: Array of strings

Length Constraints: Minimum length of 1.

Required: Yes

Response Elements

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

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 62\)](#).

InvalidParameterValuesException

One or more parameter values are not valid.

HTTP Status Code: 400

ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 400

See Also

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

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

DescribeTags

Describes the specified tags for the specified WorkSpace.

Request Syntax

```
{  
  "ResourceId": "string"  
}
```

Request Parameters

The request accepts the following data in JSON format.

ResourceId (p. 10)

The ID of the WorkSpace. To find this ID, use [DescribeWorkspaces \(p. 17\)](#).

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

Response Syntax

```
{  
  "TagList": [  
    {  
      "Key": "string",  
      "Value": "string"  
    }  
  ]  
}
```

Response Elements

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

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

TagList (p. 10)

The tags.

Type: Array of [Tag \(p. 46\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 62\)](#).

ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 400

See Also

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

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

DescribeWorkspaceBundles

Describes the available WorkSpace bundles.

You can filter the results using either bundle ID or owner, but not both.

Request Syntax

```
{
  "BundleIds": [ "string" ],
  "NextToken": "string",
  "Owner": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

BundleIds (p. 12)

The IDs of the bundles. This parameter cannot be combined with any other filter.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Pattern: ^wsb-[0-9a-z]{8,63}\$

Required: No

NextToken (p. 12)

The token for the next set of results. (You received this token from a previous call.)

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Required: No

Owner (p. 12)

The owner of the bundles. This parameter cannot be combined with any other filter.

Specify `AMAZON` to describe the bundles provided by AWS or `null` to describe the bundles that belong to your account.

Type: String

Required: No

Response Syntax

```
{
  "Bundles": [
    {
      "BundleId": "string",
```

```
    "ComputeType": {
      "Name": "string"
    },
    "Description": "string",
    "Name": "string",
    "Owner": "string",
    "RootStorage": {
      "Capacity": "string"
    },
    "UserStorage": {
      "Capacity": "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.

Bundles (p. 12)

Information about the bundles.

Type: Array of [WorkspaceBundle \(p. 52\)](#) objects

NextToken (p. 12)

The token to use to retrieve the next set of results, or null if there are no more results available. This token is valid for one day and must be used within that time frame.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 62\)](#).

InvalidParameterValuesException

One or more parameter values are not valid.

HTTP Status Code: 400

See Also

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

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

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

DescribeWorkspaceDirectories

Describes the available AWS Directory Service directories that are registered with Amazon WorkSpaces.

Request Syntax

```
{  
  "DirectoryIds": [ "string" ],  
  "NextToken": "string"  
}
```

Request Parameters

The request accepts the following data in JSON format.

DirectoryIds (p. 15)

The identifiers of the directories. If the value is null, all directories are retrieved.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Pattern: ^d-[0-9a-f]{8,63}\$

Required: No

NextToken (p. 15)

The token for the next set of results. (You received this token from a previous call.)

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Required: No

Response Syntax

```
{  
  "Directories": [  
    {  
      "Alias": "string",  
      "CustomerUserName": "string",  
      "DirectoryId": "string",  
      "DirectoryName": "string",  
      "DirectoryType": "string",  
      "DnsIpAddresses": [ "string" ],  
      "IamRoleId": "string",  
      "RegistrationCode": "string",  
      "State": "string",  
      "SubnetIds": [ "string" ],  
      "WorkspaceCreationProperties": {  
        "CustomSecurityGroupId": "string",  
        "DefaultOu": "string",  
        "EnableInternetAccess": boolean,  
        "EnableWorkDocs": boolean,  
      }  
    }  
  ]  
}
```

```
        "UserEnabledAsLocalAdministrator": boolean
      },
      "WorkspaceSecurityGroupId": "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.

Directories (p. 15)

Information about the directories.

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

NextToken (p. 15)

The token to use to retrieve the next set of results, or null if there are no more results available. This token is valid for one day and must be used within that time frame.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 62\)](#).

InvalidParameterValuesException

One or more parameter values are not valid.

HTTP Status Code: 400

See Also

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

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

DescribeWorkspaces

Describes the specified WorkSpaces.

You can filter the results using bundle ID, directory ID, or owner, but you can specify only one filter at a time.

Request Syntax

```
{  
  "BundleId": "string",  
  "DirectoryId": "string",  
  "Limit": number,  
  "NextToken": "string",  
  "UserName": "string",  
  "WorkspaceIds": [ "string" ]  
}
```

Request Parameters

The request accepts the following data in JSON format.

BundleId (p. 17)

The ID of the bundle. All WorkSpaces that are created from this bundle are retrieved. This parameter cannot be combined with any other filter.

Type: String

Pattern: ^wsb-[0-9a-z]{8,63}\$

Required: No

DirectoryId (p. 17)

The ID of the directory. In addition, you can optionally specify a specific directory user (see `UserName`). This parameter cannot be combined with any other filter.

Type: String

Pattern: ^d-[0-9a-f]{8,63}\$

Required: No

Limit (p. 17)

The maximum number of items to return.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 25.

Required: No

NextToken (p. 17)

The token for the next set of results. (You received this token from a previous call.)

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Required: No

UserName (p. 17)

The name of the directory user. You must specify this parameter with `DirectoryId`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Required: No

WorkspaceIds (p. 17)

The IDs of the WorkSpaces. This parameter cannot be combined with any other filter.

Because the [CreateWorkspaces \(p. 5\)](#) operation is asynchronous, the identifier it returns is not immediately available. If you immediately call [DescribeWorkspaces \(p. 17\)](#) with this identifier, no information is returned.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Pattern: `^ws-[0-9a-z]{8,63}$`

Required: No

Response Syntax

```
{
  "NextToken": "string",
  "Workspaces": [
    {
      "BundleId": "string",
      "ComputerName": "string",
      "DirectoryId": "string",
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "IpAddress": "string",
      "ModificationStates": [
        {
          "Resource": "string",
          "State": "string"
        }
      ],
      "RootVolumeEncryptionEnabled": boolean,
      "State": "string",
      "SubnetId": "string",
      "UserName": "string",
      "UserVolumeEncryptionEnabled": boolean,
      "VolumeEncryptionKey": "string",
      "WorkspaceId": "string",
      "WorkspaceProperties": {
        "ComputeTypeName": "string",
        "RootVolumeSizeGib": number,
        "RunningMode": "string",
        "RunningModeAutoStopTimeoutInMinutes": number,
        "UserVolumeSizeGib": number
      }
    }
  ]
}
```

```
]
}
```

Response Elements

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

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

NextToken (p. 18)

The token to use to retrieve the next set of results, or null if there are no more results available. This token is valid for one day and must be used within that time frame.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Workspaces (p. 18)

Information about the WorkSpaces.

Because [CreateWorkspaces](#) (p. 5) is an asynchronous operation, some of the returned information could be incomplete.

Type: Array of [Workspace](#) (p. 49) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 62).

InvalidParameterValuesException

One or more parameter values are not valid.

HTTP Status Code: 400

ResourceUnavailableException

The specified resource is not available.

HTTP Status Code: 400

See Also

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

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

- [AWS SDK for Ruby V2](#)

DescribeWorkspacesConnectionStatus

Describes the connection status of the specified WorkSpaces.

Request Syntax

```
{  
  "NextToken": "string",  
  "WorkspaceIds": [ "string" ]  
}
```

Request Parameters

The request accepts the following data in JSON format.

NextToken (p. 21)

The token for the next set of results. (You received this token from a previous call.)

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Required: No

WorkspaceIds (p. 21)

The identifiers of the WorkSpaces. You can specify up to 25 WorkSpaces.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Pattern: ^ws-[0-9a-z]{8,63}\$

Required: No

Response Syntax

```
{  
  "NextToken": "string",  
  "WorkspacesConnectionStatus": [  
    {  
      "ConnectionState": "string",  
      "ConnectionStateCheckTimestamp": number,  
      "LastKnownUserConnectionTimestamp": number,  
      "WorkspaceId": "string"  
    }  
  ]  
}
```

Response Elements

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

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

NextToken (p. 21)

The token to use to retrieve the next set of results, or null if there are no more results available.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

WorkspacesConnectionStatus (p. 21)

Information about the connection status of the WorkSpace.

Type: Array of [WorkspaceConnectionStatus \(p. 54\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 62\)](#).

InvalidParameterValuesException

One or more parameter values are not valid.

HTTP Status Code: 400

See Also

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

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

ModifyWorkspaceProperties

Modifies the specified WorkSpace properties.

Request Syntax

```
{
  "WorkspaceId": "string",
  "WorkspaceProperties": {
    "ComputeTypeName": "string",
    "RootVolumeSizeGib": number,
    "RunningMode": "string",
    "RunningModeAutoStopTimeoutInMinutes": number,
    "UserVolumeSizeGib": number
  }
}
```

Request Parameters

The request accepts the following data in JSON format.

WorkspaceId (p. 23)

The ID of the WorkSpace.

Type: String

Pattern: `^ws-[0-9a-z]{8,63}$`

Required: Yes

WorkspaceProperties (p. 23)

The properties of the WorkSpace.

Type: [WorkspaceProperties \(p. 58\)](#) object

Required: Yes

Response Elements

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

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 62\)](#).

AccessDeniedException

The user is not authorized to access a resource.

HTTP Status Code: 400

InvalidParameterValuesException

One or more parameter values are not valid.

HTTP Status Code: 400

InvalidResourceStateException

The state of the WorkSpace is not valid for this operation.

HTTP Status Code: 400

OperationInProgressException

The properties of this WorkSpace are currently being modified. Try again in a moment.

HTTP Status Code: 400

ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 400

ResourceUnavailableException

The specified resource is not available.

HTTP Status Code: 400

UnsupportedWorkspaceConfigurationException

The configuration of this WorkSpace is not supported for this operation. For more information, see the [Amazon WorkSpaces Administration Guide](#).

HTTP Status Code: 400

See Also

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

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

RebootWorkspaces

Reboots the specified WorkSpaces.

You cannot reboot a WorkSpace unless its state is `AVAILABLE`, `IMPAIRED`, or `INOPERABLE`.

This operation is asynchronous and returns before the WorkSpaces have rebooted.

Request Syntax

```
{
  "RebootWorkspaceRequests": [
    {
      "WorkspaceId": "string"
    }
  ]
}
```

Request Parameters

The request accepts the following data in JSON format.

RebootWorkspaceRequests (p. 25)

The WorkSpaces to reboot. You can specify up to 25 WorkSpaces.

Type: Array of [RebootRequest \(p. 41\)](#) objects

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Required: Yes

Response Syntax

```
{
  "FailedRequests": [
    {
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "WorkspaceId": "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.

FailedRequests (p. 25)

Information about the WorkSpaces that could not be rebooted.

Type: Array of [FailedWorkspaceChangeRequest \(p. 39\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 62\)](#).

See Also

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

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

RebuildWorkspaces

Rebuilds the specified WorkSpace.

You cannot rebuild a WorkSpace unless its state is `AVAILABLE` or `ERROR`.

Rebuilding a WorkSpace is a potentially destructive action that can result in the loss of data. For more information, see [Rebuild a WorkSpace](#).

This operation is asynchronous and returns before the WorkSpaces have been completely rebuilt.

Request Syntax

```
{
  "RebuildWorkspaceRequests": [
    {
      "WorkspaceId": "string"
    }
  ]
}
```

Request Parameters

The request accepts the following data in JSON format.

RebuildWorkspaceRequests (p. 27)

The WorkSpace to rebuild. You can specify a single WorkSpace.

Type: Array of [RebuildRequest \(p. 42\)](#) objects

Array Members: Fixed number of 1 item.

Required: Yes

Response Syntax

```
{
  "FailedRequests": [
    {
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "WorkspaceId": "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.

FailedRequests (p. 27)

Information about the WorkSpace if it could not be rebuilt.

Type: Array of [FailedWorkspaceChangeRequest \(p. 39\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 62\)](#).

See Also

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

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

StartWorkspaces

Starts the specified WorkSpaces.

You cannot start a WorkSpace unless it has a running mode of `AutoStop` and a state of `STOPPED`.

Request Syntax

```
{
  "StartWorkspaceRequests": [
    {
      "WorkspaceId": "string"
    }
  ]
}
```

Request Parameters

The request accepts the following data in JSON format.

StartWorkspaceRequests (p. 29)

The WorkSpaces to start. You can specify up to 25 WorkSpaces.

Type: Array of [StartRequest \(p. 44\)](#) objects

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Required: Yes

Response Syntax

```
{
  "FailedRequests": [
    {
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "WorkspaceId": "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.

FailedRequests (p. 29)

Information about the WorkSpaces that could not be started.

Type: Array of [FailedWorkspaceChangeRequest \(p. 39\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 62\)](#).

See Also

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

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

StopWorkspaces

Stops the specified WorkSpaces.

You cannot stop a WorkSpace unless it has a running mode of `AutoStop` and a state of `AVAILABLE`, `IMPAIRED`, `UNHEALTHY`, or `ERROR`.

Request Syntax

```
{
  "StopWorkspaceRequests": [
    {
      "WorkspaceId": "string"
    }
  ]
}
```

Request Parameters

The request accepts the following data in JSON format.

StopWorkspaceRequests (p. 31)

The WorkSpaces to stop. You can specify up to 25 WorkSpaces.

Type: Array of [StopRequest \(p. 45\)](#) objects

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Required: Yes

Response Syntax

```
{
  "FailedRequests": [
    {
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "WorkspaceId": "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.

FailedRequests (p. 31)

Information about the WorkSpaces that could not be stopped.

Type: Array of [FailedWorkspaceChangeRequest \(p. 39\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 62\)](#).

See Also

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

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

TerminateWorkspaces

Terminates the specified WorkSpaces.

Terminating a WorkSpace is a permanent action and cannot be undone. The user's data is destroyed. If you need to archive any user data, contact Amazon Web Services before terminating the WorkSpace.

You can terminate a WorkSpace that is in any state except `SUSPENDED`.

This operation is asynchronous and returns before the WorkSpaces have been completely terminated.

Request Syntax

```
{
  "TerminateWorkspaceRequests": [
    {
      "WorkspaceId": "string"
    }
  ]
}
```

Request Parameters

The request accepts the following data in JSON format.

TerminateWorkspaceRequests (p. 33)

The WorkSpaces to terminate. You can specify up to 25 WorkSpaces.

Type: Array of [TerminateRequest \(p. 47\)](#) objects

Array Members: Minimum number of 1 item. Maximum number of 25 items.

Required: Yes

Response Syntax

```
{
  "FailedRequests": [
    {
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "WorkspaceId": "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.

FailedRequests (p. 33)

Information about the WorkSpaces that could not be terminated.

Type: Array of [FailedWorkspaceChangeRequest](#) (p. 39) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 62).

See Also

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

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

Data Types

The Amazon WorkSpaces 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:

- [ComputeType](#) (p. 36)
- [DefaultWorkspaceCreationProperties](#) (p. 37)
- [FailedCreateWorkspaceRequest](#) (p. 38)
- [FailedWorkspaceChangeRequest](#) (p. 39)
- [ModificationState](#) (p. 40)
- [RebootRequest](#) (p. 41)
- [RebuildRequest](#) (p. 42)
- [RootStorage](#) (p. 43)
- [StartRequest](#) (p. 44)
- [StopRequest](#) (p. 45)
- [Tag](#) (p. 46)
- [TerminateRequest](#) (p. 47)
- [UserStorage](#) (p. 48)
- [Workspace](#) (p. 49)
- [WorkspaceBundle](#) (p. 52)
- [WorkspaceConnectionStatus](#) (p. 54)
- [WorkspaceDirectory](#) (p. 55)
- [WorkspaceProperties](#) (p. 58)
- [WorkspaceRequest](#) (p. 60)

ComputeType

Information about the compute type.

Contents

Name

The compute type.

Type: String

Valid Values: VALUE | STANDARD | PERFORMANCE | POWER | GRAPHICS

Required: No

See Also

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

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

DefaultWorkspaceCreationProperties

Information about defaults used to create a WorkSpace.

Contents

CustomSecurityGroupId

The identifier of any security groups to apply to WorkSpaces when they are created.

Type: String

Pattern: `^(sg-[0-9a-f]{8})$`

Required: No

DefaultOu

The organizational unit (OU) in the directory for the WorkSpace machine accounts.

Type: String

Required: No

EnableInternetAccess

The public IP address to attach to all WorkSpaces that are created or rebuilt.

Type: Boolean

Required: No

EnableWorkDocs

Indicates whether the directory is enabled for Amazon WorkDocs.

Type: Boolean

Required: No

UserEnabledAsLocalAdministrator

Indicates whether the WorkSpace user is an administrator on the WorkSpace.

Type: Boolean

Required: No

See Also

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

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

FailedCreateWorkspaceRequest

Information about a WorkSpace that could not be created.

Contents

ErrorCode

The error code.

Type: String

Required: No

ErrorMessage

The textual error message.

Type: String

Required: No

WorkspaceRequest

Information about the WorkSpace.

Type: [WorkspaceRequest \(p. 60\)](#) object

Required: No

See Also

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

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

FailedWorkspaceChangeRequest

Information about a WorkSpace that could not be rebooted ([RebootWorkspaces \(p. 25\)](#)), rebuilt ([RebuildWorkspaces \(p. 27\)](#)), terminated ([TerminateWorkspaces \(p. 33\)](#)), started ([StartWorkspaces \(p. 29\)](#)), or stopped ([StopWorkspaces \(p. 31\)](#)).

Contents

ErrorCode

The error code.

Type: String

Required: No

ErrorMessage

The textual error message.

Type: String

Required: No

WorkspaceId

The identifier of the WorkSpace.

Type: String

Pattern: `^ws-[0-9a-z]{8,63}$`

Required: No

See Also

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

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

ModificationState

Information about a Workspace modification.

Contents

Resource

The resource.

Type: String

Valid Values: `ROOT_VOLUME` | `USER_VOLUME` | `COMPUTE_TYPE`

Required: No

State

The modification state.

Type: String

Valid Values: `UPDATE_INITIATED` | `UPDATE_IN_PROGRESS`

Required: No

See Also

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

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

RebootRequest

Information used to reboot a Workspace.

Contents

WorkspaceId

The identifier of the Workspace.

Type: String

Pattern: `^ws-[0-9a-z]{8,63}$`

Required: Yes

See Also

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

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

RebuildRequest

Information used to rebuild a WorkSpace.

Contents

WorkspaceId

The identifier of the WorkSpace.

Type: String

Pattern: `^ws-[0-9a-z]{8,63}$`

Required: Yes

See Also

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

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

RootStorage

Information about the root volume for a Workspace bundle.

Contents

Capacity

The size of the root volume.

Type: String

Length Constraints: Minimum length of 1.

Required: No

See Also

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

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

StartRequest

Information used to start a Workspace.

Contents

WorkspaceId

The ID of the Workspace.

Type: String

Pattern: `^ws-[0-9a-z]{8,63}$`

Required: No

See Also

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

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

StopRequest

Information used to stop a Workspace.

Contents

WorkspaceId

The ID of the Workspace.

Type: String

Pattern: `^ws-[0-9a-z]{8,63}$`

Required: No

See Also

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

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

Tag

Information about a tag.

Contents

Key

The key of the tag.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 127.

Required: Yes

Value

The value of the tag.

Type: String

Length Constraints: Maximum length of 255.

Required: No

See Also

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

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

TerminateRequest

Information used to terminate a WorkSpace.

Contents

WorkspaceId

The identifier of the WorkSpace.

Type: String

Pattern: `^ws-[0-9a-z]{8,63}$`

Required: Yes

See Also

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

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

UserStorage

Information about the user storage for a Workspace bundle.

Contents

Capacity

The size of the user storage.

Type: String

Length Constraints: Minimum length of 1.

Required: No

See Also

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

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

Workspace

Information about a Workspace.

Contents

BundleId

The identifier of the bundle used to create the Workspace.

Type: String

Pattern: `^wsb-[0-9a-z]{8,63}$`

Required: No

ComputerName

The name of the Workspace, as seen by the operating system.

Type: String

Required: No

DirectoryId

The identifier of the AWS Directory Service directory for the Workspace.

Type: String

Pattern: `^d-[0-9a-f]{8,63}$`

Required: No

ErrorCode

If the Workspace could not be created, contains the error code.

Type: String

Required: No

ErrorMessage

If the Workspace could not be created, contains a textual error message that describes the failure.

Type: String

Required: No

IpAddress

The IP address of the Workspace.

Type: String

Required: No

ModificationStates

The modification states of the Workspace.

Type: Array of [ModificationState \(p. 40\)](#) objects

Required: No

RootVolumeEncryptionEnabled

Indicates whether the data stored on the root volume is encrypted.

Type: Boolean

Required: No

State

The operational state of the WorkSpace.

Type: String

Valid Values: PENDING | AVAILABLE | IMPAIRED | UNHEALTHY | REBOOTING | STARTING
| REBUILDING | MAINTENANCE | TERMINATING | TERMINATED | SUSPENDED | UPDATING
| STOPPING | STOPPED | ERROR

Required: No

SubnetId

The identifier of the subnet for the WorkSpace.

Type: String

Pattern: `^(subnet-[0-9a-f]{8})$`

Required: No

UserName

The user for the WorkSpace.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Required: No

UserVolumeEncryptionEnabled

Indicates whether the data stored on the user volume is encrypted.

Type: Boolean

Required: No

VolumeEncryptionKey

The KMS key used to encrypt data stored on your WorkSpace.

Type: String

Required: No

WorkspaceId

The identifier of the WorkSpace.

Type: String

Pattern: `^ws-[0-9a-z]{8,63}$`

Required: No

WorkspaceProperties

The properties of the WorkSpace.

Type: [WorkspaceProperties \(p. 58\)](#) object

Required: No

See Also

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

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

WorkspaceBundle

Information about a WorkSpace bundle.

Contents

BundleId

The bundle identifier.

Type: String

Pattern: `^wsb-[0-9a-z]{8,63}$`

Required: No

ComputeType

The compute type. For more information, see [Amazon WorkSpaces Bundles](#).

Type: [ComputeType \(p. 36\)](#) object

Required: No

Description

A description.

Type: String

Required: No

Name

The name of the bundle.

Type: String

Length Constraints: Minimum length of 1.

Required: No

Owner

The owner of the bundle. This is the account identifier of the owner, or `AMAZON` if the bundle is provided by AWS.

Type: String

Required: No

RootStorage

The size of the root volume.

Type: [RootStorage \(p. 43\)](#) object

Required: No

UserStorage

The size of the user storage.

Type: [UserStorage \(p. 48\)](#) object

Required: No

See Also

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

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

WorkspaceConnectionStatus

Describes the connection status of a Workspace.

Contents

ConnectionState

The connection state of the Workspace. The connection state is unknown if the Workspace is stopped.

Type: String

Valid Values: `CONNECTED` | `DISCONNECTED` | `UNKNOWN`

Required: No

ConnectionStateCheckTimestamp

The timestamp of the connection state check.

Type: Timestamp

Required: No

LastKnownUserConnectionTimestamp

The timestamp of the last known user connection.

Type: Timestamp

Required: No

WorkspaceId

The ID of the Workspace.

Type: String

Pattern: `^ws-[0-9a-z]{8,63}$`

Required: No

See Also

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

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

WorkspaceDirectory

Contains information about an AWS Directory Service directory for use with Amazon WorkSpaces.

Contents

Alias

The directory alias.

Type: String

Required: No

CustomerUserName

The user name for the service account.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Required: No

DirectoryId

The directory identifier.

Type: String

Pattern: `^d-[0-9a-f]{8,63}$`

Required: No

DirectoryName

The name of the directory.

Type: String

Required: No

DirectoryType

The directory type.

Type: String

Valid Values: `SIMPLE_AD` | `AD_CONNECTOR`

Required: No

DnsIpAddresses

The IP addresses of the DNS servers for the directory.

Type: Array of strings

Required: No

IamRoleId

The identifier of the IAM role. This is the role that allows Amazon WorkSpaces to make calls to other services, such as Amazon EC2, on your behalf.

Type: String

Pattern: `^arn:aws:[A-Za-z0-9][A-Za-z0-9_/.-]{0,62}:[A-Za-z0-9_/.-]{0,63}:[A-Za-z0-9_/.-]{0,63}:[A-Za-z0-9][A-Za-z0-9_/.-]{0,127}$`

Required: No

RegistrationCode

The registration code for the directory. This is the code that users enter in their Amazon WorkSpaces client application to connect to the directory.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20.

Required: No

State

The state of the directory's registration with Amazon WorkSpaces

Type: String

Valid Values: REGISTERING | REGISTERED | DEREGISTERING | DEREGISTERED | ERROR

Required: No

SubnetIds

The identifiers of the subnets used with the directory.

Type: Array of strings

Pattern: `^(subnet-[0-9a-f]{8})$`

Required: No

WorkspaceCreationProperties

The default creation properties for all WorkSpaces in the directory.

Type: [DefaultWorkspaceCreationProperties \(p. 37\)](#) object

Required: No

WorkspaceSecurityGroupId

The identifier of the security group that is assigned to new WorkSpaces.

Type: String

Pattern: `^(sg-[0-9a-f]{8})$`

Required: No

See Also

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

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

- [AWS SDK for Ruby V2](#)

WorkspaceProperties

Information about a Workspace.

Contents

ComputeTypeName

The compute type. For more information, see [Amazon WorkSpaces Bundles](#).

Type: String

Valid Values: VALUE | STANDARD | PERFORMANCE | POWER | GRAPHICS

Required: No

RootVolumeSizeGib

The size of the root volume.

Type: Integer

Required: No

RunningMode

The running mode. For more information, see [Manage the Workspace Running Mode](#).

Type: String

Valid Values: AUTO_STOP | ALWAYS_ON

Required: No

RunningModeAutoStopTimeoutInMinutes

The time after a user logs off when WorkSpaces are automatically stopped. Configured in 60 minute intervals.

Type: Integer

Required: No

UserVolumeSizeGib

The size of the user storage.

Type: Integer

Required: No

See Also

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

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

WorkspaceRequest

Information used to create a WorkSpace.

Contents

BundleId

The identifier of the bundle for the WorkSpace. You can use [DescribeWorkspaceBundles \(p. 12\)](#) to list the available bundles.

Type: String

Pattern: `^wsb-[0-9a-z]{8,63}$`

Required: Yes

DirectoryId

The identifier of the AWS Directory Service directory for the WorkSpace. You can use [DescribeWorkspaceDirectories \(p. 15\)](#) to list the available directories.

Type: String

Pattern: `^d-[0-9a-f]{8,63}$`

Required: Yes

RootVolumeEncryptionEnabled

Indicates whether the data stored on the root volume is encrypted.

Type: Boolean

Required: No

Tags

The tags for the WorkSpace.

Type: Array of [Tag \(p. 46\)](#) objects

Required: No

UserName

The username of the user for the WorkSpace. This username must exist in the AWS Directory Service directory for the WorkSpace.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Required: Yes

UserVolumeEncryptionEnabled

Indicates whether the data stored on the user volume is encrypted.

Type: Boolean

Required: No

VolumeEncryptionKey

The KMS key used to encrypt data stored on your WorkSpace.

Type: String

Required: No

WorkspaceProperties

The WorkSpace properties.

Type: [WorkspaceProperties \(p. 58\)](#) object

Required: No

See Also

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

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

Common Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 400

InternalFailure

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

HTTP Status Code: 500

InvalidAction

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

HTTP Status Code: 400

InvalidClientTokenId

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

HTTP Status Code: 403

InvalidParameterCombination

Parameters that must not be used together were used together.

HTTP Status Code: 400

InvalidParameterValue

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

HTTP Status Code: 400

InvalidQueryParameter

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

HTTP Status Code: 400

MalformedQueryString

The query string contains a syntax error.

HTTP Status Code: 404

MissingAction

The request is missing an action or a required parameter.

HTTP Status Code: 400

MissingAuthenticationToken

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

HTTP Status Code: 403

MissingParameter

A required parameter for the specified action is not supplied.

HTTP Status Code: 400

OptInRequired

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

HTTP Status Code: 403

RequestExpired

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

HTTP Status Code: 400

ServiceUnavailable

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

HTTP Status Code: 503

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

ValidationError

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

HTTP Status Code: 400

Logging Amazon WorkSpaces API Calls by Using CloudTrail

The Amazon WorkSpaces API is integrated with AWS CloudTrail, a service that captures API calls made by or on behalf of Amazon WorkSpaces in your AWS account and delivers the log files to an Amazon S3 bucket that you specify. CloudTrail captures API calls from the Amazon WorkSpaces API and CLI. Using the information collected by CloudTrail, you can determine what request was made to Amazon WorkSpaces, the source IP address from which the request was made, who made the request, when it was made, and so on. For more information about CloudTrail, including how to configure and enable it, see the [AWS CloudTrail User Guide](#).

Amazon WorkSpaces Information in CloudTrail

When CloudTrail logging is enabled in your AWS account, API calls made to Amazon WorkSpaces actions are tracked in log files. Amazon WorkSpaces records are written together with other AWS service records in a log file. CloudTrail determines when to create and write to a new file based on a time period and file size.

All Amazon WorkSpaces actions, except those performed from the Amazon WorkSpaces console, are logged by CloudTrail. For example, calls to create, rebuild, or terminate WorkSpaces generate entries in CloudTrail log files. For more information, see [Actions \(p. 2\)](#).

Every log entry contains information about who generated the request. The user identity information in the log helps you determine whether the request was made with root or IAM user credentials, with temporary security credentials for a role or federated user, or by another AWS service. For more information, see the **userIdentity** field in the [CloudTrail Event Reference](#).

You can store your log files in your bucket for as long as you want, but you can also define Amazon S3 lifecycle rules to archive or delete log files automatically. By default, your log files are encrypted by using Amazon S3 server-side encryption (SSE).

You can choose to have CloudTrail publish Amazon SNS notifications when new log files are delivered if you want to take quick action upon log file delivery. For more information, see [Configuring Amazon SNS Notifications](#).

You can also aggregate Amazon WorkSpaces log files from multiple AWS regions and multiple AWS accounts into a single Amazon S3 bucket. For more information, see [Aggregating CloudTrail Log Files to a Single Amazon S3 Bucket](#).

Understanding Amazon WorkSpaces Log File Entries

CloudTrail log files can contain one or more log entries where each entry is made up of multiple JSON-formatted events. A log entry represents a single request from any source and includes information about the requested action, any parameters, the date and time of the action, and so on. The log entries are not guaranteed to be in any particular order. That is, they are not an ordered stack trace of the public API calls.

Any sensitive information, such as passwords, authentication tokens, file comments, and file contents are redacted in the log entries.

The following example shows an example of a CloudTrail log entry for Amazon WorkSpaces.

```
{
  "Records" : [
    {
      "eventVersion" : "1.02",
      "userIdentity" :
      {
        "type" : "IAMUser",
        "principalId" : "user_id",
        "arn" : "user_arn",
        "accountId" : "account_id",
        "accessKeyId" : "access_key_id",
        "userName" : "username"
      },
      "eventTime" : "event_time",
      "eventSource" : "workspaces.amazonaws.com",
      "eventName" : "DescribeWorkspaces",
      "awsRegion" : "region",
      "sourceIPAddress" : "IP_address",
      "userAgent" : "user_agent",
      "requestParameters" :
      {
        "requestContext" :
        {
          "awsAccountId" : "account_id"
        }
      },
      "responseElements" :
      {
        "workspaces" : [
          {
            "bundleId" : "bundle_id",
            "userName" : "workspace_user_name",
            "ipAddress" : ";ip_address",
            "directoryId" : ";directory_id",
            "state" : "state",
            "workspaceId" : "workspace_id",
            "subnetId" : "subnet_id"
          }
        ]
      },
      "requestID" : "request_id",
      "eventID" : "event_id",
      "eventType" : "AwsApiCall",
      "recipientAccountId" : "account_id"
    }
  ]
}
```