Amazon WorkSpaces Service: API Reference
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Welcome to the Amazon WorkSpaces API Reference

Amazon WorkSpaces enables you to provision virtual, cloud-based Microsoft Windows or Amazon Linux desktops for your users, known as WorkSpaces. WorkSpaces eliminates the need to procure and deploy hardware or install complex software. You can quickly add or remove users as your needs change. Users can access their virtual desktops from multiple devices or web browsers.

This API Reference provides detailed information about the actions, data types, parameters, and errors of the WorkSpaces service. For more information about the supported AWS Regions, endpoints, and service quotas of the WorkSpaces service, see WorkSpaces endpoints and quotas in the AWS General Reference.

You can also manage your WorkSpaces resources using the WorkSpaces console, AWS Command Line Interface (AWS CLI), and SDKs. For more information about administering WorkSpaces, see the Amazon WorkSpaces Administration Guide. For more information about using the Amazon WorkSpaces client application or web browser to access provisioned WorkSpaces, see the Amazon WorkSpaces User Guide. For more information about using the AWS CLI to manage your WorkSpaces resources, see the WorkSpaces section of the AWS CLI Reference.
Actions

The following actions are supported:

- AssociateConnectionAlias (p. 4)
- AssociateIpGroups (p. 7)
- AuthorizeIpRules (p. 9)
- CopyWorkspaceImage (p. 11)
- CreateConnectClientAddIn (p. 14)
- CreateConnectionAlias (p. 17)
- CreateIpGroup (p. 20)
- CreateTags (p. 23)
- CreateUpdatedWorkspaceImage (p. 25)
- CreateWorkspaceBundle (p. 28)
- CreateWorkspaces (p. 32)
- DeleteClientBranding (p. 35)
- DeleteConnectClientAddIn (p. 37)
- DeleteConnectionAlias (p. 39)
- DeleteIpGroup (p. 41)
- DeleteTags (p. 43)
- DeleteWorkspaceBundle (p. 45)
- DeleteWorkspaceImage (p. 47)
- DeregisterWorkspaceDirectory (p. 49)
- DescribeAccount (p. 51)
- DescribeAccountModifications (p. 53)
- DescribeClientBranding (p. 55)
- DescribeClientProperties (p. 58)
- DescribeConnectClientAddIns (p. 60)
- DescribeConnectionAliases (p. 63)
- DescribeConnectionAliasPermissions (p. 66)
- DescribelpGroups (p. 69)
- DescribeTags (p. 72)
- DescribeWorkspaceBundles (p. 74)
- DescribeWorkspaceDirectories (p. 77)
- DescribeWorkspaceImagePermissions (p. 80)
- DescribeWorkspaceImages (p. 83)
- DescribeWorkspaces (p. 86)
- DescribeWorkspacesConnectionStatus (p. 90)
- DescribeWorkspaceSnapshots (p. 92)
- DisassociateConnectionAlias (p. 94)
- DisassociatelpGroups (p. 96)
- ImportClientBranding (p. 98)
- ImportWorkspaceImage (p. 103)
- ListAvailableManagementCidrRanges (p. 106)
• MigrateWorkspace (p. 109)
• ModifyAccount (p. 112)
• ModifyClientProperties (p. 114)
• ModifySelfservicePermissions (p. 116)
• ModifyWorkspaceAccessProperties (p. 118)
• ModifyWorkspaceCreationProperties (p. 120)
• ModifyWorkspaceProperties (p. 122)
• ModifyWorkspaceState (p. 124)
• RebootWorkspaces (p. 126)
• RebuildWorkspaces (p. 128)
• RegisterWorkspaceDirectory (p. 130)
• RestoreWorkspace (p. 133)
• RevokeIpRules (p. 135)
• StartWorkspaces (p. 137)
• StopWorkspaces (p. 139)
• TerminateWorkspaces (p. 141)
• UpdateConnectClientAddIn (p. 143)
• UpdateConnectionAliasPermission (p. 145)
• UpdateRulesOfIpGroup (p. 147)
• UpdateWorkspaceBundle (p. 149)
• UpdateWorkspaceImagePermission (p. 151)
AssociateConnectionAlias

Associates the specified connection alias with the specified directory to enable cross-Region redirection. For more information, see Cross-Region Redirection for Amazon WorkSpaces.

**Note**
Before performing this operation, call DescribeConnectionAliases to make sure that the current state of the connection alias is CREATED.

**Request Syntax**

```json
{
  "AliasId": "string",
  "ResourceId": "string"
}
```

**Request Parameters**

The request accepts the following data in JSON format.

**AliasId (p. 4)**

The identifier of the connection alias.

Type: String


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

Required: Yes

**ResourceId (p. 4)**

The identifier of the directory to associate the connection alias with.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

**Response Syntax**

```json
{
  "ConnectionIdentifier": "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.
ConnectionIdentifier (p. 4)

The identifier of the connection alias association. You use the connection identifier in the DNS TXT record when you're configuring your DNS routing policies.

Type: String
Pattern: ^[a-zA-Z0-9]+$

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

AccessDeniedException
The user is not authorized to access a resource.
HTTP Status Code: 400

InvalidParameterValueException
One or more parameter values are not valid.
HTTP Status Code: 400

InvalidResourceStateException
The state of the resource is not valid for this operation.
HTTP Status Code: 400

OperationNotSupportedException
This operation is not supported.
HTTP Status Code: 400

ResourceAssociatedException
The resource is associated with a directory.
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 V2
See Also

- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
Associates the specified IP access control group with the specified directory.

Request Syntax

```
{
    "DirectoryId": "string",
    "GroupIds": [ "string" ]
}
```

Request Parameters

The request accepts the following data in JSON format.

**DirectoryId (p. 7)**

The identifier of the directory.

Type: String


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

Required: Yes

**GroupIds (p. 7)**

The identifiers of one or more IP access control groups.

Type: Array of strings

Pattern: wsipg-[0-9a-z]{8,63}$

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. 217).

**AccessDeniedException**

The user is not authorized to access a resource.

HTTP Status Code: 400

**InvalidParameterValueException**

One or more parameter values are not valid.

HTTP Status Code: 400
InvalidResourceStateException

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

HTTP Status Code: 400

OperationNotSupportedException

This operation is not supported.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
AuthorizeIpRules

Adds one or more rules to the specified IP access control group.

This action gives users permission to access their WorkSpaces from the CIDR address ranges specified in the rules.

Request Syntax

```
{
  "GroupId": "string",
  "UserRules": [
    {
      "ipRule": "string",
      "ruleDesc": "string"
    }
  ]
}
```

Request Parameters

The request accepts the following data in JSON format.

**GroupId (p. 9)**

The identifier of the group.

Type: String

Pattern: wsipg-[0-9a-z]{8,63}$

Required: Yes

**UserRules (p. 9)**

The rules to add to the group.

Type: Array of IpRuleItem (p. 182) 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. 217).

**AccessDeniedException**

The user is not authorized to access a resource.

HTTP Status Code: 400

**InvalidParameterValuesException**

One or more parameter values are not valid.

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HTTP Status Code: 400
**InvalidResourceStateException**

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

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CopyWorkspaceImage

Copies the specified image from the specified Region to the current Region. For more information about copying images, see Copy a Custom WorkSpaces Image.

In the China (Ningxia) Region, you can copy images only within the same Region.

In AWS GovCloud (US), to copy images to and from other Regions, contact AWS Support.

**Important**
Before copying a shared image, be sure to verify that it has been shared from the correct AWS account. To determine if an image has been shared and to see the ID of the AWS account that owns an image, use the DescribeWorkSpaceImages and DescribeWorkspaceImagePermissions API operations.

**Request Syntax**

```
{
  "Description": "string",
  "Name": "string",
  "SourceImageId": "string",
  "SourceRegion": "string",
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ]
}
```

**Request Parameters**

The request accepts the following data in JSON format.

**Description (p. 11)**

A description of the image.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

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

Required: No

**Name (p. 11)**

The name of the image.

Type: String

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

Pattern: `^[a-zA-Z0-9_./( )\-]+$`

Required: Yes

**SourceImageId (p. 11)**

The identifier of the source image.
Type: String
Pattern: wsi-[0-9a-z]^{9,63}$
Required: Yes

SourceRegion (p. 11)
The identifier of the source Region.
Type: String
Pattern: ^[-0-9a-z]{1,31}$
Required: Yes

Tags (p. 11)
The tags for the image.
Type: Array of Tag (p. 193) objects
Required: No

Response Syntax

```
{
  "ImageId": "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.

ImageId (p. 12)
The identifier of the image.
Type: String
Pattern: wsi-[0-9a-z]^{9,63}$

Errors
For information about the errors that are common to all actions, see Common Errors (p. 217).

AccessDeniedException
The user is not authorized to access a resource.
HTTP Status Code: 400

InvalidParameterValueException
One or more parameter values are not valid.
HTTP Status Code: 400
**OperationNotSupportedException**
This operation is not supported.

HTTP Status Code: 400
**ResourceAlreadyExistsException**
The specified resource already exists.

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
**ResourceUnavailableException**
The specified resource is not available.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateConnectClientAddIn

Creates a client-add-in for Amazon Connect within a directory. You can create only one Amazon Connect client add-in within a directory.

This client add-in allows WorkSpaces users to seamlessly connect to Amazon Connect.

Request Syntax

```json
{
   "Name": "string",
   "ResourceId": "string",
   "URL": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

**Name (p. 14)**

The name of the client add-in.

Type: String

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

Pattern: ^.*$

Required: Yes

**ResourceId (p. 14)**

The directory identifier for which to configure the client add-in.

Type: String


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

Required: Yes

**URL (p. 14)**

The endpoint URL of the Amazon Connect client add-in.

Type: String


Pattern: ^(http|https)\:\//\S+$

Required: Yes

Response Syntax

```json
{
}
```
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.

AddInId (p. 14)

The client add-in identifier.

Type: String

Length Constraints: Fixed length of 36.

Pattern: [a-f0-9]{8}-[a-f0-9]{4}-[a-f0-9]{4}-[a-f0-9]{4}-[a-f0-9]{12}

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

AccessDeniedException

The user is not authorized to access a resource.

HTTP Status Code: 400

InvalidParameterValueException

One or more parameter values are not valid.

HTTP Status Code: 400

ResourceAlreadyExistsException

The specified resource already exists.

HTTP Status Code: 400

ResourceCreationFailedException

The resource could not be created.

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
See Also

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateConnectionAlias

Creates the specified connection alias for use with cross-Region redirection. For more information, see Cross-Region Redirection for Amazon WorkSpaces.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

**ConnectionString (p. 17)**

A connection string in the form of a fully qualified domain name (FQDN), such as www.example.com.

**Important**

After you create a connection string, it is always associated to your AWS account. You cannot recreate the same connection string with a different account, even if you delete all instances of it from the original account. The connection string is globally reserved for your account.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^[.0-9a-zA-Z-\_]{1,255}$`

Required: Yes

**Tags (p. 17)**

The tags to associate with the connection alias.

Type: Array of Tag (p. 193) objects

Required: No

Response Syntax

```
{
    "AliasId": "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.

**AliasId (p. 17)**

The identifier of the connection alias.

Type: String


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

### Errors

For information about the errors that are common to all actions, see [Common Errors (p. 217)](#).

**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 resource is not valid for this operation.

HTTP Status Code: 400

**OperationNotSupportedException**

This operation is not supported.

HTTP Status Code: 400

**ResourceAlreadyExistsException**

The specified resource already exists.

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 V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
CreateIpGroup

Creates an IP access control group.

An IP access control group provides you with the ability to control the IP addresses from which users are allowed to access their WorkSpaces. To specify the CIDR address ranges, add rules to your IP access control group and then associate the group with your directory. You can add rules when you create the group or at any time using AuthorizeIpRules (p. 9).

There is a default IP access control group associated with your directory. If you don’t associate an IP access control group with your directory, the default group is used. The default group includes a default rule that allows users to access their WorkSpaces from anywhere. You cannot modify the default IP access control group for your directory.

**Request Syntax**

```json
{
  "GroupDesc": "string",
  "GroupName": "string",
  "Tags": [
    {
      "Key": "string",
      "Value": "string"
    }
  ],
  "UserRules": [
    {
      "ipRule": "string",
      "ruleDesc": "string"
    }
  ]
}
```

**Request Parameters**

The request accepts the following data in JSON format.

**GroupDesc (p. 20)**

The description of the group.

Type: String

Required: No

**GroupName (p. 20)**

The name of the group.

Type: String

Required: Yes

**Tags (p. 20)**

The tags. Each WorkSpaces resource can have a maximum of 50 tags.

Type: Array of Tag (p. 193) objects

Required: No
UserRules (p. 20)

The rules to add to the group.

Type: Array of IpRuleItem (p. 182) objects

Required: No

Response Syntax

```
{
   "GroupId": "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.

GroupId (p. 21)

The identifier of the group.

Type: String

Pattern: wsipg-[0-9a-z]{8,63}$

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

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

ResourceAlreadyExistsException

The specified resource already exists.

HTTP Status Code: 400

ResourceCreationFailedException

The resource could not be created.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateTags

Creates the specified tags for the specified WorkSpaces resource.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

ResourceId (p. 23)

The identifier of the WorkSpaces resource. The supported resource types are WorkSpaces, registered directories, images, custom bundles, IP access control groups, and connection aliases.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

Tags (p. 23)

The tags. Each WorkSpaces resource can have a maximum of 50 tags.

Type: Array of Tag (p. 193) 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. 217).

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateUpdatedWorkspaceImage

Creates a new updated WorkSpace image based on the specified source image. The new updated WorkSpace image has the latest drivers and other updates required by the Amazon WorkSpaces components.

To determine which WorkSpace images need to be updated with the latest Amazon WorkSpaces requirements, use DescribeWorkspaceImages.

**Note**

- Only Windows 10, Windows Sever 2016, and Windows Server 2019 WorkSpace images can be programmatically updated at this time.
- Microsoft Windows updates and other application updates are not included in the update process.
- The source WorkSpace image is not deleted. You can delete the source image after you've verified your new updated image and created a new bundle.

**Request Syntax**

```json
{
    "Description": "string",
    "Name": "string",
    "SourceImageId": "string",
    "Tags": [
        {
            "Key": "string",
            "Value": "string"
        }
    ]
}
```

**Request Parameters**

The request accepts the following data in JSON format.

**Description (p. 25)**

A description of whether updates for the WorkSpace image are available.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: ^[a-zA-Z0-9_./()-]+$  

Required: Yes

**Name (p. 25)**

The name of the new updated WorkSpace image.

Type: String

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

Pattern: ^[a-zA-Z0-9_./()\-]+$
Required: Yes

SourceImageId (p. 25)

The identifier of the source WorkSpace image.

Type: String

Pattern: \wsi-[0-9a-z]{9,63}$

Required: Yes

Tags (p. 25)

The tags that you want to add to the new updated WorkSpace image.

Note
To add tags at the same time when you're creating the updated image, you must create an IAM policy that grants your IAM user permissions to use workspaces:CreateTags.

Type: Array of Tag (p. 193) objects

Required: No

Response Syntax

```
{
  "ImageId": "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.

ImageId (p. 26)

The identifier of the new updated WorkSpace image.

Type: String

Pattern: \wsi-[0-9a-z]{9,63}$

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

AccessException

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 resource is not valid for this operation.

HTTP Status Code: 400

OperationNotSupportedException

This operation is not supported.

HTTP Status Code: 400

ResourceAlreadyExistsException

The specified resource already exists.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
CreateWorkspaceBundle

Creates the specified WorkSpace bundle. For more information about creating WorkSpace bundles, see Create a Custom WorkSpaces Image and Bundle.

Request Syntax

```json
{
   "BundleDescription": "string",
   "BundleName": "string",
   "ComputeType": {
      "Name": "string"
   },
   "ImageId": "string",
   "RootStorage": {
      "Capacity": "string"
   },
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ],
   "UserStorage": {
      "Capacity": "string"
   }
}
```

Request Parameters

The request accepts the following data in JSON format.

**BundleDescription (p. 28)**

The description of the bundle.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: ^[a-zA-Z0-9_./() -]+$

Required: Yes

**BundleName (p. 28)**

The name of the bundle.

Type: String

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

Pattern: ^[a-zA-Z0-9_./()\-]+$

Required: Yes

**ComputeType (p. 28)**

Describes the compute type of the bundle.
Type: `ComputeType (p. 159)` object
Required: Yes

**ImageId (p. 28)**

The identifier of the image that is used to create the bundle.

Type: String
Pattern: `wsi-\d{9,63}`

Required: Yes

**RootStorage (p. 28)**

Describes the root volume for a WorkSpace bundle.

Type: `RootStorage (p. 187)` object
Required: No

**Tags (p. 28)**

The tags associated with the bundle.

Note

To add tags at the same time when you're creating the bundle, you must create an IAM policy that grants your IAM user permissions to use `workspaces:CreateTags`.

Type: Array of `Tag (p. 193)` objects
Required: No

**UserStorage (p. 28)**

Describes the user volume for a WorkSpace bundle.

Type: `UserStorage (p. 196)` object
Required: Yes

---

**Response Syntax**

```json
{
    "WorkspaceBundle": {
        "BundleId": "string",
        "ComputeType": {
            "Name": "string"
        },
        "CreationTime": number,
        "Description": "string",
        "ImageId": "string",
        "LastUpdatedTime": number,
        "Name": "string",
        "Owner": "string",
        "RootStorage": {
            "Capacity": "string"
        },
        "UserStorage": {
            "Capacity": "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.

**WorkspaceBundle (p. 29)**

Describes a WorkSpace bundle.

Type: `WorkspaceBundle` (p. 202) object

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 217).

**AccessDeniedException**

The user is not authorized to access a resource.

HTTP Status Code: 400

**InvalidParameterValueException**

One or more parameter values are not valid.

HTTP Status Code: 400

**ResourceAlreadyExistsException**

The specified resource already exists.

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

**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 V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
CreateWorkspaces

Creates one or more WorkSpaces.

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

Request Syntax

```json
{
  "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. 32)**

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

Type: Array of WorkspaceRequest (p. 214) objects

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

Required: Yes

Response Syntax

```json
{
  "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
        }
      }
    }
  ]
}
```
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. 32)

Information about the WorkSpaces that could not be created.

Type: Array of FailedCreateWorkspaceRequest (p. 173) objects
PendingRequests (p. 32)

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. 86) before the WorkSpace is created, the information returned can be incomplete.

Type: Array of Workspace (p. 197) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteClientBranding

Deletes customized client branding. Client branding allows you to customize your WorkSpace's client login portal. You can tailor your login portal company logo, the support email address, support link, link to reset password, and a custom message for users trying to sign in.

After you delete your customized client branding, your login portal reverts to the default client branding.

Request Syntax

```json
{
   "Platforms": [ "string" ],
   "ResourceId": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

Platforms (p. 35)

The device type for which you want to delete client branding.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 6 items.

Valid Values: DeviceTypeWindows | DeviceTypeOsx | DeviceTypeAndroid | DeviceTypeIos | DeviceTypeLinux | DeviceTypeWeb

Required: Yes

ResourceId (p. 35)

The directory identifier of the WorkSpace for which you want to delete client branding.

Type: String


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

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. 217).

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

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteConnectClientAddIn

Deletes a client-add-in for Amazon Connect that is configured within a directory.

Request Syntax

```
{
    "AddInId": "string",
    "ResourceId": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

**AddInId (p. 37)**

The identifier of the client add-in to delete.

Type: String

Length Constraints: Fixed length of 36.

Pattern: \[a-f0-9\]{8}-[a-f0-9\]{4}-[a-f0-9\]{4}-[a-f0-9\]{4}-[a-f0-9\]{12}

Required: Yes

**ResourceId (p. 37)**

The directory identifier for which the client add-in is configured.

Type: String


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

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. 217).

**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

**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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteConnectionAlias

Deletes the specified connection alias. For more information, see Cross-Region Redirection for Amazon WorkSpaces.

Important
If you will no longer be using a fully qualified domain name (FQDN) as the registration code for your WorkSpaces users, you must take certain precautions to prevent potential security issues. For more information, see Security Considerations if You Stop Using Cross-Region Redirection.

Note
To delete a connection alias that has been shared, the shared account must first disassociate the connection alias from any directories it has been associated with. Then you must unshare the connection alias from the account it has been shared with. You can delete a connection alias only after it is no longer shared with any accounts or associated with any directories.

Request Syntax

```
{
   "AliasId": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

AliasId (p. 39)

The identifier of the connection alias to delete.

Type: String


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

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. 217).

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 resource is not valid for this operation.

HTTP Status Code: 400

OperationNotSupportedException
This operation is not supported.

HTTP Status Code: 400

ResourceAssociatedException
The resource is associated with a directory.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteIpGroup

Deletes the specified IP access control group.

You cannot delete an IP access control group that is associated with a directory.

Request Syntax

```json
{
    "GroupId": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

GroupId (p. 41)

The identifier of the IP access control group.

Type: String

Pattern: wsipg-[0-9a-z]{8,63}$

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. 217).

AccessDeniedException

The user is not authorized to access a resource.

HTTP Status Code: 400

InvalidParameterValueException

One or more parameter values are not valid.

HTTP Status Code: 400

ResourceAssociatedException

The resource is associated with a directory.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteTags

Deletes the specified tags from the specified WorkSpaces resource.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

ResourceId (p. 43)

The identifier of the WorkSpaces resource. The supported resource types are WorkSpaces, registered directories, images, custom bundles, IP access control groups, and connection aliases.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

TagKeys (p. 43)

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. 217).

InvalidParameterValueException

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteWorkspaceBundle

Deletes the specified WorkSpace bundle. For more information about deleting WorkSpace bundles, see Delete a Custom WorkSpaces Bundle or Image.

Request Syntax

```json
{
   "BundleId": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

**BundleId (p. 45)**

- The identifier of the bundle.
- Type: String
- Pattern: ^wsb-[0-9a-z]{8,63}$
- Required: No

Response Elements

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

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

**AccessDeniedException**

- The user is not authorized to access a resource.
- HTTP Status Code: 400

**InvalidParameterValueException**

- One or more parameter values are not valid.
- HTTP Status Code: 400

**ResourceAssociatedException**

- The resource is associated with a directory.
- 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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeleteWorkspaceImage

Deletes the specified image from your account. To delete an image, you must first delete any bundles that are associated with the image and unshare the image if it is shared with other accounts.

Request Syntax

```json
{
   "ImageId": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

**ImageId (p. 47)**

The identifier of the image.

Type: String

Pattern: wsi-[0-9a-z]{9,63}$

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. 217).

**AccessDeniedException**

The user is not authorized to access a resource.

HTTP Status Code: 400

**InvalidResourceStateException**

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

HTTP Status Code: 400

**ResourceAssociatedException**

The resource is associated with a directory.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DeregisterWorkspaceDirectory

Deregisters the specified directory. This operation is asynchronous and returns before the WorkSpace directory is deregistered. If any WorkSpaces are registered to this directory, you must remove them before you can deregister the directory.

**Note**
Simple AD and AD Connector are made available to you free of charge to use with WorkSpaces. If there are no WorkSpaces being used with your Simple AD or AD Connector directory for 30 consecutive days, this directory will be automatically deregistered for use with Amazon WorkSpaces, and you will be charged for this directory as per the AWS Directory Service pricing terms.
To delete empty directories, see Delete the Directory for Your WorkSpaces. If you delete your Simple AD or AD Connector directory, you can always create a new one when you want to start using WorkSpaces again.

**Request Syntax**

```
{
  "DirectoryId": "string"
}
```

**Request Parameters**

The request accepts the following data in JSON format.

**DirectoryId (p. 49)**

The identifier of the directory. If any WorkSpaces are registered to this directory, you must remove them before you deregister the directory, or you will receive an OperationNotSupportedException error.

Type: String


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

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. 217).

**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 resource is not valid for this operation.

HTTP Status Code: 400

OperationNotSupportedException

This operation is not supported.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DescribeAccount

Retrieves a list that describes the configuration of Bring Your Own License (BYOL) for the specified account.

Response Syntax

```json
{
    "DedicatedTenancyManagementCidrRange": "string",
    "DedicatedTenancySupport": "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.

**DedicatedTenancyManagementCidrRange (p. 51)**

The IP address range, specified as an IPv4 CIDR block, used for the management network interface.

The management network interface is connected to a secure Amazon WorkSpaces management network. It is used for interactive streaming of the WorkSpace desktop to Amazon WorkSpaces clients, and to allow Amazon WorkSpaces to manage the WorkSpace.

Type: String


**DedicatedTenancySupport (p. 51)**

The status of BYOL (whether BYOL is enabled or disabled).

Type: String

Valid Values: ENABLED | DISABLED

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

**AccessDeniedException**

The user is not authorized to access a resource.

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 V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
DescribeAccountModifications

Retrieves a list that describes modifications to the configuration of Bring Your Own License (BYOL) for the specified account.

**Request Syntax**

```json
{
    "NextToken": "string"
}
```

**Request Parameters**

The request accepts the following data in JSON format.

- **NextToken (p. 53)**

  If you received a `NextToken` from a previous call that was paginated, provide this token to receive the next set of results.

  Type: String

  Length Constraints: Minimum length of 1. Maximum length of 2048.

  Required: No

**Response Syntax**

```json
{
    "AccountModifications": [
        {
            "DedicatedTenancyManagementCidrRange": "string",
            "DedicatedTenancySupport": "string",
            "ErrorCode": "string",
            "ErrorMessage": "string",
            "ModificationState": "string",
            "StartTime": "number"
        }
    ],
    "NextToken": "string"
}
```

**Response Elements**

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

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

- **AccountModifications (p. 53)**

  The list of modifications to the configuration of BYOL.

  Type: Array of `AccountModification (p. 155)` objects
NextToken (p. 53)

The token to use to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

AccessDeniedException

The user is not authorized to access a resource.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DescribeClientBranding

Describes the specified client branding. Client branding allows you to customize the login page of various device types for your users. You can add your company logo, the support email address, support link, link to reset password, and a custom message for users trying to sign in.

**Note**
Only device types that have branding information configured will be shown in the response.

**Request Syntax**

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

**Request Parameters**

The request accepts the following data in JSON format.

**ResourceId (p. 55)**

The directory identifier of the WorkSpace for which you want to view client branding information.

Type: String


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

Required: Yes

**Response Syntax**

```
{
    "DeviceTypeAndroid": {
        "ForgotPasswordLink": "string",
        "LoginMessage": {
            "string": "string"
        },
        "LogoUrl": "string",
        "SupportEmail": "string",
        "SupportLink": "string"
    },
    "DeviceTypeIos": {
        "ForgotPasswordLink": "string",
        "LoginMessage": {
            "string": "string"
        },
        "Logo3xUrl": "string",
        "Logo2xUrl": "string",
        "LogoUrl": "string",
        "SupportEmail": "string",
        "SupportLink": "string"
    },
    "DeviceTypeLinux": {
        "ForgotPasswordLink": "string",
        "LoginMessage": {
```
## 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.

### DeviceTypeAndroid (p. 55)

The branding information for Android devices.

Type: `DefaultClientBrandingAttributes (p. 167) object`

### DeviceTypeIos (p. 55)

The branding information for iOS devices.

Type: `IosClientBrandingAttributes (p. 176) object`

### DeviceTypeLinux (p. 55)

The branding information for Linux devices.

Type: `DefaultClientBrandingAttributes (p. 167) object`

### DeviceTypeOsx (p. 55)

The branding information for macOS devices.

Type: `DefaultClientBrandingAttributes (p. 167) object`
DeviceTypeWeb (p. 55)

The branding information for Web access.

Type: DefaultClientBrandingAttributes (p. 167) object

DeviceTypeWindows (p. 55)

The branding information for Windows devices.

Type: DefaultClientBrandingAttributes (p. 167) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

AccessDeniedException

The user is not authorized to access a resource.

HTTP Status Code: 400

InvalidParameterValueException

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DescribeClientProperties

Retrieves a list that describes one or more specified Amazon WorkSpaces clients.

Request Syntax

```json
{
  "ResourceIds": [ "string" ]
}
```

Request Parameters

The request accepts the following data in JSON format.

ResourceIds (p. 58)

The resource identifier, in the form of directory IDs.

- Type: Array of strings
- Array Members: Minimum number of 1 item. Maximum number of 25 items.
- Length Constraints: Minimum length of 1.
- Required: Yes

Response Syntax

```json
{
  "ClientPropertiesList": [
    {
      "ClientProperties": {
        "ReconnectEnabled": "string"
      },
      "ResourceId": "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.

ClientPropertiesList (p. 58)

Information about the specified Amazon WorkSpaces clients.

- Type: Array of ClientPropertiesResult (p. 158) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).
AccessDeniedException

The user is not authorized to access a resource.

HTTP Status Code: 400

InvalidParameterValueException

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DescribeConnectClientAddIns

Retrieves a list of Amazon Connect client add-ins that have been created.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

**MaxResults (p. 60)**

The maximum number of items to return.

Type: Integer


Required: No

**NextToken (p. 60)**

If you received a NextToken from a previous call that was paginated, provide this token to receive the next set of results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Required: No

**ResourceId (p. 60)**

The directory identifier for which the client add-in is configured.

Type: String


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

Required: Yes

Response Syntax

```json
{
   "AddIns": [
      {
         "AddInId": "string",
         "Name": "string",
         "ResourceId": "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.

AddIns (p. 60)

Information about client add-ins.

Type: Array of ConnectClientAddIn (p. 160) objects

NextToken (p. 60)

The token to use to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

AccessDeniedException

The user is not authorized to access a resource.

HTTP Status Code: 400

InvalidParameterValueException

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 V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
DescribeConnectionAliases

Retrieves a list that describes the connection aliases used for cross-Region redirection. For more information, see Cross-Region Redirection for Amazon WorkSpaces.

Request Syntax

```
{
   "AliasIds": [ "string" ],
   "Limit": number,
   "NextToken": "string",
   "ResourceId": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

**AliasIds (p. 63)**

The identifiers of the connection aliases to describe.

Type: Array of strings

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


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

Required: No

**Limit (p. 63)**

The maximum number of connection aliases to return.

Type: Integer


Required: No

**NextToken (p. 63)**

If you received a NextToken from a previous call that was paginated, provide this token to receive the next set of results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Required: No

**ResourceId (p. 63)**

The identifier of the directory associated with the connection alias.

Type: String
Response Syntax

```json
{
    "ConnectionAliases": [
        {
            "AliasId": "string",
            "Associations": [
                {
                    "AssociatedAccountId": "string",
                    "AssociationStatus": "string",
                    "ConnectionIdentifier": "string",
                    "ResourceId": "string"
                }
            ],
            "ConnectionString": "string",
            "OwnerAccountId": "string",
            "State": "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.

**ConnectionAliases (p. 64)**

Information about the specified connection aliases.

Type: Array of [ConnectionAlias (p. 162)] objects

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

**NextToken (p. 64)**

The token to use to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Errors

For information about the errors that are common to all actions, see [Common Errors (p. 217)].

**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

OperationNotSupportedException

This operation is not supported.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DescribeConnectionAliasPermissions

Describes the permissions that the owner of a connection alias has granted to another AWS account for the specified connection alias. For more information, see Cross-Region Redirection for Amazon WorkSpaces.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

**AliasId (p. 66)**

The identifier of the connection alias.

Type: String


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

Required: Yes

**MaxResults (p. 66)**

The maximum number of results to return.

Type: Integer


Required: No

**NextToken (p. 66)**

If you received a NextToken from a previous call that was paginated, provide this token to receive the next set of results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Required: No

Response Syntax

```
{
    "AliasId": "string",
    "ConnectionAliasPermissions": [
        {
```

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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.

**AliasId (p. 66)**

The identifier of the connection alias.

Type: String


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

**ConnectionAliasPermissions (p. 66)**

The permissions associated with a connection alias.

Type: Array of ConnectionAliasPermission (p. 166) objects

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

**NextToken (p. 66)**

The token to use to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

**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

**OperationNotSupportedException**

This operation is not supported.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DescribeIpGroups

Describes one or more of your IP access control groups.

Request Syntax

```json
{
    "GroupIds": [ "string" ],
    "MaxResults": number,
    "NextToken": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

**GroupIds (p. 69)**

The identifiers of one or more IP access control groups.

- Type: Array of strings
- Pattern: `wsipg-[0-9a-z]{8,63}$`
- Required: No

**MaxResults (p. 69)**

The maximum number of items to return.

- Type: Integer
- Required: No

**NextToken (p. 69)**

If you received a `NextToken` from a previous call that was paginated, provide this token to receive the next set of results.

- Type: String
- Required: No

Response Syntax

```json
{
    "NextToken": "string",
    "Result": [
        {
            "groupDesc": "string",
            "groupId": "string",
            "groupName": "string",
            "userRules": [
            ...
        }
    ]
}
```
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. 69)

The token to use to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Result (p. 69)

Information about the IP access control groups.

Type: Array of WorkspacesIpGroup (p. 216) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

AccessDeniedException

The user is not authorized to access a resource.

HTTP Status Code: 400

InvalidParameterValueException

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
See Also

- AWS SDK for Python
- AWS SDK for Ruby V3
DescribeTags

Describes the specified tags for the specified WorkSpaces resource.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

ResourceId (p. 72)

The identifier of the WorkSpaces resource. The supported resource types are WorkSpaces, registered directories, images, custom bundles, IP access control groups, and connection aliases.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

Response Syntax

```json
{
   "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. 72)

The tags.

Type: Array of Tag (p. 193) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).
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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DescribeWorkspaceBundles

Retrieves a list that 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. 74)**

The identifiers of the bundles. You cannot combine this parameter with any other filter.

Type: Array of strings

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

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

Required: No

**NextToken (p. 74)**

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 2048.

Required: No

**Owner (p. 74)**

The owner of the bundles. You cannot combine this parameter with any other filter.

To describe the bundles provided by AWS, specify AMAZON. To describe the bundles that belong to your account, don't specify a value.

Type: String

Required: No

Response Syntax

```
{
    "Bundles": [
        {
            "BundleId": "string",
```
"ComputeType": {
    "Name": "string",
    "CreationTime": number,
    "Description": "string",
    "ImageId": "string",
    "LastUpdatedTime": number,
    "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. 74)**

Information about the bundles.

Type: Array of `WorkspaceBundle (p. 202)` objects

**NextToken (p. 74)**

The token to use to retrieve the next page of results. This value is null when there are no more results to return. 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 2048.

Errors

For information about the errors that are common to all actions, see `Common Errors (p. 217)`.

**InvalidParameterValueException**

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++
See Also

- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DescribeWorkspaceDirectories

Describes the available directories that are registered with Amazon WorkSpaces.

Request Syntax

```json
{
   "DirectoryIds": [ "string" ],
   "Limit": number,
   "NextToken": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

DirectoryIds (p. 77)

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

Limit (p. 77)

The maximum number of directories to return.

Type: Integer


Required: No

NextToken (p. 77)

If you received a NextToken from a previous call that was paginated, provide this token to receive the next set of results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Required: No

Response Syntax

```json
{
   "Directories": [
   {
```
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. 77)**

Information about the directories.

Type: Array of `WorkspaceDirectory (p. 207)` objects

**NextToken (p. 77)**

The token to use to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.
Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

InvalidParameterValueException

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DescribeWorkspaceImagePermissions

Describes the permissions that the owner of an image has granted to other AWS accounts for an image.

Request Syntax

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

Request Parameters

The request accepts the following data in JSON format.

**ImageId (p. 80)**

The identifier of the image.

Type: String

Pattern: wsi-[0-9a-z]{9,63}$

Required: Yes

**MaxResults (p. 80)**

The maximum number of items to return.

Type: Integer


Required: No

**NextToken (p. 80)**

If you received a NextToken from a previous call that was paginated, provide this token to receive the next set of results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Required: No

Response Syntax

```json
{
   "ImageId": "string",
   "ImagePermissions": [ 
   { 
      "SharedAccountId": "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.

**ImageId (p. 80)**

The identifier of the image.

Type: String

Pattern: wsi-[0-9a-zA-Z]{9,63}$

**ImagePermissions (p. 80)**

The identifiers of the AWS accounts that the image has been shared with.

Type: Array of ImagePermission (p. 175) objects

**NextToken (p. 80)**

The token to use to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

**AccessDeniedException**

The user is not authorized to access a resource.

HTTP Status Code: 400

**InvalidParameterValueException**

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 V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
DescribeWorkspaceImages

Retrieves a list that describes one or more specified images, if the image identifiers are provided. Otherwise, all images in the account are described.

Request Syntax

```
{
    "ImageIds": [ "string" ],
    "ImageType": "string",
    "MaxResults": number,
    "NextToken": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

**ImageIds (p. 83)**

The identifier of the image.

Type: Array of strings

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

Pattern: wsi-[0-9a-z]{9,63}$

Required: No

**ImageType (p. 83)**

The type (owned or shared) of the image.

Type: String

Valid Values: OWNED  |  SHARED

Required: No

**MaxResults (p. 83)**

The maximum number of items to return.

Type: Integer


Required: No

**NextToken (p. 83)**

If you received a NextToken from a previous call that was paginated, provide this token to receive the next set of results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.
Response Syntax

```
{
  "Images": [ 
    {
      "Created": number,
      "Description": "string",
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "ImageId": "string",
      "Name": "string",
      "OperatingSystem": {
        "Type": "string"
      },
      "OwnerAccountId": "string",
      "RequiredTenancy": "string",
      "State": "string",
      "Updates": {
        "Description": "string",
        "UpdateAvailable": boolean
      }
    }
  ],
  "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.

**Images (p. 84)**

Information about the images.

Type: Array of Workspacelimage (p. 210) objects

**NextToken (p. 84)**

The token to use to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 217).

**AccessDeniedException**

The user is not authorized to access a resource.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DescribeWorkspaces

Describes the specified WorkSpaces.

You can filter the results by using the bundle identifier, directory identifier, 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. 86)

The identifier of the bundle. All WorkSpaces that are created from this bundle are retrieved. You cannot combine this parameter with any other filter.

  - Type: String
  - Pattern: ^wsb-[0-9a-z]{8,63}$
  - Required: No

**DirectoryId** (p. 86)

The identifier of the directory. In addition, you can optionally specify a specific directory user (see **UserName**). You cannot combine this parameter with any other filter.

  - Type: String
  - Pattern: ^d-[0-9a-f]{8,63}$
  - Required: No

**Limit** (p. 86)

The maximum number of items to return.

  - Type: Integer
  - Required: No

**NextToken** (p. 86)

If you received a **NextToken** from a previous call that was paginated, provide this token to receive the next set of results.
UserName (p. 86)
The name of the directory user. You must specify this parameter with DirectoryId.

Type: String
Required: No

WorkspaceIds (p. 86)
The identifiers of the WorkSpaces. You cannot combine this parameter with any other filter.

Because the CreateWorkspaces (p. 32) operation is asynchronous, the identifier it returns is not immediately available. If you immediately call DescribeWorkspaces (p. 86) 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. 87)

The token to use to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Workspaces (p. 87)

Information about the WorkSpaces.

Because CreateWorkspaces (p. 32) is an asynchronous operation, some of the returned information could be incomplete.

Type: Array of Workspace (p. 197) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
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. 90)**

If you received a `NextToken` from a previous call that was paginated, provide this token to receive the next set of results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Required: No

**WorkspaceIds (p. 90)**

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": [  
    
  ]
}
```

Response Elements

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

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

**NextToken (p. 90)**

The token to use to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

**WorkspacesConnectionStatus (p. 90)**

Information about the connection status of the WorkSpace.

Type: Array of WorkspacesConnectionStatus (p. 204) objects

---

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 217).

**InvalidParameterValueException**

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DescribeWorkspaceSnapshots

Describes the snapshots for the specified WorkSpace.

Request Syntax

```
{
  "WorkspaceId": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

**WorkspaceId (p. 92)**

The identifier of the WorkSpace.

Type: String

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

Required: Yes

Response Syntax

```
{
  "RebuildSnapshots": [
    {
      "SnapshotTime": number
    }
  ],
  "RestoreSnapshots": [
    {
      "SnapshotTime": 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.

**RebuildSnapshots (p. 92)**

Information about the snapshots that can be used to rebuild a WorkSpace. These snapshots include the user volume.

Type: Array of **Snapshot (p. 190)** objects

**RestoreSnapshots (p. 92)**

Information about the snapshots that can be used to restore a WorkSpace. These snapshots include both the root volume and the user volume.
Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

**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

**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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DisassociateConnectionAlias

Disassociates a connection alias from a directory. Disassociating a connection alias disables cross-Region redirection between two directories in different Regions. For more information, see Cross-Region Redirection for Amazon WorkSpaces.

**Note**
Before performing this operation, call DescribeConnectionAliases to make sure that the current state of the connection alias is CREATED.

**Request Syntax**

```json
{
   "AliasId": "string"
}
```

**Request Parameters**

The request accepts the following data in JSON format.

**AliasId (p. 94)**

The identifier of the connection alias to disassociate.

Type: String


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

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. 217).

**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 resource is not valid for this operation.

HTTP Status Code: 400
### OperationNotSupportedException

This operation is not supported.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
DisassociateIpGroups

Disassociates the specified IP access control group from the specified directory.

Request Syntax

```json
{
"DirectoryId": "string",
"GroupIds": [ "string" ]
}
```

Request Parameters

The request accepts the following data in JSON format.

**DirectoryId (p. 96)**

The identifier of the directory.

Type: String


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

Required: Yes

**GroupIds (p. 96)**

The identifiers of one or more IP access control groups.

Type: Array of strings

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

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. 217).

**AccessDeniedException**

The user is not authorized to access a resource.

HTTP Status Code: 400

**InvalidParameterValueException**

One or more parameter values are not valid.

HTTP Status Code: 400
InvalidResourceStateException

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

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ImportClientBranding

Imports client branding. Client branding allows you to customize your WorkSpace's client login portal. You can tailor your login portal company logo, the support email address, support link, link to reset password, and a custom message for users trying to sign in.

After you import client branding, the default branding experience for the specified platform type is replaced with the imported experience.

**Note**

- You must specify at least one platform type when importing client branding.
- You can import up to 6 MB of data with each request. If your request exceeds this limit, you can import client branding for different platform types using separate requests.
- In each platform type, the `SupportEmail` and `SupportLink` parameters are mutually exclusive. You can specify only one parameter for each platform type, but not both.
- Imported data can take up to a minute to appear in the WorkSpaces client.

**Request Syntax**

```json
{
  "DeviceTypeAndroid": {
    "ForgotPasswordLink": "string",
    "LoginMessage": {
      "string": "string"
    },
    "Logo": blob,
    "SupportEmail": "string",
    "SupportLink": "string"
  },
  "DeviceTypeIos": {
    "ForgotPasswordLink": "string",
    "LoginMessage": {
      "string": "string"
    },
    "Logo": blob,
    "Logo2x": blob,
    "Logo3x": blob,
    "SupportEmail": "string",
    "SupportLink": "string"
  },
  "DeviceTypeLinux": {
    "ForgotPasswordLink": "string",
    "LoginMessage": {
      "string": "string"
    },
    "Logo": blob,
    "SupportEmail": "string",
    "SupportLink": "string"
  },
  "DeviceTypeOsx": {
    "ForgotPasswordLink": "string",
    "LoginMessage": {
      "string": "string"
    },
    "Logo": blob,
    "SupportEmail": "string",
    "SupportLink": "string"
  }
}
```

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Request Parameters

The request accepts the following data in JSON format.

**DeviceTypeAndroid (p. 98)**

The branding information to import for Android devices.

Type: `DefaultImportClientBrandingAttributes (p. 169)` object

Required: No

**DeviceTypeIos (p. 98)**

The branding information to import for iOS devices.

Type: `IosImportClientBrandingAttributes (p. 179)` object

Required: No

**DeviceTypeLinux (p. 98)**

The branding information to import for Linux devices.

Type: `DefaultImportClientBrandingAttributes (p. 169)` object

Required: No

**DeviceTypeOsx (p. 98)**

The branding information to import for macOS devices.

Type: `DefaultImportClientBrandingAttributes (p. 169)` object

Required: No

**DeviceTypeWeb (p. 98)**

The branding information to import for web access.

Type: `DefaultImportClientBrandingAttributes (p. 169)` object

Required: No
DeviceTypeWindows (p. 98)

The branding information to import for Windows devices.

Type: DefaultImportClientBrandingAttributes (p. 169) object

Required: No

ResourceId (p. 98)

The directory identifier of the WorkSpace for which you want to import client branding.

Type: String


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

Required: Yes

Response Syntax

```
{
  "DeviceTypeAndroid": {
    "ForgotPasswordLink": "string",
    "LoginMessage": {
      "string": "string"
    },
    "LogoUrl": "string",
    "SupportEmail": "string",
    "SupportLink": "string"
  },
  "DeviceTypeIos": {
    "ForgotPasswordLink": "string",
    "LoginMessage": {
      "string": "string"
    },
    "Logo2xUrl": "string",
    "Logo3xUrl": "string",
    "LogoUrl": "string",
    "SupportEmail": "string",
    "SupportLink": "string"
  },
  "DeviceTypeLinux": {
    "ForgotPasswordLink": "string",
    "LoginMessage": {
      "string": "string"
    },
    "LogoUrl": "string",
    "SupportEmail": "string",
    "SupportLink": "string"
  },
  "DeviceTypeOsx": {
    "ForgotPasswordLink": "string",
    "LoginMessage": {
      "string": "string"
    },
    "LogoUrl": "string",
    "SupportEmail": "string",
    "SupportLink": "string"
  },
  "DeviceTypeWeb": {
    "ForgotPasswordLink": "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.

DeviceTypeAndroid (p. 100)

The branding information configured for Android devices.

Type: DefaultClientBrandingAttributes (p. 167) object

DeviceTypeIos (p. 100)

The branding information configured for iOS devices.

Type: IosClientBrandingAttributes (p. 176) object

DeviceTypeLinux (p. 100)

The branding information configured for Linux devices.

Type: DefaultClientBrandingAttributes (p. 167) object

DeviceTypeOsx (p. 100)

The branding information configured for macOS devices.

Type: DefaultClientBrandingAttributes (p. 167) object

DeviceTypeWeb (p. 100)

The branding information configured for web access.

Type: DefaultClientBrandingAttributes (p. 167) object

DeviceTypeWindows (p. 100)

The branding information configured for Windows devices.

Type: DefaultClientBrandingAttributes (p. 167) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).
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

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ImportWorkspaceImage

Imports the specified Windows 10 Bring Your Own License (BYOL) image into Amazon WorkSpaces. The image must be an already licensed Amazon EC2 image that is in your AWS account, and you must own the image. For more information about creating BYOL images, see Bring Your Own Windows Desktop Licenses.

Request Syntax

```
{
   "Applications": [ "string" ],
   "Ec2ImageId": "string",
   "ImageDescription": "string",
   "ImageName": "string",
   "IngestionProcess": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

The request accepts the following data in JSON format.

**Applications (p. 103)**

If specified, the version of Microsoft Office to subscribe to. Valid only for Windows 10 BYOL images. For more information about subscribing to Office for BYOL images, see Bring Your Own Windows Desktop Licenses.

**Note**

- Although this parameter is an array, only one item is allowed at this time
- Microsoft Office 2016 application subscription is currently not supported for Graphics.g4dn Bring Your Own License (BYOL) images

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 5 items.

Valid Values: Microsoft_Office_2016 | Microsoft_Office_2019

Required: No

**Ec2ImageId (p. 103)**

The identifier of the EC2 image.

Type: String

Pattern: ^ami\-([a-f0-9]{8}|[a-f0-9]{17})$

Required: Yes

**ImageDescription (p. 103)**

The description of the WorkSpace image.
Response Syntax

```json
{
   "ImageId": "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.

**ImageId (p. 104)**

The identifier of the WorkSpace image.
Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

AccessDeniedException
The user is not authorized to access a resource.

HTTP Status Code: 400

InvalidParameterValueException
One or more parameter values are not valid.

HTTP Status Code: 400

OperationNotSupportedException
This operation is not supported.

HTTP Status Code: 400

ResourceAlreadyExistsException
The specified resource already exists.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

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ListAvailableManagementCidrRanges

Retrieves a list of IP address ranges, specified as IPv4 CIDR blocks, that you can use for the network management interface when you enable Bring Your Own License (BYOL).

This operation can be run only by AWS accounts that are enabled for BYOL. If your account isn't enabled for BYOL, you'll receive an **AccessDeniedException** error.

The management network interface is connected to a secure Amazon WorkSpaces management network. It is used for interactive streaming of the WorkSpace desktop to Amazon WorkSpaces clients, and to allow Amazon WorkSpaces to manage the WorkSpace.

**Request Syntax**

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

**Request Parameters**

The request accepts the following data in JSON format.

**ManagementCidrRangeConstraint (p. 106)**

The IP address range to search. Specify an IP address range that is compatible with your network and in CIDR notation (that is, specify the range as an IPv4 CIDR block).

Type: String


Required: Yes

**MaxResults (p. 106)**

The maximum number of items to return.

Type: Integer


Required: No

**NextToken (p. 106)**

If you received a NextToken from a previous call that was paginated, provide this token to receive the next set of results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Required: No
Response Syntax

```json
{
   "ManagementCidrRanges": [ "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.

ManagementCidrRanges (p. 107)

The list of available IP address ranges, specified as IPv4 CIDR blocks.

Type: Array of strings

Pattern: `(^([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.(0-9|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.(0-9)|.0(16#))`$  

NextToken (p. 107)

The token to use to retrieve the next page of results. This value is null when there are no more results to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

AccessDeniedException

The user is not authorized to access a resource.

HTTP Status Code: 400

InvalidParameterValueException

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
See Also

- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
MigrateWorkspace

Migrates a WorkSpace from one operating system or bundle type to another, while retaining the data on the user volume.

The migration process recreates the WorkSpace by using a new root volume from the target bundle image and the user volume from the last available snapshot of the original WorkSpace. During migration, the original D:\Users\%USERNAME% user profile folder is renamed to D:\Users\%USERNAME\MMddyyTHHmmss%.NotMigrated. A new D:\Users\%USERNAME\ folder is generated by the new OS. Certain files in the old user profile are moved to the new user profile.

For available migration scenarios, details about what happens during migration, and best practices, see Migrate a WorkSpace.

Request Syntax

```json
{
    "BundleId": "string",
    "SourceWorkspaceId": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

**BundleId (p. 109)**

The identifier of the target bundle type to migrate the WorkSpace to.

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

**SourceWorkspaceId (p. 109)**

The identifier of the WorkSpace to migrate from.

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

Response Syntax

```json
{
    "SourceWorkspaceId": "string",
    "TargetWorkspaceId": "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.

**SourceWorkspaceId (p. 109)**

The original identifier of the WorkSpace that is being migrated.

Type: String

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

**TargetWorkspaceId (p. 109)**

The new identifier of the WorkSpace that is being migrated. If the migration does not succeed, the target WorkSpace ID will not be used, and the WorkSpace will still have the original WorkSpace ID.

Type: String

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

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 217).

**AccessDeniedException**

The user is not authorized to access a resource.

HTTP Status Code: 400

**InvalidParameterValueException**

One or more parameter values are not valid.

HTTP Status Code: 400

**OperationInProgressException**

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

HTTP Status Code: 400

**OperationNotSupportedException**

This operation is not supported.

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

**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 V2
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V3
ModifyAccount

Modifies the configuration of Bring Your Own License (BYOL) for the specified account.

Request Syntax

```
{
    "DedicatedTenancyManagementCidrRange": "string",
    "DedicatedTenancySupport": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

**DedicatedTenancyManagementCidrRange (p. 112)**

The IP address range, specified as an IPv4 CIDR block, for the management network interface. Specify an IP address range that is compatible with your network and in CIDR notation (that is, specify the range as an IPv4 CIDR block). The CIDR block size must be /16 (for example, 203.0.113.25/16). It must also be specified as available by the `ListAvailableManagementCidrRanges` operation.

Type: String

Pattern: `(^([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.(\[0-9]|[1-9]\[0-9]|1[0-9][0-9]|2[0-4]\[0-9]|25[0-5]\.\[0-9]|[0-9]\[0-9]|1[0-9]\[0-9]|2[0-4]\[0-9]|25[0-5])\./0\.(16\$)\$`  

Required: No

**DedicatedTenancySupport (p. 112)**

The status of BYOL.

Type: String

Valid Values: ENABLED

Required: No

Response Elements

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

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

**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 resource is not valid for this operation.

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

**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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ModifyClientProperties

Modifies the properties of the specified Amazon WorkSpaces clients.

Request Syntax

```json
{
  "ClientProperties": {
    "ReconnectEnabled": "string",
    "ResourceId": "string"
  }
}
```

Request Parameters

The request accepts the following data in JSON format.

**ClientProperties (p. 114)**

Information about the Amazon WorkSpaces client.

Type: ClientProperties (p. 157) object

Required: Yes

**ResourceId (p. 114)**

The resource identifiers, in the form of directory IDs.

Type: String

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. 217).

**AccessDeniedException**

The user is not authorized to access a resource.

HTTP Status Code: 400

**InvalidParameterValueException**

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ModifySelfservicePermissions

Modifies the self-service WorkSpace management capabilities for your users. For more information, see Enable Self-Service WorkSpace Management Capabilities for Your Users.

Request Syntax

```json
{
    "ResourceId": "string",
    "SelfservicePermissions": {
        "ChangeComputeType": "string",
        "IncreaseVolumeSize": "string",
        "RebuildWorkspace": "string",
        "RestartWorkspace": "string",
        "SwitchRunningMode": "string"
    }
}
```

Request Parameters

The request accepts the following data in JSON format.

ResourceId (p. 116)

The identifier of the directory.

Type: String


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

Required: Yes

SelfservicePermissions (p. 116)

The permissions to enable or disable self-service capabilities.

Type: SelfservicePermissions (p. 188) 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. 217).

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

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ModifyWorkspaceAccessProperties

Specifies which devices and operating systems users can use to access their WorkSpaces. For more information, see Control Device Access.

Request Syntax

```
{
   "ResourceId": "string",
   "WorkspaceAccessProperties": {
      "DeviceTypeAndroid": "string",
      "DeviceTypeChromeOs": "string",
      "DeviceTypeIos": "string",
      "DeviceTypeLinux": "string",
      "DeviceTypeOsx": "string",
      "DeviceTypeWeb": "string",
      "DeviceTypeWindows": "string",
      "DeviceTypeZeroClient": "string"
   }
}
```

Request Parameters

The request accepts the following data in JSON format.

ResourceId (p. 118)

The identifier of the directory.

Type: String


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

Required: Yes

WorkspaceAccessProperties (p. 118)

The device types and operating systems to enable or disable for access.

Type: WorkspaceAccessProperties (p. 200) 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. 217).

AccessDeniedException

The user is not authorized to access a resource.
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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ModifyWorkspaceCreationProperties

Modify the default properties used to create WorkSpaces.

Request Syntax

```json
{
    "ResourceId": "string",
    "WorkspaceCreationProperties": {
        "CustomSecurityGroupId": "string",
        "DefaultOu": "string",
        "EnableInternetAccess": boolean,
        "EnableMaintenanceMode": boolean,
        "EnableWorkDocs": boolean,
        "UserEnabledAsLocalAdministrator": boolean
    }
}
```

Request Parameters

The request accepts the following data in JSON format.

ResourceId (p. 120)

- The identifier of the directory.
- Type: String
- Pattern: ^d-[0-9a-f]{8,63}$
- Required: Yes

WorkspaceCreationProperties (p. 120)

- The default properties for creating WorkSpaces.
- Type: WorkspaceCreationProperties (p. 205) 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. 217).

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

OperationNotSupportedException

This operation is not supported.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ModifyWorkspaceProperties

Modifies the specified WorkSpace properties. For important information about how to modify the size of the root and user volumes, see Modify a WorkSpace.

Request Syntax

```json
{
    "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. 122)**

The identifier of the WorkSpace.

Type: String
Pattern: ^ws-[0-9a-z]{8,63}#
Required: Yes

**WorkspaceProperties (p. 122)**

The properties of the WorkSpace.

Type: WorkspaceProperties (p. 212) 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. 217).

**AccessDeniedException**

The user is not authorized to access a resource.

HTTP Status Code: 400

**InvalidParameterValueException**

One or more parameter values are not valid.
HTTP Status Code: 400
InvalidResourceStateException
The state of the resource 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 Required Configuration and Service Components for WorkSpaces.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
ModifyWorkspaceState

Sets the state of the specified WorkSpace.

To maintain a WorkSpace without being interrupted, set the WorkSpace state to \texttt{ADMIN\_MAINTENANCE}. WorkSpaces in this state do not respond to requests to reboot, stop, start, rebuild, or restore. An AutoStop WorkSpace in this state is not stopped. Users cannot log into a WorkSpace in the \texttt{ADMIN\_MAINTENANCE} state.

**Request Syntax**

```json
{
    "WorkspaceId": "string",
    "WorkspaceState": "string"
}
```

**Request Parameters**

The request accepts the following data in JSON format.

**WorkspaceId (p. 124)**

- The identifier of the WorkSpace.
- Type: String
- Pattern: \^[w\-][0-9a-z]{8,63}$
- Required: Yes

**WorkspaceState (p. 124)**

- The WorkSpace state.
- Type: String
- Valid Values: \texttt{AVAILABLE} | \texttt{ADMIN\_MAINTENANCE}
- 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 \texttt{Common Errors (p. 217)}.

- \texttt{InvalidParameterValueException}
  - One or more parameter values are not valid.
  - HTTP Status Code: 400

- \texttt{InvalidResourceStateException}
  - The state of the resource is not valid for this operation.
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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
RebootWorkspaces

Reboots the specified WorkSpaces.

You cannot reboot a WorkSpace unless its state is AVAILABLE or UNHEALTHY.

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. 126)**

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

Type: Array of `RebootRequest (p. 185)` 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. 126)**

Information about the WorkSpaces that could not be rebooted.

Type: Array of `FailedWorkspaceChangeRequest (p. 174)` objects
Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
RebuildWorkspaces

Rebuilds the specified WorkSpace.

You cannot rebuild a WorkSpace unless its state is AVAILABLE, ERROR, UNHEALTHY, STOPPED, or REBOOTING.

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. 128)**

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

Type: Array of RebuildRequest (p. 186) 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. 128)

Information about the WorkSpace that could not be rebuilt.

Type: Array of FailedWorkspaceChangeRequest (p. 174) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
RegisterWorkspaceDirectory

Registers the specified directory. This operation is asynchronous and returns before the WorkSpace directory is registered. If this is the first time you are registering a directory, you will need to create the workspaces_DefaultRole role before you can register a directory. For more information, see Creating the workspaces_DefaultRole Role.

Request Syntax

```json
{
    "DirectoryId": "string",
    "EnableSelfService": boolean,
    "EnableWorkDocs": boolean,
    "SubnetIds": [ "string" ],
    "Tags": [
        {
            "Key": "string",
            "Value": "string"
        }
    ],
    "Tenancy": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

**DirectoryId (p. 130)**

The identifier of the directory. You cannot register a directory if it does not have a status of Active. If the directory does not have a status of Active, you will receive an InvalidResourceStateException error. If you have already registered the maximum number of directories that you can register with Amazon WorkSpaces, you will receive a ResourceLimitExceededException error. Deregister directories that you are not using for WorkSpaces, and try again.

Type: String


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

Required: Yes

**EnableSelfService (p. 130)**

Indicates whether self-service capabilities are enabled or disabled.

Type: Boolean

Required: No

**EnableWorkDocs (p. 130)**

Indicates whether Amazon WorkDocs is enabled or disabled. If you have enabled this parameter and WorkDocs is not available in the Region, you will receive an OperationNotSupportedException error. Set EnableWorkDocs to disabled, and try again.

Type: Boolean

Required: Yes
**SubnetIds (p. 130)**

The identifiers of the subnets for your virtual private cloud (VPC). Make sure that the subnets are in supported Availability Zones. The subnets must also be in separate Availability Zones. If these conditions are not met, you will receive an OperationNotSupportedException error.

Type: Array of strings

Array Members: Maximum number of 2 items.


Pattern: `^subnet-(\[0-9a-f]{8}\|[0-9a-f]{17})$`

Required: No

**Tags (p. 130)**

The tags associated with the directory.

Type: Array of Tag (p. 193) objects

Required: No

**Tenancy (p. 130)**

Indicates whether your WorkSpace directory is dedicated or shared. To use Bring Your Own License (BYOL) images, this value must be set to DEDICATED and your AWS account must be enabled for BYOL. If your account has not been enabled for BYOL, you will receive an InvalidParameterValuesException error. For more information about BYOL images, see Bring Your Own Windows Desktop Images.

Type: String

Valid Values: DEDICATED | SHARED

Required: No

**Response Elements**

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

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 217).

**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 resource is not valid for this operation.
HTTP Status Code: 400

**OperationNotSupportedException**

This operation is not supported.

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

**UnsupportedNetworkConfigurationException**

The configuration of this network is not supported for this operation, or your network configuration conflicts with the Amazon WorkSpaces management network IP range. For more information, see [Configure a VPC for Amazon WorkSpaces](#).

HTTP Status Code: 400

**WorkspacesDefaultRoleNotFoundException**

The workspaces_DefaultRole role could not be found. If this is the first time you are registering a directory, you will need to create the workspaces_DefaultRole role before you can register a directory. For more information, see [Creating the workspaces_DefaultRole Role](#).

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
RestoreWorkspace

Restores the specified WorkSpace to its last known healthy state.

You cannot restore a WorkSpace unless its state is AVAILABLE, ERROR, UNHEALTHY, or STOPPED.

Restoring a WorkSpace is a potentially destructive action that can result in the loss of data. For more information, see Restore a WorkSpace.

This operation is asynchronous and returns before the WorkSpace is completely restored.

Request Syntax

```json
{
  "WorkspaceId": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

**WorkspaceId (p. 133)**

The identifier of the WorkSpace.

- Type: String
- Pattern: ^ws-[0-9a-z]{8,63}$
- 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. 217).

**AccessDeniedException**

The user is not authorized to access a resource.

- HTTP Status Code: 400

**InvalidParameterValueException**

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
RevokeIpRules

Removes one or more rules from the specified IP access control group.

Request Syntax

```
{
    "GroupId": "string",
    "UserRules": [ "string" ]
}
```

Request Parameters

The request accepts the following data in JSON format.

**GroupId (p. 135)**

The identifier of the group.

Type: String

Pattern: wsipg-[0-9a-z]{8,63}$

Required: Yes

**UserRules (p. 135)**

The rules to remove from the group.

Type: Array of strings

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. 217).

**AccessDeniedException**

The user is not authorized to access a resource.

HTTP Status Code: 400

**InvalidParameterValueException**

One or more parameter values are not valid.

HTTP Status Code: 400

**InvalidResourceStateException**

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

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
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. 137)**

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

- **Type:** Array of **StartRequest (p. 191) 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. 137)**

Information about the WorkSpaces that could not be started.

- **Type:** Array of **FailedWorkspaceChangeRequest (p. 174) objects**
Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
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. 139)

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

Type: Array of StopRequest (p. 192) 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. 139)

Information about the WorkSpaces that could not be stopped.

Type: Array of FailedWorkspaceChangeRequest (p. 174) objects
Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
**TerminateWorkspaces**

Terminates the specified WorkSpaces.

**Important**
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 AWS Support 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. After a WorkSpace is terminated, the TERMINATED state is returned only briefly before the WorkSpace directory metadata is cleaned up, so this state is rarely returned. To confirm that a WorkSpace is terminated, check for the WorkSpace ID by using DescribeWorkSpaces. If the WorkSpace ID isn't returned, then the WorkSpace has been successfully terminated.

**Note**
Simple AD and AD Connector are made available to you free of charge to use with WorkSpaces. If there are no WorkSpaces being used with your Simple AD or AD Connector directory for 30 consecutive days, this directory will be automatically deregistered for use with Amazon WorkSpaces, and you will be charged for this directory as per the AWS Directory Service pricing terms.

To delete empty directories, see Delete the Directory for Your WorkSpaces. If you delete your Simple AD or AD Connector directory, you can always create a new one when you want to start using WorkSpaces again.

**Request Syntax**

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

**Request Parameters**

The request accepts the following data in JSON format.

**TerminateWorkspaceRequests (p. 141)**

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

Type: Array of TerminateRequest (p. 194) objects

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

Required: Yes

**Response Syntax**

```json
{
  "FailedRequests": [
  
  ]
}
```
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. 141)**

Information about the WorkSpaces that could not be terminated.

Type: Array of FailedWorkspaceChangeRequest (p. 174) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 217).

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateConnectClientAddIn

Updates a Amazon Connect client add-in. Use this action to update the name and endpoint URL of a Amazon Connect client add-in.

Request Syntax

```
{
    "AddInId": "string",
    "Name": "string",
    "ResourceId": "string",
    "URL": "string"
}
```

Request Parameters

The request accepts the following data in JSON format.

**AddInId (p. 143)**

The identifier of the client add-in to update.
Type: String
Length Constraints: Fixed length of 36.
Pattern: \[a-f0-9\]{8}-\[a-f0-9\]{4}-\[a-f0-9\]{4}-\[a-f0-9\]{4}-\[a-f0-9\]{12}
Required: Yes

**Name (p. 143)**

The name of the client add-in.
Type: String
Length Constraints: Minimum length of 1. Maximum length of 64.
Pattern: ^.*$
Required: No

**ResourceId (p. 143)**

The directory identifier for which the client add-in is configured.
Type: String
Pattern: ^d-[0-9a-f]{8,63}$
Required: Yes

**URL (p. 143)**

The endpoint URL of the Amazon Connect client add-in.
Type: String
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. 217).

AccessDeniedException

The user is not authorized to access a resource.

HTTP Status Code: 400

InvalidParameterValueException

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateConnectionAliasPermission

Shares or unshares a connection alias with one account by specifying whether that account has permission to associate the connection alias with a directory. If the association permission is granted, the connection alias is shared with that account. If the association permission is revoked, the connection alias is unshared with the account. For more information, see Cross-Region Redirection for Amazon WorkSpaces.

**Note**

- Before performing this operation, call DescribeConnectionAliases to make sure that the current state of the connection alias is `CREATED`.
- To delete a connection alias that has been shared, the shared account must first disassociate the connection alias from any directories it has been associated with. Then you must unshare the connection alias from the account it has been shared with. You can delete a connection alias only after it is no longer shared with any accounts or associated with any directories.

**Request Syntax**

```json
{
  "AliasId": "string",
  "ConnectionAliasPermission": {
    "AllowAssociation": boolean,
    "SharedAccountId": "string"
  }
}
```

**Request Parameters**

The request accepts the following data in JSON format.

**AliasId (p. 145)**

The identifier of the connection alias that you want to update permissions for.

- Type: String
- Pattern: `^wsca-[0-9a-z]{8,63}$`
- Required: Yes

**ConnectionAliasPermission (p. 145)**

Indicates whether to share or unshare the connection alias with the specified AWS account.

- Type: ConnectionAliasPermission (p. 166) 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. 217).

AccessException

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 resource is not valid for this operation.

HTTP Status Code: 400

OperationNotSupportedException

This operation is not supported.

HTTP Status Code: 400

ResourceAssociatedException

The resource is associated with a directory.

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateRulesOfIpGroup

Replaces the current rules of the specified IP access control group with the specified rules.

Request Syntax

```
{
  "GroupId": "string",
  "UserRules": [  
    {  
      "ipRule": "string",
      "ruleDesc": "string"
    }
  ]
}
```

Request Parameters

The request accepts the following data in JSON format.

**GroupId** *(p. 147)*

The identifier of the group.

Type: String

Pattern: wsipg-[0-9a-z]{8,63}$

Required: Yes

**UserRules** *(p. 147)*

One or more rules.

Type: Array of IpRuleItem *(p. 182)* 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. 217).*

**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 resource is not valid for this operation.

HTTP Status Code: 400

ResourceLimitExceededExceptio

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateWorkspaceBundle

Updates a WorkSpace bundle with a new image. For more information about updating WorkSpace bundles, see Update a Custom WorkSpaces Bundle.

**Important**

Existing WorkSpaces aren't automatically updated when you update the bundle that they're based on. To update existing WorkSpaces that are based on a bundle that you've updated, you must either rebuild the WorkSpaces or delete and recreate them.

**Request Syntax**

```
{
  "BundleId": "string",
  "ImageId": "string"
}
```

**Request Parameters**

The request accepts the following data in JSON format.

**BundleId (p. 149)**

The identifier of the bundle.

Type: String

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

Required: No

**ImageId (p. 149)**

The identifier of the image.

Type: String

Pattern: `wsi-\[0-9a-z]{9,63}$`

Required: No

**Response Elements**

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

**Errors**

For information about the errors that are common to all actions, see Common Errors (p. 217).

**AccessDeniedException**

The user is not authorized to access a resource.

HTTP Status Code: 400

**InvalidParameterValueException**

One or more parameter values are not valid.
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

**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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
UpdateWorkspaceImagePermission

Shares or unshares an image with one account in the same AWS Region by specifying whether that account has permission to copy the image. If the copy image permission is granted, the image is shared with that account. If the copy image permission is revoked, the image is unshared with the account.

After an image has been shared, the recipient account can copy the image to other Regions as needed.

In the China (Ningxia) Region, you can copy images only within the same Region.

In AWS GovCloud (US), to copy images to and from other Regions, contact AWS Support.

For more information about sharing images, see Share or Unshare a Custom WorkSpaces Image.

**Note**

- To delete an image that has been shared, you must unshare the image before you delete it.
- Sharing Bring Your Own License (BYOL) images across AWS accounts isn't supported at this time in AWS GovCloud (US). To share BYOL images across accounts in AWS GovCloud (US), contact AWS Support.

**Request Syntax**

```json
{
  "AllowCopyImage": boolean,
  "ImageId": "string",
  "SharedAccountId": "string"
}
```

**Request Parameters**

The request accepts the following data in JSON format.

**AllowCopyImage (p. 151)**

The permission to copy the image. This permission can be revoked only after an image has been shared.

Type: Boolean

Required: Yes

**ImageId (p. 151)**

The identifier of the image.

Type: String

Pattern: wsi-[0-9a-z]{9,63}$

Required: Yes

**SharedAccountId (p. 151)**

The identifier of the AWS account to share or unshare the image with.

**Important**

Before sharing the image, confirm that you are sharing to the correct AWS account ID.
Type: String  
Pattern: ^\d{12}$  
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. 217).

AccessDeniedException

The user is not authorized to access a resource.

HTTP Status Code: 400

InvalidParameterValueException

One or more parameter values are not valid.

HTTP Status Code: 400

OperationNotSupportedException

This operation is not supported.

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

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 V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3
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:

- AccountModification (p. 155)
- ClientProperties (p. 157)
- ClientPropertiesResult (p. 158)
- ComputeType (p. 159)
- ConnectClientAddIn (p. 160)
- ConnectionAlias (p. 162)
- ConnectionAliasAssociation (p. 164)
- ConnectionAliasPermission (p. 166)
- DefaultClientBrandingAttributes (p. 167)
- DefaultImportClientBrandingAttributes (p. 169)
- DefaultWorkspaceCreationProperties (p. 171)
- FailedCreateWorkspaceRequest (p. 173)
- FailedWorkspaceChangeRequest (p. 174)
- ImagePermission (p. 175)
- IosClientBrandingAttributes (p. 176)
- IosImportClientBrandingAttributes (p. 179)
- IpRuleItem (p. 182)
- ModificationState (p. 183)
- OperatingSystem (p. 184)
- RebootRequest (p. 185)
- RebuildRequest (p. 186)
- RootStorage (p. 187)
- SelfservicePermissions (p. 188)
- Snapshot (p. 190)
- StartRequest (p. 191)
- StopRequest (p. 192)
- Tag (p. 193)
- TerminateRequest (p. 194)
- UpdateResult (p. 195)
- UserStorage (p. 196)
- Workspace (p. 197)
- WorkspaceAccessProperties (p. 200)
- WorkspaceBundle (p. 202)
- WorkspaceConnectionStatus (p. 204)
- WorkspaceCreationProperties (p. 205)
• `WorkspaceDirectory` (p. 207)
• `WorkspaceImage` (p. 210)
• `WorkspaceProperties` (p. 212)
• `WorkspaceRequest` (p. 214)
• `WorkspacesIpGroup` (p. 216)
AccountModification

Describes a modification to the configuration of Bring Your Own License (BYOL) for the specified account.

Contents

DedicatedTenancyManagementCidrRange

The IP address range, specified as an IPv4 CIDR block, for the management network interface used for the account.

Type: String


Required: No

DedicatedTenancySupport

The status of BYOL (whether BYOL is being enabled or disabled).

Type: String

Valid Values: ENABLED | DISABLED

Required: No

ErrorCode

The error code that is returned if the configuration of BYOL cannot be modified.

Type: String

Required: No

ErrorMessage

The text of the error message that is returned if the configuration of BYOL cannot be modified.

Type: String

Required: No

ModificationState

The state of the modification to the configuration of BYOL.

Type: String

Valid Values: PENDING | COMPLETED | FAILED

Required: No

StartTime

The timestamp when the modification of the BYOL configuration was started.

Type: Timestamp

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 V2
- AWS SDK for Ruby V3
ClientProperties

Describes an Amazon WorkSpaces client.

Contents

ReconnectEnabled

Specifies whether users can cache their credentials on the Amazon WorkSpaces client. When enabled, users can choose to reconnect to their WorkSpaces without re-entering their credentials.

Type: String

Valid Values: ENABLED | DISABLED

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 V2
- AWS SDK for Ruby V3
ClientPropertiesResult

Information about the Amazon WorkSpaces client.

Contents

ClientProperties
  Information about the Amazon WorkSpaces client.
  Type: ClientProperties (p. 157) object
  Required: No

ResourceId
  The resource identifier, in the form of a directory ID.
  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 V2
  - AWS SDK for Ruby V3
ComputeType

Describes the compute type of the bundle.

Contents

Name

The compute type.

Type: String

Valid Values: VALUE | STANDARD | PERFORMANCE | POWER | GRAPHICS | POWERPRO | GRAPHICSPRO | GRAPHICS_G4DN | GRAPHICSPRO_G4DN

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 V2
- AWS SDK for Ruby V3
ConnectClientAddIn

Describes an Amazon Connect client add-in.

Contents

AddInId

The client add-in identifier.

Type: String

Length Constraints: Fixed length of 36.

Pattern: [a-f0-9]{8}-[a-f0-9]{4}-[a-f0-9]{4}-[a-f0-9]{4}-[a-f0-9]{12}

Required: No

Name

The name of the client add-in.

Type: String

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

Pattern: ^.*$

Required: No

ResourceId

The directory identifier for which the client add-in is configured.

Type: String


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

Required: No

URL

The endpoint URL of the client add-in.

Type: String


Pattern: ^(http|https)://\S+

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
See Also

- AWS SDK for Java V2
- AWS SDK for Ruby V3
ConnectionAlias

Describes a connection alias. Connection aliases are used for cross-Region redirection. For more information, see Cross-Region Redirection for Amazon WorkSpaces.

Contents

**AliasId**

The identifier of the connection alias.

Type: String


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

Required: No

**Associations**

The association status of the connection alias.

Type: Array of ConnectionAliasAssociation (p. 164) objects

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

Required: No

**ConnectionString**

The connection string specified for the connection alias. The connection string must be in the form of a fully qualified domain name (FQDN), such as www.example.com.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: ^[0-9a-zA-Z-]{1,255}$

Required: No

**OwnerAccountIId**

The identifier of the AWS account that owns the connection alias.

Type: String

Pattern: ^\d(12)$

Required: No

**State**

The current state of the connection alias.

Type: String

Valid Values: CREATING | CREATED | DELETING

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 V2
- AWS SDK for Ruby V3
ConnectionAliasAssociation

Describes a connection alias association that is used for cross-Region redirection. For more information, see Cross-Region Redirection for Amazon WorkSpaces.

Contents

AssociatedAccountId

The identifier of the AWS account that associated the connection alias with a directory.

Type: String

Pattern: ^\d\{12\}$

Required: No

AssociationStatus

The association status of the connection alias.

Type: String

Valid Values: NOT_ASSOCIATED | ASSOCIATED_WITH_OWNER_ACCOUNT | ASSOCIATED_WITH_SHARED_ACCOUNT | PENDING_ASSOCIATION | PENDING_DISASSOCIATION

Required: No

ConnectionIdentifier

The identifier of the connection alias association. You use the connection identifier in the DNS TXT record when you're configuring your DNS routing policies.

Type: String


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

Required: No

ResourceId

The identifier of the directory associated with a connection alias.

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 V2
- AWS SDK for Ruby V3
ConnectionAliasPermission

Describes the permissions for a connection alias. Connection aliases are used for cross-Region redirection. For more information, see Cross-Region Redirection for Amazon WorkSpaces.

Contents

AllowAssociation

Indicates whether the specified AWS account is allowed to associate the connection alias with a directory.

Type: Boolean

Required: Yes

SharedAccountId

The identifier of the AWS account that the connection alias is shared with.

Type: String

Pattern: ^\d{12}$

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 V2
- AWS SDK for Ruby V3
DefaultClientBrandingAttributes

Returns default client branding attributes that were imported. These attributes display on the client login screen.

**Important**
Client branding attributes are public facing. Ensure that you don't include sensitive information.

## Contents

### ForgotPasswordLink

The forgotten password link. This is the web address that users can go to if they forget the password for their WorkSpace.

Type: String


Pattern: `^(http|https)://\S+$`

Required: No

### LoginMessage

The login message. Specified as a key value pair, in which the key is a locale and the value is the localized message for that locale. The only key supported is `en_US`.

Type: String to string map

Key Length Constraints: Fixed length of 5.

Key Pattern: `^[a-z]{2}_[A-Z]{2}$`

Value Length Constraints: Minimum length of 0. Maximum length of 600.

Value Pattern: `^.*$`

Required: No

### LogoUrl

The logo URL. This is the link where users can download the logo image. The only supported image format is `.png`.

Type: String


Pattern: `^(http|https)://\S+$`

Required: No

### SupportEmail

The support email. The company's customer support email address.

**Note**
- In each platform type, the `SupportEmail` and `SupportLink` parameters are mutually exclusive. You can specify one parameter for each platform type, but not both.
- The default email is `workspaces-feedback@amazon.com`.
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 V2
- AWS SDK for Ruby V3
DefaultImportClientBrandingAttributes

The default client branding attributes to be imported. These attributes display on the client login screen.

**Important**
Client branding attributes are public facing. Ensure that you do not include sensitive information.

**Contents**

ForgotPasswordLink

The forgotten password link. This is the web address that users can go to if they forget the password for their WorkSpace.

Type: String


Pattern: `^(http|https)\:\//\S+$`

Required: No

LoginMessage

The login message. Specified as a key value pair, in which the key is a locale and the value is the localized message for that locale. The only key supported is `en_US`.

Type: String to string map

Key Length Constraints: Fixed length of 5.

Key Pattern: `^[a-z]{2}_[A-Z]{2}$`

Value Length Constraints: Minimum length of 0. Maximum length of 600.

Value Pattern: `^.*$`

Required: No

Logo

The logo. This is the link where users can download the logo image. The only image format accepted is `.png`.

Type: Base64-encoded binary data object


Required: No

SupportEmail

The support email. The company's customer support email address.

**Note**
- In each platform type, the `SupportEmail` and `SupportLink` parameters are mutually exclusive. You can specify one parameter for each platform type, but not both.
- The default email is `workspaces-feedback@amazon.com`.

Type: String

Pattern: ^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,4}$

Required: No

**SupportLink**

The support link. The link for the company's customer support page for their WorkSpace.

**Note**

- In each platform type, the `SupportEmail` and `SupportLink` parameters are mutually exclusive. You can specify one parameter for each platform type, but not both.
- The default support link is `workspaces-feedback@amazon.com`.

Type: String


Pattern: ^(http|https)://\S+$

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 V2
- AWS SDK for Ruby V3
DefaultWorkspaceCreationProperties

Describes the default values that are used to create WorkSpaces. For more information, see Update Directory Details for Your WorkSpaces.

Contents

CustomSecurityGroupId

The identifier of the default security group to apply to WorkSpaces when they are created. For more information, see Security Groups for Your WorkSpaces.

Type: String


Pattern: ^sg-([0-9a-f]{8}|[0-9a-f]{17})$  

Required: No

DefaultOu

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

Type: String

Required: No

EnableInternetAccess

Specifies whether to automatically assign an Elastic public IP address to WorkSpaces in this directory by default. If enabled, the Elastic public IP address allows outbound internet access from your WorkSpaces when you're using an internet gateway in the Amazon VPC in which your WorkSpaces are located. If you're using a Network Address Translation (NAT) gateway for outbound internet access from your VPC, or if your WorkSpaces are in public subnets and you manually assign them Elastic IP addresses, you should disable this setting. This setting applies to new WorkSpaces that you launch or to existing WorkSpaces that you rebuild. For more information, see Configure a VPC for Amazon WorkSpaces.

Type: Boolean

Required: No

EnableMaintenanceMode

Specifies whether maintenance mode is enabled for WorkSpaces. For more information, see WorkSpace Maintenance.

Type: Boolean

Required: No

EnableWorkDocs

Specifies whether the directory is enabled for Amazon WorkDocs.

Type: Boolean

Required: No

UserEnabledAsLocalAdministrator

Specifies whether WorkSpace users are local administrators on their WorkSpaces.
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 V2
- AWS SDK for Ruby V3
FailedCreateWorkspaceRequest

Describes a WorkSpace that cannot be created.

Contents

ErrorCode

The error code that is returned if the WorkSpace cannot be created.

Type: String
Required: No

ErrorMessage

The text of the error message that is returned if the WorkSpace cannot be created.

Type: String
Required: No

WorkspaceRequest

Information about the WorkSpace.

Type: WorkspaceRequest (p. 214) 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 V2
- AWS SDK for Ruby V3
FailedWorkspaceChangeRequest

Describes a WorkSpace that could not be rebooted. (RebootWorkspaces (p. 126)), rebuilt (RebuildWorkspaces (p. 128)), restored (RestoreWorkspace (p. 133)), terminated (TerminateWorkspaces (p. 141)), started (StartWorkspaces (p. 137)), or stopped (StopWorkspaces (p. 139)).

Contents

ErrorCode

The error code that is returned if the WorkSpace cannot be rebooted.

Type: String

Required: No

ErrorMessage

The text of the error message that is returned if the WorkSpace cannot be rebooted.

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 V2
- AWS SDK for Ruby V3
ImagePermission

Describes the AWS accounts that have been granted permission to use a shared image. For more information about sharing images, see Share or Unshare a Custom WorkSpaces Image.

Contents

SharedAccountId

The identifier of the AWS account that an image has been shared with.

Type: String

Pattern: ^\d{12}$

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 V2
- AWS SDK for Ruby V3
IosClientBrandingAttributes

The client branding attributes for iOS device types. These attributes are displayed on the iOS client login screen only.

**Important**
Client branding attributes are public facing. Ensure you do not include sensitive information.

**Contents**

**ForgotPasswordLink**

The forgotten password link. This is the web address that users can go to if they forget the password for their Workspace.

- **Type**: String
- **Length Constraints**: Minimum length of 1. Maximum length of 200.
- **Pattern**: ^(http|https)://\S+
- **Required**: No

**LoginMessage**

The login message. Specified as a key value pair, in which the key is a locale and the value is the localized message for that locale. The only key supported is `en_US`.

- **Type**: String to string map
- **Key Length Constraints**: Fixed length of 5.
- **Key Pattern**: ^[a-z]{2}[A-Z]{2}$
- **Value Length Constraints**: Minimum length of 0. Maximum length of 600.
- **Value Pattern**: ^.*$
- **Required**: No

**Logo2xUrl**

The @2x version of the logo. This is the higher resolution display that offers a scale factor of 2.0 (or @2x).

**Note**
For more information about iOS image size and resolution, see [Image Size and Resolution](http://developer.apple.com) in the [Apple Human Interface Guidelines](http://developer.apple.com).

- **Type**: String
- **Length Constraints**: Minimum length of 1. Maximum length of 200.
- **Pattern**: ^(http|https)://\S+
- **Required**: No

**Logo3xUrl**

The @3x version of the logo. This is the higher resolution display that offers a scale factor of 3.0 (or @3x).
**Note**
For more information about iOS image size and resolution, see Image Size and Resolution in the Apple Human Interface Guidelines.

Type: String
Pattern: ^(http|https)://\S+$
Required: No

**LogoUrl**
The logo. This is the link where users can download the logo image. This is the standard-resolution display that has a 1:1 pixel density (or @1x), where one pixel is equal to one point.

Type: String
Pattern: ^(http|https)://\S+$
Required: No

**SupportEmail**
The support email. The company's customer support email address.

Note
- In each platform type, the SupportEmail and SupportLink parameters are mutually exclusive. You can specify one parameter for each platform type, but not both.
- The default email is workspaces-feedback@amazon.com.

Type: String
Pattern: ^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,4}$
Required: No

**SupportLink**
The support link. The link for the company's customer support page for their WorkSpace.

Note
- In each platform type, the SupportEmail and SupportLink parameters are mutually exclusive. You can specify one parameter for each platform type, but not both.
- The default support link is workspaces-feedback@amazon.com.

Type: String
Pattern: ^(http|https)://\S+$
Required: No

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
IosImportClientBrandingAttributes

The client branding attributes to import for iOS device types. These attributes are displayed on the iOS client login screen.

**Important**
Client branding attributes are public facing. Ensure you do not include sensitive information.

**Contents**

ForgotPasswordLink

The forgotten password link. This is the web address that users can go to if they forget the password for their WorkSpace.

Type: String


Pattern: ^(http|https)\://\S+

Required: No

LoginMessage

The login message. Specified as a key value pair, in which the key is a locale and the value is the localized message for that locale. The only key supported is en_US.

Type: String to string map

Key Length Constraints: Fixed length of 5.

Key Pattern: ^[a-z]{2}_[A-Z]{2}$

Value Length Constraints: Minimum length of 0. Maximum length of 600.

Value Pattern: ^.*$

Required: No

Logo

The logo. This is the link where users can download the logo image. This is the standard-resolution display that has a 1:1 pixel density (or @1x), where one pixel is equal to one point.

Type: Base64-encoded binary data object


Required: No

Logo2x

The @2x version of the logo. This is the higher resolution display that offers a scale factor of 2.0 (or @2x).

**Note**
For more information about iOS image size and resolution, see Image Size and Resolution in the Apple Human Interface Guidelines.

Type: Base64-encoded binary data object

Required: No

**Logo3x**

The @3x version of the logo. This is the higher resolution display that offers a scale factor of 3.0 (or @3x).

*Note*

For more information about iOS image size and resolution, see [Image Size and Resolution](#) in the [Apple Human Interface Guidelines](#).

Type: Base64-encoded binary data object


Required: No

**SupportEmail**

The support email. The company's customer support email address.

*Note*

- In each platform type, the `SupportEmail` and `SupportLink` parameters are mutually exclusive. You can specify one parameter for each platform type, but not both.
- The default email is `workspaces-feedback@amazon.com`.

Type: String


Pattern: `^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,4}$`

Required: No

**SupportLink**

The support link. The link for the company's customer support page for their WorkSpace.

*Note*

- In each platform type, the `SupportEmail` and `SupportLink` parameters are mutually exclusive. You can specify one parameter for each platform type, but not both.
- The default support link is `workspaces-feedback@amazon.com`.

Type: String


Pattern: `^(http|https)\://\S+$`

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 V2
- AWS SDK for Ruby V3
IpRuleItem

Describes a rule for an IP access control group.

Contents

**ipRule**

The IP address range, in CIDR notation.

Type: String
Required: No

**ruleDesc**

The description.

Type: String
Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3
ModificationState

Describes 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 V2
- AWS SDK for Ruby V3
OperatingSystem

The operating system that the image is running.

Contents

Type

The operating system.

Type: String

Valid Values: WINDOWS | LINUX

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 V2
- AWS SDK for Ruby V3
RebootRequest

Describes the 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 V2
- AWS SDK for Ruby V3
RebuildRequest

Describes the 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 V2
- AWS SDK for Ruby V3
RootStorage

Describes 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 V2
- AWS SDK for Ruby V3
SelfservicePermissions

Describes the self-service permissions for a directory. For more information, see Enable Self-Service WorkSpace Management Capabilities for Your Users.

Contents

ChangeComputeType

Specifies whether users can change the compute type (bundle) for their WorkSpace.

Type: String

Valid Values: ENABLED | DISABLED

Required: No

IncreaseVolumeSize

Specifies whether users can increase the volume size of the drives on their WorkSpace.

Type: String

Valid Values: ENABLED | DISABLED

Required: No

RebuildWorkspace

Specifies whether users can rebuild the operating system of a WorkSpace to its original state.

Type: String

Valid Values: ENABLED | DISABLED

Required: No

RestartWorkspace

Specifies whether users can restart their WorkSpace.

Type: String

Valid Values: ENABLED | DISABLED

Required: No

SwitchRunningMode

Specifies whether users can switch the running mode of their WorkSpace.

Type: String

Valid Values: ENABLED | DISABLED

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 V2
- AWS SDK for Ruby V3
Snapshot

Describes a snapshot.

Contents

SnapshotTime

The time when the snapshot was created.

Type: Timestamp

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 V2
- AWS SDK for Ruby V3
StartRequest

Information used to start a WorkSpace.

Contents

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 V2
- AWS SDK for Ruby V3
StopRequest

Describes the information used to stop a WorkSpace.

Contents

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 V2
- AWS SDK for Ruby V3
Tag

Describes a tag.

Contents

Key

The key of the tag.

Type: String


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 V2
- AWS SDK for Ruby V3
TerminaterRequest

Describes the 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 V2
- AWS SDK for Ruby V3
UpdateResult

Describes whether a WorkSpace image needs to be updated with the latest drivers and other components required by Amazon WorkSpaces.

**Note**
Only Windows 10 WorkSpace images can be programmatically updated at this time.

**Contents**

**Description**

A description of whether updates for the WorkSpace image are pending or available.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: ^[a-zA-Z0-9-_./() -]+$

Required: No

**UpdateAvailable**

Indicates whether updated drivers or other components are available for the specified WorkSpace image.

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 V2
- AWS SDK for Ruby V3
UserStorage

Describes the user volume for a WorkSpace bundle.

Contents

Capacity

The size of the user 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 V2
- AWS SDK for Ruby V3
Workspace

Describes 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. The format of this name varies. For more information, see Launch a WorkSpace.

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

The error code that is returned if the WorkSpace cannot be created.

Type: String

Required: No

ErrorMessage

The text of the error message that is returned if the WorkSpace cannot be created.

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. 183) 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.

**Note**

After a WorkSpace is terminated, the TERMINATED state is returned only briefly before the WorkSpace directory metadata is cleaned up, so this state is rarely returned. To confirm that a WorkSpace is terminated, check for the WorkSpace ID by using DescribeWorkSpaces. If the WorkSpace ID isn't returned, then the WorkSpace has been successfully terminated.

Type: String

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

Required: No

**SubnetId**

The identifier of the subnet for the WorkSpace.

Type: String


Pattern: \([^\-\w\{\}\]\{8\}\|[^\-\w\{\}\]\{17\}\]\)

Required: No

**UserName**

The user for the WorkSpace.

Type: String


Required: No

**UserVolumeEncryptionEnabled**

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

Type: Boolean

Required: No

**VolumeEncryptionKey**

The symmetric AWS KMS key used to encrypt data stored on your WorkSpace. Amazon WorkSpaces does not support asymmetric KMS keys.

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. 212)` 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 V2
- AWS SDK for Ruby V3
WorkspaceAccessProperties

The device types and operating systems that can be used to access a WorkSpace. For more information, see Amazon WorkSpaces Client Network Requirements.

Contents

DeviceTypeAndroid

Indicates whether users can use Android and Android-compatible Chrome OS devices to access their WorkSpaces.

Type: String

Valid Values: ALLOW | DENY

Required: No

DeviceTypeChromeOs

Indicates whether users can use Chromebooks to access their WorkSpaces.

Type: String

Valid Values: ALLOW | DENY

Required: No

DeviceTypeIos

Indicates whether users can use iOS devices to access their WorkSpaces.

Type: String

Valid Values: ALLOW | DENY

Required: No

DeviceTypeLinux

Indicates whether users can use Linux clients to access their WorkSpaces.

Type: String

Valid Values: ALLOW | DENY

Required: No

DeviceTypeOsx

Indicates whether users can use macOS clients to access their WorkSpaces.

Type: String

Valid Values: ALLOW | DENY

Required: No

DeviceTypeWeb

Indicates whether users can access their WorkSpaces through a web browser.

Type: String
Valid Values: ALLOW | DENY

Required: No

**DeviceTypeWindows**

Indicates whether users can use Windows clients to access their WorkSpaces.

Type: String

Valid Values: ALLOW | DENY

Required: No

**DeviceTypeZeroClient**

Indicates whether users can use zero client devices to access their WorkSpaces.

Type: String

Valid Values: ALLOW | DENY

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 V2
- AWS SDK for Ruby V3
WorkspaceBundle

Describes a WorkSpace bundle.

Contents

BundleId

The identifier of the bundle.

Type: String

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

Required: No

ComputeType

The compute type of the bundle. For more information, see Amazon WorkSpaces Bundles.

Type: ComputeType (p. 159) object

Required: No

CreationTime

The time when the bundle was created.

Type: Timestamp

Required: No

Description

The description of the bundle.

Type: String

Required: No

ImageId

The identifier of the image that was used to create the bundle.

Type: String

Pattern: wsi-[0-9a-z]{9,63}$

Required: No

LastUpdatedTime

The last time that the bundle was updated.

Type: Timestamp

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. 187)` object

Required: No

**UserStorage**

The size of the user volume.

Type: `UserStorage (p. 196)` 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 V2
- AWS SDK for Ruby V3
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 status check.

Type: Timestamp

Required: No

LastKnownUserConnectionTimestamp

The timestamp of the last known user connection.

Type: Timestamp

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 V2
- AWS SDK for Ruby V3
WorkspaceCreationProperties

Describes the default properties that are used for creating WorkSpaces. For more information, see Update Directory Details for Your WorkSpaces.

Contents

CustomSecurityGroupId

The identifier of your custom security group.

Type: String


Pattern: ^sg-(\[0-9a-f]{8}|\[0-9a-f]{17})$  

Required: No

DefaultOu

The default organizational unit (OU) for your WorkSpaces directories. This string must be the full Lightweight Directory Access Protocol (LDAP) distinguished name for the target domain and OU. It must be in the form "OU=value, DC=value, DC=value", where value is any string of characters, and the number of domain components (DCs) is two or more. For example, OU=WorkSpaces_machines, DC=machines, DC=example, DC=com.

Important
- To avoid errors, certain characters in the distinguished name must be escaped. For more information, see Distinguished Names in the Microsoft documentation.
- The API doesn't validate whether the OU exists.

Type: String

Required: No

EnableInternetAccess

Indicates whether internet access is enabled for your WorkSpaces.

Type: Boolean

Required: No

EnableMaintenanceMode

Indicates whether maintenance mode is enabled for your WorkSpaces. For more information, see WorkSpace Maintenance.

Type: Boolean

Required: No

EnableWorkDocs

Indicates whether Amazon WorkDocs is enabled for your WorkSpaces.

Note
If WorkDocs is already enabled for a WorkSpaces directory and you disable it, new WorkSpaces launched in the directory will not have WorkDocs enabled. However, WorkDocs remains enabled for any existing WorkSpaces, unless you either disable users' access to WorkDocs or you delete the WorkDocs site. To disable users' access to WorkDocs, see
Disabling Users in the Amazon WorkDocs Administration Guide. To delete a WorkDocs site, see Deleting a Site in the Amazon WorkDocs Administration Guide.

If you enable WorkDocs on a directory that already has existing WorkSpaces, the existing WorkSpaces and any new WorkSpaces that are launched in the directory will have WorkDocs enabled.

Type: Boolean

Required: No

UserEnabledAsLocalAdministrator

Indicates whether users are local administrators of their WorkSpaces.

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 V2
- AWS SDK for Ruby V3
WorkspaceDirectory

Describes a directory that is used with Amazon WorkSpaces.

Contents

**Alias**

The directory alias.

Type: String

Required: No

**CustomerUserName**

The user name for the service account.

Type: String


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

ipGroupIds

The identifiers of the IP access control groups associated with the directory.

Type: Array of strings

Pattern: wsipg-[0-9a-z]{8,63}$

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


Required: No

SelfservicePermissions

The default self-service permissions for WorkSpaces in the directory.

Type: SelfservicePermissions (p. 188) object

Required: No

State

The state of the directory's registration with Amazon WorkSpaces. After a directory is deregistered, the DEREGISTERED state is returned very briefly before the directory metadata is cleaned up, so this state is rarely returned. To confirm that a directory is deregistered, check for the directory ID by using DescribeWorkspaceDirectories. If the directory ID isn't returned, then the directory has been successfully deregistered.

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

Array Members: Maximum number of 2 items.

Pattern: ^subnet-([0-9a-f]{8}|[0-9a-f]{17})$  
Required: No

**Tenancy**

Specifies whether the directory is dedicated or shared. To use Bring Your Own License (BYOL), this value must be set to DEDICATED. For more information, see Bring Your Own Windows Desktop Images.

Type: String

Valid Values: DEDICATED | SHARED

Required: No

**WorkspaceAccessProperties**

The devices and operating systems that users can use to access WorkSpaces.

Type: WorkspaceAccessProperties (p. 200) object

Required: No

**WorkspaceCreationProperties**

The default creation properties for all WorkSpaces in the directory.

Type: DefaultWorkspaceCreationProperties (p. 171) object

Required: No

**WorkspaceSecurityGroupId**

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

Type: String


Pattern: ^sg-([0-9a-f]{8}|[0-9a-f]{17})$  
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 V2
- AWS SDK for Ruby V3
WorkspaceImage

Describes a WorkSpace image.

Contents

Created

The date when the image was created. If the image has been shared, the AWS account that the image has been shared with sees the original creation date of the image.

Type: Timestamp

Required: No

Description

The description of the image.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: ^[a-zA-Z0-9-_./(\-\)]+$

Required: No

ErrorCode

The error code that is returned for the image.

Type: String

Required: No

ErrorMessage

The text of the error message that is returned for the image.

Type: String

Required: No

ImageId

The identifier of the image.

Type: String

Pattern: wsi-[0-9a-z]{9,63}$

Required: No

Name

The name of the image.

Type: String

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

Pattern: ^[a-zA-Z0-9-_./(\-\)]+$

Required: No
OperatingSystem

The operating system that the image is running.

Type: OperatingSystem (p. 184) object

Required: No

OwnerAccountid

The identifier of the AWS account that owns the image.

Type: String

Pattern: ^\d{12}$

Required: No

RequiredTenancy

Specifies whether the image is running on dedicated hardware. When Bring Your Own License (BYOL) is enabled, this value is set to DEDICATED. For more information, see Bring Your Own Windows Desktop Images.

Type: String

Valid Values: DEFAULT | DEDICATED

Required: No

State

The status of the image.

Type: String

Valid Values: AVAILABLE | PENDING | ERROR

Required: No

Updates

The updates (if any) that are available for the specified image.

Type: UpdateResult (p. 195) 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 V2
- AWS SDK for Ruby V3
WorkspaceProperties

Describes a WorkSpace.

Contents

ComputeTypeName

The compute type. For more information, see Amazon WorkSpaces Bundles.

Type: String

Valid Values: VALUE | STANDARD | PERFORMANCE | POWER | GRAPHICS | POWERPRO | GRAPHICSPRO | GRAPHICS_G4DN | GRAPHICSPRO_G4DN

Required: No

RootVolumeSizeGib

The size of the root volume. For important information about how to modify the size of the root and user volumes, see Modify a WorkSpace.

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. For important information about how to modify the size of the root and user volumes, see Modify a WorkSpace.

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
See Also

- AWS SDK for Java V2
- AWS SDK for Ruby V3
WorkspaceRequest

Describes the information used to create a WorkSpace.

Contents

BundleId

The identifier of the bundle for the WorkSpace. You can use DescribeWorkspaceBundles (p. 74) 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. 77) 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. 193) objects

Required: No

UserName

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

Type: String


Required: Yes

UserVolumeEncryptionEnabled

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

Type: Boolean
Required: No

**VolumeEncryptionKey**

The symmetric AWS KMS key used to encrypt data stored on your WorkSpace. Amazon WorkSpaces does not support asymmetric KMS keys.

Type: String

Required: No

**WorkspaceProperties**

The WorkSpace properties.

Type: `WorkspaceProperties (p. 212)` 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 V2
- AWS SDK for Ruby V3
WorkspacesIpGroup

Describes an IP access control group.

Contents

groupDesc

The description of the group.

Type: String

Required: No

groupId

The identifier of the group.

Type: String

Pattern: wsipg-[0-9a-z]{8,63}$

Required: No

groupName

The name of the group.

Type: String

Required: No

userRules

The rules.

Type: Array of IpRuleItem (p. 182) objects

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 V2
- AWS SDK for Ruby V3
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

NotAuthorized

You do not have permission to perform this action.

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 WorkSpaces API Calls by Using CloudTrail

The WorkSpaces API is integrated with AWS CloudTrail, a service that provides a record of actions taken by a user, role, or an AWS service in WorkSpaces. CloudTrail captures API calls for WorkSpaces as events. The calls captured include calls from the WorkSpaces console and code calls to the WorkSpaces API operations. If you create a trail, you can enable continuous delivery of CloudTrail events to an Amazon S3 bucket, including events for WorkSpaces. If you don't configure a trail, you can still view the most recent events in the CloudTrail console in Event history. Using the information collected by CloudTrail, you can determine the request that was made to WorkSpaces, the IP address from which the request was made, who made the request, when it was made, and additional details.

To learn more about CloudTrail, including how to configure and enable it, see the AWS CloudTrail User Guide.

WorkSpaces Information in CloudTrail

CloudTrail is enabled on your AWS account when you create the account. When supported event activity occurs in WorkSpaces, that activity is recorded in a CloudTrail event along with other AWS service events in Event history. For example, calls to create, rebuild, or terminate WorkSpaces generate entries in CloudTrail log files. For more information, see Actions (p. 2).

You can view, search, and download recent events in your AWS account. For more information, see Viewing Events with CloudTrail Event History.

For an ongoing record of events in your AWS account, including events for WorkSpaces, create a trail. A trail enables CloudTrail to deliver log files to an Amazon S3 bucket. By default, when you create a trail in the console, the trail applies to all AWS Regions. The trail logs events from all Regions in the AWS partition and delivers the log files to the Amazon S3 bucket that you specify. Additionally, you can configure other AWS services to further analyze and act upon the event data collected in CloudTrail logs. For more information, see the following:

- Overview for Creating a Trail
- CloudTrail Supported Services and Integrations
- Configuring Amazon SNS Notifications for CloudTrail
- Receiving CloudTrail Log Files from Multiple Regions and Receiving CloudTrail Log Files from Multiple Accounts

Example: WorkSpaces Log File Entry

A trail is a configuration that enables delivery of events as log files to an Amazon S3 bucket that you specify. CloudTrail log files contain one or more log entries. An event represents a single request from any source and includes information about the requested action, the date and time of the action, request parameters, and so on. CloudTrail log files aren't an ordered stack trace of the public API calls, so they don't appear in any specific order.

Any sensitive information, such as passwords, authentication tokens, file comments, and file contents are redacted in the log entries.
The following shows an example of a CloudTrail log entry for WorkSpaces.

```json
{
  "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"
      }
    }
  ]
}
```