
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.

API Reference

This section contains the Amazon WorkSpaces API reference documentation.

Topics

- [Actions](#) (p. 2)
- [Data Types](#) (p. 32)
- [Common Errors](#) (p. 52)

Actions

The following actions are supported:

- [CreateTags](#) (p. 3)
- [CreateWorkspaces](#) (p. 5)
- [DeleteTags](#) (p. 8)
- [DescribeTags](#) (p. 10)
- [DescribeWorkspaceBundles](#) (p. 12)
- [DescribeWorkspaceDirectories](#) (p. 14)
- [DescribeWorkspaces](#) (p. 16)
- [DescribeWorkspacesConnectionStatus](#) (p. 19)
- [ModifyWorkspaceProperties](#) (p. 21)
- [RebootWorkspaces](#) (p. 23)
- [RebuildWorkspaces](#) (p. 25)
- [StartWorkspaces](#) (p. 27)
- [StopWorkspaces](#) (p. 29)
- [TerminateWorkspaces](#) (p. 31)

CreateTags

Creates tags for a 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 resource ID of the request.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

Tags (p. 3)

The tags of the request.

Type: array of [Tag \(p. 41\)](#) 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 \(p. 52\)](#).

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.

Note

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": {
        "RunningMode": "string",
        "RunningModeAutoStopTimeoutInMinutes": number
      }
    }
  ]
}
```

Request Parameters

The request accepts the following data in JSON format.

Workspaces (p. 5)

An array of structures that specify the WorkSpaces to create.

Type: array of [WorkspaceRequest \(p. 51\)](#) 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": {
        "RunningMode": "string",
        "RunningModeAutoStopTimeoutInMinutes": number
    }
}
],
"PendingRequests": [
    {
        "BundleId": "string",
        "ComputerName": "string",
        "DirectoryId": "string",
        "ErrorCode": "string",
        "ErrorMessage": "string",
        "IpAddress": "string",
        "RootVolumeEncryptionEnabled": boolean,
        "State": "string",
        "SubnetId": "string",
        "UserName": "string",
        "UserVolumeEncryptionEnabled": boolean,
        "VolumeEncryptionKey": "string",
        "WorkspaceId": "string",
        "WorkspaceProperties": {
            "RunningMode": "string",
            "RunningModeAutoStopTimeoutInMinutes": 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)

An array of structures that represent the WorkSpaces that could not be created.
Type: array of [FailedCreateWorkspaceRequest \(p. 35\)](#) objects

PendingRequests (p. 5)

An array of structures that represent the WorkSpaces that were created.
Because this operation is asynchronous, the identifier in `WorkspaceId` is not immediately available. If you immediately call [DescribeWorkspaces \(p. 16\)](#) with this identifier, no information will be returned.
Type: array of [Workspace \(p. 44\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

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 tags from a Workspace.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

ResourceId (p. 8)

The resource ID of the request.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

TagKeys (p. 8)

The tag keys of the request.

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 \(p. 52\)](#).

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 tags for a Workspace.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

ResourceId (p. 10)

The resource ID of the request.

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 list of tags.

Type: array of [Tag \(p. 41\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

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

Obtains information about the WorkSpace bundles that are available to your account in the specified region.

You can filter the results with either the `BundleIds` parameter, or the `Owner` parameter, but not both.

This operation supports pagination with the use of the `NextToken` request and response parameters. If more results are available, the `NextToken` response member contains a token that you pass in the next call to this operation to retrieve the next set of items.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

BundleIds (p. 12)

An array of strings that contains the identifiers of the bundles to retrieve. This parameter cannot be combined with any other filter parameter.

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 `NextToken` value from a previous call to this operation. Pass null if this is the first call.

Type: String

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

Required: No

Owner (p. 12)

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

This contains one of the following values:

- null- Retrieves the bundles that belong to the account making the call.
- `AMAZON`- Retrieves the bundles that are provided by AWS.

Type: String

Required: No

Response Syntax

```
{
  "Bundles": [
    {
      "BundleId": "string",
      "ComputeType": {
        "Name": "string"
      },
      "Description": "string",
    }
  ]
}
```

```
    "Name": "string",
    "Owner": "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)

An array of structures that contain information about the bundles.

Type: array of [WorkspaceBundle \(p. 46\)](#) objects

NextToken (p. 12)

If not null, more results are available. Pass this value for the `NextToken` parameter in a subsequent call to this operation to retrieve the next set of items. 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 \(p. 52\)](#).

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

Retrieves information about the AWS Directory Service directories in the region that are registered with Amazon WorkSpaces and are available to your account.

This operation supports pagination with the use of the `NextToken` request and response parameters. If more results are available, the `NextToken` response member contains a token that you pass in the next call to this operation to retrieve the next set of items.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

DirectoryIds (p. 14)

An array of strings that contains the directory identifiers to retrieve information for. If this member 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. 14)

The `NextToken` value from a previous call to this operation. Pass null if this is the first 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. 14)

An array of structures that contain information about the directories.
Type: array of [WorkspaceDirectory \(p. 48\)](#) objects

NextToken (p. 14)

If not null, more results are available. Pass this value for the `NextToken` parameter in a subsequent call to this operation to retrieve the next set of items. 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 \(p. 52\)](#).

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

Obtains information about the specified WorkSpaces.

Only one of the filter parameters, such as `BundleId`, `DirectoryId`, or `WorkspaceIds`, can be specified at a time.

This operation supports pagination with the use of the `NextToken` request and response parameters. If more results are available, the `NextToken` response member contains a token that you pass in the next call to this operation to retrieve the next set of items.

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. 16)

The identifier of a bundle to obtain the WorkSpaces for. All WorkSpaces that are created from this bundle will be retrieved. This parameter cannot be combined with any other filter parameter.

Type: String

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

Required: No

DirectoryId (p. 16)

Specifies the directory identifier to which to limit the WorkSpaces. Optionally, you can specify a specific directory user with the `UserName` parameter. This parameter cannot be combined with any other filter parameter.

Type: String

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

Required: No

Limit (p. 16)

The maximum number of items to return.

Type: Integer

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

Required: No

NextToken (p. 16)

The `NextToken` value from a previous call to this operation. Pass null if this is the first call.

Type: String

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

Required: No

UserName (p. 16)

Used with the `DirectoryId` parameter to specify the directory user for whom to obtain the WorkSpace.

Type: String

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

Required: No

WorkspacesIds (p. 16)

An array of strings that contain the identifiers of the WorkSpaces for which to retrieve information. This parameter cannot be combined with any other filter parameter.

Because the [CreateWorkspaces \(p. 5\)](#) operation is asynchronous, the identifier it returns is not immediately available. If you immediately call [DescribeWorkspaces \(p. 16\)](#) 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",
      "RootVolumeEncryptionEnabled": boolean,
      "State": "string",
      "SubnetId": "string",
      "UserName": "string",
      "UserVolumeEncryptionEnabled": boolean,
      "VolumeEncryptionKey": "string",
      "WorkspaceId": "string",
      "WorkspaceProperties": {
        "RunningMode": "string",
        "RunningModeAutoStopTimeoutInMinutes": 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. 17)

If not null, more results are available. Pass this value for the `NextToken` parameter in a subsequent call to this operation to retrieve the next set of items. 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. 17)

An array of structures that contain the information about the WorkSpaces.

Because the [CreateWorkspaces \(p. 5\)](#) operation is asynchronous, some of this information may be incomplete for a newly-created WorkSpace.

Type: array of [Workspace \(p. 44\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

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 a specified WorkSpace.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

NextToken (p. 19)

The next token of the request.

Type: String

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

Required: No

WorkspaceIds (p. 19)

An array of strings that contain the identifiers of the 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. 19)

The next token of the result.

Type: String

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

WorkspacesConnectionStatus (p. 19)

The connection status of the WorkSpace.

Type: array of [WorkspaceConnectionStatus \(p. 47\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

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 WorkSpace properties, including the running mode and AutoStop time.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

WorkspaceId (p. 21)

The ID of the WorkSpace.

Type: String

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

Required: Yes

WorkspaceProperties (p. 21)

The WorkSpace properties of the request.

Type: [WorkspaceProperties \(p. 50\)](#) 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 \(p. 52\)](#).

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.

To be able to reboot a WorkSpace, the WorkSpace must have a **State** of `AVAILABLE`, `IMPAIRED`, or `INOPERABLE`.

Note

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. 23)

An array of structures that specify the WorkSpaces to reboot.

Type: array of [RebootRequest \(p. 37\)](#) 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. 23)

An array of structures representing any WorkSpaces that could not be rebooted.

Type: array of [FailedWorkspaceChangeRequest \(p. 36\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

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 WorkSpaces.

Rebuilding a WorkSpace is a potentially destructive action that can result in the loss of data. Rebuilding a WorkSpace causes the following to occur:

- The system is restored to the image of the bundle that the WorkSpace is created from. Any applications that have been installed, or system settings that have been made since the WorkSpace was created will be lost.
- The data drive (D drive) is re-created from the last automatic snapshot taken of the data drive. The current contents of the data drive are overwritten. Automatic snapshots of the data drive are taken every 12 hours, so the snapshot can be as much as 12 hours old.

To be able to rebuild a WorkSpace, the WorkSpace must have a **State** of `AVAILABLE` or `ERROR`.

Note

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. 25)

An array of structures that specify the WorkSpaces to rebuild.

Type: array of [RebuildRequest \(p. 38\)](#) 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. 25)

An array of structures representing any WorkSpaces that could not be rebuilt.

Type: array of [FailedWorkspaceChangeRequest \(p. 36\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

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. The WorkSpaces must have 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. 27)

The requests.

Type: array of [StartRequest \(p. 39\)](#) 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. 27)

The failed requests.

Type: array of [FailedWorkspaceChangeRequest \(p. 36\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

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. The WorkSpaces must have 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. 29)

The requests.

Type: array of [StopRequest \(p. 40\)](#) 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)

The failed requests.

Type: array of [FailedWorkspaceChangeRequest \(p. 36\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 52\)](#).

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 not maintained and will be 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`.

Note

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. 31)

An array of structures that specify the WorkSpaces to terminate.

Type: array of [TerminateRequest](#) (p. 42) 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)

An array of structures representing any WorkSpaces that could not be terminated.

Type: array of [FailedWorkspaceChangeRequest](#) (p. 36) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 52).

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 following data types are supported:

- [ComputeType](#) (p. 33)
- [DefaultWorkspaceCreationProperties](#) (p. 34)
- [FailedCreateWorkspaceRequest](#) (p. 35)
- [FailedWorkspaceChangeRequest](#) (p. 36)
- [RebootRequest](#) (p. 37)
- [RebuildRequest](#) (p. 38)
- [StartRequest](#) (p. 39)
- [StopRequest](#) (p. 40)
- [Tag](#) (p. 41)
- [TerminateRequest](#) (p. 42)
- [UserStorage](#) (p. 43)
- [Workspace](#) (p. 44)
- [WorkspaceBundle](#) (p. 46)
- [WorkspaceConnectionStatus](#) (p. 47)
- [WorkspaceDirectory](#) (p. 48)
- [WorkspaceProperties](#) (p. 50)
- [WorkspaceRequest](#) (p. 51)

ComputeType

Contains information about the compute type of a Workspace bundle.

Contents

Name

The name of the compute type for the bundle.

Type: String

Valid Values: `VALUE` | `STANDARD` | `PERFORMANCE`

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

Contains default WorkSpace creation information.

Contents

CustomSecurityGroupIds

The identifier of any custom security groups that are applied to the WorkSpaces when they are created.

Type: String

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

Required: No

DefaultOu

The organizational unit (OU) in the directory that the WorkSpace machine accounts are placed in.

Type: String

Required: No

EnableInternetAccess

A public IP address will be attached to all WorkSpaces that are created or rebuilt.

Type: Boolean

Required: No

EnableWorkDocs

Specifies if the directory is enabled for Amazon WorkDocs.

Type: Boolean

Required: No

UserEnabledAsLocalAdministrator

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

Contains 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

A [FailedCreateWorkspaceRequest:WorkspaceRequest \(p. 35\)](#) object that contains the information about the Workspace that could not be created.

Type: [WorkspaceRequest \(p. 51\)](#) 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

Contains information about a WorkSpace that could not be rebooted ([RebootWorkspaces \(p. 23\)](#)), rebuilt ([RebuildWorkspaces \(p. 25\)](#)), terminated ([TerminateWorkspaces \(p. 31\)](#)), started ([StartWorkspaces \(p. 27\)](#)), or stopped ([StopWorkspaces \(p. 29\)](#)).

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](#)

RebootRequest

Contains information used with the [RebootWorkspaces](#) (p. 23) operation to reboot a Workspace.

Contents

WorkspaceId

The identifier of the Workspace to reboot.

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

Contains information used with the [RebuildWorkspaces \(p. 25\)](#) operation to rebuild a Workspace.

Contents

WorkspaceId

The identifier of the Workspace to rebuild.

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](#)

StartRequest

Describes the start request.

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

Describes the stop request.

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

Describes the tag of the Workspace.

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

Contains information used with the [TerminateWorkspaces](#) (p. 31) operation to terminate a Workspace.

Contents

WorkspaceId

The identifier of the Workspace to terminate.

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

Contains information about the user storage for a Workspace bundle.

Contents

Capacity

The amount of user storage for the bundle.

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

Contains information about a Workspace.

Contents

BundleId

The identifier of the bundle that the Workspace was created from.

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 that the Workspace belongs to.

Type: String

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

Required: No

ErrorCode

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

Type: String

Required: No

ErrorMessage

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

Type: String

Required: No

IpAddress

The IP address of the Workspace.

Type: String

Required: No

RootVolumeEncryptionEnabled

Specifies whether the data stored on the root volume, or C: drive, 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 | STOPPING | STOPPED | ERROR`

Required: No

SubnetId

The identifier of the subnet that the Workspace is in.

Type: String

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

Required: No

UserName

The user that the Workspace is assigned to.

Type: String

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

Required: No

UserVolumeEncryptionEnabled

Specifies whether the data stored on the user volume, or D: drive, 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

Describes the properties of a Workspace.

Type: [WorkspaceProperties](#) (p. 50) 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

Contains information about a WorkSpace bundle.

Contents

BundleId

The bundle identifier.

Type: String

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

Required: No

ComputeType

A [ComputeType \(p. 33\)](#) object that specifies the compute type for the bundle.

Type: [ComputeType \(p. 33\)](#) object

Required: No

Description

The bundle 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 contains the owner's account identifier, or `AMAZON` if the bundle is provided by AWS.

Type: String

Required: No

UserStorage

A [UserStorage \(p. 43\)](#) object that specifies the amount of user storage that the bundle contains.

Type: [UserStorage \(p. 43\)](#) 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. Returns UNKNOWN if the WorkSpace is in a Stopped state.

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

An array of strings that contains 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

An array of strings that contains the identifiers of the subnets used with the directory.

Type: array of Strings

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

Required: No

WorkspaceCreationProperties

A structure that specifies the default creation properties for all WorkSpaces in the directory.

Type: [DefaultWorkspaceCreationProperties \(p. 34\)](#) 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

Describes the properties of a Workspace.

Contents

RunningMode

The running mode of the Workspace. AlwaysOn WorkSpaces are billed monthly. AutoStop WorkSpaces are billed by the hour and stopped when no longer being used in order to save on costs.

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

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

Contains information about a WorkSpace creation request.

Contents

BundleId

The identifier of the bundle to create the WorkSpace from. You can use the [DescribeWorkspaceBundles \(p. 12\)](#) operation to obtain a list of the bundles that are available.

Type: String

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

Required: Yes

DirectoryId

The identifier of the AWS Directory Service directory to create the WorkSpace in. You can use the [DescribeWorkspaceDirectories \(p. 14\)](#) operation to obtain a list of the directories that are available.

Type: String

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

Required: Yes

RootVolumeEncryptionEnabled

Specifies whether the data stored on the root volume, or C: drive, is encrypted.

Type: Boolean

Required: No

Tags

The tags of the WorkSpace request.

Type: array of [Tag \(p. 41\)](#) objects

Required: No

UserName

The username that the WorkSpace is assigned to. This username must exist in the AWS Directory Service directory specified by the `DirectoryId` member.

Type: String

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

Required: Yes

UserVolumeEncryptionEnabled

Specifies whether the data stored on the user volume, or D: drive, is encrypted.

Type: Boolean

Required: No

VolumeEncryptionKey

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

Type: String

Required: No

WorkspaceProperties

Describes the properties of a WorkSpace.

Type: [WorkspaceProperties \(p. 50\)](#) 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 common errors that all actions return. Any action-specific errors are listed in the topic for the action.

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

Throttling

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 [API Reference \(p. 2\)](#).

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>"
    }
  ]
}
```

Document History

The following table describes the important changes to the documentation in this release of the Amazon WorkSpaces API.

- **Latest documentation update:** April 9th, 2015

Change	Description	Date Changed
Initial Release	Preliminary release of the Amazon WorkSpaces API.	April 9th, 2015