



API Reference

# AWS Partner Central



# AWS Partner Central: API Reference

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# Welcome

This AWS Partner Central API reference is designed to help [AWS Partners](#) integrate customer relationship management (CRM) systems with Partner Central. The API automates interactions with Partner Central, which helps to ensure effective engagements in joint business activities.

The API provides standard AWS API functionality. Access it by either using API [Actions](#) or by using an AWS SDK that's tailored to your programming language or platform. For more information, see [Getting Started with AWS](#) and [Tools to Build on AWS](#).

## Features offered by AWS Partner Central API

- Opportunity management:** Facilitates the management of coselling opportunities with AWS using API actions such as `CreateOpportunity`, `UpdateOpportunity`, `ListOpportunities`, `GetOpportunity`, and `AssignOpportunity`.
- AWS referral management:** Facilitates receiving referrals shared by AWS using actions like `ListEngagementInvitations`, `GetEngagementInvitation`, `StartEngagementByAcceptingInvitation`, and `RejectEngagementInvitation`.
- Entity association:** Associate related entities such as *AWS Products*, *Partner Solutions*, and *AWS Marketplace Private Offers* with opportunities using the actions `AssociateOpportunity` and `DisassociateOpportunity`.
- View AWS opportunity details:** Use the `GetAWSOpportunitySummary` action to retrieve real-time summaries of AWS opportunities that are linked to your opportunities.
- List solutions:** Provides list APIs for listing solutions partners offer using `ListSolutions`.
- Event subscription:** Partners can subscribe to real-time updates on opportunities by listening to events such as *Opportunity Created*, *Opportunity Updated*, *Engagement Invitation Accepted*, *Engagement Invitation Rejected* and *Engagement Invitation Created* using Amazon EventBridge.

## Supported Regions and endpoints

The AWS Partner Central API is available in the US East (N. Virginia) Region.

| Region    | Endpoint                                 |
|-----------|--|
| us-east-1 | partnercentral-selling.us-east-1.api.aws |

Partners can test and validate API integrations in a secure sandbox environment. This allows you to test API actions without affecting live data. For more information, see [Testing in a sandbox](#).

## Selling API entities

AWS Partner Central entities represent key business components used in coselling engagements between partners and AWS. These entities encapsulate information related to opportunities, solutions, products, and offers, enabling smooth collaboration and management of joint sales activities. The following sections provide descriptions of the core entities in the Partner Central Selling API.

### Opportunity

An opportunity is a potential sale or deal that a business identifies and actively pursues. It's a qualified prospect or lead with a specific need that the company's products or services can address. Opportunities are typically tracked in a sales pipeline or CRM system and form the foundation of future revenue. Effective opportunity management involves nurturing leads through the sales process, from the initial qualification to closing. For more information, see [Working with your opportunities](#) and [Data types](#)

### Partner Solutions

Represents a Partner Solution (referred to as offering on AWS Partner Central), which is a software product or consulting practice created and delivered by AWS Partners. Partner Solutions help customers address specific business challenges or achieve particular goals using AWS services. For more information, see [What is a solution?](#)

### AWS product

Represents a specific AWS service or product. AWS offers a wide range of products and services designed to provide scalable, reliable, and cost-effective infrastructure solutions. Partners can obtain the latest list of AWS Products from the [bulk import page on Partner Central](#) (Start Import > AWS Products and Solutions). For more information, you can [learn about AWS Products](#) or [view the list of all AWS Products](#).

### AWS Marketplace private offer

AWS Marketplace private offer is a feature that allows AWS Marketplace sellers to offer specific pricing and terms to individual AWS customers. Through private offers, sellers can negotiate

custom prices, payment schedules, and end user license terms. AWS customers can obtain software solutions that meet their specific requirements, while also possibly benefiting from more favorable terms or pricing compared to standard offerings. The private offer process involves the seller creating a unique offer with tailored terms, which is then shared privately with the designated AWS customer for their review and acceptance. For more information, see [Private offers in AWS Marketplace](#).

## Engagement invitation

Engagement Invitation refers to a formal request from AWS for partners to collaborate on a specific referral. This allows AWS and the partner to work together to drive the opportunity forward. The invitation can be accepted or rejected by the partner.

## Using AWS Partner Central API with an AWS SDK

AWS software development kits (SDKs) are available for many popular programming languages. Each SDK provides an API, code examples, and documentation that make it easier for developers to build applications in their preferred language.

| SDK documentation                          | Code examples  |
|--|--|
| <a href="#">AWS SDK for C++</a>            | <a href="#">AWS SDK for C++ code examples</a>            |
| <a href="#">AWS CLI</a>                    | <a href="#">AWS CLI code examples</a>                    |
| <a href="#">AWS SDK for Go</a>             | <a href="#">AWS SDK for Go code examples</a>             |
| <a href="#">AWS SDK for Java</a>           | <a href="#">AWS SDK for Java code examples</a>           |
| <a href="#">AWS SDK for JavaScript</a>     | <a href="#">AWS SDK for JavaScript code examples</a>     |
| <a href="#">AWS SDK for Kotlin</a>         | <a href="#">AWS SDK for Kotlin code examples</a>         |
| <a href="#">AWS SDK for .NET</a>           | <a href="#">AWS SDK for .NET code examples</a>           |
| <a href="#">AWS SDK for PHP</a>            | <a href="#">AWS SDK for PHP code examples</a>            |
| <a href="#">AWS Tools for PowerShell</a>   | <a href="#">AWS Tools for PowerShell code examples</a>   |
| <a href="#">AWS SDK for Python (Boto3)</a> | <a href="#">AWS SDK for Python (Boto3) code examples</a> |

| SDK documentation                    | Code examples                                      |
|--------------------------------------|--|
| <a href="#">AWS SDK for Ruby</a>     | <a href="#">AWS SDK for Ruby code examples</a>     |
| <a href="#">AWS SDK for Rust</a>     | <a href="#">AWS SDK for Rust code examples</a>     |
| <a href="#">AWS SDK for SAP ABAP</a> | <a href="#">AWS SDK for SAP ABAP code examples</a> |
| <a href="#">AWS SDK for Swift</a>    | <a href="#">AWS SDK for Swift code examples</a>    |

 **Example availability**

Can't find what you need? Request a code example by using the **Provide feedback** link at the bottom of this page.

# Setup and authentication

Setting up and authenticating with the AWS Partner Central API involves three steps. Here's an overview of the process:

1. Link your AWS Marketplace Seller account to Partner Central.
2. Set up permissions using IAM.
3. Authenticate your API calls using Signature Version 4 (SigV4).

## Linking your AWS account to Partner Central

Linking your AWS account to Partner Central is a prerequisite for using the API. For more information, see [Linking AWS Partner Central accounts with AWS Marketplace seller accounts](#).

You must sign in to Partner Central with an account that has alliance-lead or cloud-administrator permissions, navigate to the **Account Linking** section, and follow the prompts.

## Setting up IAM

To use the AWS Partner Central API, you will need an AWS Identity and Access Management (IAM) role or an IAM user to start making calls. For more information, see [When do I use IAM?](#). Follow the steps for [Creating IAM roles](#) and [Creating an IAM user](#) in your AWS account guides for this. You must create this IAM Role/User in your Partner Central-linked AWS Marketplace Seller account. IAM role/user creation does not incur any costs.

### 1. Create an IAM Role/User

Sign in to the AWS Management Console, navigate to the IAM service, and follow the steps to create an IAM role or an IAM user.

### 2. Assign Policies:

Attach managed policies or create custom policies as needed. To modify or expand permissions, apply additional policies to the IAM Role instead of copying and combining the content from `AWSPartnerCentralOpportunityManagement` with other permissions. Avoid duplicating managed policies, as doing so will prevent you from automatically gaining access to new features as they're released, and you'll have to manually update your policies in the future. For more details about access policies, see the [Access Control documentation](#).

## Managing AWS Marketplace offers

For managing AWS Marketplace offers and linking them to opportunities, partners must give the IAM role permission to access Catalog APIs. Ensure the role/user has permissions, such as `aws-marketplace>ListEntities` and `aws-marketplace/SearchAgreements`.

## Authenticating API calls

AWS Partner Central API uses Signature Version 4 (SigV4) for authentication. Here's how to implement it:

### Using the AWS SDK

AWS SDKs automatically handle request signing. Provide your AWS credentials, and the SDK does the rest.

1. For Java, see [Provide temporary credentials to the AWS SDK for Java](#).
2. For Python (Boto3), see [Credentials](#).
3. For JavaScript (Node.js), see [Setting credentials in Node.js](#).
4. For .NET, see [Credential and profile resolution](#).
5. For other programming languages and more examples, see the [Tools to Build on AWS](#).

### Authentication without using the AWS SDK

If an AWS SDK is not available for your chosen programming language, authentication involves manually creating a canonical request, signing the request, and handling the session tokens. AWS offers comprehensive guidance for [using SigV4 signing](#). However, please note that using the AWS SDK is recommended as manual request signing increases the complexity and requires careful management of security tokens.

## Signing your calls with custom user-agent

When making API requests to AWS Partner Central, we recommends including the `X-Amzn-User-Agent` header to help AWS identify the source of the client application, track usage, and audit performance. AWS uses this header to distinguish the type of client application making the call and to gather insights about the success rate of different client implementations.

## Custom user-agent header

**Header Name:** X-Amzn-User-Agent

**Purpose:** Distinguishes the type of client making the API request, categorizing the source of the interaction.

**Format:** CompanyName | ProductName | CRMName | ProductVersion

**Example Value:** AWS | AWS Partner CRM Connector | Salesforce | v3.0

Including this header in every request enables AWS to analyze request patterns, track integrations, and improve the API experience for different CRM systems.

## Using custom headers in SDKs

To include the X-Amzn-User-Agent header in SDK calls, you can modify the client request behavior before making the API call. Below is an example using the AWS SDK for Python (Boto3):

```
import boto3

# Define service and endpoint details
service_name = "partnercentral-selling"
endpoint_url = "https://partnercentral-selling.us-east-1.api.aws"

# Create a boto3 client for Partner Central
partner_central_client = boto3.client(
    service_name=service_name,
    region_name='us-east-1',
    endpoint_url=endpoint_url
)

# Function to add the custom User-Agent header

def add_version_header(params, **kwargs):
    params["headers"]['X-Amzn-User-Agent'] = 'AWS|AWS Partner CRM Connector|Salesforce|v3.0'

# Register the event to modify the request before the call is made
partner_central_client.meta.events.register(
    f'before-call.{service_name}.*', add_version_header
)
```

```
# Now, whenever an API call is made using this client, the custom User-Agent header  
will be included
```

This example demonstrates how to register an event in the Boto3 SDK to automatically append the X-Amzn-User-Agent header to every API request. The same approach can be applied to other AWS SDKs by modifying their respective request-interception mechanisms.

# Access control and permissions

Access control and permissions are managed by AWS Identity and Access Management (IAM). This section provides guidance for configuring the necessary permissions to interact with the API, including the permissions required to list AWS Marketplace entities.

# Prerequisites

Before configuring permissions, ensure that your AWS account is linked to Partner Central and that you created the necessary IAM roles and users. For more information, see [Setup and Authentication](#).

# Using AWS managed policies

AWS provides managed policies that grant the required permissions to interact with the API. To provide the necessary access to manage opportunities, attach the AWSPartnerCentralOpportunityManagement policy to your IAM identities. For more information, see [AWS managed policies for AWS Partner Central users](#).

# AWSPartnerCentralOpportunityManagement policy

This policy grants full access to Partner Central opportunity management actions.

```
{  
  "Version": "2012-10-17",  
  "Statement": [  
    {  
      "Sid": "OpportunityManagement",  
      "Effect": "Allow",  
      "Action": [  
        "partnercentral:AcceptEngagementInvitation",  
        "partnercentral:AssignOpportunity",  
        "partnercentral:AssociateOpportunity",  
        "partnercentral>CreateEngagement",  
        "partnercentral>CreateEngagementInvitation",  
        "partnercentral>CreateOpportunity",  
        "partnercentral>CreateResourceSnapshot",  
        "partnercentral>CreateResourceSnapshotJob",  
        "partnercentral>DeleteResourceSnapshotJob",  
        "partnercentral:DisassociateOpportunity",  
        "partnercentral:ListOpportunities",  
        "partnercentral:ListResourceSnapshots",  
        "partnercentral:UpdateOpportunity",  
        "partnercentral:UpdateResourceSnapshot",  
        "partnercentral:UpdateResourceSnapshotJob"  
      ]  
    }  
  ]  
}
```

```
        "partnercentral:GetAwsOpportunitySummary",
        "partnercentral:GetEngagement",
        "partnercentral:GetEngagementInvitation",
        "partnercentral:GetOpportunity",
        "partnercentral:GetResourceSnapshot",
        "partnercentral:GetResourceSnapshotJob",
        "partnercentral>ListEngagementByAcceptingInvitationTasks",
        "partnercentral>ListEngagementFromOpportunityTasks",
        "partnercentral>ListEngagementInvitations",
        "partnercentral>ListEngagementMembers",
        "partnercentral>ListEngagementResourceAssociations",
        "partnercentral>ListEngagements",
        "partnercentral>ListOpportunities",
        "partnercentral>ListResourceSnapshotJobs",
        "partnercentral>ListResourceSnapshots",
        "partnercentral>ListSolutions",
        "partnercentral:RejectEngagementInvitation",
        "partnercentral:StartEngagementByAcceptingInvitationTask",
        "partnercentral:StartEngagementFromOpportunityTask",
        "partnercentral:StartResourceSnapshotJob",
        "partnercentral:StopResourceSnapshotJob",
        "partnercentral:SubmitOpportunity",
        "partnercentral:UpdateOpportunity"
    ],
    "Resource": "*"
},
{
    "Sid": "ListingAWSMarketplaceEntities",
    "Effect": "Allow",
    "Action": ["aws-marketplace>ListEntities"],
    "Resource": "*"
},
{
    "Sid": "AWSMarketplaceOffersAccess",
    "Effect": "Allow",
    "Action": ["aws-marketplace>DescribeEntity"],
    "Resource": ["arn:aws:aws-marketplace:*:*:AWSMarketplace/Offer/*"]
}
]
```

# Custom policies

If the managed policies don't meet your needs, create custom IAM policies that grant the permissions required for your use case. The following example is a custom policy that grants permissions to list AWS Marketplace entities:

## Example Example of custom policy

```
{  
    "Version": "2012-10-17",  
    "Statement": [  
        {  
            "Effect": "Allow",  
            "Action": [  
                "partnercentral>ListOpportunities",  
                "aws-marketplace>ListEntities"  
            ],  
            "Resource": "*"  
        }  
    ]  
}
```

## Custom permissive policy

This policy provides broad access to Partner Central selling actions, including features that may be added in the future without requiring policy updates. By using the wild card action `partnercentral:*`, this policy automatically grants access to new Partner Central selling features as they become available, reducing the need for manual updates. This policy also includes permissions for interacting with AWS Marketplace entities, which helps to ensure access is maintained for both selling and Marketplace actions.

```
{  
    "Version": "2012-10-17",  
    "Statement": [  
        {  
            "Effect": "Allow",  
            "Action": [  
                "partnercentral:*"  
            ]  
        }  
    ]  
}
```

```
        ],
        "Resource": "*"
    },
    {
        "Effect": "Allow",
        "Action":
        [
            "aws-marketplace>ListEntities",
            "aws-marketplace>DescribeEntity"
        ],
        "Resource": "*"
    },
    {
        "Effect": "Allow",
        "Action":
        [
            "aws-marketplace>SearchAgreements",
            "aws-marketplace>DescribeAgreement"
        ],
        "Resource": "*",
        "Condition":
        {
            "StringEquals":
            {
                "aws-marketplace:PartyType": "Proposer"
            }
        }
    }
]
```

## Assigning policies to IAM roles and users

Follow these steps to assign policies to IAM roles and users:

1. Sign in to the AWS Management Console.
2. Navigate to the IAM service.
3. Select roles or users, and choose the IAM role or user to which you want to attach a policy.
4. Attach the `AWSPartnerCentralOpportunityManagement` policy or your custom policy to the selected IAM role or user.

For more information, see [Adding and removing IAM identity permissions](#).

## Managing permissions using condition keys

Condition keys in IAM policies provide resource-level permissions for when to enforce statement policies. You can use condition keys to specify conditions that dictate when certain permissions are allowed or denied.

For more information, see [IAM JSON policy elements: Condition operators](#).

### Condition keys overview

| Condition key             | Description   | Applicable actions                  | Valid values |
|---------------------------|---|-------------------------------------|--------------|
| partnercentral:Catalog    | filters access by the type of the associated catalog entity | all actions                         | AWS, sandbox |
| aws-marketplace:PartyType | filters access based on the type of party (e.g., proposer)  | SearchAgreements, DescribeAgreement | proposer     |

## Summary of required permissions

### Summary of required permissions

| Action                              | Description  |
|-------------------------------------|--|
| partnercentral>CreateOpportunity    | allows creating opportunities                        |
| partnercentral>UpdateOpportunity    | allows updating opportunities                        |
| partnercentral>ListOpportunities    | allows listing opportunities                         |
| partnercentral>GetOpportunity       | allows retrieving opportunity details                |
| partnercentral>ListSolutions        | allows listing solutions                             |
| partnercentral>AssociateOpportunity | allows associating opportunities with other entities |

| Action                                    | Description   |
|---|---|
| partnercentral:DisassociateOpportunity    | allows disassociating opportunities from other entities |
| partnercentral:AcceptEngagementInvitation | allows accepting engagement invitations                 |
| partnercentral:RejectEngagementInvitation | allows rejecting engagement invitations                 |
| partnercentral:GetEngagementInvitation    | allows retrieving engagement invitation details         |
| partnercentral>ListEngagementInvitations  | allows listing engagement invitations                   |
| partnercentral:SubmitOpportunity          | allows submitting opportunities                         |
| partnercentral:GetAwsOpportunitySummary   | allows retrieving AWS opportunity summary               |
| aws-marketplace>ListEntities              | allows listing AWS Marketplace entities                 |
| aws-marketplace>DescribeEntity            | allows describing AWS Marketplace entities              |
| aws-marketplace>SearchAgreements          | allows searching agreements in AWS Marketplace          |
| aws-marketplace>DescribeAgreement         | allows describing agreements in AWS Marketplace         |

# Testing in a sandbox

A sandbox provides users of AWS Partner Central APIs a secure and isolated environment to test and validate their API interactions, ensuring smooth operation before promoting their solution to the production environment. AWS offers a dynamic sandbox to Partner Central API users that returns responses similar to the production environment. AWS does not provide a user interface to ACE Pipeline Manager in the sandbox environment. Therefore, partners need to rely on the programmatic responses to test their solutions.

## Access to the sandbox environment

Partners gain access to the testing environment as soon as they link their AWS account to the Partner Central account. For more information, see [Linking your AWS Marketplace account to AWS Partner Central account](#). Each request includes a Catalog parameter, which determines the data environment. When Catalog is set to AWS, it references production data, and when it's set to Sandbox, it references sandbox data.

## **How to use the sandbox**

- ## 1. Create an IAM role:

Create an IAM role in the AWS account linked with your AWS Partner Central account.

- ## 2. Assign Policy:

Assign the following policy to the IAM role. For more information, see [Adding and removing IAM identity permissions](#).

```
        "partnercentral>ListSolutions",
        "partnercentralAssociateOpportunity",
        "partnercentralDisassociateOpportunity",
        "partnercentralAssignOpportunity",
        "partnercentralSubmitOpportunity",
        "partnercentralAcceptEngagementInvitation",
        "partnercentralCreateEngagementInvitation",
        "partnercentralRejectEngagementInvitation",
        "partnercentralGetEngagementInvitation",
        "partnercentralListEngagementInvitations",
        "partnercentralStartEngagementFromOpportunityTask",
        "partnercentralStartEngagementByAcceptingInvitationTask",
        "partnercentralCreateResourceSnapshotJob",
        "partnercentralStartResourceSnapshotJob",
        "partnercentralCreateEngagement"
    ],
    "Resource": "*",
    "Condition": {
        "StringEquals": {
            "partnercentralCatalog": "Sandbox"
        }
    }
},
{
    "Effect": "Allow",
    "Action": [
        "aws-marketplace>ListEntities",
        "aws-marketplace>DescribeEntity"
    ],
    "Resource": "*"
},
{
    "Effect": "Allow",
    "Action": [
        "aws-marketplace>SearchAgreements",
        "aws-marketplace>DescribeAgreement"
    ],
    "Resource": "*",
    "Condition": {
        "StringEquals": {
            "aws-marketplacePartyType": "Proposer"
        }
    }
}
```

```
]  
}
```

### 3. Use IAM role credentials:

Use the credentials (secret key and access key) of this IAM role in your solution to perform the API actions.

## Important details about the sandbox environment

1. Data refresh: Once per year, AWS refreshes the data in the sandbox environment (typically at the beginning of the year). After this refresh, you may lose some of the data in your testing environment.
2. Testing scope: The sandbox environment is typically used for functional testing and not for testing scalability or performance. The sandbox supports a maximum of one request per second.

## Testing AWS actions

During the testing phase, it is often necessary to simulate AWS actions. This simulation enables partners to thoroughly test the complete end-to-end flow of their integration with AWS services.

### Simulating the creation of an AWS originated opportunity

To simulate the creation of an AWS originated opportunity, in the payload of the CreateOpportunity action, include "Catalog": "Sandbox" and "Origin": "AWS Referral".

For example:

```
{  
    "Catalog": "Sandbox",  
    "Origin": "AWS Referral",  
    "OpportunityIdentifier": "0123456",  
    "Title": "Test Opportunity",  
    ...  
}
```

## Simulating updates to a partner-originated opportunity

To simulate updates or other actions on a partner-originated opportunity, use the `UpdateOpportunity` action with "Catalog": "Sandbox" and `Lifecycle.ReviewStatus`: "Approved" or "Action Required" in the payload.

If you are taking the payload from the `GetOpportunity` action to do the update, ensure that you change the ID to `Identifier`, and remove the following fields:

- `CreatedDate`
- `OpportunityTeam`
- `RelatedEntityIdentifiers`

For example:

```
{  
    "Catalog": "Sandbox",  
    "Identifier": "0123456",  
    "Title": "Updated Test Opportunity",  
    "Lifecycle": {  
        "ReviewStatus": "Approved"  
    }  
    ...  
}
```

## Testing events in the sandbox environment

Partners can consume opportunity events from the sandbox environment to help test the event-based implementations. Set up EventBridge in the same AWS account with rules to listen for sandbox events by specifying catalog: sandbox in the event details. For more information, see [Selling API Events](#).

Example event rule:

```
{  
    "source": ["aws.partnercentral-selling"],  
    "detail": {  
        "catalog": ["Sandbox"]  
    }  
}
```

{}

Event rules that specify catalog as Sandbox will only match events coming from the sandbox, generated by the actions you perform in the sandbox environment.

## Additional testing notes

1. Testing AssociateOpportunity action:
  - a. Use the default solution "S-1234567" for testing the AssociateOpportunity action.
  - b. For testing Marketplace offers, use a real offer ID from your account.
2. To move to production, change the catalog value from Sandbox to AWS.

## Getting help

If you encounter challenges integrating your CRM with AWS, or if you need to test a specific scenario not covered here, please reach out to support by raising a case through the following steps:

1. Sign in to the [AWS Partner Central](#) with your AWS Partner Network credentials.
2. On the [Support Center for Partner Central](#), choose Open New Case to log a new case.  
Complete the fields as follows:
  - a. Type of support case: AWS Partner Central.
  - b. Question regarding: Partner Central Tools or ACE leads and opportunities.
  - c. Get specific: Select the most appropriate CRM Integration case type.
  - d. Subject: Include a brief description of the request.
  - e. Description: Provide a detailed description of issues, questions, errors, and troubleshooting steps.
  - f. Attachments: Include logs and screenshots, where applicable.

# Quotas

AWS Partner Central API enforces quotas to ensure fair usage and to protect the service from misuse. Below are the detailed quotas for various API operations and associations per opportunity.

## API operation quotas

| Type          | API operation                            | Quota (per partner account)         |
|---------------|--|-------------------------------------|
| Read actions  | GetOpportunity                           | 10 per second; 100,000 per 24 hours |
|               | GetAwsOpportunitySummary                 |                                     |
|               | ListOpportunities                        |                                     |
|               | ListSolutions                            |                                     |
|               | GetEngagementInvitation                  |                                     |
|               | ListEngagementInvitations                |                                     |
| Write actions | CreateOpportunity                        | 1 per second; 10,000 per 24 hours   |
|               | UpdateOpportunity                        |                                     |
|               | AssociateOpportunity                     |                                     |
|               | DisassociateOpportunity                  |                                     |
|               | RejectEngagementInvitation               |                                     |
|               | AssignOpportunity                        |                                     |
|               | StartEngagementFromOpportunityTask       |                                     |
|               | StartEngagementByAcceptingInvitationTask |                                     |

# Association quotas per opportunity

| Related entity                 | Quota              |
|--------------------------------|--------------------|
| AWS products                   | 20 per opportunity |
| Partner Solutions              | 10 per opportunity |
| AWS Marketplace private offers | 1 per opportunity  |

## Understanding and managing quotas

### Rate limiting

When an API rate limit is reached, the service will respond with a `ThrottlingException`. To better handle rate limiting, AWS recommends implementing exponential backoff and retry strategies in your application.

### Time window for quotas

The daily quotas reset on a rolling 24 hour period. Your requests would be throttled e.g. if you have performed 10,000 write actions in the last 24 hours and are trying to perform the 10,001st request. Ensure that your application's usage patterns take this into account to prevent unintentional throttling.

### Requesting a quota increase

If the default quotas do not meet your requirements, you can request a quota increase through the [Service Quotas page](#). The Service Quotas console is a browser-based interface that you can use to view and manage your service quotas. You can access Service Quotas from any AWS Management Console page by choosing it on the top navigation bar, or by searching for Service Quotas in the AWS Management Console.

# Working with your opportunities

## What is an Opportunity?

During the initial stages of the sales process, a sales representative assesses whether an interested individual (called *lead*) has the potential to become a customer. This assessment and validation phase is referred to as *Qualification*. Once a lead is deemed qualified and is considered to have a higher probability of converting to a customer, it is then classified as an *Opportunity*.

## Working with Your Opportunities

Partners can manage opportunities created within their CRM systems and synchronize them with AWS Partner Central using the AWS Partner Central Selling API. This allows partners to track and manage opportunities from initiation to closure.

### Creating an Opportunity

The first step in managing opportunities is creating an opportunity using the `CreateOpportunity` action. This creates an opportunity with the `Lifecycle.ReviewStatus` set to `Pending Submission`. However, the opportunity is not yet submitted to AWS for validation.

Once created, partners must associate at least one Partner Solution with the opportunity using the `AssociateOpportunity` action. This action clearly defines what the opportunity is attempting to sell. Partners can view the complete list of available solutions in their account using the `ListSolutions` API, and they can associate between one and ten solutions.

Optionally, partners can also associate relevant AWS Products with the opportunity using the `AssociateOpportunity` action. This step helps AWS sales teams understand what AWS products are expected to be sold in conjunction with the opportunity.

Once the required Partner Solution is associated and, optionally, AWS Products are linked, partners can start engagement on the opportunity by using the `StartEngagementFromOpportunityTask` action. This is when the opportunity gets submitted for starting an engagement.

## Review Process

After starting the engagement on the opportunity using the `StartEngagementFromOpportunityTask` action, the opportunity enters the AWS validation phase, and its `Lifecycle.ReviewStatus` is set to `Submitted`. No changes can be made to the opportunity until the review process is complete.

During this validation phase, AWS ensures that the opportunity details are accurate and complete. While the validation is in progress, the `Lifecycle.ReviewStatus` is set to `In-Review`.

If there are changes or additional details required from the partner, AWS sets the `Lifecycle.ReviewStatus` to `Action Required`, and any required updates are communicated via the `Lifecycle.ReviewComments` field.

Once the opportunity passes validation, the `Lifecycle.ReviewStatus` changes to `Approved`, making the opportunity ready for co-selling activities.

Partners should monitor the `Opportunity Updated` event using Amazon EventBridge. This will notify them of any status changes or feedback from AWS. Upon receiving the event, partners can use the `GetOpportunity` API action to fetch the latest opportunity details and verify the `Lifecycle.ReviewStatus` field.

## Resolving Validation Issues

If the `Lifecycle.ReviewStatus` is set to `Action Required`, partners need to address the issues highlighted by AWS. To resolve these, partners can update the opportunity using the `UpdateOpportunity` API action.

During the `Action Required` state, only certain fields are editable. These fields include:

1. `Customer.Account.Address.City`
2. `Customer.Account.Address.Country`
3. `Customer.Account.Address.PostalCode`
4. `Customer.Account.Address.StateOrRegion`
5. `Customer.Account.Address.StreetAddress`
6. `Customer.Account.WebsiteUrl`
7. `LifeCycle.TargetCloseDate`
8. `Project.ExpectedCustomerSpend.Amount`

9. Project.ExpectedCustomerSpend.Currency

10Project.CustomerBusinessProblem

11PartnerOpportunityIdentifier

After making the necessary changes, the opportunity re-enters the validation phase, and the process repeats until the opportunity's Lifecycle.ReviewStatus is set to Approved or Disqualified.

## Post-Approval Updates

Once the opportunity is Approved, partners can continue to update the opportunity as needed using the UpdateOpportunity action, facilitating seamless co-selling activities.

Partners should continue monitoring the Opportunity Updated events through Amazon EventBridge to remain updated on any changes. For more information on tracking AWS updates, refer to the "Working with opportunity updates" section. Partners can also update select fields based on the business validation rules.

# Working with opportunities from AWS

## 1. Receiving the AWS Opportunity

Opportunities are shared with partners when an AWS sales executive attaches a partner to an opportunity in AWS's CRM system. These are referred to as AWS Opportunities, distinct from opportunities created in the partner's own account.

When an AWS Opportunity has a partner attached, AWS creates an Engagement Invitation containing a subset of data from the AWS Opportunity. Partners will receive an *Engagement Invitation Created* event.

## 2. Reviewing the Engagement Invitation

The Engagement Invitation contains essential information such as `Project.Title`, `Project.CustomerUseCase`, `Lifecycle.Stage`, `Project.CustomerBusinessProblem`, and a few additional fields. Partners can use this data to decide whether to pursue the opportunity.

However, the following fields from the AWS Opportunity are not included in the Engagement Invitation:

```
Customer.Account.Address.StreetAddress  
Customer.Account.Address.City  
Customer.Account.Address.PostalCode  
Customer.Contact  
Customer.Account.AWSAccountId  
Project.OtherSolutionDescription  
RelatedEntityIdentifiers
```

## 3. Handling the Engagement Invitation

Upon receiving an *Engagement Invitation Created* event, partners can use the `GetEngagementInvitation` action to retrieve details of the AWS Opportunity.

If the partner decides not to pursue the opportunity, they can reject the invitation using the `RejectEngagementInvitation` action, along with the required `RejectionReason`. Once rejected, access to the opportunity is lost.

To accept the invitation and proceed, partners should use the `StartEngagementByAcceptingInvitationTask` action. This is an asynchronous action that sequentially performs the following tasks:

1. Accepts the Engagement Invitation.
2. Creates a new opportunity in the partner's account using data from the AWS Opportunity.
3. Includes additional details required to identify the customer in the partner's account.

Upon completion, an *Opportunity Created* event is triggered with the corresponding Opportunity ID. Partners can then use this ID in the `GetOpportunity` action to retrieve full details of the opportunity.

If the partner is not using events, they can call `StartEngagementByAcceptingInvitationTask` again with the same payload to check the latest status.

## 4. Managing the AWS Opportunity Post-Acceptance

Once the opportunity is in the partner's account, it can be managed and updated like any other opportunity in the system. Partners can use actions like `UpdateOpportunity` to make any necessary changes.

For more details on how to track AWS updates and manage opportunity updates, refer to the [Working with opportunity updates](#) section.

# Working with opportunity updates

## Updating opportunities

Partners can use the `UpdateOpportunity` action to update opportunities, with specific rules governing which fields are updated, and when they're updated:

1. Updates cannot be made if the `Lifecycle.ReviewStatus` is `Submitted` or `In-Review`.
2. Before submission, partners can make updates, but AWS will not process them unless the `StartEngagementFromOpportunityTask` action is invoked.
3. When the opportunity is in `Submitted` or `In-review` status, all updates are blocked.
4. If the opportunity is in `Action Required` status, AWS opens select fields for updates. These fields include:
  - `Customer.Account.Address.City`
  - `Customer.Account.Address.Country`
  - `Customer.Account.Address.PostalCode`
  - `Customer.Account.Address.StateOrRegion`
  - `Customer.Account.Address.StreetAddress`
  - `Customer.Account.WebsiteUrl`
  - `LifeCycle.TargetCloseDate`
  - `Project.ExpectedCustomerSpend.Amount`
  - `Project.ExpectedCustomerSpend.CurrencyCode`
  - `Project.ExpectedCustomerSpend.EstimationURL`
  - `Project.ExpectedCustomerSpend.Frequency`
  - `Project.ExpectedCustomerSpend.TargetCompany`
  - `Project.CustomerBusinessProblem`
  - `PartnerOpportunityIdentifier`
5. After the review process (i.e., when `Lifecycle.ReviewStatus` is set to `Approved`), the following fields cannot be updated:
  - `Customer.Account.Address.Country`
  - `Customer.Account.Address.PostalCode`

- `Customer.Account.Industry`
  - `Customer.Account.WebsiteUrl`
  - `Project.CustomerBusinessProblem`
  - `PartnerOpportunityIdentifier`
  - `Project.Title`
6. For all other fields, updates can be made using the `UpdateOpportunity` action. However, additional restrictions may apply based on business rules for the specific program or opportunity type. For more details, refer to field-level validations.
7. For all updates made through both the UI and API, the *Opportunity Updated* event is generated.

## Receiving updates from AWS on opportunities

AWS typically updates AWS opportunities, and each time an update is made, an *Opportunity Updated* event is generated.

### To retrieve the latest updates from AWS, partners need to invoke two separate actions

1. `GetOpportunity` to retrieve details of the partner's opportunity.
2. `GetAWSOpportunitySummary` to retrieve real-time summaries of the AWS opportunity data.

Most regular updates from AWS will be available through the `GetAWSOpportunitySummary` response. However, AWS may occasionally update attributes in the partner's opportunity directly.

### To consume updates from AWS

1. Invoke the `GetAWSOpportunitySummary` action to retrieve the latest details of the AWS Opportunity.
2. If changes need to be reflected in the partner's opportunity, use the `UpdateOpportunity` action to copy the relevant data onto the partner's opportunity.

Partners can choose to automate this process as a direct update mechanism or implement a manual review process to validate and update the data.

# Working with multipartner opportunities

AWS Partners can work together on opportunities with AWS as an active participant.

## Topics

- [Engagements and snapshots](#)
- [Creating a custom policy for ResourceSnapshotJobRole](#)
- [Inviting partners to an opportunity](#)
- [Retrieving engagement invitation details](#)
- [Responding to an engagement invitation](#)
- [Reviewing and updating multipartner opportunities](#)
- [Using snapshots to receive partner updates](#)
- [Viewing engagement members](#)
- [Monitoring resource snapshot job status](#)

## Engagements and snapshots

An *engagement* is a resource owned by AWS for collaboration between multiple AWS Partner accounts and AWS on a customer opportunity. Engagements facilitate secure information sharing among partners and collaboration while maintaining individual opportunity ownership and control. Engagements encompass opportunities that originate from both AWS and partners, with AWS as an active participant. Partners can invite AWS or other partners to join an engagement using `EngagementInvitations`. When invited partners accept, they receive their own opportunity within the same engagement.

Engagement members share progress through snapshots—point in time, immutable copies of specific fields from an underlying resource such as an opportunity. Snapshots are created within the engagement and shared with members. When the underlying resource changes, the owner can create a new snapshot revision to reflect updates. AWS provides snapshot jobs—customer-owned jobs that automatically create new revisions when the resource changes. Once shared, snapshots remain permanently accessible to engagement members.

# Creating a custom policy for ResourceSnapshotJobRole

Collaborating on multi-partner opportunities requires sharing snapshots of your opportunities with other partners in an engagement. To maintain access to the latest opportunity details, you need to create a custom role called `ResourceSnapshotJobRole`. This role allows the system to create snapshots of your opportunities on your behalf and retrieve snapshots from other partners in the same engagement. Without this role, any updates you make to your opportunity will not be visible to other partners in the engagement, and they will continue to see outdated snapshots of your opportunity data.

## Note

You can use a name other than `ResourceSnapshotJobRole`. If you use a different name, replace all instances of `ResourceSnapshotJobRole` in the following policies with your policy name.

To create this role, go to your IAM console and create the `ResourceSnapshotJobRole` role with the following custom trust policy:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Principal": {
        "Service": "resource-snapshot-job.partnercentral-selling.amazonaws.com"
      },
      "Action": "sts:AssumeRole"
    }
  ]
}
```

After creating this role, you need to attach either AWS managed policy [AWSPartnerCentralSellingResourceSnapshotJobExecutionRolePolicy](#) or attach the following permissions policy to it:

```
{
  "Version": "2012-10-17",
```

```
"Statement": [
  {
    "Effect": "Allow",
    "Action": [
      "partnercentral>CreateResourceSnapshot"
    ],
    "Resource": [
      "arn:aws:partnercentral:*::catalog/AWS/engagement/*"
    ]
  },
  {
    "Effect": "Allow",
    "Action": [
      "partnercentral:GetOpportunity"
    ],
    "Resource": [
      "arn:aws:partnercentral:{account}:catalog/AWS/opportunity/*"
    ]
  }
]
```

Replace {account} with your AWS account ID.

After the ResourceSnapshotJobRole role is created successfully with the above permissions attached, you need to set the ResourceSnapshotJobRole for your organization. Use the [PutSellingSystemSettings](#) action to set the role you created as the ResourceSnapshotJobRole for your company (identified by your AWS account):

```
aws-cli/2.13.5 Python/3.11.4 Linux/4.14.255-314-253.539.amzn2.x86_64
Host: partner-central.aws.amazon.com
Content-Type: application/json

{
  "ResourceSnapshotJobRoleIdentifier": "arn:aws:iam:{account}:role/
ResourceSnapshotJobRole"
}
```

Replace {account} with your AWS account ID, and ResourceSnapshotJobRole with the name of the role you created. This role will be implicitly assumed by the resource snapshot jobs to access your opportunities and create snapshots for sharing with other partners in the engagement.

# Inviting partners to an opportunity

Partners can collaborate on opportunities that originate from both partners and AWS by initiating an engagement invitation. You can invite a maximum of nine partners to an opportunity.

## To invite partners to an opportunity:

1. Follow the steps in [Finding and connecting with partners](#) in the *AWS Partner Central Sales Guide*. You must connect with partners before you can invite them to opportunities. This connection grants mutual access to each other's account IDs, ensuring invitations reach the intended partner account.
2. Use the [StartEngagementFromOpportunityTask](#) action to create an engagement and associate an opportunity with it. This asynchronous action performs the following tasks sequentially:
  1. Creates an engagement.
  2. Associates the opportunity with the engagement.
  3. Invokes the [CreateEngagementInvitation](#) action to AWS.
  4. Submits the opportunity to AWS.
  5. Starts the ResourceSnapshotJob to create snapshots.
3. Invite other partners to join.
  - a. Get the engagement ID associated with your opportunity using [ListEngagementFromOpportunityTasks](#) filtered by the TaskIdentifier returned in the previous step.
  - b. Use the receiving partner's engagement ID and account ID to send an invitation with [CreateEngagementInvitation](#).

A successful invitation sends an engagement invitation created event to the receiving partner.

# Retrieving engagement invitation details

When you receive an engagement invitation created event, use the [GetEngagementInvitation](#) action to retrieve the invitation details. The response includes essential information about the customer opportunity associated with the engagement.

Review the invitation details, particularly the `InvitationMessage`, `Project.Title`, `Project.CustomerUseCase`, and `Project.CustomerBusinessProblem` fields. This

information provides context about the customer opportunity and the inviting partner's expectations for collaboration.

Use these details to evaluate if you want to pursue the opportunity by accepting or declining the engagement invitation.

## Responding to an engagement invitation

When a partner sends you an engagement invitation, it creates an engagement invitation created event that notifies you of the invitation. You have the option to accept or reject the invitation. This decision determines your involvement in the multipartner opportunity.

### To reject an engagement invitation:

Use the [RejectEngagementInvitation](#) action to reject the invitation. You must provide a RejectionReason parameter explaining your decision. Once rejected, you lose access to the invitation details, and an engagement invitation rejected event notifies the sending partner that you have rejected their invitation.

### To accept an engagement invitation:

To accept the invitation and proceed with the multipartner opportunity, use the [StartEngagementByAcceptingInvitationTask](#) action. This asynchronous action performs the following tasks sequentially:

1. Accepts the engagement invitation.
2. Creates a new opportunity in your partner account using data from the sending partner's opportunity. You will receive an opportunity created event.
3. Includes additional details required to identify the customer in your account.
4. Publishes an engagement invitation accepted event which notifies the partner that you have accepted the invitation and have been added to the engagement.

### Expired engagement invitation

If you do not respond to an engagement invitation within fifteen days, it expires, and you cannot participate in the multipartner opportunity. An engagement invitation expired event notifies the sending partner that the invitation expired.

**Note**

If you still want to collaborate, the sending partner must initiate a new engagement invitation.

## Reviewing and updating multipartner opportunities

When a partner initiates an engagement on an opportunity, the review status of the newly created opportunity in the receiving partner's account is determined by the sending partner's opportunity status.

### Opportunity with submitted review status:

If the sending partner's opportunity has `Lifecycle.ReviewStatus` set to `Submitted`, the following process occurs:

1. The new opportunity created in the receiving partner's account will have `Lifecycle.ReviewStatus` set to `Submitted`.
2. The `Submitted` status remains until the sending partner's opportunity is `Approved`.
3. Once the sending partner's opportunity is validated and the `Lifecycle.ReviewStatus` is set to `Approved`, the other partners' opportunities will automatically inherit the `Approved` status.

This process ensures consistent opportunity details across multipartner opportunities, eliminating the need for multiple reviews.

Once complete, an opportunity created event is triggered with the corresponding opportunity ID. Partners can use this ID with the `GetOpportunity` action to retrieve the full opportunity details.

### Opportunity with approved review status:

If the sending partner initiates an engagement on an opportunity with `Lifecycle.ReviewStatus` set to `Approved`, the following process occurs:

1. The new opportunity created in the receiving partner's account will have `Lifecycle.ReviewStatus` set to `Approved`.
2. An opportunity created event is triggered with the corresponding opportunity ID.

3. Partners can use the [GetOpportunity](#) action with the opportunity ID to retrieve the full opportunity details.

However, the approved opportunity may not have some partner-specific details that were not copied from the sending partner's opportunity. The receiving partner should update these details using the [UpdateOpportunity](#) action when the opportunity stage is updated to Qualified or a later stage:

- Project.CustomerUseCase
- Project.DeliveryModels
- Solution
- PrimaryNeedsFromAws
- LifeCycle.TargetCloseDate
- Project.ExpectedCustomerSpend.Amount
- Project.ExpectedCustomerSpend.Currency
- Marketing.source
- Marketing.AwsFundingUsed

Once the opportunity is created in the receiving partner's account, it can be managed and updated like any other opportunity within the partner's system. Partners can use the [UpdateOpportunity](#) action to make changes or provide more information about their involvement in the opportunity.

## Using snapshots to receive partner updates

Within an engagement, partners maintain and update their opportunities independently. When someone revises an engagement's resources, such as adding an opportunity, an engagement resource snapshot created event is published.

To stay informed about changes and access the most current information from other partners' opportunities, you can use the following actions:

- [ListEngagementResourceAssociations](#) – Use this action to retrieve the engagement ID associated with the opportunity.

- [ListResourceSnapshots](#) – Use this action to retrieve a comprehensive list of all opportunity snapshots associated with the engagement, providing an overview of available snapshots across all partners.
- [GetResourceSnapshot](#) – Use this action to obtain real-time summaries of specific opportunity snapshots, allowing you to view the most up-to-date information without directly accessing another partner's opportunity.

If you identify relevant changes or updates from another partner's opportunity that should be reflected in your own, use the [UpdateOpportunity](#) action. This action facilitates selectively incorporating pertinent data into your opportunity, ensuring alignment and consistency across the engagement.

## Viewing engagement members

An engagement on a multipartner opportunity can have up to ten partners. Whenever a new partner accepts the engagement invitation, an engagement member added event is published, notifying all current members about the change.

To view all members collaborating within an engagement, follow these steps:

1. Use the [ListEngagementResourceAssociations](#) action to retrieve the engagement ID associated with the opportunity.
2. Provide the ID from step 1 to the [ListEngagementMembers](#) action to fetch the partner details of engagement members.

 **Note**

Only members of an engagement can invoke the `ListEngagementMembers` action.

## Monitoring resource snapshot job status

When working with multipartner opportunities, you must create a role that allows you to create snapshots of your opportunities for other partners and retrieve opportunity snapshots from other partners in an engagement. Without this role, any updates you make to your opportunity will not be available to other partners in the engagement, and they will continue to see outdated snapshots of your opportunity.

To track the status of resource snapshot jobs associated with a multipartner opportunity in an engagement, follow these steps:

1. Use the [ListEngagementResourceAssociations](#) action to retrieve the engagement ID associated with the opportunity.
2. Provide the ID from step 1 to the [ListResourceSnapshotJobs](#) action to generate a list of all snapshot jobs owned by the caller in the engagement. Retrieve the job ID from the response.
3. Provide the job ID to the [GetResourceSnapshotJob](#) action to track the job status and see if it's running.

The ResourceSnapshotJob operation publishes metrics to Amazon CloudWatch for its asynchronous operations. CloudWatch processes the data into readable, near real-time metrics to help you monitor the performance and health of the service.

The following metrics are available:

- **Faults** – Counts internal issues during job execution. Use this metric to monitor service stability and set alarms for fault thresholds.
- **Errors** – Tracks customer-related issues during job processing. This metric helps identify problems with customer inputs or configurations.
- **Invocations** – Represents the total number of job invocations, including both successful and failed attempts. Use this to track service usage trends over time.

 **Note**

Metrics are reported to CloudWatch only when there is activity in the ResourceSnapshotJob service. If there are no jobs or no data for a specific metric, that metric isn't reported.

To ensure smooth operation of the ResourceSnapshotJob operation:

- Use the metrics to verify that the service performs as expected.
- Create CloudWatch alarms to monitor metrics and trigger actions (such as sending notifications) when metrics exceed acceptable ranges.
- Set up proactive monitoring to identify and resolve issues.

For more information about using CloudWatch metrics, see the [Amazon CloudWatch User Guide](#).

# Working with selling API events

Events for the selling API provide real-time notifications about changes in the status or the details of opportunities. These events help keep your systems in sync with AWS Partner Central, and help ensure timely responses and updates.

## Topics

- [Complete the prerequisite to monitor events](#)
- [Configure Amazon EventBridge to monitor events](#)
- [Learn more about selling API events](#)

## Complete the prerequisite to monitor events

Users require the appropriate IAM permissions to access and manage events published by the Partner Central selling API. For more information about the available actions, resources, and condition keys for EventBridge, see [Using IAM policy conditions in Amazon EventBridge](#) in the *Amazon EventBridge User Guide*. One of the condition keys is events:detail-type, which can be used to scope permissions to specific event types.

The following example policy demonstrates how to customize and scope the permissions for the proposed events. The AllowPutRuleForPartnercentralSellingEvents statement allows the creation of rules, but only for events from the aws.partnercentral-selling source.

```
{  
    "Version": "2012-10-17",  
    "Statement": {  
        "Sid": "AllowPutRuleForPartnercentralSellingEvents",  
        "Effect": "Allow",  
        "Action": "events:PutRule",  
        "Resource": "*",  
        "Condition": {  
            "StringEquals": {  
                "events:source": "aws.partnercentral-selling"  
            }  
        }  
    }  
}
```

# Configure Amazon EventBridge to monitor events

To monitor selling API events, you create an EventBridge rule that matches the events that you want to capture. You can use the AWS Management Console or the AWS SDKs to create and manage rules. The following sections explain how to create rules using both methods. Regardless of the method you use, you must create the rule in the US East (N. Virginia) us-east-1 Region.

## AWS Management Console setup

To set up an EventBridge rule using the AWS Management Console, follow the steps in [Creating rules that react to events in Amazon EventBridge](#) in the *Amazon EventBridge User Guide*. When creating the rule, you must set the event bus to **default**, and create the rule in the US East (N. Virginia) us-east-1 Region.

Following is an example of an event rule:

```
{  
    "source": ["aws.partnercentral-selling"],  
    "detail": {  
        "catalog": ["AWS"]  
    }  
}
```

## AWS SDK setup

You can use the AWS SDKs to create and manage EventBridge rules programmatically. For more information, see [PutRule](#) in the *Amazon EventBridge API Reference*.

The following example uses the AWS SDK for Python (Boto3):

```
import boto3  
  
client = boto3.client('events', region_name='us-east-1')  
  
response = client.put_rule(  
    Name='MyOpportunityCreatedRule',  
    EventPattern=  
    '{  
        "source": ["aws.partnercentral-selling"],  
        "detail": {  
            "catalog": ["AWS"]  
        }  
    }',  
    Description='My Opportunity Created Rule'  
)
```

```
        "detail-type": ["Opportunity Created"],
        "detail": {"catalog": ["AWS"]}

    },
    State='ENABLED'
)
print('Rule ARN:', response['RuleArn'])
```

## Learn more about selling API events

The following sections describe the selling API event types, scenarios that trigger them, and event examples.

### Event types

Following are the event types and their triggers.

- [Opportunity Created](#): Triggered when a new opportunity is created.
- [Opportunity Updated](#): Triggered when an opportunity (Opportunity or its corresponding AWS Opportunity Summary) is updated.
- [Engagement Invitation Created](#): Triggered when an AWS Referral invitation is created.
- [Engagement Invitation Accepted](#): Triggered when a partner accepts an AWS Engagement Invitation, confirming their interest in collaborating with AWS on the opportunity.
- [Engagement Invitation Rejected](#): Triggered when a partner rejects an AWS Engagement Invitation.
- [Engagement Invitation Expired](#): This event is triggered when a Partner rejects an EngagementInvitation. It notifies the sending and receiving partner that the invitation has expired.
- [Engagement Member Added](#): This event is triggered when a new member joins the Engagement after accepting an invitation. It notifies all current members of the Engagement about the new member being added to the Engagement.
- [Engagement Resource Snapshot Created](#): This event is triggered when the new revision of the Snapshot of the resources (such as opportunities) associated with an Engagement is created. It notifies all the current members of the Engagement about the changes to the associated resource Snapshot.

## Event scenarios

The following table describes how events operate under different scenarios. The following assumptions are made for these scenarios:

- AWS is also a partner in these scenarios.
- ResourceSnapshot Job is configured correctly by the partner.
- The fields updated on the opportunity are also on the opportunity template for Resource Snapshot.

| Action by you as a partner  | Events received  | Participant type |
|---|--|------------------|
| You create an opportunity   | Opportunity Created  |                  |
| You use StartEngagementFromOpportunityTask to submit an opportunity | Opportunity Updated,<br>Engagement Resource Snapshot Created,<br>Engagement Member Added,<br>Engagement Invitation Created |                  |
| AWS approves your submitted opportunity                             | Engagement Invitation Accepted, Engagement Member Added, Opportunity Updated, Engagement Resource Snapshot Created         |                  |
| AWS rejects your submitted opportunity                              | Engagement Invitation Rejected, Opportunity Updated, Engagement Resource Snapshot Created                                  |                  |
| You associate an AWS Marketplace offer with an opportunity          | Opportunity Updated  |                  |

| Action by you as a partner   | Events received   | Participant type |
|--|---|------------------|
| You associate a solution with an opportunity                                   | Opportunity Updated, Engagement Resource Snapshot Created   |                  |
| You update an opportunity  | Opportunity Updated, Engagement Resource Snapshot Created (Optional if ResourceSnapshotJob is set up and the field updates are on the template) |                  |
| AWS updates your opportunity   | Opportunity Updated, Engagement Resource Snapshot Created   |                  |
| You invite another partner to an engagement                                    | Engagement Invitation Created   | Sender           |
| Your invitation to join an engagement is accepted by a partner                 | Engagement Invitation Accepted, Engagement Member Added   | Sender           |
| Your invitation to join an engagement is rejected by a partner                 | Engagement Invitation Rejected  | Sender           |
| Your invitation to join an engagement is not acted on by a partner for 15 days | Engagement Invitation Expired   | Sender           |
| You receive an invitation from another partner to join an engagement           | Engagement Invitation Created   | Receiver         |

| Action by you as a partner  | Events received   | Participant type |
|---|---|------------------|
| You accept the invitation from another partner to join an engagement via StartEngagementByAcceptingInvitationTask | Engagement Invitation Accepted, Engagement Member Added, Opportunity Created, Opportunity Updated, Engagement Resource Snapshot Created | Receiver         |
| You reject the invitation to join an engagement from another partner  | Engagement Invitation Rejected  | Receiver         |
| You do not act on invitation to join an engagement from another partner for 15 days                               | Engagement Invitation Expired   | Receiver         |

## Example events

The following sections provide examples of the events listed earlier in the previous section.

### Topics

- [Opportunity Created](#)
- [Opportunity Updated](#)
- [Engagement Invitation Created](#)
- [Engagement Invitation Accepted](#)
- [Engagement Invitation Rejected](#)
- [Engagement Invitation Expired](#)
- [Engagement Member Added](#)
- [Engagement Resource Snapshot Created](#)

## Opportunity Created

Partners use this event to:

- Notify their users that a new Opportunity has been created.

- Trigger automated workflows such as updating CRM systems or notifying sales teams about new opportunity creations.

The following example shows a typical Opportunity Created event.

```
{  
    "version": "1",  
    "id": "01234567-0123-0123-0123-0123456789ab",  
    "source": "aws.partnercentral-selling",  
    "detail-type": "Opportunity Created",  
    "time": "2023-04-16T15:23:45Z",  
    "region": "us-east-1",  
    "account": "123456789012",  
    "detail": {  
        "schemaVersion": "<version number>",  
        "catalog": "<Sandbox | AWS>",  
        "opportunity": {  
            "identifier": "String"  
        }  
    }  
}
```

## Opportunity Updated

Partners use this event to:

- Notify their users that an existing Opportunity has been updated.
- Trigger automated workflows such as updating CRM systems or notifying sales teams.

The following example shows a typical Opportunity Updated event.

```
{  
    "version": "1",  
    "id": "01234567-0123-0123-0123-0123456789ab",  
    "source": "aws.partnercentral-selling",  
    "detail-type": "Opportunity Updated",  
    "time": "2023-04-16T15:23:45Z",  
    "region": "us-east-1",  
    "account": "123456789012",  
    "detail": {  
        "schemaVersion": "<version number>",  
    }  
}
```

```
    "catalog": "<Sandbox | AWS>",
    "opportunity": {
        "identifier": "String"
    }
}
```

## Engagement Invitation Created

Partners use this event to:

- Notify their users about the new EngagementInvitation they have received.
- Trigger automated workflows to accept or reject the invitation, such as updating CRM systems or notifying sales teams.

The following example shows a typical Engagement Invitation Created event.

```
{
    "version": "0",
    "id": "01234567-0123-0123-0123-0123456789ab",
    "detail-type": "Engagement Invitation Created",
    "source": "aws.partnercentral-selling",
    "account": "123456789012",
    "time": "2023-04-15T12:34:56Z",
    "region": "us-east-1",
    "resources": [
        "arn:aws:partnercentral:us-east-1::catalog/AWS/engagement-invitation/engi-v7p8z56whnauo"
    ],
    "detail": {
        "catalog": "AWS",
        "engagementInvitation": {
            "arn": "arn:aws:partnercentral:us-east-1::catalog/AWS/engagement-invitation/engi-v7p8z56whnauo",
            "id": "engi-v7p8z56whnauo",
            "engagementId": "eng-12345678901234",
            "senderAccountId": "string",
            "receiverAccountId": "string",
            "senderCompanyName": "string",
            "expirationDate": "string",
            "participantType": "Enum" //Sender/Receiver
        }
    }
}
```

```
    }  
}
```

## Engagement Invitation Accepted

Partners use this event to:

- Notify their users that the EngagementInvitation has been accepted.
- Update their internal records to reflect the new partner in the Engagement.
- Trigger automated workflows to synchronize data or notify other team members about the new Engagement member.

The following example shows a typical Engagement Invitation Accepted event.

```
{  
  "version": "0",  
  "id": "01234567-0123-0123-0123-0123456789ab",  
  "detail-type": "Engagement Invitation Accepted",  
  "source": "aws.partnercentral-selling",  
  "account": "123456789012",  
  "time": "2023-04-16T15:23:45Z",  
  "region": "us-east-1",  
  "resources": ["arn:aws:partnercentral:us-east-1::catalog/AWS/engagement-invitation/  
engi-v7p8z56whnauo"],  
  "detail": {  
    "catalog": "AWS",  
    "engagementInvitation": {  
      "arn": "arn:aws:partnercentral:us-east-1::catalog/AWS/engagement-  
invitation/engi-v7p8z56whnauo",  
      "id": "engi-v7p8z56whnauo",  
      "engagementId": "eng-12356whnauo",  
      "participantType": "Enum", //Sender/Receiver  
      "senderAccountId": "string",  
      "receiverAccountId": "string"  
    }  
  }  
}
```

## Engagement Invitation Rejected

Partners use this event to:

- Notify their users that the EngagementInvitation has been rejected.
- Update their internal records to reflect the rejected invitation.
- Trigger any necessary workflows, such as notifying the sales team about the rejection.

The following example shows a typical Engagement Invitation Rejected event.

```
{  
    "version": "0",  
    "id": "01234567-0123-0123-0123-0123456789ab",  
    "detail-type": "Engagement Invitation Rejected",  
    "source": "aws.partnercentral-selling",  
    "account": "123456789012",  
    "time": "2023-04-17T09:48:27Z",  
    "region": "us-east-1",  
    "resources": ["arn:aws:partnercentral:us-east-1::catalog/AWS/engagement-invitation/engi-v7p8z56whnauo"],  
    "detail": {  
        "catalog": "AWS",  
        "engagementInvitation": {  
            "arn": "arn:aws:partnercentral:us-east-1::catalog/AWS/engagement-invitation/engi-v7p8z56whnauo",  
            "id": "engi-v7p8z56whnauo",  
            "engagementId": "eng-12356whnauo",  
            "participantType": "Enum", //Sender/Receiver  
            "senderAccountId": "string",  
            "receiverAccountId": "string"  
        }  
    }  
}
```

## Engagement Invitation Expired

Partners use this event to:

- Notify their users that the EngagementInvitation has expired and can no longer be acted upon.
- Update their internal records to reflect the expired invitation.
- Trigger any necessary workflows, such as notifying the sales team about the expired invitation.

The following example shows a typical Engagement Invitation Expired event.

```
{  
    "version": "0",  
    "id": "01234567-0123-0123-0123-0123456789ab",  
    "detail-type": "Engagement Invitation Expired",  
    "source": "aws.partnercentral-selling",  
    "account": "123456789012",  
    "time": "2023-04-18T18:20:15Z",  
    "region": "us-east-1",  
    "resources": [  
        "arn:aws:partnercentral:us-east-1::catalog/AWS/engagement-invitation/engi-v7p8z56whnauo"  
    ],  
    "detail": {  
        "catalog" : "AWS",  
        "engagementInvitation": {  
            "arn": "arn:aws:partnercentral:us-east-1::catalog/AWS/engagement-invitation/engi-v7p8z56whnauo",  
            "id": "engi-v7p8z56whnauo",  
            "engagementId": "eng-12356whnauo",  
            "participantType": "Enum", //Sender/Receiver  
            "senderAccountId": "string",  
            "receiverAccountId": "string"  
        }  
    }  
}
```

## Engagement Member Added

Partners use this event to:

- Notify their users about the changes to the Engagement membership.
- Update their internal records to reflect the new Engagement member.
- Trigger any necessary workflows, such as notifying team members about the changes.

The following example shows a typical Engagement Member Added event.

```
{  
    "version": "0",  
    "id": "01234567-0123-0123-0123-0123456789ab",  
    "detail-type": "Engagement Member Added",  
    "source": "aws.partnercentral-selling",  
    "account": "123456789012",  
    "time": "2023-04-18T18:20:15Z",  
    "region": "us-east-1",  
    "resources": [  
        "arn:aws:partnercentral:us-east-1::catalog/AWS/engagement-member-added/engi-v7p8z56whnauo"  
    ],  
    "detail": {  
        "catalog" : "AWS",  
        "engagementMemberAdded": {  
            "arn": "arn:aws:partnercentral:us-east-1::catalog/AWS/engagement-member-added/engi-v7p8z56whnauo",  
            "id": "engi-v7p8z56whnauo",  
            "engagementId": "eng-12356whnauo",  
            "memberType": "Enum", //Sender/Receiver  
            "senderAccountId": "string",  
            "receiverAccountId": "string"  
        }  
    }  
}
```

```
"account": "123456789012",
"time": "2023-04-16T15:23:45Z",
"region": "us-east-1",
"resources": [
    "arn:aws:partnercentral:us-east-1::catalog/AWS/engagement/eng-v7p8z56whnauo"
],
"detail": {
    "catalog": "AWS",
    "engagement": {
        "id": "eng-v7p8z56whnauo"
    },
    "engagementMember": {
        "accountId": "string",
        "companyName": "string"
    }
}
}
```

## Engagement Resource Snapshot Created

Partners use this event to:

- Notify their users about the changes to the Engagement resources.
- Update their internal records to reflect the new Engagement resources.
- Trigger any necessary workflows, such as updating opportunity or lead information in their CRM systems.

The following example shows a typical Engagement Resource Snapshot Created event.

```
{
    "version": "0",
    "id": "01234567-0123-0123-0123-0123456789ab",
    "detail-type": "Engagement Resource Snapshot Created",
    "source": "aws.partnercentral-selling",
    "account": "123456789012",
    "time": "2023-04-18T18:20:15Z",
    "region": "us-east-1",
    "resources": [
        "arn:aws:partnercentral:us-east-1::catalog/AWS/engagement/eng-v7p8z56whnauo"
    ],
    "detail": {
```

```
"catalog" : "AWS",
"resourceSnapshot": {
    "arn": "arn:aws:partnercentral-selling:us-east-1::catalog/AWS/engagement/eng-v7p8z56whnauo/resource/Opportunity/o-12312/template/temp-name/snapshot/snapshot-19232",
    "engagementId": "eng-v7p8z56whnauo",
    "resourceType": "Opportunity",
    "resourceId" : "0123211231",
    "createdBy": "123123123123"
}
}
```

# Associating, disassociating and assigning opportunities

Opportunities can be associated or disassociated with Partner Solutions, AWS Products, and AWS Marketplace Offers throughout the opportunity lifecycle.

## Associating opportunities with other entities

The associated entities are retrieved from the `GetOpportunity` method within the `RelatedEntityIdentifiers` object. The `RelatedEntityIdentifiers` can be updated using `AssociateOpportunity`. Note that this field cannot be updated using the `UpdateOpportunity` or `CreateOpportunity` method.

## Solutions

Before an engagement with AWS is started using the `StartEngagementFromOpportunityTask` action, it is mandatory to associate at least one and upto ten Partner Solutions. An AWS Referral may or may not contain a Partner Solution.

To view your existing solutions, use the `ListSolutions` action.

Partners can create, update, and manage their solutions in the Build section on [AWS Partner Central](#).

## AWS products

Upto 20 AWS Products can be associated with an opportunity. To view a list of available AWS Products, use the list of [AWS Products hosted on GitHub](#). Association with AWS Products is exclusively done using the `AssociateOpportunity` action. To replace or remove a Product, use the `DisassociateOpportunity` action.

## AWS Marketplace offers

Opportunities can be tied to an AWS Marketplace Private Offer. To view available offers, use the `ListEntities` from the AWS Marketplace Catalog API. Currently, you can only associate offers from the AWS Marketplace Seller account linked to AWS Partner Central.

For associating a private offer ARN is required. Sample:

```
arn:aws:aws-marketplace:us-east-1:123123123123:AWSMarketplace/Offer/offer-dtn3example1tg
```

Remember, only one opportunity can be associated with an AWS Marketplace Private Offer.

## Disassociating opportunities from other entities

Use the `DisassociateOpportunity` action to unlink the Opportunity from Solutions, AWS Products, AWS Marketplace Offers. Depending on the state of the Opportunity, different validation rules apply for unlinking the related objects.

## Assigning opportunities

Use `AssignOpportunity` to change the opportunity's owner. You can set any of your Partner Central users to be the opportunity owner.

# Logging AWS Partner Central API calls with AWS CloudTrail

[AWS CloudTrail](#) is a service that enables governance, compliance, operational auditing, and risk auditing of your AWS account. With AWS CloudTrail, you can log, continuously monitor, and retain account activity related to actions across your AWS infrastructure. AWS Partner Central API activity is recorded as events in CloudTrail. You can create a trail, a configuration that enables delivery of events as log files to an Amazon S3 bucket.

## Overview

The AWS Partner Central API is integrated with AWS CloudTrail, a service that provides a record of actions taken by a user, role, or an AWS service in AWS Partner Central. CloudTrail captures all API calls for AWS Partner Central as events. The calls captured include calls from the AWS Partner Central and from code calls to the AWS Partner Central API operations.

If you create a trail, you can enable continuous delivery of CloudTrail events to an Amazon S3 bucket, including events for AWS Partner Central. 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 AWS Partner Central, the IP address from which the request was made, who made the request, when it was made, and additional details.

## Understanding AWS Partner Central log file entries

A trail is a configuration that enables delivery of events as log files to an Amazon S3 bucket. When your trail tracks AWS Partner Central events, CloudTrail processes the events as log files across all the regions. Each log file can contain one or more events.

The following example shows a CloudTrail log entry that demonstrates the `ListOpportunities` action on AWS Partner Central:

```
{  
  "eventVersion": "1.05",  
  "userIdentity": {  
    "type": "IAMUser",
```

```
    "principalId": "ABCDEFGHIJKLMN0P12345",
    "arn": "arn:aws:iam::123456789010:user/CloudTrailTestUser",
    "accountId": "123456789010",
    "accessKeyId": "ABCDEFGHIJKLMN0P1234",
    "userName": "CloudTrailTestUser"
},
"eventTime": "2023-10-17T21:49:23Z",
"eventSource": "partnercentral-selling.amazonaws.com",
"eventName": "ListOpportunities",
"awsRegion": "us-east-1",
"sourceIPAddress": "127.0.0.1",
"userAgent": "PostmanRuntime/7.18.0",
"requestParameters": {
    "MaxResults": 20
},
"responseElements": null,
"requestID": "fEXAMPLE-cb3e-4e21-86fd-6b3EXAMPLEd1",
"eventID": "7EXAMPLE-97d6-4139-91e3-01aEXAMPLE48",
"readOnly": true,
"eventType": "AwsApiCall",
"recipientAccountId": "123456789010"
}
```

In this example, the `ListOpportunities` action was called by the IAM user named `CloudTrailTestUser`. The action was called in the `us-east-1` AWS Region, and the request was made on October 17, 2023 at 21:49:23 UTC.

## Fields in AWS Partner Central log file entries

Each entry in a CloudTrail log file contains information about who made a request, the resources acted upon in the request, and the response elements returned by AWS Partner Central. The list of fields in a log entry, such as `eventVersion`, `userIdentity`, and `eventTime`, provide detailed information about the action. For example, the `sourceIPAddress` field shows the IP address that the request was made from.

# Best practices

## Reacting to events

When handling events from AWS Partner Central API, ensure that your processing logic is idempotent to handle duplicate events. Instead of making immediate [GetOpportunity](#) calls for each event, consider batching or selectively fetching details based on your application's needs. For uninterrupted operations, beware of [Quotas](#).

## Implementing optimistic locking

Optimistic locking prevents unintended data overrides during concurrent updates. Here's a typical scenario:

1. Partner retrieves an opportunity from their CRM system.
2. User A updates the opportunity on AWS Partner Central.
3. User B updates the same opportunity at the same time through the CRM integration.
4. If the data changes, the CRM system attempts to upload the data but returns a `ConflictException`.
5. User reviews the error and manually resolves conflicting data.

To avoid this scenario, all [UpdateOpportunity](#) requests must include the `LastModifiedDate` parameter, which you can obtain from previous [CreateOpportunity](#), [UpdateOpportunity](#), and [GetOpportunity](#) actions. The update succeeds only if `LastModifiedDate` matches our system. If it doesn't, you must fetch the latest `LastModifiedDate` using [GetOpportunity](#) and reattempt the update.

## Synchronizing data between CRM and AWS Partner Central

It is essential to keep your system synced with the latest data from Partner Central. The following are two strategies to ensure your system reflects the latest data:

### Using events (recommended)

1. Load data using [ListOpportunities](#).

2. Subscribe to opportunity events.
3. Respond to new opportunities or changes.

- When you receive Opportunity Created, Opportunity Updated, or Engagement Invitation Accepted events, use GetOpportunity to fetch the latest data.
- When you receive Engagement Invitation Rejected events, remove the corresponding opportunities.

## Using ListOpportunities polling

1. Load data using [ListOpportunities](#).
2. Choose a polling frequency, ensuring it is not too frequent to avoid exhausting your daily [read quota](#).
3. Identify the latest LastModifiedDate from your stored data, ensuring it originates from AWS.
4. Use the timestamp in the AfterLastModifiedDate filter when calling [ListOpportunities](#).

```
{  
    "FilterList": [  
        {  
            "Name": "AfterLastModifiedDate",  
            "ValueList": [ "2023-05-01T20:37:46Z" ] // Replace with actual timestamp  
            of your last synced data  
        }  
    ]  
}
```

5. AWS will return opportunities created or updated after the value indicated on the timestamp.
6. Iterate over all returned pages using NextToken, and update your system's data using [GetOpportunity](#).

```
{  
    "NextToken": "AAMA-EFRSN...PZa942D",  
    "FilterList": [  
        {  
            "Name": "AfterLastModifiedDate",  
            "ValueList": [ "2023-05-01T20:37:46Z" ] // Replace with actual timestamp  
            of your last synced data  
        }  
    ]  
}
```

{}

# Code examples for Partner Central using AWS SDKs

The following code examples show how to use Partner Central with an AWS software development kit (SDK).

*Actions* are code excerpts from larger programs and must be run in context. While actions show you how to call individual service functions, you can see actions in context in their related scenarios.

*Scenarios* are code examples that show you how to accomplish specific tasks by calling multiple functions within a service or combined with other AWS services.

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Code examples

- [Basic examples for Partner Central using AWS SDKs](#)
  - [Actions for Partner Central using AWS SDKs](#)
    - [Use AssignOpportunity with an AWS SDK](#)
    - [Use AssociateOpportunity with an AWS SDK](#)
    - [Use CreateOpportunity with an AWS SDK](#)
    - [Use DisassociateOpportunity with an AWS SDK](#)
    - [Use GetAwsOpportunitySummary with an AWS SDK](#)
    - [Use GetEngagementInvitation with an AWS SDK](#)
    - [Use GetOpportunity with an AWS SDK](#)
    - [Use ListEngagementInvitations with an AWS SDK](#)
    - [Use ListOpportunities with an AWS SDK](#)
    - [Use ListSolutions with an AWS SDK](#)
    - [Use RejectEngagementInvitation with an AWS SDK](#)
    - [Use StartEngagementByAcceptingInvitationTask with an AWS SDK](#)
    - [Use StartEngagementFromOpportunityTask with an AWS SDK](#)
    - [Use UpdateOpportunity with an AWS SDK](#)
  - [Scenarios for Partner Central using AWS SDKs](#)
    - [Update associated entity of an opportunity](#)

# Basic examples for Partner Central using AWS SDKs

The following code examples show how to use the basics of AWS Partner Central with AWS SDKs.

## Examples

- [Actions for Partner Central using AWS SDKs](#)
  - [Use AssignOpportunity with an AWS SDK](#)
  - [Use AssociateOpportunity with an AWS SDK](#)
  - [Use CreateOpportunity with an AWS SDK](#)
  - [Use DisassociateOpportunity with an AWS SDK](#)
  - [Use GetAwsOpportunitySummary with an AWS SDK](#)
  - [Use GetEngagementInvitation with an AWS SDK](#)
  - [Use GetOpportunity with an AWS SDK](#)
  - [Use ListEngagementInvitations with an AWS SDK](#)
  - [Use ListOpportunities with an AWS SDK](#)
  - [Use ListSolutions with an AWS SDK](#)
  - [Use RejectEngagementInvitation with an AWS SDK](#)
  - [Use StartEngagementByAcceptingInvitationTask with an AWS SDK](#)
  - [Use StartEngagementFromOpportunityTask with an AWS SDK](#)
  - [Use UpdateOpportunity with an AWS SDK](#)

## Actions for Partner Central using AWS SDKs

The following code examples demonstrate how to perform individual Partner Central actions with AWS SDKs. Each example includes a link to GitHub, where you can find instructions for setting up and running the code.

These excerpts call the Partner Central API and are code excerpts from larger programs that must be run in context. You can see actions in context in [Scenarios for Partner Central using AWS SDKs](#).

The following examples include only the most commonly used actions. For a complete list, see the [AWS Partner Central API Reference](#).

## Examples

- [Use AssignOpportunity with an AWS SDK](#)

- [Use AssociateOpportunity with an AWS SDK](#)
- [Use CreateOpportunity with an AWS SDK](#)
- [Use DisassociateOpportunity with an AWS SDK](#)
- [Use GetAwsOpportunitySummary with an AWS SDK](#)
- [Use GetEngagementInvitation with an AWS SDK](#)
- [Use GetOpportunity with an AWS SDK](#)
- [Use ListEngagementInvitations with an AWS SDK](#)
- [Use ListOpportunities with an AWS SDK](#)
- [Use ListSolutions with an AWS SDK](#)
- [Use RejectEngagementInvitation with an AWS SDK](#)
- [Use StartEngagementByAcceptingInvitationTask with an AWS SDK](#)
- [Use StartEngagementFromOpportunityTask with an AWS SDK](#)
- [Use UpdateOpportunity with an AWS SDK](#)

## Use AssignOpportunity with an AWS SDK

The following code examples show how to use AssignOpportunity.

Java

### SDK for Java 2.x

Reassign an existing Opportunity to another user.

```
package org.example;

import static org.example.utils.Constants.*;

import org.example.utils.Constants;
import org.example.utils.ReferenceCodesUtils;

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;
import software.amazon.awssdk.http.apache.ApacheHttpClient;
import software.amazon.awssdk.regions.Region;
import
software.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;
import
software.amazon.awssdk.services.partnercentralselling.model.AssignOpportunityRequest;
```

```
import
software.amazon.awssdk.services.partnercentralselling.model.AssignOpportunityResponse;
import
software.amazon.awssdk.services.partnercentralselling.model.AssigneeContact;

/*
Purpose
PC-API-07 Assigning a new owner
*/

public class AssignOpportunity {

    static PartnerCentralSellingClient client =
    PartnerCentralSellingClient.builder()
        .region(Region.US_EAST_1)
        .credentialsProvider(DefaultCredentialsProvider.create())
        .httpClient(ApacheHttpClient.builder().build())
        .build();

    public static void main(String[] args) {

        String opportunityId = args.length > 0 ? args[0] : OPPORTUNITY_ID;

        String assigneeFirstName = "John";

        String assigneeLastName = "Doe";

        String assigneeEmail = "test@test.com";

        String businessTitle = "PartnerAccountManager";

        AssignOpportunityResponse response = getResponse(opportunityId,
        assigneeFirstName, assigneeLastName, assigneeEmail, businessTitle);

        ReferenceCodesUtils.formatOutput(response);
    }

    static AssignOpportunityResponse getResponse(String opportunityId, String
    assigneeFirstName, String assigneeLastName, String assigneeEmail, String
    businessTitle) {

        AssignOpportunityRequest assignOpportunityRequest =
        AssignOpportunityRequest.builder()
            .catalog(Constants.CATALOG_TO_USE)
```

```
.identifier(opportunityId)
    .assignee(AssigneeContact.builder()
        .firstName(assigneeFirstName)
        .lastName(assigneeLastName)
        .email(assigneeEmail)
        .businessTitle(businessTitle)
        .build())
    .build();

    AssignOpportunityResponse response =
client.assignOpportunity(assignOpportunityRequest);

    return response;
}
}
```

- For API details, see [AssignOpportunity](#) in *AWS SDK for Java 2.x API Reference*.

## Python

### SDK for Python (Boto3)

Reassign an existing Opportunity to another user.

```
#!/usr/bin/env python

"""
Purpose
PC-API-07 Assigning a new owner
"""

import logging
import boto3
import utils.helpers as helper
from botocore.client import ClientError

from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

partner_central_client = boto3.client(
    service_name=serviceName,
```

```
        region_name='us-east-1'
    )

def assign_opportunity(identifier):
    assign_opportunity_request ={
        "Catalog": CATALOG_TO_USE,
        "Identifier": identifier,
        "Assignee": {
            "BusinessTitle": "OpportunityOwner",
            "Email": "test@test.com",
            "FirstName": "John",
            "LastName": "Doe"
        }
    }
    try:
        # Perform an API call
        response =
partner_central_client.assign_opportunity(**assign_opportunity_request)
        return response

    except ClientError as err:
        # Catch all client exceptions
        print(err.response)

def usage_demo():
    identifier = "04236468"

    logging.basicConfig(level=logging.INFO, format="%(levelname)s: %(message)s")

    print("-" * 88)
    print("Assigning a new owner to an opportunity.")
    print("-" * 88)

    helper.pretty_print_datetime(assign_opportunity(identifier))

if __name__ == "__main__":
    usage_demo()
```

- For API details, see [AssignOpportunity](#) in *AWS SDK for Python (Boto3) API Reference*.

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Use AssociateOpportunity with an AWS SDK

The following code examples show how to use AssociateOpportunity.

Action examples are code excerpts from larger programs and must be run in context. You can see this action in context in the following code example:

- [Update associated entity of an opportunity](#)

Java

### SDK for Java 2.x

Create a formal association between an Opportunity and various related entities.

```
package org.example;

import static org.example.utils.Constants.*;

import org.example.utils.Constants;
import org.example.utils.ReferenceCodesUtils;

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;
import software.amazon.awssdk.http.apache.ApacheHttpClient;
import software.amazon.awssdk.regions.Region;
import
software.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;
import
software.amazon.awssdk.services.partnercentralselling.model.AssociateOpportunityRequest;
import
software.amazon.awssdk.services.partnercentralselling.model.AssociateOpportunityResponse

/*
Purpose
PC-API -11 Associating a product
PC-API -12 Associating a solution
PC-API -13 Associating an offer
entity_type = Solutions | AWSProducts | AWSMarketplaceOffers
*/
```

```
public class AssociateOpportunity {

    static PartnerCentralSellingClient client =
    PartnerCentralSellingClient.builder()
        .region(Region.US_EAST_1)
        .credentialsProvider(DefaultCredentialsProvider.create())
        .httpClient(ApacheHttpClient.builder().build())
        .build();

    public static void main(String[] args) {

        String opportunityId = args.length > 0 ? args[0] : OPPORTUNITY_ID;

        String entityType = "Solutions";

        String entityIdentifier = "S-0000000";

        AssociateOpportunityResponse response = getResponse(opportunityId,
        entityType, entityIdentifier );

        ReferenceCodesUtils.formatOutput(response);
    }

    static AssociateOpportunityResponse getResponse(String opportunityId, String
    entityType, String entityIdentifier) {

        AssociateOpportunityRequest associateOpportunityRequest =
AssociateOpportunityRequest.builder()
        .catalog(Constants.CATALOG_TO_USE)
        .opportunityIdentifier(opportunityId)
        .relatedEntityType(entityType)
        .relatedEntityIdentifier(entityIdentifier)
        .build();

        AssociateOpportunityResponse response =
client.associateOpportunity(associateOpportunityRequest);

        return response;
    }
}
```

- For API details, see [AssociateOpportunity](#) in *AWS SDK for Java 2.x API Reference*.

## Python

### SDK for Python (Boto3)

Create a formal association between an Opportunity and various related entities.

```
#!/usr/bin/env python

"""
Purpose
PC-API -11 Associating a product
PC-API -12 Associating a solution
PC-API -13 Associating an offer
"""

import logging
import boto3
import utils.helpers as helper
from botocore.client import ClientError

from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

partner_central_client = boto3.client(
    service_name=serviceName,
    region_name='us-east-1'
)

def associate_opportunity(entity_type, entity_identifier, opportunityIdentifier):
    associate_opportunity_request ={
        "Catalog": CATALOG_TO_USE,
        "OpportunityIdentifier" : opportunityIdentifier,
        "RelatedEntityType" : entity_type,
        "RelatedEntityIdentifier" : entity_identifier
    }
    try:
        # Perform an API call
        response =
    partner_central_client.associate_opportunity(**associate_opportunity_request)
    return response

    except ClientError as err:
        # Catch all client exceptions
```

```
    print(err.response)

def usage_demo():
    #entity_type = Solutions | AWSProducts | AWSMarketplaceOffers
    entity_type = "Solutions"
    entity_identifier = "S-0059717"
    opportunityIdentifier = "05465588"

    logging.basicConfig(level=logging.INFO, format="%(levelname)s: %(message)s")

    print("-" * 88)
    print("Associate Opportunity.")
    print("-" * 88)

    helper.pretty_print_datetime(associate_opportunity(entity_type,
entity_identifier, opportunityIdentifier))

if __name__ == "__main__":
    usage_demo()
```

- For API details, see [AssociateOpportunity](#) in *AWS SDK for Python (Boto3) API Reference*.

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Use CreateOpportunity with an AWS SDK

The following code examples show how to use CreateOpportunity.

.NET

### SDK for .NET

Create an opportunity.

```
// Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.
// PDX-License-Identifier: Apache-2.0

using System;
using Newtonsoft.Json;
using Amazon;
```

```
using Amazon.Runtime;
using Amazon.PartnerCentralSelling;
using Amazon.PartnerCentralSelling.Model;

namespace AWSExample
{
    class Program
    {
        static readonly string catalogToUse = "AWS";
        static async Task Main(string[] args)
        {
            // Initialize credentials from .aws/credentials file
            var credentials = new
Amazon.Runtime.CredentialManagement.SharedCredentialsFile();
            if (credentials.TryGetProfile("default", out var profile))
            {
                AWS Credentials awsCredentials =
profile.GetAWSCredentials(credentials);

                var client = new
AmazonPartnerCentralSellingClient(awsCredentials);

                var request = new CreateOpportunityRequest
                {
                    Catalog = catalogToUse,
                    Origin = "Partner Referral",
                    Customer = new Customer
                    {
                        Account = new Account
                        {
                            Address = new Address
                            {
                                CountryCode = "US",
                                PostalCode = "99502",
                                StateOrRegion = "Alaska"
                            },
                            CompanyName = "TestCompanyName",
                            Duns = "123456789",
                            WebsiteUrl = "www.test.io",
                            Industry = "Automotive"
                        },
                        Contacts = new List<Contact>
                        {
                            new Contact

```

```
        {
            Email = "test@test.io",
            FirstName = "John",
            LastName = "Doe",
            Phone = "+14444444444",
            BusinessTitle = "test title"
        }
    }
},
LifeCycle = new LifeCycle
{
    ReviewStatus = "Submitted",
    TargetCloseDate = "2024-12-30"
},
Marketing = new Marketing
{
    Source = "None"
},
OpportunityType = "Net New Business",
PrimaryNeedsFromAws = new List<string> { "Co-Sell - Architectural Validation" },
Project = new Project
{
    Title = "Moin Test UUID",
    CustomerBusinessProblem = "Sandbox is not working as expected",
    CustomerUseCase = "AI Machine Learning and Analytics",
    DeliveryModels = new List<string> { "SaaS or PaaS" },
    ExpectedCustomerSpend = new List<ExpectedCustomerSpend>
    {
        new ExpectedCustomerSpend
        {
            Amount = "2000.0",
            CurrencyCode = "USD",
            Frequency = "Monthly",
            TargetCompany = "Ibxelabs"
        }
    },
    SalesActivities = new List<string> { "Initialized discussions with customer" }
}
};

try
```

```
    {
        var response = await client.CreateOpportunityAsync(request);
        Console.WriteLine(response.HttpStatusCode);
        string formattedJson = JsonConvert.SerializeObject(response,
Formatting.Indented);
        Console.WriteLine(formattedJson);
    }
    catch (ValidationException ex)
    {
        Console.WriteLine("Validation error: " + ex.Message);
    }
    catch (AmazonPartnerCentralSellingException e)
    {
        Console.WriteLine("Failed:");
        Console.WriteLine(e.RequestId);
        Console.WriteLine(e.ErrorCode);
        Console.WriteLine(e.Message);
    }
}
else
{
    Console.WriteLine("Profile not found.");
}
}
}
}
```

- For API details, see [CreateOpportunity](#) in *AWS SDK for .NET API Reference*.

## Java

### SDK for Java 2.x

Create an opportunity.

```
package org.example;

import java.time.Instant;
import java.util.ArrayList;
import java.util.List;

import static org.example.utils.Constants.*;
```

```
import org.example.entity.Root;
import org.example.utils.ReferenceCodesUtils;
import org.example.utils.StringSerializer;

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;
import software.amazon.awssdk.http.apache.ApacheHttpClient;
import software.amazon.awssdk.regions.Region;
import
software.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;
import software.amazon.awssdk.services.partnercentralselling.model.Account;
import software.amazon.awssdk.services.partnercentralselling.model.Address;
import software.amazon.awssdk.services.partnercentralselling.model.Contact;
import
software.amazon.awssdk.services.partnercentralselling.model.CreateOpportunityRequest;
import
software.amazon.awssdk.services.partnercentralselling.model.CreateOpportunityResponse;
import software.amazon.awssdk.services.partnercentralselling.model.Customer;
import
software.amazon.awssdk.services.partnercentralselling.model.ExpectedCustomerSpend;
import software.amazon.awssdk.services.partnercentralselling.model.LifeCycle;
import software.amazon.awssdk.services.partnercentralselling.model.Marketing;
import software.amazon.awssdk.services.partnercentralselling.model.MonetaryValue;
import
software.amazon.awssdk.services.partnercentralselling.model.NextStepsHistory;
import software.amazon.awssdk.services.partnercentralselling.model.Project;
import
software.amazon.awssdk.services.partnercentralselling.model.SoftwareRevenue;

import com.google.gson.Gson;
import com.google.gson.GsonBuilder;
import com.google.gson.ToNumberPolicy;

public class CreateOpportunity {

    static final Gson GSON = new GsonBuilder()
        .setObjectToNumberStrategy(ToNumberPolicy.LAZY_PARSED_NUMBER)
        .registerTypeAdapter(String.class, new StringSerializer())
        .create();

    static PartnerCentralSellingClient client =
        PartnerCentralSellingClient.builder()
            .region(Region.US_EAST_1)
            .credentialsProvider(DefaultCredentialsProvider.create())
            .httpClient(ApacheHttpClient.builder().build())
}
```

```
.build();

public static void main(String[] args) {

    String inputFile = "CreateOpportunity2.json";

    if (args.length > 0)
        inputFile = args[0];

    CreateOpportunityResponse response = createOpportunity(inputFile);

    client.close();
}

static CreateOpportunityResponse createOpportunity(String inputFile) {

    String inputString = ReferenceCodesUtils.readInputFileToString(inputFile);

    Root root = JSON.fromJson(inputString, Root.class);

    List<NextStepsHistory> nextStepsHistories = new ArrayList<NextStepsHistory>();
    if (root.lifeCycle != null && root.lifeCycle.nextStepsHistories != null) {
        for (org.example.entity.NextStepsHistory nextStepsHistoryJson :
root.lifeCycle.nextStepsHistories) {
            NextStepsHistory nextStepsHistory = NextStepsHistory.builder()
                .time(Instant.parse(nextStepsHistoryJson.time))
                .value(nextStepsHistoryJson.value)
                .build();
            nextStepsHistories.add(nextStepsHistory);
        }
    }

    LifeCycle lifeCycle = null;
    if (root.lifeCycle != null) {
        lifeCycle = LifeCycle.builder()
            .closedLostReason(root.lifeCycle.closedLostReason)
            .nextSteps(root.lifeCycle.nextSteps)
            .nextStepsHistory(nextStepsHistories)
            .reviewComments(root.lifeCycle.reviewComments)
            .reviewStatus(root.lifeCycle.reviewStatus)
            .reviewStatusReason(root.lifeCycle.reviewStatusReason)
            .stage(root.lifeCycle.stage)
            .targetCloseDate(root.lifeCycle.targetCloseDate)
            .build();
    }
}
```

```
}

Marketing marketing = null;
if ( root.marketing != null ) {
    marketing = Marketing.builder()
        .awsFundingUsed(root.marketing.awsFundingUsed)
        .campaignName(root.marketing.campaignName)
        .channels(root.marketing.channels)
        .source(root.marketing.source)
        .useCases(root.marketing.useCases)
        .build();
}

Address address = null;
if ( root.customer != null && root.customer.account != null &&
root.customer.account.address != null ) {
    address = Address.builder()
        .city(root.customer.account.address.city)
        .postalCode(root.customer.account.address.postalCode)
        .stateOrRegion(root.customer.account.address.stateOrRegion)
        .countryCode(root.customer.account.address.countryCode)
        .streetAddress(root.customer.account.address.streetAddress)
        .build();
}

Account account = null;
if ( root.customer != null && root.customer.account!= null) {
    account = Account.builder()
        .address(address)
        .awsAccountId(root.customer.account.awsAccountId)
        .duns(root.customer.account.duns)
        .industry(root.customer.account.industry)
        .otherIndustry(root.customer.account.otherIndustry)
        .companyName(root.customer.account.companyName)
        .websiteUrl(root.customer.account.websiteUrl)
        .build();
}

List<Contact> contacts = new ArrayList<Contact>();
if ( root.customer != null && root.customer.contacts != null) {
    for (org.example.entity.Contact jsonContact : root.customer.contacts) {
        Contact contact = Contact.builder()
            .email(jsonContact.email)
```

```
        .firstName(jsonContact.firstName)
        .lastName(jsonContact.lastName)
        .phone(jsonContact.phone)
        .businessTitle(jsonContact.businessTitle)
        .build();
    contacts.add(contact);
}
}

Customer customer = Customer.builder()
    .account(account)
    .contacts(contacts)
    .build();

Contact oportunityTeamContact = null;
if (root.opportunityTeam != null && root.opportunityTeam.get(0) != null ) {
    oportunityTeamContact = Contact.builder()
        .firstName(root.opportunityTeam.get(0).firstName)
        .lastName(root.opportunityTeam.get(0).lastName)
        .email(root.opportunityTeam.get(0).email)
        .phone(root.opportunityTeam.get(0).phone)
        .businessTitle(root.opportunityTeam.get(0).businessTitle)
        .build();
}

List<ExpectedCustomerSpend> expectedCustomerSpends = new
ArrayList<ExpectedCustomerSpend>();
if ( root.project != null && root.project.expectedCustomerSpend != null) {
    for (org.example.entity.ExpectedCustomerSpend expectedCustomerSpendJson :
root.project.expectedCustomerSpend) {
        ExpectedCustomerSpend expectedCustomerSpend = null;
        expectedCustomerSpend = ExpectedCustomerSpend.builder()
            .amount(expectedCustomerSpendJson.amount)
            .currencyCode(expectedCustomerSpendJson.currencyCode)
            .frequency(expectedCustomerSpendJson.frequency)
            .targetCompany(expectedCustomerSpendJson.targetCompany)
            .build();
        expectedCustomerSpends.add(expectedCustomerSpend);
    }
}

Project project = null;
if ( root.project != null) {
    project = Project.builder()
```

```
        .title(root.project.title)
        .customerBusinessProblem(root.project.customerBusinessProblem)
        .customerUseCase(root.project.customerUseCase)
        .deliveryModels(root.project.deliveryModels)
        .expectedCustomerSpend(expectedCustomerSpends)
        .salesActivities(root.project.salesActivities)
        .competitorName(root.project.competitorName)
        .otherSolutionDescription(root.project.otherSolutionDescription)
        .build();
    }

    SoftwareRevenue softwareRevenue = null;
    if ( root.softwareRevenue != null) {
        MonetaryValue monetaryValue = null;
        if ( root.softwareRevenue.value != null) {
            monetaryValue = MonetaryValue.builder()
                .amount(root.softwareRevenue.value.amount)
                .currencyCode(root.softwareRevenue.value.currencyCode)
                .build();
        }
        softwareRevenue = SoftwareRevenue.builder()
            .deliveryModel(root.softwareRevenue.deliveryModel)
            .effectiveDate(root.softwareRevenue.effectiveDate)
            .expirationDate(root.softwareRevenue.expirationDate)
            .value(monetaryValue)
            .build();
    }

    // Building the Actual CreateOpportunity Request
    CreateOpportunityRequest createOpportunityRequest =
CreateOpportunityRequest.builder()
    .catalog(CATALOG_TO_USE)
    .clientToken(root.clientToken)
    .primaryNeedsFromAwsWithStrings(root.primaryNeedsFromAws)
    .opportunityType(root.opportunityType)
    .lifeCycle(lifeCycle)
    .marketing(marketing)
    .nationalSecurity(root.nationalSecurity)
    .origin(root.origin)
    .customer(customer)
    .project(project)
    .partnerOpportunityIdentifier(root.partnerOpportunityIdentifier)
    .opportunityTeam(oportunityTeamContact)
    .softwareRevenue(softwareRevenue)
```

```
.build();

CreateOpportunityResponse response =
client.createOpportunity(createOpportunityRequest);
System.out.println("Successfully created: " + response);

return response;
}

}
```

- For API details, see [CreateOpportunity](#) in *AWS SDK for Java 2.x API Reference*.

## Python

### SDK for Python (Boto3)

Create an opportunity.

```
#!/usr/bin/env python
import boto3
import logging
import sys
import os
sys.path.append(os.path.dirname(os.path.dirname(os.path.abspath(__file__))))
import utils.helpers as helper
import utils.stringify_details as sd
from botocore.client import ClientError
from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

def create_opportunity(partner_central_client):
    create_opportunity_request = helper.remove_nulls(sd.stringify_json("src/
create_opportunity/createOpportunity.json"))
    try:
        # Perform an API call
        response =
partner_central_client.create_opportunity(**create_opportunity_request)

        helper.pretty_print_datetime(response)
```

```
# Retrieve the opportunity details
get_response = partner_central_client.get_opportunity(
    Identifier=response["Id"],
    Catalog=CATALOG_TO_USE
)
helper.pretty_print_datetime(get_response)
return response
except ClientError as err:
    # Catch all client exceptions
    print(err.response)

def usage_demo():
    logging.basicConfig(level=logging.INFO, format"%(levelname)s: %(message)s")

    print("-" * 88)
    print("Create Opportunity.")
    print("-" * 88)

    partner_central_client = boto3.client(
        service_name=serviceName,
        region_name='us-east-1'
    )

    create_opportunity(partner_central_client)

if __name__ == "__main__":
    usage_demo()
```

- For API details, see [CreateOpportunity in AWS SDK for Python \(Boto3\) API Reference](#).

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Use DisassociateOpportunity with an AWS SDK

The following code examples show how to use DisassociateOpportunity.

Action examples are code excerpts from larger programs and must be run in context. You can see this action in context in the following code example:

- [Update associated entity of an opportunity](#)

Java

## SDK for Java 2.x

Remove an existing association between an Opportunity and related entities.

```
package org.example;

import static org.example.utils.Constants.*;

import org.example.utils.Constants;
import org.example.utils.ReferenceCodesUtils;

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;
import software.amazon.awssdk.http.apache.ApacheHttpClient;
import software.amazon.awssdk.regions.Region;
import
software.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;
import
software.amazon.awssdk.services.partnercentralselling.model.DisassociateOpportunityRequest
import
software.amazon.awssdk.services.partnercentralselling.model.DisassociateOpportunityResponse

/*
Purpose
PC-API -14 Removing a Solution
PC-API -15 Removing an offer
PC-API -16 Removing a product
entity_type = Solutions | AWSProducts | AWSMarketplaceOffers
*/
public class DisassociateOpportunity {

    static PartnerCentralSellingClient client =
        PartnerCentralSellingClient.builder()
            .region(Region.US_EAST_1)
            .credentialsProvider(DefaultCredentialsProvider.create())
            .httpClient(ApacheHttpClient.builder().build())
            .build();

    public static void main(String[] args) {
```

```
String opportunityId = args.length > 0 ? args[0] : OPPORTUNITY_ID;

String entityType = "Solutions";

String entityIdentifier = "S-0000000";

DisassociateOpportunityResponse response = getResponse(opportunityId,
entityType, entityIdentifier );

ReferenceCodesUtils.formatOutput(response);
}

static DisassociateOpportunityResponse getResponse(String opportunityId, String
entityType, String entityIdentifier) {

    DisassociateOpportunityRequest disassociateOpportunityRequest =
DisassociateOpportunityRequest.builder()
    .catalog(Constants.CATALOG_TO_USE)
    .opportunityIdentifier(opportunityId)
    .relatedEntityType(entityType)
    .relatedEntityIdentifier(entityIdentifier)
    .build();

    DisassociateOpportunityResponse response =
client.disassociateOpportunity(disassociateOpportunityRequest);

    return response;
}
}
```

- For API details, see [DisassociateOpportunity](#) in *AWS SDK for Java 2.x API Reference*.

## Python

### SDK for Python (Boto3)

Remove an existing association between an Opportunity and related entities.

```
#!/usr/bin/env python
```

```
"""
Purpose
PC-API -14 Removing a Solution
PC-API -15 Removing an offer
PC-API -16 Removing a product
"""

import logging
import boto3
import utils.helpers as helper
from botocore.client import ClientError

from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

partner_central_client = boto3.client(
    service_name=serviceName,
    region_name='us-east-1'
)

def disassociate_opportunity(entity_type, entity_identifier,
                             opportunityIdentifier):
    disassociate_opportunity_request ={ 
        "Catalog": CATALOG_TO_USE,
        "OpportunityIdentifier" : opportunityIdentifier,
        "RelatedEntityType" : entity_type,
        "RelatedEntityIdentifier" : entity_identifier
    }
    try:
        # Perform an API call
        response =
partner_central_client.disassociate_opportunity(**disassociate_opportunity_request)
        return response
    except ClientError as err:
        # Catch all client exceptions
        print(err.response)

def usage_demo():
    #entity_type = Solutions | AWSProducts | AWSMarketplaceOffers
    entity_type = "Solutions"
    entity_identifier = "S-0049999"
    opportunityIdentifier = "04397574"
```

```
logging.basicConfig(level=logging.INFO, format"%(levelname)s: %(message)s")\n\nprint("-" * 88)\nprint("Get updated Opportunity.")\nprint("-" * 88)\n\n    helper.pretty_print_datetime(disassociate_opportunity(entity_type,\nentity_identifier, opportunityIdentifier))\n\nif __name__ == "__main__":\n    usage_demo()
```

- For API details, see [DisassociateOpportunity](#) in *AWS SDK for Python (Boto3) API Reference*.

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Use GetAwsOpportunitySummary with an AWS SDK

The following code examples show how to use GetAwsOpportunitySummary.

Java

### SDK for Java 2.x

Retrieves a summary of an AWS Opportunity.

```
package org.example;\n\nimport static org.example.utils.Constants.*;\n\nimport org.example.utils.Constants;\nimport org.example.utils.ReferenceCodesUtils;\n\nimport software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;\nimport software.amazon.awssdk.http.apache.ApacheHttpClient;\nimport software.amazon.awssdk.regions.Region;\nimport\nsoftware.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;\nimport\nsoftware.amazon.awssdk.services.partnercentralselling.model.GetAwsOpportunitySummaryRequ
```

```
import software.amazon.awssdk.services.partnercentralselling.model.GetAwsOpportunitySummaryResponse

/*
 * Purpose
 * PC-API-25 Retrieves a summary of an AWS Opportunity.
 */

public class GetAwsOpportunitySummary {

    static PartnerCentralSellingClient client =
        PartnerCentralSellingClient.builder()
            .region(Region.US_EAST_1)
            .credentialsProvider(DefaultCredentialsProvider.create())
            .httpClient(ApacheHttpClient.builder().build())
            .build();

    public static void main(String[] args) {

        String opportunityId = args.length > 0 ? args[0] : OPPORTUNITY_ID;
        GetAwsOpportunitySummaryResponse response = getResponse(opportunityId);

        ReferenceCodesUtils.formatOutput(response);
    }

    public static GetAwsOpportunitySummaryResponse getResponse(String opportunityId)
    {

        GetAwsOpportunitySummaryRequest getOpportunityRequest =
        GetAwsOpportunitySummaryRequest.builder()
            .catalog(Constants.CATALOG_TO_USE)
            .relatedOpportunityIdentifier(opportunityId)
            .build();

        GetAwsOpportunitySummaryResponse response =
        client.getAwsOpportunitySummary(getOpportunityRequest);

        return response;
    }
}
```

- For API details, see [GetAwsOpportunitySummary](#) in *AWS SDK for Java 2.x API Reference*.

## Python

### SDK for Python (Boto3)

Retrieves a summary of an AWS Opportunity.

```
#!/usr/bin/env python

"""
Purpose
PC-API-25 Retrieves a summary of an AWS Opportunity.
LifeCycle.ReviewStatus=Approved
"""

import logging
import boto3
import utils.helpers as helper
from botocore.client import ClientError

from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

partner_central_client = boto3.client(
    service_name=serviceName,
    region_name='us-east-1'
)

def get_opportunity(identifier):
    get_opportunity_request ={
        "Catalog": CATALOG_TO_USE,
        "RelatedOpportunityIdentifier": identifier
    }
    try:
        # Perform an API call
        response =
partner_central_client.get_aws_opportunity_summary(**get_opportunity_request)
        return response
    except ClientError as err:
        # Catch all client exceptions
        print(err.response)

def usage_demo():
```

```
identifier = "05465588"

logging.basicConfig(level=logging.INFO, format"%(levelname)s: %(message)s")

print("-" * 88)
print("Get AWS Opportunity summary.")
print("-" * 88)

helper.pretty_print_datetime(get_opportunity(identifier))

if __name__ == "__main__":
    usage_demo()
```

- For API details, see [GetAwsOpportunitySummary](#) in *AWS SDK for Python (Boto3) API Reference*.

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Use GetEngagementInvitation with an AWS SDK

The following code examples show how to use GetEngagementInvitation.

Java

### SDK for Java 2.x

Retrieves the details of an engagement invitation shared by AWS with a partner.

```
package org.example;

import static org.example.utils.Constants.*;

import org.example.utils.Constants;
import org.example.utils.ReferenceCodesUtils;

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;
import software.amazon.awssdk.http.apache.ApacheHttpClient;
import software.amazon.awssdk.regions.Region;
```

```
import
software.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;
import
software.amazon.awssdk.services.partnercentralselling.model.GetEngagementInvitationRequest;
import
software.amazon.awssdk.services.partnercentralselling.model.GetEngagementInvitationResponse;

/*
 * Purpose
 * PC-API-22 Get engagement invitation opportunity
 */

public class GetEngagementInvitation {

    static PartnerCentralSellingClient client =
        PartnerCentralSellingClient.builder()
            .region(Region.US_EAST_1)
            .credentialsProvider(DefaultCredentialsProvider.create())
            .httpClient(ApacheHttpClient.builder().build())
            .build();

    public static void main(String[] args) {

        String opportunityId = args.length > 0 ? args[0] : OPPORTUNITY_ID;

        GetEngagementInvitationResponse response = getResponse(opportunityId);

        ReferenceCodesUtils.formatOutput(response);
    }

    static GetEngagementInvitationResponse getResponse(String opportunityId) {

        GetEngagementInvitationRequest getOpportunityRequest =
            GetEngagementInvitationRequest.builder()
                .catalog(Constants.CATALOG_TO_USE)
                .identifier(opportunityId)
                .build();

        GetEngagementInvitationResponse response =
            client.getEngagementInvitation(getOpportunityRequest);

        return response;
    }
}
```

- For API details, see [GetEngagementInvitation](#) in *AWS SDK for Java 2.x API Reference*.

## Python

### SDK for Python (Boto3)

Retrieves the details of an engagement invitation shared by AWS with a partner.

```
#!/usr/bin/env python

"""
Purpose
PC-API-22 GetOpportunityEngagementInvitation - Retrieves details of a specific
engagement invitation.
This operation allows partners to view the invitation and its associated
information,
such as the customer, project, and lifecycle details.
"""

import json
import logging
import boto3
import utils.helpers as helper

from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

partner_central_client = boto3.client(
    service_name=serviceName,
    region_name='us-east-1'
)

def get_opportunity_engagement_invitation(identifier):
    get_opportunity_engagement_invitation_request ={ 
        "Catalog": CATALOG_TO_USE,
        "Identifier": identifier
    }
    try:
        # Perform an API call

```

```
response =
partner_central_client.get_engagement_invitation(**get_opportunity_engagement_invitation)
return response

except Exception as err:
    # Catch all client exceptions
    print(json.dumps(err.response))

def usage_demo():
    identifier = "arn:aws:partnercentral-selling:us-east-1:aws:catalog/Sandbox/
engagement-invitation/engi-0000000IS0Qga"

    logging.basicConfig(level=logging.INFO, format"%(levelname)s: %(message)s")

    print("-" * 88)
    print("Given the ARN identifier, retrieve details of Opportunity Engagement
Invitation.")
    print("-" * 88)

helper.pretty_print_datetime(get_opportunity_engagement_invitation(identifier))

if __name__ == "__main__":
    usage_demo()
```

- For API details, see [GetEngagementInvitation](#) in *AWS SDK for Python (Boto3) API Reference*.

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Use GetOpportunity with an AWS SDK

The following code examples show how to use GetOpportunity.

### .NET

#### SDK for .NET

Get an opportunity.

```
// Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.  
// PDX-License-Identifier: Apache-2.0  
  
using System;  
using Newtonsoft.Json;  
using Amazon;  
using Amazon.Runtime;  
using Amazon.PartnerCentralSelling;  
using Amazon.PartnerCentralSelling.Model;  
  
namespace AWSExample  
{  
    class Program  
    {  
        static readonly string catalogToUse = "AWS";  
        static readonly string identifier = "01111111";  
        static async Task Main(string[] args)  
        {  
            // Initialize credentials from .aws/credentials file  
            var credentials = new  
                Amazon.Runtime.CredentialManagement.SharedCredentialsFile();  
            if (credentials.TryGetProfile("default", out var profile))  
            {  
                AWS Credentials awsCredentials =  
                    profile.GetAWSCredentials(credentials);  
  
                var client = new  
                    AmazonPartnerCentralSellingClient(awsCredentials);  
  
                var request = new GetOpportunityRequest  
                {  
                    Catalog = catalogToUse,  
                    Identifier = identifier  
                };  
  
                try {  
                    var response = await client.GetOpportunityAsync(request);  
                    Console.WriteLine(response.HttpStatusCode);  
                    string formattedJson = JsonConvert.SerializeObject(response,  
                        Formatting.Indented);  
                    Console.WriteLine(formattedJson);  
                } catch(ValidationException ex) {  
                    Console.WriteLine("Validation error: " + ex.Message);  
                }  
            }  
        }  
    }  
}
```

```
        } catch (AmazonPartnerCentralException e) {
            Console.WriteLine("Failed:");
            Console.WriteLine(e.RequestId);
            Console.WriteLine(e.ErrorCode);
            Console.WriteLine(e.Message);
        }
    }
else
{
    Console.WriteLine("Profile not found.");
}
}
}

}
```

- For API details, see [GetOpportunity](#) in *AWS SDK for .NET API Reference*.

## Go

### SDK for Go V2

Get an opportunity.

```
package main

import (
    "context"
    "encoding/json"
    "fmt"
    "log"

    "github.com/aws/aws-sdk-go-v2/aws"
    "github.com/aws/aws-sdk-go-v2/config"
    "github.com/aws/aws-sdk-go-v2/service/partnercentral"
)

func main() {
    config, err := config.LoadDefaultConfig(context.TODO())

    if err != nil {
        log.Fatal(err)
    }

    client, err := partnercentral.New(&partnercentral.Options{
        Region: aws.String("us-west-2"),
    })
    if err != nil {
        log.Fatal(err)
    }

    // Use the client...
}
```

```
}

config.Region = "us-east-1"

client := partnercentralselling.NewFromConfig(config)

output, err := client.GetOpportunity(context.TODO(),
&partnercentralselling.GetOpportunityInput{
    Identifier: aws.String("01111111"),
    Catalog:    aws.String("AWS"),
})

if err != nil {
    log.Fatal(err)
}
log.Println("printing opportunity...\n")

jsonOutput, err := json.MarshalIndent(output, "", "    ")

fmt.Println(string(jsonOutput))
}
```

- For API details, see [GetOpportunity](#) in *AWS SDK for Go API Reference*.

## Java

### SDK for Java 2.x

Get an opportunity.

```
package org.example;

import static org.example.utils.Constants.*;

import org.example.utils.Constants;
import org.example.utils.ReferenceCodesUtils;

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;
import software.amazon.awssdk.http.apache.ApacheHttpClient;
import software.amazon.awssdk.regions.Region;
import
software.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;
```

```
import software.amazon.awssdk.services.partnercentralselling.model.GetOpportunityRequest;
import software.amazon.awssdk.services.partnercentralselling.model.GetOpportunityResponse;

/*
 * Purpose
 * PC-API-08 Get updated Opportunity
 */

public class GetOpportunity {

    static PartnerCentralSellingClient client =
        PartnerCentralSellingClient.builder()
            .region(Region.US_EAST_1)
            .credentialsProvider(DefaultCredentialsProvider.create())
            .httpClient(ApacheHttpClient.builder().build())
            .build();

    public static void main(String[] args) {

        String opportunityId = args.length > 0 ? args[0] : OPPORTUNITY_ID;

        GetOpportunityResponse response = getResponse(opportunityId);

        ReferenceCodesUtils.formatOutput(response);
    }

    public static GetOpportunityResponse getResponse(String opportunityId) {

        GetOpportunityRequest getOpportunityRequest =
            GetOpportunityRequest.builder()
                .catalog(Constants.CATALOG_TO_USE)
                .identifier(opportunityId)
                .build();

        GetOpportunityResponse response =
            client.getOpportunity(getOpportunityRequest);

        return response;
    }
}
```

- For API details, see [GetOpportunity](#) in *AWS SDK for Java 2.x API Reference*.

## Python

### SDK for Python (Boto3)

Get an opportunity.

```
#!/usr/bin/env python

"""
Purpose
PC-API -08 Get updated Opportunity given opportunity id
"""

import logging
import boto3
import utils.helpers as helper
from botocore.client import ClientError

from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

partner_central_client = boto3.client(
    service_name=serviceName,
    region_name='us-east-1'
)

def get_opportunity(identifier):
    get_opportunity_request ={
        "Catalog": CATALOG_TO_USE,
        "Identifier": identifier
    }
    try:
        # Perform an API call
        response =
partner_central_client.get_opportunity(**get_opportunity_request)
        return response

    except ClientError as err:
        # Catch all client exceptions
        print(err.response)
```

```
def usage_demo():
    identifier = "05465588"

    logging.basicConfig(level=logging.INFO, format="%(levelname)s: %(message)s")

    print("-" * 88)
    print("Get updated Opportunity.")
    print("-" * 88)

    helper.pretty_print_datetime(get_opportunity(identifier))

if __name__ == "__main__":
    usage_demo()
```

- For API details, see [GetOpportunity](#) in *AWS SDK for Python (Boto3) API Reference*.

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Use ListEngagementInvitations with an AWS SDK

The following code examples show how to use ListEngagementInvitations.

Java

### SDK for Java 2.x

Retrieves a list of engagement invitations sent to the partner.

```
package org.example;

import java.util.ArrayList;
import java.util.List;

import org.example.utils.ReferenceCodesUtils;
import static org.example.utils.Constants.*;

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;
import software.amazon.awssdk.http.apache.ApacheHttpClient;
import software.amazon.awssdk.regions.Region;
```

```
import
software.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;
import
software.amazon.awssdk.services.partnercentralselling.model.ListEngagementInvitationsRequest;
import
software.amazon.awssdk.services.partnercentralselling.model.ListEngagementInvitationsResponse;
import
software.amazon.awssdk.services.partnercentralselling.model.ParticipantType;
import
software.amazon.awssdk.services.partnercentralselling.model.EngagementInvitationSummary;

public class ListEngagementInvitations {

    static PartnerCentralSellingClient client =
        PartnerCentralSellingClient.builder()
            .region(Region.US_EAST_1)
            .credentialsProvider(DefaultCredentialsProvider.create())
            .httpClient(ApacheHttpClient.builder().build())
            .build();

    public static void main(String[] args) {

        List<EngagementInvitationSummary> opportunitySummaries = getResponse();
        ReferenceCodesUtils.formatOutput(opportunitySummaries);
    }

    static List<EngagementInvitationSummary> getResponse() {

        List<EngagementInvitationSummary> opportunitySummaries = new
        ArrayList<EngagementInvitationSummary>();

        ListEngagementInvitationsRequest listOpportunityRequest =
        ListEngagementInvitationsRequest.builder()
            .catalog(CATALOG_TO_USE)
            .participantType(ParticipantType.RECEIVER)
            .maxResults(5)
            .build();

        ListEngagementInvitationsResponse response =
        client.listEngagementInvitations(listOpportunityRequest);

        opportunitySummaries.addAll(response.engagementInvitationSummaries());

        client.close();
    }
}
```

```
        return opportunitySummaries;
    }
}
```

- For API details, see [ListEngagementInvitations](#) in *AWS SDK for Java 2.x API Reference*.

## Python

### SDK for Python (Boto3)

Retrieves a list of engagement invitations sent to the partner.

```
#!/usr/bin/env python

"""
Purpose
PC-API-21 ListEngagementInvitations - Retrieves a list of engagement invitations
based on specified criteria.
This operation allows partners to view all invitations to engagement.
"""

import json
import logging
import boto3
import utils.helpers as helper

from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

partner_central_client = boto3.client(
    service_name=serviceName,
    region_name='us-east-1'
)

def list_engagement_invitations():
    list_engagement_invitations_request ={  
        "Catalog": CATALOG_TO_USE,  
        "MaxResults": 20  
    }  
    try:
```

```
# Perform an API call
response =
partner_central_client.list_engagement_invitations(**list_engagement_invitations_request)
return response

except Exception as err:
    # Catch all client exceptions
    print(json.dumps(err.response))

def usage_demo():
    logging.basicConfig(level=logging.INFO, format"%(levelname)s: %(message)s")

    print("-" * 88)
    print("Retrieve list of Engagement Invitations.")
    print("-" * 88)

    helper.pretty_print_datetime(list_engagement_invitations())

if __name__ == "__main__":
    usage_demo()
```

- For API details, see [ListEngagementInvitations in AWS SDK for Python \(Boto3\) API Reference](#).

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Use ListOpportunities with an AWS SDK

The following code examples show how to use ListOpportunities.

### .NET

#### SDK for .NET

List opportunities.

```
// Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.
// PDX-License-Identifier: Apache-2.0
```

```
using System;
using Newtonsoft.Json;
using Amazon;
using Amazon.Runtime;
using Amazon.PartnerCentralSelling;
using Amazon.PartnerCentralSelling.Model;

namespace AWSExample
{
    class Program
    {
        static readonly string catalogToUse = "Sandbox";
        static async Task Main(string[] args)
        {
            // Initialize credentials from .aws/credentials file
            var credentials = new
Amazon.Runtime.CredentialManagement.SharedCredentialsFile();
            if (credentials.TryGetProfile("default", out var profile))
            {
                AWSCredentials awsCredentials =
profile.GetAWSCredentials(credentials);

                //var config = new AmazonPartnerCentralSellingConfig()
                //{
                //    ServiceURL = "https://partnercentral-selling.us-
east-1.api.aws",
                //};
                //var client = new
AmazonPartnerCentralSellingClient(awsCredentials, config);
                var client = new
AmazonPartnerCentralSellingClient(awsCredentials);
                var request = new ListOpportunitiesRequest
                {
                    Catalog = catalogToUse,
                    MaxResults = 2
                };

                try {
                    var response = await client.ListOpportunitiesAsync(request);
                    Console.WriteLine(response.HttpStatusCode);
                    foreach (var opportunity in response.OpportunitySummaries)
                    {
                        Console.WriteLine("Opportunity id: " + opportunity.Id);
                    }
                }
            }
        }
    }
}
```

```
        string formattedJson =
    JsonConvert.SerializeObject(response.OpportunitySummaries, Formatting.Indented);
        Console.WriteLine(formattedJson);
    } catch(ValidationException ex) {
        Console.WriteLine("Validation error: " + ex.Message);
    } catch (AmazonPartnerCentralSellingException e) {
        Console.WriteLine("Failed:");
        Console.WriteLine(e.RequestId);
        Console.WriteLine(e.ErrorCode);
        Console.WriteLine(e.Message);
    }
}
else
{
    Console.WriteLine("Profile not found.");
}
}
}
}
```

- For API details, see [ListOpportunities](#) in *AWS SDK for .NET API Reference*.

## Go

### SDK for Go V2

List opportunities.

```
package main

import (
    "context"
    "encoding/json"
    "fmt"
    "log"

    "github.com/aws/aws-sdk-go-v2/aws"
    "github.com/aws/aws-sdk-go-v2/config"
    "github.com/aws/aws-sdk-go-v2/service/partnercentralselling"
)
```

```
func main() {
    config, err := config.LoadDefaultConfig(context.TODO())

    if err != nil {
        log.Fatal(err)
    }

    config.Region = "us-east-1"

    client := partnercentralselling.NewFromConfig(config)

    output, err := client.ListOpportunities(context.TODO(),
    &partnercentralselling.ListOpportunitiesInput{
        MaxResults: aws.Int32(2),
        Catalog:    aws.String("AWS"),
    })

    if err != nil {
        log.Fatal(err)
    }

    jsonOutput, err := json.MarshalIndent(output, "", "    ")
    fmt.Println(string(jsonOutput))
}
```

- For API details, see [ListOpportunities](#) in *AWS SDK for Go API Reference*.

## Java

### SDK for Java 2.x

List opportunities.

```
package org.example;

import java.util.ArrayList;
import java.util.List;

import org.example.utils.ReferenceCodesUtils;
import static org.example.utils.Constants.*;

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;
```

```
import software.amazon.awssdk.http.apache.ApacheHttpClient;
import software.amazon.awssdk.regions.Region;
import
software.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;
import
software.amazon.awssdk.services.partnercentralselling.model.ListOpportunitiesRequest;
import
software.amazon.awssdk.services.partnercentralselling.model.ListOpportunitiesResponse;
import
software.amazon.awssdk.services.partnercentralselling.model.OpportunitySummary;

/*
 * Purpose
 * PC-API-18 Getting list of Opportunities
 */

public class ListOpportunitiesPaging {

    static PartnerCentralSellingClient client =
    PartnerCentralSellingClient.builder()
        .region(Region.US_EAST_1)
        .credentialsProvider(DefaultCredentialsProvider.create())
        .httpClient(ApacheHttpClient.builder().build())
        .build();

    public static void main(String[] args) {
        List<OpportunitySummary> opportunitySummaries = getResponse();
        ReferenceCodesUtils.formatOutput(opportunitySummaries);
    }

    private static List<OpportunitySummary> getResponse() {
        List<OpportunitySummary> opportunitySummaries = new
        ArrayList<OpportunitySummary>();

        ListOpportunitiesRequest listOpportunityRequest =
        ListOpportunitiesRequest.builder()
            .catalog(CATALOG_TO_USE)
            .maxResults(5)
            .build();

        ListOpportunitiesResponse response =
        client.listOpportunities(listOpportunityRequest);

        opportunitySummaries.addAll(response.opportunitySummaries());
    }
}
```

```
        while (response.nextToken() != null && response.nextToken().length() > 0) {
            listOpportunityRequest = ListOpportunitiesRequest.builder()
                .catalog(CATALOG_TO_USE)
                .maxResults(5)
                .nextToken(response.nextToken())
                .build();
            response = client.listOpportunities(listOpportunityRequest);
            opportunitySummaries.addAll(response.opportunitySummaries());
        }

        client.close();

        return opportunitySummaries;
    }
}
```

- For API details, see [ListOpportunities](#) in *AWS SDK for Java 2.x API Reference*.

## Python

### SDK for Python (Boto3)

List opportunities.

```
#!/usr/bin/env python

"""
Purpose
PC-API -18 Getting list of Opportunities
"""

import json
import logging
import boto3
import utils.helpers as helper

from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

partner_central_client = boto3.client(
```

```
        service_name=serviceName,
        region_name='us-east-1'
    )

def get_list_of_opportunities():

    opportunity_list = []

    list_opportunities_request ={ 
        "Catalog": CATALOG_TO_USE,
        "MaxResults": 20
    }
    try:
        # Perform an API call
        response =
partner_central_client.list_opportunities(**list_opportunities_request)
        opportunity_list.extend(response["OpportunitySummaries"])

        while "NextToken" in response and response["NextToken"] is not None:
            list_opportunities_request["NextToken"] = response["NextToken"]
            response =
partner_central_client.list_opportunities(**list_opportunities_request)
            opportunity_list.extend(response["OpportunitySummaries"])

    return opportunity_list

except Exception as err:
    # Catch all client exceptions
    print(json.dumps(err.response))

def usage_demo():
    logging.basicConfig(level=logging.INFO, format"%(levelname)s: %(message)s")

    print("-" * 88)
    print("Getting list of Opportunities.")
    print("-" * 88)

    helper.pretty_print_datetime(get_list_of_opportunities())

if __name__ == "__main__":
    usage_demo()
```

- For API details, see [ListOpportunities](#) in *AWS SDK for Python (Boto3) API Reference*.

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Use `ListSolutions` with an AWS SDK

The following code examples show how to use `ListSolutions`.

Java

### SDK for Java 2.x

Retrieves a list of Partner Solutions that the partner registered on Partner Central.

```
package org.example;

import java.util.ArrayList;
import java.util.List;

import static org.example.utils.Constants.*;
import org.example.utils.ReferenceCodesUtils;

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;
import software.amazon.awssdk.http.apache.ApacheHttpClient;
import software.amazon.awssdk.regions.Region;
import
software.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;
import
software.amazon.awssdk.services.partnercentralselling.model.ListSolutionsRequest;
import
software.amazon.awssdk.services.partnercentralselling.model.ListSolutionsResponse;
import software.amazon.awssdk.services.partnercentralselling.model.SolutionBase;

/*
 * Purpose
 * PC-API-10 Getting list of solutions
 */

public class ListSolutions {

    static PartnerCentralSellingClient client =
        PartnerCentralSellingClient.builder()
            .region(Region.US_EAST_1)
```

```
.credentialsProvider(DefaultCredentialsProvider.create())
.httpClient(ApacheHttpClient.builder().build())
.build();

public static void main(String[] args) {
    List<SolutionBase> solutionSummaries = getResponse();
    ReferenceCodesUtils.formatOutput(solutionSummaries);
}

static List<SolutionBase> getResponse() {
List<SolutionBase> solutionSummaries = new ArrayList<SolutionBase>();

ListSolutionsRequest listSolutionsRequest = ListSolutionsRequest.builder()
.catalog(CATALOG_TO_USE)
.maxResults(5)
.build();

ListSolutionsResponse response = client.listSolutions(listSolutionsRequest);

solutionSummaries.addAll(response.solutionSummaries());

return solutionSummaries;
}
}
```

- For API details, see [ListSolutions](#) in *AWS SDK for Java 2.x API Reference*.

## Python

### SDK for Python (Boto3)

Retrieves a list of Partner Solutions that the partner registered on Partner Central.

```
#!/usr/bin/env python

"""
Purpose
PC-API-10 Getting list of solutions
"""

import logging
import boto3
```

```
import utils.helpers as helper
from botocore.client import ClientError

from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

partner_central_client = boto3.client(
    service_name=serviceName,
    region_name='us-east-1'
)

def get_list_of_solutions():
    list_solutions_request ={
        "Catalog": CATALOG_TO_USE,
        "MaxResults": 20
    }
    try:
        # Perform an API call
        response =
partner_central_client.list_solutions(**list_solutions_request)
        return response

    except ClientError as err:
        # Catch all client exceptions
        print(err.response)

def usage_demo():
    logging.basicConfig(level=logging.INFO, format"%(levelname)s: %(message)s")

    print("-" * 88)
    print("Getting list of solutions.")
    print("-" * 88)

    helper.pretty_print_datetime(get_list_of_solutions())

if __name__ == "__main__":
    usage_demo()
```

- For API details, see [ListSolutions](#) in *AWS SDK for Python (Boto3) API Reference*.

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Use RejectEngagementInvitation with an AWS SDK

The following code examples show how to use RejectEngagementInvitation.

Java

### SDK for Java 2.x

Rejects an EngagementInvitation that AWS shared.

```
package org.example;

import static org.example.utils.Constants.*;

import org.example.utils.Constants;
import org.example.utils.ReferenceCodesUtils;

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;
import software.amazon.awssdk.http.apache.ApacheHttpClient;
import software.amazon.awssdk.regions.Region;
import
software.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;
import
software.amazon.awssdk.services.partnercentralselling.model.RejectEngagementInvitationRe
import
software.amazon.awssdk.services.partnercentralselling.model.RejectEngagementInvitationRe

/*
 * Purpose
 * PC-API-05 AWS Originated(AO) rejection
 */

public class RejectEngagementInvitation {

    static PartnerCentralSellingClient client =
        PartnerCentralSellingClient.builder()
            .region(Region.US_EAST_1)
            .credentialsProvider(DefaultCredentialsProvider.create())
            .httpClient(ApacheHttpClient.builder().build())
}
```

```
.build();

public static void main(String[] args) {
    String opportunityId = args.length > 0 ? args[0] : OPPORTUNITY_ID;

    RejectEngagementInvitationResponse response = getResponse(opportunityId);

    ReferenceCodesUtils.formatOutput(response);
}

static RejectEngagementInvitationResponse getResponse(String invitationId) {

    RejectEngagementInvitationRequest rejectOpportunityRequest =
        RejectEngagementInvitationRequest.builder()
            .catalog(Constants.CATALOG_TO_USE)
            .identifier(invitationId)
            .rejectionReason("Unable to support")
            .build();

    RejectEngagementInvitationResponse response =
        client.rejectEngagementInvitation(rejectOpportunityRequest);

    return response;
}
}
```

- For API details, see [RejectEngagementInvitation](#) in *AWS SDK for Java 2.x API Reference*.

## Python

### SDK for Python (Boto3)

Rejects an EngagementInvitation that AWS shared.

```
#!/usr/bin/env python

"""
Purpose
PC-API-05 AWS Originated A0 rejection - RejectOpportunityEngagementInvitation -
Rejects a engagement invitation.
```

```
This action indicates that the partner does not wish to participate in the
engagement and
provides a reason for the rejection.
Upon rejection, a OpportunityEngagementInvitationRejected event is triggered.
Subsequently, the invitation will no longer be available for the partner to act
on.

"""

import json
import logging
import boto3
import utils.helpers as helper

from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

partner_central_client = boto3.client(
    service_name=serviceName,
    region_name='us-east-1'
)

def reject_opportunity_engagement_invitation(identifier, reject_reason):
    reject_opportunity_engagement_invitation_request ={
        "Catalog": CATALOG_TO_USE,
        "Identifier": identifier,
        "RejectionReason": reject_reason
    }
    try:
        # Perform an API call
        response =
partner_central_client.reject_engagement_invitation(**reject_opportunity_engagement_invitation_request)
        return response
    except Exception as err:
        # Catch all client exceptions
        print(json.dumps(err.response))

def usage_demo():
    identifier = "arn:aws:partnercentral:us-east-1::catalog/Sandbox/engagement-
invitation/engi-0000002isviga"
    reject_reason = "Customer problem unclear"

    logging.basicConfig(level=logging.INFO, format="%(levelname)s: %(message)s")
```

```
print("-" * 88)
print("Given the ARN identifier and reject reason, reject the Opportunity
Engagement Invitation.")
print("-" * 88)

helper.pretty_print_datetime(reject_opportunity_engagement_invitation(identifier,
reject_reason))

if __name__ == "__main__":
    usage_demo()
```

- For API details, see [RejectEngagementInvitation](#) in *AWS SDK for Python (Boto3) API Reference*.

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Use StartEngagementByAcceptingInvitationTask with an AWS SDK

The following code examples show how to use `StartEngagementByAcceptingInvitationTask`.

Java

### SDK for Java 2.x

Starts the engagement by accepting an `EngagementInvitation`.

```
package org.example;

import static org.example.utils.Constants.*;

import org.example.utils.Constants;
import org.example.utils.ReferenceCodesUtils;

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;
import software.amazon.awssdk.http.apache.ApacheHttpClient;
import software.amazon.awssdk.regions.Region;
```

```
import
    software.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;
import
    software.amazon.awssdk.services.partnercentralselling.model.StartEngagementByAcceptingInvitationTask;
import
    software.amazon.awssdk.services.partnercentralselling.model.StartEngagementByAcceptingInvitationTaskResponse;
import
    software.amazon.awssdk.services.partnercentralselling.model.GetEngagementInvitationRequest;
import
    software.amazon.awssdk.services.partnercentralselling.model.GetEngagementInvitationResponse;
import
    software.amazon.awssdk.services.partnercentralselling.model.InvitationStatus;

/*
Purpose
PC-API-04: Start Engagement By Accepting InvitationTask for AWS Originated(A0)
opportunity
*/
public class StartEngagementByAcceptingInvitationTask {

    static PartnerCentralSellingClient client =
        PartnerCentralSellingClient.builder()
            .region(Region.US_EAST_1)
            .credentialsProvider(DefaultCredentialsProvider.create())
            .httpClient(ApacheHttpClient.builder().build())
            .build();

    static String clientToken = "test-a30d161";

    public static void main(String[] args) {

        String opportunityId = args.length > 0 ? args[0] : OPPORTUNITY_ID;

        StartEngagementByAcceptingInvitationTaskResponse response =
getResponse(opportunityId);

        if ( response == null) {
            System.out.println("Opportunity is not AWS Originated.");
        } else {
            ReferenceCodesUtils.formatOutput(response);
        }
    }
}
```

```
    private static GetEngagementInvitationResponse getInvitation(String invitationId) {

        GetEngagementInvitationRequest getRequest =
GetEngagementInvitationRequest.builder()
            .catalog(Constants.CATALOG_TO_USE)
            .identifier(invitationId)
            .build();

        GetEngagementInvitationResponse response =
client.getEngagementInvitation(getRequest);

        return response;
    }

    static StartEngagementByAcceptingInvitationTaskResponse getResponse(String invitationId) {

        if ( getInvitation(invitationId).status().equals(InvitationStatus.PENDING)) {
            StartEngagementByAcceptingInvitationTaskRequest acceptOpportunityRequest =
StartEngagementByAcceptingInvitationTaskRequest.builder()
            .catalog(Constants.CATALOG_TO_USE)
            .identifier(invitationId)
            .clientToken(clientToken)
            .build();

            StartEngagementByAcceptingInvitationTaskResponse response =
client.startEngagementByAcceptingInvitationTask(acceptOpportunityRequest);
            return response;
        }
        return null;
    }
}
```

- For API details, see [StartEngagementByAcceptingInvitationTask](#) in *AWS SDK for Java 2.x API Reference*.

## Python

### SDK for Python (Boto3)

Starts the engagement by accepting an EngagementInvitation.

```
#!/usr/bin/env python

"""
Purpose
PC-API -11 Associating a product
PC-API -12 Associating a solution
PC-API -13 Associating an offer
"""

import logging
import boto3
import utils.helpers as helper
from botocore.client import ClientError

from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

partner_central_client = boto3.client(
    service_name=serviceName,
    region_name='us-east-1'
)

def get_opportunity(identifier):
    get_opportunity_request ={
        "Identifier": identifier,
        "Catalog": CATALOG_TO_USE
    }
    try:
        # Perform an API call
        response =
partner_central_client.get_engagement_invitation(**get_opportunity_request)
        return response

    except ClientError as err:
        # Catch all client exceptions
        print(err.response)

def start_engagement_by_accepting_invitation_task(identifier):

    response = get_opportunity(identifier)

    if ( response['Status'] == 'PENDING' ) :
```

```
accept_opportunity_engagement_invitation_request ={  
    "Catalog": CATALOG_TO_USE,  
    "Identifier" : identifier,  
    "ClientToken": "test-123456"  
}  
try:  
    # Perform an API call  
    response =  
partner_central_client.start_engagement_by_accepting_invitation_task(**accept_opportunity_engagement_invitation_request)  
    return response  
  
except ClientError as err:  
    # Catch all client exceptions  
    print(err.response)  
    return None  
else:  
    return None  
  
def usage_demo():  
    identifier = "arn:aws:partnercentral:us-east-1::catalog/Sandbox/engagement-invitation/engi-0000002isusga"  
    logging.basicConfig(level=logging.INFO, format"%(levelname)s: %(message)s")  
  
    print("-" * 88)  
    print("Get updated Opportunity.")  
    print("-" * 88)  
  
    helper.pretty_print_datetime(start_engagement_by_accepting_invitation_task(identifier))  
  
if __name__ == "__main__":  
    usage_demo()
```

- For API details, see [StartEngagementByAcceptingInvitationTask](#) in *AWS SDK for Python (Boto3) API Reference*.

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Use StartEngagementFromOpportunityTask with an AWS SDK

The following code examples show how to use StartEngagementFromOpportunityTask.

Java

### SDK for Java 2.x

Initiates the engagement process from an existing opportunity by accepting the engagement invitation and creating a corresponding opportunity in the partner's system.

```
package org.example;

import static org.example.utils.Constants.*;

import org.example.utils.Constants;
import org.example.utils.ReferenceCodesUtils;

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;
import software.amazon.awssdk.http.apache.ApacheHttpClient;
import software.amazon.awssdk.regions.Region;
import
software.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;
import software.amazon.awssdk.services.partnercentralselling.model.AwsSubmission;
import
software.amazon.awssdk.services.partnercentralselling.model.SalesInvolvementType;
import
software.amazon.awssdk.services.partnercentralselling.model.StartEngagementFromOpportuni
import
software.amazon.awssdk.services.partnercentralselling.model.StartEngagementFromOpportuni
import software.amazon.awssdk.services.partnercentralselling.model.Visibility;

/*
 * Purpose
 * PC-API-01 Partner Originated (PO) opp submission(Start Engagement From
 * Opportunity Task for AO Originated Opportunity)
 */

public class StartEngagementFromOpportunityTask {

    static PartnerCentralSellingClient client =
        PartnerCentralSellingClient.builder()
            .region(Region.US_EAST_1)
```

```
        .credentialsProvider(DefaultCredentialsProvider.create())
        .httpClient(ApacheHttpClient.builder().build())
        .build();

    public static void main(String[] args) {

        String opportunityId = args.length > 0 ? args[0] : OPPORTUNITY_ID;

        StartEngagementFromOpportunityTaskResponse response =
getResponse(opportunityId);

        ReferenceCodesUtils.formatOutput(response);
    }

    static StartEngagementFromOpportunityTaskResponse getResponse(String
opportunityId) {

        StartEngagementFromOpportunityTaskRequest submitOpportunityRequest =
StartEngagementFromOpportunityTaskRequest.builder()
        .catalog(Constants.CATALOG_TO_USE)
        .identifier(opportunityId)
        .clientToken("test-annjqwesdsd99")

        .awsSubmission(AwsSubmission.builder().involvementType(SalesInvolvementType.CO_SELL).vis
            .build();

        StartEngagementFromOpportunityTaskResponse response =
client.startEngagementFromOpportunityTask(submitOpportunityRequest);

        return response;
    }
}
```

- For API details, see [StartEngagementFromOpportunityTask](#) in *AWS SDK for Java 2.x API Reference*.

## Python

### SDK for Python (Boto3)

Initiates the engagement process from an existing opportunity by accepting the engagement invitation and creating a corresponding opportunity in the partner's system.

```
#!/usr/bin/env python

"""
Purpose
PC-API -11 Associating a product
PC-API -12 Associating a solution
PC-API -13 Associating an offer
"""

import logging
import boto3
import utils.helpers as helper
from botocore.client import ClientError

from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

partner_central_client = boto3.client(
    service_name=serviceName,
    region_name='us-east-1'
)

def start_engagement_from_opportunity_task(identifier):

    start_engagement_from_opportunity_task_request ={

        "AwsSubmission": {
            "InvolvementType": "Co-Sell",
            "Visibility": "Full"
        },
        "Catalog": CATALOG_TO_USE,
        "Identifier" : identifier,
        "ClientToken": "test-annjqwesdsd99"
    }
    try:
        # Perform an API call
        response =
partner_central_client.start_engagement_from_opportunity_task(**start_engagement_from_op
        return response

    except ClientError as err:
        # Catch all client exceptions
        print(err.response)
```

```
        return None

def usage_demo():
    identifier = "05465588"

    logging.basicConfig(level=logging.INFO, format"%(levelname)s: %(message)s")

    print("-" * 88)
    print("Start Engagement from Opportunity Task.")
    print("-" * 88)

helper.pretty_print_datetime(start_engagement_from_opportunity_task(identifier))

if __name__ == "__main__":
    usage_demo()
```

- For API details, see [StartEngagementFromOpportunityTask](#) in *AWS SDK for Python (Boto3) API Reference*.

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Use UpdateOpportunity with an AWS SDK

The following code examples show how to use UpdateOpportunity.

Java

### SDK for Java 2.x

Update an opportunity.

```
package org.example;

import java.time.Instant;
import java.util.ArrayList;
import java.util.List;

import static org.example.utils.Constants.*;
```

```
import org.example.entity.Root;
import org.example.utils.Constants;
import org.example.utils.ReferenceCodesUtils;
import org.example.utils.StringSerializer;

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;
import software.amazon.awssdk.http.apache.ApacheHttpClient;
import software.amazon.awssdk.regions.Region;
import
    software.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;
import software.amazon.awssdk.services.partnercentralselling.model.Account;
import software.amazon.awssdk.services.partnercentralselling.model.Address;
import software.amazon.awssdk.services.partnercentralselling.model.Contact;
import software.amazon.awssdk.services.partnercentralselling.model.Customer;
import
    software.amazon.awssdk.services.partnercentralselling.model.ExpectedCustomerSpend;
import
    software.amazon.awssdk.services.partnercentralselling.model.GetOpportunityRequest;
import
    software.amazon.awssdk.services.partnercentralselling.model.GetOpportunityResponse;
import software.amazon.awssdk.services.partnercentralselling.model.LifeCycle;
import software.amazon.awssdk.services.partnercentralselling.model.Marketing;
import
    software.amazon.awssdk.services.partnercentralselling.model.NextStepsHistory;
import software.amazon.awssdk.services.partnercentralselling.model.Project;
import software.amazon.awssdk.services.partnercentralselling.model.ReviewStatus;
import
    software.amazon.awssdk.services.partnercentralselling.model.UpdateOpportunityRequest;
import
    software.amazon.awssdk.services.partnercentralselling.model.UpdateOpportunityResponse;

import com.google.gson.Gson;
import com.google.gson.GsonBuilder;
import com.google.gson.ToNumberPolicy;

/*
 * Purpose
 * PC-API-02/06 Update opportunity when LifeCycle.ReviewStatus is not Submitted
 * or In-Review
 */

public class UpdateOpportunity {
```

```
static final Gson GSON = new GsonBuilder()
    .setObjectToNumberStrategy(ToNumberPolicy.LAZY_PARSED_NUMBER)
    .registerTypeAdapter(String.class, new StringSerializer())
    .create();

static PartnerCentralSellingClient client =
    PartnerCentralSellingClient.builder()
        .region(Region.US_EAST_1)
        .credentialsProvider(DefaultCredentialsProvider.create())
        .httpClient(ApacheHttpClient.builder().build())
        .build();

static String OPPORTUNITY_ORIGIN = ORIGIN_PARTNER_ORIGINATED;

public static void main(String[] args) {

    String inputFile = "updateOpportunity.json";

    if (args.length > 0)
        inputFile = args[0];

    UpdateOpportunityResponse response = updateOpportunity(inputFile);

    client.close();
}

public static GetOpportunityResponse getResponse(String opportunityId) {

    GetOpportunityRequest getOpportunityRequest =
    GetOpportunityRequest.builder()
        .catalog(Constants.CATALOG_TO_USE)
        .identifier(opportunityId)
        .build();

    GetOpportunityResponse response =
    client.getOpportunity(getOpportunityRequest);
    System.out.println(opportunityId + ":" + response);
    return response;
}

public static UpdateOpportunityResponse updateOpportunity(String inputFile) {

    String inputString = ReferenceCodesUtils.readFileToString(inputFile);
```

```
Root root = JSON.fromJson(inputString, Root.class);
GetOpportunityResponse response = getResponse(root.identifier);

if (response != null
    && response.lifeCycle() != null
    && response.lifeCycle().reviewStatus() != null
    && response.lifeCycle().reviewStatus() != ReviewStatus.SUBMITTED
    && response.lifeCycle().reviewStatus() != ReviewStatus.IN_REVIEW) {

    List<NextStepsHistory> nextStepsHistories = new ArrayList<NextStepsHistory>();
    if (root.lifeCycle != null && root.lifeCycle.nextStepsHistories != null) {
        for (org.example.entity.NextStepsHistory nextStepsHistoryJson :
            root.lifeCycle.nextStepsHistories) {
            NextStepsHistory nextStepsHistory = NextStepsHistory.builder()
                .time(Instant.parse(nextStepsHistoryJson.time))
                .value(nextStepsHistoryJson.value)
                .build();
            nextStepsHistories.add(nextStepsHistory);
        }
    }
}

Lifecycle lifecycle = null;
if (root.lifecycle != null) {
    lifecycle = Lifecycle.builder()
        .closedLostReason(root.lifecycle.closedLostReason)
        .nextSteps(root.lifecycle.nextSteps)
        .nextStepsHistory(nextStepsHistories)
        .reviewComments(root.lifecycle.reviewComments)
        .reviewStatus(root.lifecycle.reviewStatus)
        .reviewStatusReason(root.lifecycle.reviewStatusReason)
        .stage(root.lifecycle.stage)
        .targetCloseDate(root.lifecycle.targetCloseDate)
        .build();
}

Marketing marketing = null;
if (root.marketing != null) {
    marketing = Marketing.builder()
        .awsFundingUsed(root.marketing.awsFundingUsed)
        .campaignName(root.marketing.campaignName)
        .channels(root.marketing.channels)
        .source(root.marketing.source)
        .useCases(root.marketing.useCases)
        .build();
```

```
}

    Address address = null;
    if (root.customer != null && root.customer.account != null &&
root.customer.account.address != null) {
        address =
Address.builder().postalCode(root.customer.account.address.postalCode)
            .stateOrRegion(root.customer.account.address.stateOrRegion)
            .countryCode(root.customer.account.address.countryCode).build();
    }

    Account account = null;
    if (root.customer != null && root.customer.account != null) {
        account = Account.builder().address(address).duns(root.customer.account.duns)

.industry(root.customer.account.industry).companyName(root.customer.account.companyName)
            .websiteUrl(root.customer.account.websiteUrl).build();
    }

    List<Contact> contacts = new ArrayList<Contact>();
    if (root.customer != null && root.customer.contacts != null) {
        for (org.example.entity.Contact jsonContact : root.customer.contacts) {
            Contact contact = Contact.builder()
                .email(jsonContact.email)
                .firstName(jsonContact.firstName)
                .lastName(jsonContact.lastName)
                .phone(jsonContact.phone)
                .businessTitle(jsonContact.businessTitle)
                .build();
            contacts.add(contact);
        }
    }

    Customer customer =
Customer.builder().account(account).contacts(contacts).build();

    List<ExpectedCustomerSpend> expectedCustomerSpends = new
ArrayList<ExpectedCustomerSpend>();
    if (root.project != null && root.project.expectedCustomerSpend != null) {
        for (org.example.entity.ExpectedCustomerSpend expectedCustomerSpendJson :
root.project.expectedCustomerSpend) {
            ExpectedCustomerSpend expectedCustomerSpend = null;
            expectedCustomerSpend = ExpectedCustomerSpend.builder()
```

```
.amount(expectedCustomerSpendJson.amount)
.currencyCode(expectedCustomerSpendJson.currencyCode)
.frequency(expectedCustomerSpendJson.frequency)
.targetCompany(expectedCustomerSpendJson.targetCompany)
.build();
expectedCustomerSpends.add(expectedCustomerSpend);
}
}

Project project = null;
if (root.project != null) {
    project = Project.builder().title(root.project.title)
        .customerBusinessProblem(root.project.customerBusinessProblem)

    .customerUseCase(root.project.customerUseCase).deliveryModels(root.project.deliveryModel)
        .expectedCustomerSpend(expectedCustomerSpends)

    .salesActivities(root.project.salesActivities).competitorName(root.project.competitorName)
        .otherSolutionDescription(root.project.otherSolutionDescription).build();
}

// Building the Actual CreateOpportunity Request
UpdateOpportunityRequest updateOpportunityRequest =
UpdateOpportunityRequest.builder().catalog(root.catalog)

.identifier(root.identifier).lastModifiedDate(Instant.parse(root.lastModifiedDate))

.primaryNeedsFromAwsWithStrings(root.primaryNeedsFromAws).opportunityType(root.opportunityType)
    .lifeCycle(lifeCycle)
    .customer(customer)
    .project(project)
    .partnerOpportunityIdentifier(root.partnerOpportunityIdentifier)
    .marketing(marketing)
    .nationalSecurity(root.nationalSecurity)
    .opportunityType(root.opportunityType)
    .build();

UpdateOpportunityResponse updateResponse =
client.updateOpportunity(updateOpportunityRequest);
System.out.println("Successfully updated opportunity: " + updateResponse);

return updateResponse;
} else {
    System.out.println("Opportunity cannot be updated.");
}
```

```
        return null;
    }
}
}
```

- For API details, see [UpdateOpportunity](#) in *AWS SDK for Java 2.x API Reference*.

## Python

### SDK for Python (Boto3)

Update an opportunity.

```
#!/usr/bin/env python

"""
Purpose
PC-API-2 Updating Partner Originated Opportunity
"""

import logging
import boto3
import sys
import os
sys.path.append(os.path.dirname(os.path.dirname(os.path.abspath(__file__))))
import utils.helpers as helper
from botocore.client import ClientError
import utils.stringify_details as sd
from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

partner_central_client = boto3.client(
    service_name=serviceName,
    region_name='us-east-1'
)

def get_opportunity(identifier):
    get_opportunity_request ={
        "Identifier": identifier,
        "Catalog": CATALOG_TO_USE
    }
```

```
try:  
    # Perform an API call  
    response =  
partner_central_client.get_opportunity(**get_opportunity_request)  
    return response  
  
except ClientError as err:  
    # Catch all client exceptions  
    print(err.response)  
  
def update_opportunity():  
    update_opportunity_request_orig = sd.stringify_json("src/update_opportunity/  
update_opportunity_technical_validation.json")  
    update_opportunity_request =  
helper.remove_nulls(update_opportunity_request_orig)  
  
    try:  
        # Perform an API call  
        response =  
partner_central_client.update_opportunity(**update_opportunity_request)  
        return response  
  
    except ClientError as err:  
        # Catch all client exceptions  
        print(err.response)  
  
def update_opportunity_if_eligible(identifier):  
    response = get_opportunity(identifier)  
    if response is not None:  
        return update_opportunity()  
    else:  
        print("Failed to retrieve opportunity details")  
  
def usage_demo():  
    identifier = "05465588"  
  
    logging.basicConfig(level=logging.INFO, format"%(levelname)s: %(message)s")  
  
    print("-" * 88)  
    print("Updating opportunity.")  
    print("-" * 88)  
  
    helper.pretty_print_datetime(update_opportunity_if_eligible(identifier))
```

```
if __name__ == "__main__":
    usage_demo()
```

- For API details, see [UpdateOpportunity](#) in *AWS SDK for Python (Boto3) API Reference*.

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

## Scenarios for Partner Central using AWS SDKs

The following code examples show you how to implement common scenarios in Partner Central with AWS SDKs. These scenarios show you how to accomplish specific tasks by calling multiple functions within Partner Central or combined with other AWS services. Each scenario includes a link to the complete source code, where you can find instructions on how to set up and run the code.

Scenarios target an intermediate level of experience to help you understand service actions in context.

### Examples

- [Update associated entity of an opportunity](#)

## Update associated entity of an opportunity

The following code examples show how to:

- Disassociate an old entity.
- Associate a new entity.

Java

### SDK for Java 2.x

 **Note**

There's more on GitHub. Find the complete example and learn how to set up and run in the [Scenarios](#) repository.

## Update associated entity of an opportunity

```
package org.example;

import static org.example.utils.Constants.*;

import org.example.utils.Constants;
import org.example.utils.ReferenceCodesUtils;

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;
import software.amazon.awssdk.http.apache.ApacheHttpClient;
import software.amazon.awssdk.regions.Region;
import
software.amazon.awssdk.services.partnercentralselling.PartnerCentralSellingClient;
import
software.amazon.awssdk.services.partnercentralselling.model.AssociateOpportunityRequest;
import
software.amazon.awssdk.services.partnercentralselling.model.AssociateOpportunityResponse
import
software.amazon.awssdk.services.partnercentralselling.model.DisassociateOpportunityRequest
import
software.amazon.awssdk.services.partnercentralselling.model.DisassociateOpportunityResponse

/*
Purpose
PC-API -17 Replacing a solution
*/
public class ReplaceSolution {

    static PartnerCentralSellingClient client =
    PartnerCentralSellingClient.builder()
        .region(Region.US_EAST_1)
        .credentialsProvider(DefaultCredentialsProvider.create())
        .httpClient(ApacheHttpClient.builder().build())
        .build();

    public static void main(String[] args) {

        String opportunityId = args.length > 0 ? args[0] : OPPORTUNITY_ID;

        String entityType = "Solutions";
        String originalEntityIdentifier = "S-0000000";
        String newEntityIdentifier = "S-0011111";
```

```
        disassociateOppornitityResponse(opportunityId, entityType,
originalEntityIdentifier );
        AssociateOpportunityResponse associateOpportunityResponse =
associateOpportunityResponse(opportunityId, entityType, newEntityIdentifier );

        ReferenceCodesUtils.formatOutput(associateOpportunityResponse);
    }

private static AssociateOpportunityResponse associateOpportunityResponse(String
opportunityId, String entityType, String entityIdentifier) {

    AssociateOpportunityRequest associateOpportunityRequest =
AssociateOpportunityRequest.builder()
    .catalog(Constants.CATALOG_TO_USE)
    .opportunityIdentifier(opportunityId)
    .relatedEntityType(entityType)
    .relatedEntityIdentifier(entityIdentifier)
    .build();

    AssociateOpportunityResponse response =
client.associateOpportunity(associateOpportunityRequest);

    return response;
}

private static DisassociateOpportunityResponse
disassociateOppornitityResponse(String opportunityId, String entityType, String
entityIdentifier) {
    PartnerCentralSellingClient client = PartnerCentralSellingClient.builder()
        .region(Region.US_EAST_1)
        .credentialsProvider(DefaultCredentialsProvider.create())
        .httpClient(ApacheHttpClient.builder().build())
        .build();

    DisassociateOpportunityRequest disassociateOpportunityRequest =
DisassociateOpportunityRequest.builder()
    .catalog(Constants.CATALOG_TO_USE)
    .opportunityIdentifier(opportunityId)
    .relatedEntityType(entityType)
    .relatedEntityIdentifier(entityIdentifier)
    .build();
}
```

```
        DisassociateOpportunityResponse response =
client.disassociateOpportunity(disassociateOpportunityRequest);

        return response;
}
}
```

- For API details, see the following topics in *AWS SDK for Java 2.x API Reference*.
  - [AssociateOpportunity](#)
  - [DisassociateOpportunity](#)

## Python

### SDK for Python (Boto3)

#### Note

There's more on GitHub. Find the complete example and learn how to set up and run in the [AWS Code Examples Repository](#).

## Update Associated Entity of an opportunity

```
#!/usr/bin/env python

"""
Purpose
PC-API -17 Replacing a solution
"""

import logging
import boto3
import utils.helpers as helper
from botocore.client import ClientError

from utils.constants import CATALOG_TO_USE

serviceName = "partnercentral-selling"

partner_central_client = boto3.client(
```

```
        service_name=serviceName,
        region_name='us-east-1'
    )

def replace_solution(original_entity_identifier, new_entity_identifier,
opportunityIdentifier):
    disassociate_opportunity_request ={
        "Catalog": CATALOG_TO_USE,
        "OpportunityIdentifier" : opportunityIdentifier,
        "RelatedEntityType" : "Solutions",
        "RelatedEntityIdentifier" : original_entity_identifier
    }

    associate_opportunity_request ={
        "Catalog": CATALOG_TO_USE,
        "OpportunityIdentifier" : opportunityIdentifier,
        "RelatedEntityType" : "Solutions",
        "RelatedEntityIdentifier" : new_entity_identifier
    }
    try:
        # Perform an API call
        response =
partner_central_client.disassociate_opportunity(**disassociate_opportunity_request)
        response =
partner_central_client.associate_opportunity(**associate_opportunity_request)
        return response

    except ClientError as err:
        # Catch all client exceptions
        print(err.response)

def usage_demo():
    original_entity_identifier = "S-0049999"
    new_entity_identifier = "S-0050014"
    opportunityIdentifier = "04397574"

    logging.basicConfig(level=logging.INFO, format="%(levelname)s: %(message)s")

    print("-" * 88)
    print("Replacing a solution.")
    print("-" * 88)

    helper.pretty_print_datetime(replace_solution(original_entity_identifier,
new_entity_identifier, opportunityIdentifier))
```

```
if __name__ == "__main__":
    usage_demo()
```

- For API details, see the following topics in *AWS SDK for Python (Boto3) API Reference*.
  - [AssociateOpportunity](#)
  - [DisassociateOpportunity](#)

For a complete list of AWS SDK developer guides and code examples, see [Using AWS Partner Central API with an AWS SDK](#). This topic also includes information about getting started and details about previous SDK versions.

# Actions

The following actions are supported:

- [AcceptEngagementInvitation](#)
- [AssignOpportunity](#)
- [AssociateOpportunity](#)
- [CreateEngagement](#)
- [CreateEngagementInvitation](#)
- [CreateOpportunity](#)
- [CreateResourceSnapshot](#)
- [CreateResourceSnapshotJob](#)
- [DeleteResourceSnapshotJob](#)
- [DisassociateOpportunity](#)
- [GetAwsOpportunitySummary](#)
- [GetEngagement](#)
- [GetEngagementInvitation](#)
- [GetOpportunity](#)
- [GetResourceSnapshot](#)
- [GetResourceSnapshotJob](#)
- [GetSellingSystemSettings](#)
- [ListEngagementByAcceptingInvitationTasks](#)
- [ListEngagementFromOpportunityTasks](#)
- [ListEngagementInvitations](#)
- [ListEngagementMembers](#)
- [ListEngagementResourceAssociations](#)
- [ListEngagements](#)
- [ListOpportunities](#)
- [ListResourceSnapshotJobs](#)
- [ListResourceSnapshots](#)
- [ListSolutions](#)

- [ListTagsForResource](#)
- [PutSellingSystemSettings](#)
- [RejectEngagementInvitation](#)
- [StartEngagementByAcceptingInvitationTask](#)
- [StartEngagementFromOpportunityTask](#)
- [StartResourceSnapshotJob](#)
- [StopResourceSnapshotJob](#)
- [SubmitOpportunity](#)
- [TagResource](#)
- [UntagResource](#)
- [UpdateOpportunity](#)

# AcceptEngagementInvitation

Use the `AcceptEngagementInvitation` action to accept an engagement invitation shared by AWS. Accepting the invitation indicates your willingness to participate in the engagement, granting you access to all engagement-related data.

## Request Syntax

```
{  
    "Catalog": "string",  
    "Identifier": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### Catalog

The `CatalogType` parameter specifies the catalog associated with the engagement invitation. Accepted values are `AWS` and `Sandbox`, which determine the environment in which the engagement invitation is managed.

Type: String

Pattern: `[a-zA-Z]+`

Required: Yes

### Identifier

The `Identifier` parameter in the `AcceptEngagementInvitationRequest` specifies the unique identifier of the `EngagementInvitation` to be accepted. Providing the correct identifier ensures that the intended invitation is accepted.

Type: String

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

Pattern: (`arn:.*|engi-[0-9a-z]{13}`)

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](#).

### AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### ConflictException

This error occurs when the request can't be processed due to a conflict with the target resource's current state, which could result from updating or deleting the resource.

Suggested action: Fetch the latest state of the resource, verify the state, and retry the request.

HTTP Status Code: 400

### InternalServerError

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

## ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)

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

# AssignOpportunity

Enables you to reassign an existing Opportunity to another user within your Partner Central account. The specified user receives the opportunity, and it appears on their Partner Central dashboard, allowing them to take necessary actions or proceed with the opportunity.

This is useful for distributing opportunities to the appropriate team members or departments within your organization, ensuring that each opportunity is handled by the right person. By default, the opportunity owner is the one who creates it. Currently, there's no API to enumerate the list of available users.

## Request Syntax

```
{  
    "Assignee": {  
        "BusinessTitle": "string",  
        "Email": "string",  
        "FirstName": "string",  
        "LastName": "string"  
    },  
    "Catalog": "string",  
    "Identifier": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Assignee

Specifies the user or team member responsible for managing the assigned opportunity. This field identifies the *Assignee* based on the partner's internal team structure. Ensure that the email address is associated with a registered user in your Partner Central account.

Type: [AssigneeContact](#) object

Required: Yes

## [Catalog](#)

Specifies the catalog associated with the request. This field takes a string value from a predefined list: AWS or Sandbox. The catalog determines which environment the opportunity is assigned in. Use AWS to assign real opportunities in the AWS catalog, and Sandbox for testing in secure, isolated environments.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

## [Identifier](#)

Requires the Opportunity's unique identifier when you want to assign it to another user. Provide the correct identifier so the intended opportunity is reassigned.

Type: String

Pattern: 0[0-9]{1,19}

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](#).

### AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

## InternalServerException

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

## ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# AssociateOpportunity

Enables you to create a formal association between an Opportunity and various related entities, enriching the context and details of the opportunity for better collaboration and decision making. You can associate an opportunity with the following entity types:

- Partner Solution: A software product or consulting practice created and delivered by AWS Partners. Partner Solutions help customers address business challenges using AWS services.
- AWS Products: AWS offers many products and services that provide scalable, reliable, and cost-effective infrastructure solutions. For the latest list of AWS products, see [AWS products](#).
- AWS Marketplace private offer: Allows AWS Marketplace sellers to extend custom pricing and terms to individual AWS customers. Sellers can negotiate custom prices, payment schedules, and end user license terms through private offers, enabling AWS customers to acquire software solutions tailored to their specific needs. For more information, see [Private offers in AWS Marketplace](#).

To obtain identifiers for these entities, use the following methods:

- Solution: Use the [ListSolutions](#) operation.
- AWS Products: For the latest list of AWS products, see [AWS products](#).
- AWS Marketplace private offer: Use the [Using the AWS Marketplace Catalog API](#) to list entities. Specifically, use the [ListEntities](#) operation to retrieve a list of private offers. The request returns the details of available private offers. For more information, see [ListEntities](#).

## Request Syntax

```
{  
  "Catalog": "string",  
  "OpportunityIdentifier": "string",  
  "RelatedEntityIdentifier": "string",  
  "RelatedEntityType": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

## Catalog

Specifies the catalog associated with the request. This field takes a string value from a predefined list: AWS or Sandbox. The catalog determines which environment the opportunity association is made in. Use AWS to associate opportunities in the AWS catalog, and Sandbox for testing in secure, isolated environments.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

## OpportunityIdentifier

Requires the Opportunity's unique identifier when you want to associate it with a related entity. Provide the correct identifier so the intended opportunity is updated with the association.

Type: String

Pattern: 0[0-9]{1,19}

Required: Yes

## RelatedEntityIdentifier

Requires the related entity's unique identifier when you want to associate it with the Opportunity. For AWS Marketplace entities, provide the Amazon Resource Name (ARN). Use the [AWS Marketplace API](#) to obtain the ARN.

Type: String

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

Required: Yes

## RelatedEntityType

Specifies the entity type that you're associating with the Opportunity. This helps to categorize and properly process the association.

Type: String

Valid Values: Solutions | AwsProducts | AwsMarketplaceOffers

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](#).

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **InternalServerError**

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



# CreateEngagement

The CreateEngagement action allows you to create an Engagement, which serves as a collaborative space between different parties such as AWS Partners and AWS Sellers. This action automatically adds the caller's AWS account as an active member of the newly created Engagement.

## Request Syntax

```
{  
    "Catalog": "string",  
    "ClientToken": "string",  
    "Contexts": [  
        {  
            "Payload": { ... },  
            "Type": "string"  
        }  
    ],  
    "Description": "string",  
    "Title": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

The CreateEngagementRequest\$Catalog parameter specifies the catalog related to the engagement. Accepted values are AWS and Sandbox, which determine the environment in which the engagement is managed.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### [ClientToken](#)

The CreateEngagementRequest\$ClientToken parameter specifies a unique, case-sensitive identifier to ensure that the request is handled exactly once. The value must not exceed sixty-four alphanumeric characters.

Type: String

Pattern: [ ! -~]{1,64}

Required: Yes

### [Description](#)

Provides a description of the Engagement.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Required: Yes

### [Title](#)

Specifies the title of the Engagement.

Type: String

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

Required: Yes

### [Contexts](#)

The Contexts field is a required array of objects, with a maximum of 5 contexts allowed, specifying detailed information about customer projects associated with the Engagement. Each context object contains a Type field indicating the context type, which must be CustomerProject in this version, and a Payload field containing the CustomerProject details. The CustomerProject object is composed of two main components: Customer and Project. The Customer object includes information such as CompanyName, WebsiteUrl, Industry, and CountryCode, providing essential details about the customer. The Project object contains Title, BusinessProblem, and TargetCompletionDate, offering insights

into the specific project associated with the customer. This structure allows comprehensive context to be included within the Engagement, facilitating effective collaboration between parties by providing relevant customer and project information.

Type: Array of [EngagementContextDetails](#) objects

Array Members: Minimum number of 0 items. Maximum number of 5 items.

Required: No

## Response Syntax

```
{  
  "Arn": "string",  
  "Id": "string"  
}
```

## Response Elements

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

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

### Arn

The Amazon Resource Name (ARN) that identifies the engagement.

Type: String

Pattern: arn:.\*

### Id

Unique identifier assigned to the newly created engagement.

Type: String

Pattern: eng-[0-9a-z]{14}

## Errors

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

## AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

## ConflictException

This error occurs when the request can't be processed due to a conflict with the target resource's current state, which could result from updating or deleting the resource.

Suggested action: Fetch the latest state of the resource, verify the state, and retry the request.

HTTP Status Code: 400

## ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ServiceQuotaExceededException

This error occurs when the request would cause a service quota to be exceeded. Service quotas represent the maximum allowed use of a specific resource, and this error indicates that the request would surpass that limit.

Suggested action: Review the [Quotas](#) for the resource, and either reduce usage or request a quota increase.

HTTP Status Code: 400

## ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# CreateEngagementInvitation

This action creates an invitation from a sender to a single receiver to join an engagement.

## Request Syntax

```
{  
    "Catalog": "string",  
    "ClientToken": "string",  
    "EngagementIdentifier": "string",  
    "Invitation": {  
        "Message": "string",  
        "Payload": { ... },  
        "Receiver": { ... }  
    }  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### [Catalog](#)

Specifies the catalog related to the engagement. Accepted values are AWS and Sandbox, which determine the environment in which the engagement is managed.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### [ClientToken](#)

Specifies a unique, client-generated UUID to ensure that the request is handled exactly once. This token helps prevent duplicate invitation creations.

Type: String

Pattern: [ ! -~]{1,64}

Required: Yes

### EngagementIdentifier

The unique identifier of the Engagement associated with the invitation. This parameter ensures the invitation is created within the correct Engagement context.

Type: String

Pattern: eng-[0-9a-z]{14}

Required: Yes

### Invitation

The Invitation object all information necessary to initiate an engagement invitation to a partner. It contains a personalized message from the sender, the invitation's receiver, and a payload. The Payload can be the OpportunityInvitation, which includes detailed structures for sender contacts, partner responsibilities, customer information, and project details.

Type: [Invitation](#) object

Required: Yes

## Response Syntax

```
{  
  "Arn": "string",  
  "Id": "string"  
}
```

## Response Elements

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

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

## Arn

The Amazon Resource Name (ARN) that uniquely identifies the engagement invitation.

Type: String

Pattern: arn:aws:partnercentral::[0-9]{12}:[a-zA-Z]+/engagement-invitation/engi-[0-9,a-z]{13}

## Id

Unique identifier assigned to the newly created engagement invitation.

Type: String

Pattern: engi-[0-9,a-z]{13}

# Errors

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

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **ConflictException**

This error occurs when the request can't be processed due to a conflict with the target resource's current state, which could result from updating or deleting the resource.

Suggested action: Fetch the latest state of the resource, verify the state, and retry the request.

HTTP Status Code: 400

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### **ServiceQuotaExceededException**

This error occurs when the request would cause a service quota to be exceeded. Service quotas represent the maximum allowed use of a specific resource, and this error indicates that the request would surpass that limit.

Suggested action: Review the [Quotas](#) for the resource, and either reduce usage or request a quota increase.

HTTP Status Code: 400

### **ThrottlingException**

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### **ValidationException**

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# CreateOpportunity

Creates an Opportunity record in Partner Central. Use this operation to create a potential business opportunity for submission to AWS. Creating an opportunity sets `Lifecycle.ReviewStatus` to `Pending Submission`.

To submit an opportunity, follow these steps:

1. To create the opportunity, use `CreateOpportunity`.
2. To associate a solution with the opportunity, use `AssociateOpportunity`.
3. To start the engagement with AWS, use `StartEngagementFromOpportunity`.

After submission, you can't edit the opportunity until the review is complete. But opportunities in the `Pending Submission` state must have complete details. You can update the opportunity while it's in the `Pending Submission` state.

There's a set of mandatory fields to create opportunities, but consider providing optional fields to enrich the opportunity record.

## Request Syntax

```
{
  "CatalogClientTokenCustomerAccountAddressCityCountryCodePostalCodeStateOrRegionStreetAddressAwsAccountIdCompanyNameDunsIndustryOtherIndustryWebsiteUrl
```

```
"Contacts": [
    {
        "BusinessTitleEmailFirstNameLastNamePhoneLifeCycle": {
    "ClosedLostReasonNextStepsNextStepsHistory": [
        {
            "TimeValueReviewCommentsReviewStatusReviewStatusReasonStageTargetCloseDateMarketing": {
    "AwsFundingUsedCampaignNameChannelsSourceUseCasesNationalSecurityOpportunityTeam": [
    {
        "BusinessTitleEmailFirstNameLastNamePhoneOpportunityTypeOrigin
```

```
"PartnerOpportunityIdentifier": "string",
"PrimaryNeedsFromAws": [ "string" ],
"Project": {
    "AdditionalComments": "string",
    "ApnPrograms": [ "string" ],
    "CompetitorName": "string",
    "CustomerBusinessProblem": "string",
    "CustomerUseCase": "string",
    "DeliveryModels": [ "string" ],
    "ExpectedCustomerSpend": [
        {
            "Amount": "string",
            "CurrencyCode": "string",
            "EstimationUrl": "string",
            "Frequency": "string",
            "TargetCompany": "string"
        }
    ],
    "OtherCompetitorNames": "string",
    "OtherSolutionDescription": "string",
    "RelatedOpportunityIdentifier": "string",
    "SalesActivities": [ "string" ],
    "Title": "string"
},
"SoftwareRevenue": {
    "DeliveryModel": "string",
    "EffectiveDate": "string",
    "ExpirationDate": "string",
    "Value": {
        "Amount": "string",
        "CurrencyCode": "string"
    }
}
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

**Note**

In the following list, the required parameters are described first.

## Catalog

Specifies the catalog associated with the request. This field takes a string value from a predefined list: AWS or Sandbox. The catalog determines which environment the opportunity is created in. Use AWS to create opportunities in the AWS catalog, and Sandbox for testing in secure, isolated environments.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

## ClientToken

Required to be unique, and should be unchanging, it can be randomly generated or a meaningful string.

Default: None

Best practice: To help ensure uniqueness and avoid conflicts, use a Universally Unique Identifier (UUID) as the ClientToken. You can use standard libraries from most programming languages to generate this. If you use the same client token, the API returns the following error: "Conflicting client token submitted for a new request body."

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

## Customer

Specifies customer details associated with the Opportunity.

Type: [Customer](#) object

Required: No

## LifeCycle

An object that contains lifecycle details for the Opportunity.

Type: [LifeCycle](#) object

Required: No

## Marketing

This object contains marketing details and is optional for an opportunity.

Type: [Marketing](#) object

Required: No

## NationalSecurity

Indicates whether the Opportunity pertains to a national security project. This field must be set to true only when the customer's industry is *Government*. Additional privacy and security measures apply during the review and management process for opportunities marked as NationalSecurity.

Type: String

Valid Values: Yes | No

Required: No

## OpportunityTeam

Represents the internal team handling the opportunity. Specify collaborating members of this opportunity who are within the partner's organization.

Type: Array of [Contact](#) objects

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Required: No

## OpportunityType

Specifies the opportunity type as a renewal, new, or expansion.

Opportunity types:

- New opportunity: Represents a new business opportunity with a potential customer that's not previously engaged with your solutions or services.
- Renewal opportunity: Represents an opportunity to renew an existing contract or subscription with a current customer, ensuring continuity of service.
- Expansion opportunity: Represents an opportunity to expand the scope of an existing contract or subscription, either by adding new services or increasing the volume of existing services for a current customer.

Type: String

Valid Values: Net New Business | Flat Renewal | Expansion

Required: No

## Origin

Specifies the origin of the opportunity, indicating if it was sourced from AWS or the partner. For all opportunities created with Catalog: AWS, this field must only be Partner Referral. However, when using Catalog: Sandbox, you can set this field to AWS Referral to simulate AWS referral creation. This allows AWS-originated flows testing in the sandbox catalog.

Type: String

Valid Values: AWS Referral | Partner Referral

Required: No

## PartnerOpportunityIdentifier

Specifies the opportunity's unique identifier in the partner's CRM system. This value is essential to track and reconcile because it's included in the outbound payload to the partner.

This field allows partners to link an opportunity to their CRM, which helps to ensure seamless integration and accurate synchronization between the Partner Central API and the partner's internal systems.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Required: No

## PrimaryNeedsFromAws

Identifies the type of support the partner needs from AWS.

Valid values:

- Cosell—Architectural Validation: Confirmation from AWS that the partner's proposed solution architecture is aligned with AWS best practices and poses minimal architectural risks.
- Cosell—Business Presentation: Request AWS seller's participation in a joint customer presentation.
- Cosell—Competitive Information: Access to AWS competitive resources and support for the partner's proposed solution.
- Cosell—Pricing Assistance: Connect with an AWS seller for support situations where a partner may be receiving an upfront discount on a service (for example: EDP deals).
- Cosell—Technical Consultation: Connect with an AWS Solutions Architect to address the partner's questions about the proposed solution.
- Cosell—Total Cost of Ownership Evaluation: Assistance with quoting different cost savings of proposed solutions on AWS versus on-premises or a traditional hosting environment.
- Cosell—Deal Support: Request AWS seller's support to progress the opportunity (for example: joint customer call, strategic positioning).
- Cosell—Support for Public Tender/RFx: Opportunity related to the public sector where the partner needs AWS RFx support.

Type: Array of strings

Valid Values: Co-Sell - Architectural Validation | Co-Sell - Business Presentation | Co-Sell - Competitive Information | Co-Sell - Pricing Assistance | Co-Sell - Technical Consultation | Co-Sell - Total Cost of Ownership Evaluation | Co-Sell - Deal Support | Co-Sell - Support for Public Tender / RFx

Required: No

## Project

An object that contains project details for the Opportunity.

Type: [Project](#) object

Required: No

## SoftwareRevenue

Specifies details of a customer's procurement terms. This is required only for partners in eligible programs.

Type: [SoftwareRevenue](#) object

Required: No

## Response Syntax

```
{  
    "Id": "string",  
    "LastModifiedDate": "string",  
    "PartnerOpportunityIdentifier": "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.

### Id

Read-only, system-generated Opportunity unique identifier. AWS creates this identifier, and it's used for all subsequent opportunity actions, such as updates, associations, and submissions. It helps to ensure that each opportunity is accurately tracked and managed.

Type: String

Pattern: 0[0-9]{1,19}

### LastModifiedDate

DateTime when the opportunity was last modified. When the Opportunity is created, its value is CreatedDate.

Type: Timestamp

## **PartnerOpportunityIdentifier**

Specifies the opportunity's unique identifier in the partner's CRM system. This value is essential to track and reconcile because it's included in the outbound payload sent back to the partner.

Type: String

## **Errors**

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

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **ConflictException**

This error occurs when the request can't be processed due to a conflict with the target resource's current state, which could result from updating or deleting the resource.

Suggested action: Fetch the latest state of the resource, verify the state, and retry the request.

HTTP Status Code: 400

### **InternalServerException**

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
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- [AWS SDK for Ruby V3](#)



# CreateResourceSnapshot

This action allows you to create an immutable snapshot of a specific resource, such as an opportunity, within the context of an engagement. The snapshot captures a subset of the resource's data based on the schema defined by the provided template.

## Request Syntax

```
{  
    "Catalog": "string",  
    "ClientToken": "string",  
    "EngagementIdentifier": "string",  
    "ResourceIdentifier": "string",  
    "ResourceSnapshotTemplateIdentifier": "string",  
    "ResourceType": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog where the snapshot is created. Valid values are AWS and Sandbox.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### ClientToken

Specifies a unique, client-generated UUID to ensure that the request is handled exactly once. This token helps prevent duplicate snapshot creations.

Type: String

Pattern: [ ! -~]{1,64}

Required: Yes

### EngagementIdentifier

The unique identifier of the engagement associated with this snapshot. This field links the snapshot to a specific engagement context.

Type: String

Pattern: eng-[0-9a-z]{14}

Required: Yes

### ResourceIdentifier

The unique identifier of the specific resource to be snapshotted. The format and constraints of this identifier depend on the ResourceType specified. For example: For Opportunity type, it will be an opportunity ID.

Type: String

Pattern: 0[0-9]{1,19}

Required: Yes

### ResourceSnapshotTemplateIdentifier

The name of the template that defines the schema for the snapshot. This template determines which subset of the resource data will be included in the snapshot. Must correspond to an existing and valid template for the specified ResourceType.

Type: String

Pattern: [a-zA-Z0-9]{3,80}

Required: Yes

### ResourceType

Specifies the type of resource for which the snapshot is being created. This field determines the structure and content of the snapshot. Must be one of the supported resource types, such as: Opportunity.

Type: String

Valid Values: Opportunity

Required: Yes

## Response Syntax

```
{  
  "Arn": "string",  
  "Revision": number  
}
```

## Response Elements

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

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

### Arn

Specifies the Amazon Resource Name (ARN) that uniquely identifies the snapshot created.

Type: String

Pattern: arn:.\*

### Revision

Specifies the revision number of the created snapshot. This field provides important information about the snapshot's place in the sequence of snapshots for the given resource.

Type: Integer

Valid Range: Minimum value of 1.

## Errors

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

## AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

## ConflictException

This error occurs when the request can't be processed due to a conflict with the target resource's current state, which could result from updating or deleting the resource.

Suggested action: Fetch the latest state of the resource, verify the state, and retry the request.

HTTP Status Code: 400

## ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ServiceQuotaExceededException

This error occurs when the request would cause a service quota to be exceeded. Service quotas represent the maximum allowed use of a specific resource, and this error indicates that the request would surpass that limit.

Suggested action: Review the [Quotas](#) for the resource, and either reduce usage or request a quota increase.

HTTP Status Code: 400

## ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# CreateResourceSnapshotJob

Use this action to create a job to generate a snapshot of the specified resource within an engagement. It initiates an asynchronous process to create a resource snapshot. The job creates a new snapshot only if the resource state has changed, adhering to the same access control and immutability rules as direct snapshot creation.

## Request Syntax

```
{  
    "Catalog": "string",  
    "ClientToken": "string",  
    "EngagementIdentifier": "string",  
    "ResourceIdentifier": "string",  
    "ResourceSnapshotTemplateIdentifier": "string",  
    "ResourceType": "string",  
    "Tags": [  
        {  
            "Key": "string",  
            "Value": "string"  
        }  
    ]  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog in which to create the snapshot job. Valid values are AWS and Sandbox.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### [ClientToken](#)

A client-generated UUID used for idempotency check. The token helps prevent duplicate job creations.

Type: String

Pattern: [ !-~]{1,64}

Required: Yes

### [EngagementIdentifier](#)

Specifies the identifier of the engagement associated with the resource to be snapshotted.

Type: String

Pattern: eng-[0-9a-z]{14}

Required: Yes

### [ResourceIdentifier](#)

Specifies the identifier of the specific resource to be snapshotted. The format depends on the ResourceType.

Type: String

Pattern: 0[0-9]{1,19}

Required: Yes

### [ResourceSnapshotTemplateIdentifier](#)

Specifies the name of the template that defines the schema for the snapshot.

Type: String

Pattern: [a-zA-Z0-9]{3,80}

Required: Yes

## ResourceType

The type of resource for which the snapshot job is being created. Must be one of the supported resource types i.e. Opportunity

Type: String

Valid Values: Opportunity

Required: Yes

## Tags

A map of the key-value pairs of the tag or tags to assign.

Type: Array of [Tag](#) objects

Array Members: Minimum number of 1 item. Maximum number of 200 items.

Required: No

## Response Syntax

```
{  
  "Arn": "string",  
  "Id": "string"  
}
```

## Response Elements

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

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

### Arn

The Amazon Resource Name (ARN) of the created snapshot job.

Type: String

Pattern: arn:.\*

## Id

The unique identifier for the created snapshot job.

Type: String

Pattern: job-[0-9a-z]{13}

## Errors

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

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **ConflictException**

This error occurs when the request can't be processed due to a conflict with the target resource's current state, which could result from updating or deleting the resource.

Suggested action: Fetch the latest state of the resource, verify the state, and retry the request.

HTTP Status Code: 400

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### **ServiceQuotaExceededException**

This error occurs when the request would cause a service quota to be exceeded. Service quotas represent the maximum allowed use of a specific resource, and this error indicates that the request would surpass that limit.

Suggested action: Review the [Quotas](#) for the resource, and either reduce usage or request a quota increase.

HTTP Status Code: 400

### ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



# DeleteResourceSnapshotJob

Use this action to deletes a previously created resource snapshot job. The job must be in a stopped state before it can be deleted.

## Request Syntax

```
{  
  "Catalog": "string",  
  "ResourceSnapshotJobIdentifier": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog from which to delete the snapshot job. Valid values are AWS and Sandbox.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### ResourceSnapshotJobIdentifier

The unique identifier of the resource snapshot job to be deleted.

Type: String

Pattern: job-[0-9a-z]{13}

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](#).

### AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### ConflictException

This error occurs when the request can't be processed due to a conflict with the target resource's current state, which could result from updating or deleting the resource.

Suggested action: Fetch the latest state of the resource, verify the state, and retry the request.

HTTP Status Code: 400

### ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# DisassociateOpportunity

Allows you to remove an existing association between an Opportunity and related entities, such as a Partner Solution, AWS product, or an AWS Marketplace offer. This operation is the counterpart to `AssociateOpportunity`, and it provides flexibility to manage associations as business needs change.

Use this operation to update the associations of an Opportunity due to changes in the related entities, or if an association was made in error. Ensuring accurate associations helps maintain clarity and accuracy to track and manage business opportunities. When you replace an entity, first attach the new entity and then disassociate the one to be removed, especially if it's the last remaining entity that's required.

## Request Syntax

```
{  
    "Catalog": "string",  
    "OpportunityIdentifier": "string",  
    "RelatedEntityIdentifier": "string",  
    "RelatedEntityType": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog associated with the request. This field takes a string value from a predefined list: AWS or Sandbox. The catalog determines which environment the opportunity disassociation is made in. Use AWS to disassociate opportunities in the AWS catalog, and Sandbox for testing in secure, isolated environments.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### OpportunityIdentifier

The opportunity's unique identifier for when you want to disassociate it from related entities. This identifier helps to ensure that the correct opportunity is updated.

Validation: Ensure that the provided identifier corresponds to an existing opportunity in the AWS system because incorrect identifiers result in an error and no changes are made.

Type: String

Pattern: 0[0-9]{1,19}

Required: Yes

### RelatedEntityIdentifier

The related entity's identifier that you want to disassociate from the opportunity. Depending on the type of entity, this could be a simple identifier or an Amazon Resource Name (ARN) for entities managed through AWS Marketplace.

For AWS Marketplace entities, use the AWS Marketplace API to obtain the necessary ARNs. For guidance on retrieving these ARNs, see [AWS MarketplaceUsing the AWS Marketplace Catalog API](#).

Validation: Ensure the identifier or ARN is valid and corresponds to an existing entity. An incorrect or invalid identifier results in an error.

Type: String

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

Required: Yes

### RelatedEntityType

The type of the entity that you're disassociating from the opportunity. When you specify the entity type, it helps the system correctly process the disassociation request to ensure that the right connections are removed.

Examples of entity types include Partner Solution, AWS product, and AWS Marketplaceoffer. Ensure that the value matches one of the expected entity types.

Validation: Provide a valid entity type to help ensure successful disassociation. An invalid or incorrect entity type results in an error.

Type: String

Valid Values: Solutions | AwsProducts | AwsMarketplaceOffers

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](#).

### AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### InternalServerError

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

### ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



# GetAwsOpportunitySummary

Retrieves a summary of an AWS Opportunity. This summary includes high-level details about the opportunity sourced from AWS, such as lifecycle information, customer details, and involvement type. It is useful for tracking updates on the AWS opportunity corresponding to an opportunity in the partner's account.

## Request Syntax

```
{  
    "Catalog": "string",  
    "RelatedOpportunityIdentifier": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog in which the AWS Opportunity is located. Accepted values include AWS for production opportunities or Sandbox for testing purposes. The catalog determines which environment the opportunity data is pulled from.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### RelatedOpportunityIdentifier

The unique identifier for the related partner opportunity. Use this field to correlate an AWS opportunity with its corresponding partner opportunity.

Type: String

Pattern: 0[0-9]{1,19}

Required: Yes

## Response Syntax

```
{  
    "Catalog": "string",  
    "Customer": {  
        "Contacts": [  
            {  
                "BusinessTitle": "string",  
                "Email": "string",  
                "FirstName": "string",  
                "LastName": "string",  
                "Phone": "string"  
            }  
        ]  
    },  
    "Insights": {  
        "EngagementScore": "string",  
        "NextBestActions": "string"  
    },  
    "InvolvementType": "string",  
    "InvolvementTypeChangeReason": "string",  
    "LifeCycle": {  
        "ClosedLostReason": "string",  
        "NextSteps": "string",  
        "NextStepsHistory": [  
            {  
                "Time": "string",  
                "Value": "string"  
            }  
        ],  
        "Stage": "string",  
        "TargetCloseDate": "string"  
    },  
    "OpportunityTeam": [  
        {  
            "BusinessTitle": "string",  
            "Email": "string",  
            "Name": "string",  
            "Role": "string",  
            "Status": "string",  
            "Title": "string"  
        }  
    ]  
}
```

```
        "FirstName": "string",
        "LastName": "string"
    },
],
"Origin": "string",
"Project": {
    "ExpectedCustomerSpend": [
        {
            "Amount": "string",
            "CurrencyCode": "string",
            "EstimationUrl": "string",
            "Frequency": "string",
            "TargetCompany": "string"
        }
    ]
},
"RelatedEntityIds": {
    "AwsProducts": [ "string" ],
    "Solutions": [ "string" ]
},
"RelatedOpportunityId": "string",
"Visibility": "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.

### Catalog

Specifies the catalog in which the AWS Opportunity exists. This is the environment (e.g., AWS or Sandbox) where the opportunity is being managed.

Type: String

Pattern: [a-zA-Z]+

### Customer

Provides details about the customer associated with the AWS Opportunity, including account information, industry, and other customer data. These details help partners understand the business context of the opportunity.

Type: [AwsOpportunityCustomer](#) object

## Insights

Provides insights into the AWS Opportunity, including engagement score and recommended actions that AWS suggests for the partner.

Type: [AwsOpportunityInsights](#) object

## InvolvementType

Specifies the type of involvement AWS has in the opportunity, such as direct cosell or advisory support. This field helps partners understand the role AWS plays in advancing the opportunity.

Type: String

Valid Values: For Visibility Only | Co-Sell

## InvolvementTypeChangeReason

Provides a reason for any changes in the involvement type of AWS in the opportunity. This field is used to track why the level of AWS engagement has changed from For Visibility Only to Co-sell offering transparency into the partnership dynamics.

Type: String

Valid Values: Expansion Opportunity | Change in Deal Information | Customer Requested | Technical Complexity | Risk Mitigation

## LifeCycle

Contains lifecycle information for the AWS Opportunity, including review status, stage, and target close date. This field is crucial for partners to monitor the progression of the opportunity.

Type: [AwsOpportunityLifeCycle](#) object

## OpportunityTeam

Details the AWS opportunity team, including members involved. This information helps partners know who from AWS is engaged and what their role is.

Type: Array of [AwsTeamMember](#) objects

## Origin

Specifies whether the AWS Opportunity originated from AWS or the partner. This helps distinguish between opportunities that were sourced by AWS and those referred by the partner.

Type: String

Valid Values: AWS Referral | Partner Referral

## Project

Provides details about the project associated with the AWS Opportunity, including the customer's business problem, expected outcomes, and project scope. This information is crucial for understanding the broader context of the opportunity.

Type: [AwsOpportunityProject](#) object

## RelatedEntityIds

Lists related entity identifiers, such as AWS products or partner solutions, associated with the AWS Opportunity. These identifiers provide additional context and help partners understand which AWS services are involved.

Type: [AwsOpportunityRelatedEntities](#) object

## RelatedOpportunityId

Provides the unique identifier of the related partner opportunity, allowing partners to link the AWS Opportunity to their corresponding opportunity in their CRM system.

Type: String

Pattern: 0[0-9]{1,19}

## Visibility

Defines the visibility level for the AWS Opportunity. Use Full visibility for most cases, while Limited visibility is reserved for special programs or sensitive opportunities.

Type: String

Valid Values: Full | Limited

# Errors

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

## AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **InternalServerException**

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### **ThrottlingException**

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### **ValidationException**

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# GetEngagement

Use this action to retrieve the engagement record for a given EngagementIdentifier.

## Request Syntax

```
{  
    "Catalog": "string",  
    "Identifier": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog related to the engagement request. Valid values are AWS and Sandbox.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### Identifier

Specifies the identifier of the Engagement record to retrieve.

Type: String

Pattern: (arn:.\*|eng-[0-9a-z]{14})

Required: Yes

## Response Syntax

```
{  
    "Arn": "string",  
    "Contexts": [  
        {  
            "Payload": { ... },  
            "Type": "string"  
        }  
    ],  
    "CreatedAt": "string",  
    "CreatedBy": "string",  
    "Description": "string",  
    "Id": "string",  
    "MemberCount": number,  
    "Title": "string"  
}
```

## Response Elements

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

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

### Arn

The Amazon Resource Name (ARN) of the engagement retrieved.

Type: String

Pattern: arn:.\*

### Contexts

A list of context objects associated with the engagement. Each context provides additional information related to the Engagement, such as customer projects or documents.

Type: Array of [EngagementContextDetails](#) objects

Array Members: Minimum number of 0 items. Maximum number of 5 items.

## CreatedAt

The date and time when the Engagement was created, presented in ISO 8601 format (UTC). For example: "2023-05-01T20:37:46Z". This timestamp helps track the lifecycle of the Engagement.

Type: Timestamp

## CreatedBy

The AWS account ID of the user who originally created the engagement. This field helps in tracking the origin of the engagement.

Type: String

Pattern: ([0-9]{12}|\w{1,12})

## Description

A more detailed description of the engagement. This provides additional context or information about the engagement's purpose or scope.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

## Id

The unique resource identifier of the engagement retrieved.

Type: String

Pattern: eng-[0-9a-z]{14}

## MemberCount

Specifies the current count of members participating in the Engagement. This count includes all active members regardless of their roles or permissions within the Engagement.

Type: Integer

## Title

The title of the engagement. It provides a brief, descriptive name for the engagement that is meaningful and easily recognizable.

Type: String

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

## Errors

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

### AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# GetEngagementInvitation

Retrieves the details of an engagement invitation shared by AWS with a partner. The information includes aspects such as customer, project details, and lifecycle information. To connect an engagement invitation with an opportunity, match the invitation's `Payload.Project.Title` with opportunity `Project.Title`.

## Request Syntax

```
{  
  "Catalog": "string",  
  "Identifier": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog associated with the request. The field accepts values from the predefined set: AWS for live operations or Sandbox for testing environments.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### Identifier

Specifies the unique identifier for the retrieved engagement invitation.

Type: String

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

Pattern: (arn:.\*|engi-[0-9a-z]{13})

Required: Yes

## Response Syntax

```
{  
    "Arn": "string",  
    "Catalog": "string",  
    "EngagementDescription": "string",  
    "EngagementId": "string",  
    "EngagementTitle": "string",  
    "ExistingMembers": [  
        {  
            "CompanyName": "string",  
            "WebsiteUrl": "string"  
        }  
    ],  
    "ExpirationDate": "string",  
    "Id": "string",  
    "InvitationDate": "string",  
    "InvitationMessage": "string",  
    "Payload": { ... },  
    "PayloadType": "string",  
    "Receiver": { ... },  
    "RejectionReason": "string",  
    "SenderAwsAccountId": "string",  
    "SenderCompanyName": "string",  
    "Status": "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.

### Catalog

Indicates the catalog from which the engagement invitation details are retrieved. This field helps in identifying the appropriate catalog (e.g., AWS or Sandbox) used in the request.

Type: String

Pattern: [a-zA-Z]+

## Id

Unique identifier assigned to the engagement invitation being retrieved.

Type: String

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

Pattern: (arn:.\*|engi-[0-9a-z]{13})

## Arn

The Amazon Resource Name (ARN) that identifies the engagement invitation.

Type: String

## EngagementDescription

The description of the engagement associated with this invitation.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

## EngagementId

The identifier of the engagement associated with this invitation. This ID links the invitation to its corresponding engagement.

Type: String

Pattern: eng-[0-9a-z]{14}

## EngagementTitle

The title of the engagement invitation, summarizing the purpose or objectives of the opportunity shared by AWS.

Type: String

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

## ExistingMembers

A list of active members currently part of the Engagement. This array contains a maximum of 10 members, each represented by an object with the following properties.

- CompanyName: The name of the member's company.
- WebsiteUrl: The website URL of the member's company.

Type: Array of [EngagementMemberSummary](#) objects

## ExpirationDate

Indicates the date on which the engagement invitation will expire if not accepted by the partner.

Type: Timestamp

## InvitationDate

The date when the engagement invitation was sent to the partner.

Type: Timestamp

## InvitationMessage

The message sent to the invited partner when the invitation was created.

Type: String

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

## Payload

Details of the engagement invitation payload, including specific data relevant to the invitation's contents, such as customer information and opportunity insights.

Type: [Payload](#) object

**Note:** This object is a Union. Only one member of this object can be specified or returned.

## PayloadType

The type of payload contained in the engagement invitation, indicating what data or context the payload covers.

Type: String

Valid Values: OpportunityInvitation

## Receiver

Information about the partner organization or team that received the engagement invitation, including contact details and identifiers.

Type: [Receiver](#) object

**Note:** This object is a Union. Only one member of this object can be specified or returned.

## RejectionReason

If the engagement invitation was rejected, this field specifies the reason provided by the partner for the rejection.

Type: String

Pattern: [\u0020-\u007E\u00A0-\uD7FF\uE000-\uFFFD]{1,80}

## SenderAwsAccountId

Specifies the AWS Account ID of the sender, which identifies the AWS team responsible for sharing the engagement invitation.

Type: String

Pattern: ([0-9]{12}|\w{1,12})

## SenderCompanyName

The name of the AWS organization or team that sent the engagement invitation.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 120.

## Status

The current status of the engagement invitation.

Type: String

Valid Values: ACCEPTED | PENDING | REJECTED | EXPIRED

## Errors

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

## AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

## InternalServerException

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

## ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

## 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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# GetOpportunity

Fetches the Opportunity record from Partner Central by a given Identifier.

Use the `ListOpportunities` action or the event notification (from Amazon EventBridge) to obtain this identifier.

## Request Syntax

```
{  
  "Catalog": "string",  
  "Identifier": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog associated with the request. This field takes a string value from a predefined list: AWS or Sandbox. The catalog determines which environment the opportunity is fetched from. Use AWS to retrieve opportunities in the AWS catalog, and Sandbox to retrieve opportunities in a secure, isolated testing environment.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### Identifier

Read-only, system generated Opportunity unique identifier.

Type: String

Pattern: 0[0-9]{1,19}

Required: Yes

## Response Syntax

```
{  
    "Arn": "string",  
    "Catalog": "string",  
    "CreatedDate": "string",  
    "Customer": {  
        "Account": {  
            "Address": {  
                "City": "string",  
                "CountryCode": "string",  
                "PostalCode": "string",  
                "StateOrRegion": "string",  
                "StreetAddress": "string"  
            },  
            "AwsAccountId": "string",  
            "CompanyName": "string",  
            "Duns": "string",  
            "Industry": "string",  
            "OtherIndustry": "string",  
            "WebsiteUrl": "string"  
        },  
        "Contacts": [  
            {  
                "BusinessTitle": "string",  
                "Email": "string",  
                "FirstName": "string",  
                "LastName": "string",  
                "Phone": "string"  
            }  
        ]  
    },  
    "Id": "string",  
    "LastModifiedDate": "string",  
    "LifeCycle": {  
        "ClosedLostReason": "string",  
        "NextSteps": "string",  
        "NextStepsHistory": [  
            {  
                "NextStep": "string",  
                "Reason": "string",  
                "Status": "string"  
            }  
        ]  
    }  
}
```

```
        "Time": "string",
        "Value": "string"
    },
],
"ReviewComments": "string",
"ReviewStatus": "string",
"ReviewStatusReason": "string",
"Stage": "string",
"TargetCloseDate": "string"
},
"Marketing": {
    "AwsFundingUsed": "string",
    "CampaignName": "string",
    "Channels": [ "string" ],
    "Source": "string",
    "UseCases": [ "string" ]
},
"NationalSecurity": "string",
"OpportunityTeam": [
    {
        "BusinessTitle": "string",
        "Email": "string",
        "FirstName": "string",
        "LastName": "string",
        "Phone": "string"
    }
],
"OpportunityType": "string",
"PartnerOpportunityIdentifier": "string",
"PrimaryNeedsFromAws": [ "string" ],
"Project": {
    "AdditionalComments": "string",
    "ApnPrograms": [ "string" ],
    "CompetitorName": "string",
    "CustomerBusinessProblem": "string",
    "CustomerUseCase": "string",
    "DeliveryModels": [ "string" ],
    "ExpectedCustomerSpend": [
        {
            "Amount": "string",
            "CurrencyCode": "string",
            "EstimationUrl": "string",
            "Frequency": "string",
            "TargetCompany": "string"
        }
    ]
}
```

```
        },
      ],
      "OtherCompetitorNames": "string",
      "OtherSolutionDescription": "string",
      "RelatedOpportunityIdentifier": "string",
      "SalesActivities": [ "string" ],
      "Title": "string"
    },
    "RelatedEntityIdentifiers": {
      "AwsMarketplaceOffers": [ "string" ],
      "AwsProducts": [ "string" ],
      "Solutions": [ "string" ]
    },
    "SoftwareRevenue": {
      "DeliveryModel": "string",
      "EffectiveDate": "string",
      "ExpirationDate": "string",
      "Value": {
        "Amount": "string",
        "CurrencyCode": "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.

### Catalog

Specifies the catalog associated with the request. This field takes a string value from a predefined list: AWS or Sandbox. The catalog determines which environment the opportunity information is retrieved from. Use AWS to retrieve opportunities in the AWS catalog, and Sandbox to retrieve opportunities in a secure and isolated testing environment.

Type: String

Pattern: [a-zA-Z]+

### CreatedDate

Date Time when the Opportunity was last created.

Type: Timestamp

## Id

Read-only, system generated Opportunity unique identifier.

Type: String

Pattern: `0[0-9]{1,19}`

## LastModifiedDate

DateTime when the opportunity was last modified.

Type: Timestamp

## RelatedEntityIdentifiers

Provides information about the associations of other entities with the opportunity.

These entities include identifiers for AWSProducts, Partner Solutions, and AWSMarketplaceOffers.

Type: [RelatedEntityIdentifiers](#) object

## Arn

The Amazon Resource Name (ARN) that uniquely identifies the opportunity.

Type: String

Pattern: `arn:.*`

## Customer

Specifies details of the customer associated with the Opportunity.

Type: [Customer](#) object

## LifeCycle

An object that contains lifecycle details for the Opportunity.

Type: [LifeCycle](#) object

## Marketing

An object that contains marketing details for the Opportunity.

Type: [Marketing](#) object

### [NationalSecurity](#)

Indicates whether the Opportunity pertains to a national security project. This field must be set to true only when the customer's industry is *Government*. Additional privacy and security measures apply during the review and management process for opportunities marked as NationalSecurity.

Type: String

Valid Values: Yes | No

### [OpportunityTeam](#)

Represents the internal team handling the opportunity. Specify the members involved in collaborating on this opportunity within the partner's organization.

Type: Array of [Contact](#) objects

Array Members: Minimum number of 0 items. Maximum number of 1 item.

### [OpportunityType](#)

Specifies the opportunity type as renewal, new, or expansion.

Opportunity types:

- New opportunity: Represents a new business opportunity with a potential customer that's not previously engaged with your solutions or services.
- Renewal opportunity: Represents an opportunity to renew an existing contract or subscription with a current customer, which helps to ensure service continuity.
- Expansion opportunity: Represents an opportunity to expand the scope of a customer's contract or subscription, either by adding new services or increasing the volume of existing services.

Type: String

Valid Values: Net New Business | Flat Renewal | Expansion

### [PartnerOpportunityIdentifier](#)

Specifies the opportunity's unique identifier in the partner's CRM system. This value is essential to track and reconcile because it's included in the outbound payload sent back to the partner.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

### PrimaryNeedsFromAws

Identifies the type of support the partner needs from AWS.

Valid values:

- Cosell—Architectural Validation: Confirmation from AWS that the partner's proposed solution architecture is aligned with AWS best practices and poses minimal architectural risks.
- Cosell—Business Presentation: Request AWS seller's participation in a joint customer presentation.
- Cosell—Competitive Information: Access to AWS competitive resources and support for the partner's proposed solution.
- Cosell—Pricing Assistance: Connect with an AWS seller for support situations where a partner may be receiving an upfront discount on a service (for example: EDP deals).
- Cosell—Technical Consultation: Connect with an AWS Solutions Architect to address the partner's questions about the proposed solution.
- Cosell—Total Cost of Ownership Evaluation: Assistance with quoting different cost savings of proposed solutions on AWS versus on-premises or a traditional hosting environment.
- Cosell—Deal Support: Request AWS seller's support to progress the opportunity (for example: joint customer call, strategic positioning).
- Cosell—Support for Public Tender/RFx: Opportunity related to the public sector where the partner needs AWS RFx support.

Type: Array of strings

Valid Values: Co-Sell - Architectural Validation | Co-Sell - Business Presentation | Co-Sell - Competitive Information | Co-Sell - Pricing Assistance | Co-Sell - Technical Consultation | Co-Sell - Total Cost of Ownership Evaluation | Co-Sell - Deal Support | Co-Sell - Support for Public Tender / RFx

### Project

An object that contains project details summary for the Opportunity.

Type: [Project](#) object

## **SoftwareRevenue**

Specifies details of a customer's procurement terms. Required only for partners in eligible programs.

Type: [SoftwareRevenue](#) object

## **Errors**

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

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **InternalServerException**

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### **ThrottlingException**

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# GetResourceSnapshot

Use this action to retrieve a specific snapshot record.

## Request Syntax

```
{  
    "Catalog": "string",  
    "EngagementIdentifier": "string",  
    "ResourceIdentifier": "string",  
    "ResourceSnapshotTemplateIdentifier": "string",  
    "ResourceType": "string",  
    "Revision": number  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog related to the request. Valid values are:

- AWS: Retrieves the snapshot from the production AWS environment.
- Sandbox: Retrieves the snapshot from a sandbox environment used for testing or development purposes.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

## EngagementIdentifier

The unique identifier of the engagement associated with the snapshot. This field links the snapshot to a specific engagement context.

Type: String

Pattern: eng-[0-9a-z]{14}

Required: Yes

## ResourceIdentifier

The unique identifier of the specific resource that was snapshotted. The format and constraints of this identifier depend on the ResourceType specified. For Opportunity type, it will be an opportunity ID

Type: String

Pattern: 0[0-9]{1,19}

Required: Yes

## ResourceSnapshotTemplateIdentifier

The name of the template that defines the schema for the snapshot. This template determines which subset of the resource data is included in the snapshot and must correspond to an existing and valid template for the specified ResourceType.

Type: String

Pattern: [a-zA-Z0-9]{3,80}

Required: Yes

## ResourceType

Specifies the type of resource that was snapshotted. This field determines the structure and content of the snapshot payload. Valid value includes:Opportunity: For opportunity-related data.

Type: String

Valid Values: Opportunity

Required: Yes

## Revision

Specifies which revision of the snapshot to retrieve. If omitted returns the latest revision.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

## Response Syntax

```
{  
    "Arn": "string",  
    "Catalog": "string",  
    "CreatedAt": "string",  
    "CreatedBy": "string",  
    "EngagementId": "string",  
    "Payload": { ... },  
    "ResourceId": "string",  
    "ResourceSnapshotTemplateName": "string",  
    "ResourceType": "string",  
    "Revision": number  
}
```

## Response Elements

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

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

### Catalog

The catalog in which the snapshot was created. Matches the Catalog specified in the request.

Type: String

Pattern: [a-zA-Z]+

### Arn

The Amazon Resource Name (ARN) that uniquely identifies the resource snapshot.

Type: String

Pattern: arn:.\*

### CreatedAt

The timestamp when the snapshot was created, in ISO 8601 format (e.g., "2023-06-01T14:30:00Z"). This allows for precise tracking of when the snapshot was taken.

Type: Timestamp

### CreatedBy

The AWS account ID of the principal (user or role) who created the snapshot. This helps in tracking the origin of the snapshot.

Type: String

Pattern: ([0-9]{12}|\w{1,12})

### EngagementId

The identifier of the engagement associated with this snapshot. Matches the EngagementIdentifier specified in the request.

Type: String

Pattern: eng-[0-9a-z]{14}

### Payload

Represents the payload of a resource snapshot. This structure is designed to accommodate different types of resource snapshots, currently supporting opportunity summaries.

Type: [ResourceSnapshotPayload](#) object

**Note:** This object is a Union. Only one member of this object can be specified or returned.

### ResourceId

The identifier of the specific resource that was snapshotted. Matches the ResourceIdentifier specified in the request.

Type: String

Pattern: 0[0-9]{1,19}

## [ResourceSnapshotTemplateName](#)

The name of the view used for this snapshot. This is the same as the template name.

Type: String

Pattern: [a-zA-Z0-9]{3,80}

## [ResourceType](#)

The type of the resource that was snapshotted. Matches the ResourceType specified in the request.

Type: String

Valid Values: Opportunity

## [Revision](#)

The revision number of this snapshot. This is a positive integer that is sequential and unique within the context of a resource view.

Type: Integer

Valid Range: Minimum value of 1.

## Errors

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

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



# GetResourceSnapshotJob

Use this action to retrieves information about a specific resource snapshot job.

## Request Syntax

```
{  
    "Catalog": "string",  
    "ResourceSnapshotJobIdentifier": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog related to the request. Valid values are:

- AWS: Retrieves the snapshot job from the production AWS environment.
- Sandbox: Retrieves the snapshot job from a sandbox environment used for testing or development purposes.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### ResourceSnapshotJobIdentifier

The unique identifier of the resource snapshot job to be retrieved. This identifier is crucial for pinpointing the specific job you want to query.

Type: String

Pattern: job-[0-9a-z]{13}

Required: Yes

## Response Syntax

```
{  
    "Arn": "string",  
    "Catalog": "string",  
    "CreatedAt": "string",  
    "EngagementId": "string",  
    "Id": "string",  
    "LastFailure": "string",  
    "LastSuccessfulExecutionDate": "string",  
    "ResourceArn": "string",  
    "ResourceId": "string",  
    "ResourceSnapshotTemplateName": "string",  
    "ResourceType": "string",  
    "Status": "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.

### Catalog

The catalog in which the snapshot job was created. This will match the Catalog specified in the request.

Type: String

Pattern: [a-zA-Z]+

### Arn

The Amazon Resource Name (ARN) of the snapshot job. This globally unique identifier can be used for resource-specific operations across AWS services.

Type: String

Pattern: arn:.\*

### CreatedAt

The date and time when the snapshot job was created in ISO 8601 format (UTC). Example: "2023-05-01T20:37:46Z"

Type: Timestamp

### EngagementId

The identifier of the engagement associated with this snapshot job. This links the job to a specific engagement context.

Type: String

Pattern: eng-[0-9a-z]{14}

### Id

The unique identifier of the snapshot job. This matches the ResourceSnapshotJobIdentifier provided in the request.

Type: String

Pattern: job-[0-9a-z]{13}

### LastFailure

If the job has encountered any failures, this field contains the error message from the most recent failure. This can be useful for troubleshooting issues with the job.

Type: String

### LastSuccessfulExecutionDate

The date and time of the last successful execution of the job, in ISO 8601 format (UTC).

Example: "2023-05-01T20:37:46Z"

Type: Timestamp

### ResourceArn

The Amazon Resource Name (ARN) of the resource being snapshotted. This provides a globally unique identifier for the resource across AWS.

Type: String

Pattern: arn:.\*

### ResourceId

The identifier of the specific resource being snapshotted. The format might vary depending on the ResourceType.

Type: String

Pattern: 0[0-9]{1,19}

### ResourceSnapshotTemplateName

The name of the template used for creating the snapshot. This is the same as the template name. It defines the structure and content of the snapshot.

Type: String

Pattern: [a-zA-Z0-9]{3,80}

### ResourceType

The type of resource being snapshotted. This would have "Opportunity" as a value as it is dependent on the supported resource type.

Type: String

Valid Values: Opportunity

### Status

The current status of the snapshot job. Valid values:

- STOPPED: The job is not currently running.
- RUNNING: The job is actively executing.

Type: String

Valid Values: Running | Stopped

## Errors

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

## AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

## ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# GetSellingSystemSettings

Retrieves the currently set system settings, which include the IAM Role used for resource snapshot jobs.

## Request Syntax

```
{  
    "Catalog": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### [Catalog](#)

Specifies the catalog in which the settings are defined. Acceptable values include AWS for production and Sandbox for testing environments.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

## Response Syntax

```
{  
    "Catalog": "string",  
    "ResourceSnapshotJobRoleArn": "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.

### Catalog

Specifies the catalog in which the settings are defined. Acceptable values include AWS for production and Sandbox for testing environments.

Type: String

Pattern: [a-zA-Z]+

### ResourceSnapshotJobRoleArn

Specifies the ARN of the IAM Role used for resource snapshot job executions.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 2048.

Pattern: arn:aws:iam::\d{12}:role/([-+=,.@\_a-zA-Z0-9]+/+)\*[-+=,.@\_a-zA-Z0-9]{1,64}

## Errors

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

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



# ListEngagementByAcceptingInvitationTasks

Lists all in-progress, completed, or failed StartEngagementByAcceptingInvitationTask tasks that were initiated by the caller's account.

## Request Syntax

```
{  
    "Catalog": "string",  
    "EngagementInvitationIdentifier": [ "string" ],  
    "MaxResults": number,  
    "NextToken": "string",  
    "OpportunityIdentifier": [ "string" ],  
    "Sort": {  
        "SortBy": "string",  
        "SortOrder": "string"  
    },  
    "TaskIdentifier": [ "string" ],  
    "TaskStatus": [ "string" ]  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog related to the request. Valid values are:

- AWS: Retrieves the request from the production AWS environment.
- Sandbox: Retrieves the request from a sandbox environment used for testing or development purposes.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### EngagementInvitationIdentifier

Filters tasks by the identifiers of the engagement invitations they are processing.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

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

Pattern: (arn:.\*|engi-[0-9a-z]{13})

Required: No

### MaxResults

Use this parameter to control the number of items returned in each request, which can be useful for performance tuning and managing large result sets.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

### NextToken

Use this parameter for pagination when the result set spans multiple pages. This value is obtained from the NextToken field in the response of a previous call to this API.

Type: String

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

Required: No

### OpportunityIdentifier

Filters tasks by the identifiers of the opportunities they created or are associated with.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Pattern: 0[0-9]{1,19}

Required: No

## Sort

Specifies the sorting criteria for the returned results. This allows you to order the tasks based on specific attributes.

Type: [ListTasksSortBase](#) object

Required: No

## TaskIdentifier

Filters tasks by their unique identifiers. Use this when you want to retrieve information about specific tasks.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Pattern: (arn:.\*|task-[0-9a-z]{13})

Required: No

## TaskStatus

Filters the tasks based on their current status. This allows you to focus on tasks in specific states.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 3 items.

Valid Values: IN\_PROGRESS | COMPLETE | FAILED

Required: No

## Response Syntax

```
{  
    "NextToken": "string",  
    "TaskSummaries": [  
        ...  
    ]  
}
```

```
{  
    "EngagementInvitationId": "string",  
    "Message": "string",  
    "OpportunityId": "string",  
    "ReasonCode": "string",  
    "ResourceSnapshotJobId": "string",  
    "StartTime": "string",  
    "TaskArn": "string",  
    "TaskId": "string",  
    "TaskStatus": "string"  
}  
}  
]  
}
```

## Response Elements

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

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

### [NextToken](#)

A token used for pagination to retrieve the next page of results. If there are more results available, this field will contain a token that can be used in a subsequent API call to retrieve the next page. If there are no more results, this field will be null or an empty string.

Type: String

### [TaskSummaries](#)

An array of EngagementByAcceptingInvitationTaskSummary objects, each representing a task that matches the specified filters. The array may be empty if no tasks match the criteria.

Type: Array of [ListEngagementByAcceptingInvitationTaskSummary](#) objects

## Errors

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

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### **ThrottlingException**

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### **ValidationException**

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListEngagementFromOpportunityTasks

Lists all in-progress, completed, or failed EngagementFromOpportunity tasks that were initiated by the caller's account.

## Request Syntax

```
{  
    "Catalog": "string",  
    "EngagementIdentifier": [ "string" ],  
    "MaxResults": number,  
    "NextToken": "string",  
    "OpportunityIdentifier": [ "string" ],  
    "Sort": {  
        "SortBy": "string",  
        "SortOrder": "string"  
    },  
    "TaskIdentifier": [ "string" ],  
    "TaskStatus": [ "string" ]  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog related to the request. Valid values are:

- AWS: Retrieves the request from the production AWS environment.
- Sandbox: Retrieves the request from a sandbox environment used for testing or development purposes.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### EngagementIdentifier

Filters tasks by the identifiers of the engagements they created or are associated with.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Pattern: (arn:.\*|eng-[0-9a-z]{14})

Required: No

### MaxResults

Specifies the maximum number of results to return in a single page of the response. Use this parameter to control the number of items returned in each request, which can be useful for performance tuning and managing large result sets.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

### NextToken

The token for requesting the next page of results. This value is obtained from the NextToken field in the response of a previous call to this API. Use this parameter for pagination when the result set spans multiple pages.

Type: String

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

Required: No

### OpportunityIdentifier

The identifier of the original opportunity associated with this task.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Pattern: 0[0-9]{1,19}

Required: No

## Sort

Specifies the sorting criteria for the returned results. This allows you to order the tasks based on specific attributes.

Type: [ListTasksSortBase](#) object

Required: No

## TaskIdentifier

Filters tasks by their unique identifiers. Use this when you want to retrieve information about specific tasks.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Pattern: (arn:.\*|task-[0-9a-z]{13})

Required: No

## TaskStatus

Filters the tasks based on their current status. This allows you to focus on tasks in specific states.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 3 items.

Valid Values: IN\_PROGRESS | COMPLETE | FAILED

Required: No

# Response Syntax

```
{  
  "NextToken": "string",
```

```
"TaskSummaries": [  
    {  
        "EngagementId        "EngagementInvitationId        "Message        "OpportunityId        "ReasonCode        "ResourceSnapshotJobId        "StartTime        "TaskArn        "TaskId        "TaskStatus    }  
]  
}
```

## 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

A token used for pagination to retrieve the next page of results. If there are more results available, this field will contain a token that can be used in a subsequent API call to retrieve the next page. If there are no more results, this field will be null or an empty string.

Type: String

### TaskSummaries

TaskSummaries An array of TaskSummary objects containing details about each task.

Type: Array of [ListEngagementFromOpportunityTaskSummary](#) objects

## Errors

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

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### **ThrottlingException**

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### **ValidationException**

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListEngagementInvitations

Retrieves a list of engagement invitations sent to the partner. This allows partners to view all pending or past engagement invitations, helping them track opportunities shared by AWS.

## Request Syntax

```
{  
    "Catalog": "string",  
    "EngagementIdentifier": [ "string" ],  
    "MaxResults": number,  
    "NextToken": "string",  
    "ParticipantType": "string",  
    "PayloadType": [ "string" ],  
    "SenderAwsAccountId": [ "string" ],  
    "Sort": {  
        "SortBy": "string",  
        "SortOrder": "string"  
    },  
    "Status": [ "string" ]  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog from which to list the engagement invitations. Use AWS for production invitations or Sandbox for testing environments.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### [ParticipantType](#)

Specifies the type of participant for which to list engagement invitations. Identifies the role of the participant.

Type: String

Valid Values: SENDER | RECEIVER

Required: Yes

### [EngagementIdentifier](#)

Retrieves a list of engagement invitation summaries based on specified filters. The ListEngagementInvitations operation allows you to view all invitations that you have sent or received. You must specify the ParticipantType to filter invitations where you are either the SENDER or the RECEIVER. Invitations will automatically expire if not accepted within 15 days.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Pattern: (arn:.\*|eng-[0-9a-z]{14})

Required: No

### [MaxResults](#)

Specifies the maximum number of engagement invitations to return in the response. If more results are available, a pagination token will be provided.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

### [NextToken](#)

A pagination token used to retrieve additional pages of results when the response to a previous request was truncated. Pass this token to continue listing invitations from where the previous call left off.

Type: String

Required: No

### PayloadType

Defines the type of payload associated with the engagement invitations to be listed. The attributes in this payload help decide on acceptance or rejection of the invitation.

Type: Array of strings

Valid Values: OpportunityInvitation

Required: No

### SenderAwsAccountId

List of sender AWS account IDs to filter the invitations.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Pattern: ([0-9]{12}|\w{1,12})

Required: No

### Sort

Specifies the sorting options for listing engagement invitations. Invitations can be sorted by fields such as InvitationDate or Status to help partners view results in their preferred order.

Type: [OpportunityEngagementInvitationSort](#) object

Required: No

### Status

Status values to filter the invitations.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Valid Values: ACCEPTED | PENDING | REJECTED | EXPIRED

Required: No

## Response Syntax

```
{  
    "EngagementInvitationSummaries": [  
        {  
            "Arn": "string",  
            "Catalog": "string",  
            "EngagementId": "string",  
            "EngagementTitle": "string",  
            "ExpirationDate": "string",  
            "Id": "string",  
            "InvitationDate": "string",  
            "ParticipantType": "string",  
            "PayloadType": "string",  
            "Receiver": { ... },  
            "SenderAwsAccountId": "string",  
            "SenderCompanyName": "string",  
            "Status": "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.

### [EngagementInvitationSummaries](#)

An array containing summaries of engagement invitations. Each summary includes information such as the invitation title, invitation date, and the current status of the invitation.

Type: Array of [EngagementInvitationSummary](#) objects

### [NextToken](#)

A pagination token returned when there are more results available than can be returned in a single call. Use this token to retrieve additional pages of engagement invitation summaries.

Type: String

## Errors

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

### AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### InternalServerException

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

### ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListEngagementMembers

Retrieves the details of member partners in an Engagement. This operation can only be invoked by members of the Engagement. The `ListEngagementMembers` operation allows you to fetch information about the members of a specific Engagement. This action is restricted to members of the Engagement being queried.

## Request Syntax

```
{  
    "Catalog": "string",  
    "Identifier": "string",  
    "MaxResults": number,  
    "NextToken": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

The catalog related to the request.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### Identifier

Identifier of the Engagement record to retrieve members from.

Type: String

Pattern: (arn:.\*|eng-[0-9a-z]{14})

Required: Yes

## MaxResults

The maximum number of results to return in a single call.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

Required: No

## NextToken

The token for the next set of results.

Type: String

Required: No

# Response Syntax

```
{  
  "EngagementMemberList": [  
    {  
      "AccountId": "string",  
      "CompanyName": "string",  
      "WebsiteUrl": "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.

## [EngagementMemberList](#)

Provides a list of engagement members.

Type: Array of [EngagementMember](#) objects

Array Members: Minimum number of 0 items. Maximum number of 10 items.

## [NextToken](#)

A pagination token used to retrieve the next set of results. If there are more results available than can be returned in a single response, this token will be present. Use this token in a subsequent request to retrieve the next page of results. If there are no more results, this value will be null.

Type: String

# Errors

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

## **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

## **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## **ThrottlingException**

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListEngagementResourceAssociations

Lists the associations between resources and engagements where the caller is a member and has at least one snapshot in the engagement.

## Request Syntax

```
{  
    "Catalog": "string",  
    "CreatedBy": "string",  
    "EngagementIdentifier": "string",  
    "MaxResults": number,  
    "NextToken": "string",  
    "ResourceIdentifier": "string",  
    "ResourceType": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog in which to search for engagement-resource associations. Valid Values: "AWS" or "Sandbox"

- AWS for production environments.
- Sandbox for testing and development purposes.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### CreatedBy

Filters the response to include only snapshots of resources owned by the specified AWS account ID. Use this when you want to find associations related to resources owned by a particular account.

Type: String

Pattern: ([0-9]{12}|\w{1,12})

Required: No

### EngagementIdentifier

Filters the results to include only associations related to the specified engagement. Use this when you want to find all resources associated with a specific engagement.

Type: String

Pattern: eng-[0-9a-z]{14}

Required: No

### MaxResults

Limits the number of results returned in a single call. Use this to control the number of results returned, especially useful for pagination.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

### NextToken

A token used for pagination of results. Include this token in subsequent requests to retrieve the next set of results.

Type: String

Required: No

## ResourceIdentifier

Filters the results to include only associations with the specified resource. Varies depending on the resource type. Use this when you want to find all engagements associated with a specific resource.

Type: String

Pattern: 0[0-9]{1,19}

Required: No

## ResourceType

Filters the results to include only associations with resources of the specified type.

Type: String

Valid Values: Opportunity

Required: No

## Response Syntax

```
{  
    "EngagementResourceAssociationSummaries": [  
        {  
            "Catalog": "string",  
            "CreatedBy": "string",  
            "EngagementId": "string",  
            "ResourceId": "string",  
            "ResourceType": "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.

## EngagementResourceAssociationSummaries

A list of engagement-resource association summaries.

Type: Array of [EngagementResourceAssociationSummary](#) objects

## NextToken

A token to retrieve the next set of results. Use this token in a subsequent request to retrieve additional results if the response was truncated.

Type: String

## Errors

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

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### **ThrottlingException**

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListEngagements

This action allows users to retrieve a list of Engagement records from Partner Central. This action can be used to manage and track various engagements across different stages of the partner selling process.

## Request Syntax

```
{  
    "Catalog": "string",  
    "CreatedBy": [ "string" ],  
    "EngagementIdentifier": [ "string" ],  
    "ExcludeCreatedBy": [ "string" ],  
    "MaxResults": number,  
    "NextToken": "string",  
    "Sort": {  
        "SortBy": "string",  
        "SortOrder": "string"  
    }  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog related to the request.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

## CreatedBy

A list of AWS account IDs. When specified, the response includes engagements created by these accounts. This filter is useful for finding engagements created by specific team members.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Pattern: ([0-9]{12}|\w{1,12})

Required: No

## EngagementIdentifier

An array of strings representing engagement identifiers to retrieve.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Pattern: (arn:.\*|eng-[0-9a-z]{14})

Required: No

## ExcludeCreatedBy

An array of strings representing AWS Account IDs. Use this to exclude engagements created by specific users.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Pattern: ([0-9]{12}|\w{1,12})

Required: No

## MaxResults

The maximum number of results to return in a single call.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

### NextToken

The token for the next set of results. This value is returned from a previous call.

Type: String

Required: No

### Sort

Specifies the sorting parameters for listing Engagements.

Type: [EngagementSort](#) object

Required: No

## Response Syntax

```
{
  "EngagementSummaryList": [
    {
      "ArnCreatedAtCreatedByIdMemberCountTitleNextToken
```

## 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.

### [EngagementSummaryList](#)

An array of engagement summary objects.

Type: Array of [EngagementSummary](#) objects

## NextToken

The token to retrieve the next set of results. This field will be null if there are no more results.

Type: String

# Errors

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

## **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

## **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## **ThrottlingException**

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## **ValidationException**

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListOpportunities

This request accepts a list of filters that retrieve opportunity subsets as well as sort options. This feature is available to partners from [Partner Central](#) using the `ListOpportunities` API action.

To synchronize your system with AWS, list only the opportunities that were newly created or updated. We recommend you rely on events emitted by the service into your AWS account's Amazon EventBridge default event bus. You can also use the `ListOpportunities` action.

We recommend the following approach:

1. Find the latest `LastModifiedDate` that you stored, and only use the values that came from AWS. Don't use values generated by your system.
2. When you send a `ListOpportunities` request, submit the date in ISO 8601 format in the `AfterLastModifiedDate` filter.
3. AWS only returns opportunities created or updated on or after that date and time. Use `NextToken` to iterate over all pages.

## Request Syntax

```
{
  "Catalog": "string",
  "CustomerCompanyName": [ "string" ],
  "Identifier": [ "string" ],
  "LastModifiedDate": {
    "AfterLastModifiedDate": "string",
    "BeforeLastModifiedDate": "string"
  },
  "LifeCycleReviewStatus": [ "string" ],
  "LifeCycleStage": [ "string" ],
  "MaxResults": number,
  "NextToken": "string",
  "Sort": {
    "SortBy": "string",
    "SortOrder": "string"
  }
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog associated with the request. This field takes a string value from a predefined list: AWS or Sandbox. The catalog determines which environment the opportunities are listed in. Use AWS for listing real opportunities in the AWS catalog, and Sandbox for testing in secure, isolated environments.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### CustomerCompanyName

Filters the opportunities based on the customer's company name. This allows partners to search for opportunities associated with a specific customer by matching the provided company name string.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 10 items.

Required: No

### Identifier

Filters the opportunities based on the opportunity identifier. This allows partners to retrieve specific opportunities by providing their unique identifiers, ensuring precise results.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 20 items.

Pattern: 0[0-9]{1,19}

Required: No

### LastModifiedDate

Filters the opportunities based on their last modified date. This filter helps retrieve opportunities that were updated after the specified date, allowing partners to track recent changes or updates.

Type: [LastModifiedDate](#) object

Required: No

### LifeCycleReviewStatus

Filters the opportunities based on their current lifecycle approval status. Use this filter to retrieve opportunities with statuses such as Pending Submission, In Review, Action Required, or Approved.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 10 items.

Valid Values: Pending Submission | Submitted | In review | Approved | Rejected | Action Required

Required: No

### LifeCycleStage

Filters the opportunities based on their lifecycle stage. This filter allows partners to retrieve opportunities at various stages in the sales cycle, such as Qualified, Technical Validation, Business Validation, or Closed Won.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 10 items.

Valid Values: Prospect | Qualified | Technical Validation | Business Validation | Committed | Launched | Closed Lost

Required: No

## MaxResults

Specifies the maximum number of results to return in a single call. This limits the number of opportunities returned in the response to avoid providing too many results at once.

Default: 20

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

## NextToken

A pagination token used to retrieve the next set of results in subsequent calls. This token is included in the response only if there are additional result pages available.

Type: String

Required: No

## Sort

An object that specifies how the response is sorted. The default Sort.SortBy value is LastModifiedDate.

Type: [OpportunitySort](#) object

Required: No

# Response Syntax

```
{
  "NextToken": "string",
  "OpportunitySummaries": [
    {
      "Arn": "string",
      "Catalog": "string",
      "CreatedDate": "string",
      "Customer": {
        "Account": {
          "Address": {
            "City": "string",
            "CountryCode": "string",
            "PostalCode": "string"
          }
        }
      }
    }
  ]
}
```

```
        "PostalCode": "string",
        "StateOrRegion": "string"
    },
    "CompanyName": "string",
    "Industry": "string",
    "OtherIndustry": "string",
    "WebsiteUrl": "string"
}
},
{
    "Id": "string",
    "LastModifiedDate": "string",
    "LifeCycle": {
        "ClosedLostReason": "string",
        "NextSteps": "string",
        "ReviewComments": "string",
        "ReviewStatus": "string",
        "ReviewStatusReason": "string",
        "Stage": "string",
        "TargetCloseDate": "string"
    },
    "OpportunityType": "string",
    "PartnerOpportunityIdentifier": "string",
    "Project": {
        "DeliveryModels": [ "string" ],
        "ExpectedCustomerSpend": [
            {
                "Amount": "string",
                "CurrencyCode": "string",
                "EstimationUrl": "string",
                "Frequency": "string",
                "TargetCompany": "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.

## OpportunitySummaries

An array that contains minimal details for opportunities that match the request criteria. This summary view provides a quick overview of relevant opportunities.

Type: Array of [OpportunitySummary](#) objects

## NextToken

A pagination token used to retrieve the next set of results in subsequent calls. This token is included in the response only if there are additional result pages available.

Type: String

# Errors

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

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **InternalServerException**

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListResourceSnapshotJobs

Lists resource snapshot jobs owned by the customer. This operation supports various filtering scenarios, including listing all jobs owned by the caller, jobs for a specific engagement, jobs with a specific status, or any combination of these filters.

## Request Syntax

```
{  
    "Catalog": "string",  
    "EngagementIdentifier": "string",  
    "MaxResults": number,  
    "NextToken": "string",  
    "Sort": {  
        "SortBy": "string",  
        "SortOrder": "string"  
    },  
    "Status": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog related to the request.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

## EngagementIdentifier

The identifier of the engagement to filter the response.

Type: String

Pattern: eng-[0-9a-z]{14}

Required: No

## MaxResults

The maximum number of results to return in a single call. If omitted, defaults to 50.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

## NextToken

The token for the next set of results.

Type: String

Required: No

## Sort

Configures the sorting of the response. If omitted, results are sorted by CreatedDate in descending order.

Type: [SortObject](#) object

Required: No

## Status

The status of the jobs to filter the response.

Type: String

Valid Values: Running | Stopped

Required: No

## Response Syntax

```
{  
    "NextToken": "string",  
    "ResourceSnapshotJobSummaries": [  
        {  
            "Arn": "string",  
            "EngagementId": "string",  
            "Id": "string",  
            "Status": "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.

### [ResourceSnapshotJobSummaries](#)

An array of resource snapshot job summary objects.

Type: Array of [ResourceSnapshotJobSummary](#) objects

### [NextToken](#)

The token to retrieve the next set of results. If there are no additional results, this value is null.

Type: String

## Errors

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

### [AccessDeniedException](#)

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### **ThrottlingException**

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### **ValidationException**

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)

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

# ListResourceSnapshots

Retrieves a list of resource view snapshots based on specified criteria. This operation supports various use cases, including:

- Fetching all snapshots associated with an engagement.
- Retrieving snapshots of a specific resource type within an engagement.
- Obtaining snapshots for a particular resource using a specified template.
- Accessing the latest snapshot of a resource within an engagement.
- Filtering snapshots by resource owner.

## Request Syntax

```
{  
    "Catalog": "string",  
    "CreatedBy": "string",  
    "EngagementIdentifier": "string",  
    "MaxResults": number,  
    "NextToken": "string",  
    "ResourceIdentifier": "string",  
    "ResourceSnapshotTemplateIdentifier": "string",  
    "ResourceType": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog related to the request.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### [EngagementIdentifier](#)

The unique identifier of the engagement associated with the snapshots.

Type: String

Pattern: eng-[0-9a-z]{14}

Required: Yes

### [CreatedBy](#)

Filters the response to include only snapshots of resources owned by the specified AWS account.

Type: String

Pattern: ([0-9]{12}|\w{1,12})

Required: No

### [MaxResults](#)

The maximum number of results to return in a single call.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

Required: No

### [NextToken](#)

The token for the next set of results.

Type: String

Required: No

### [ResourceIdentifier](#)

Filters the response to include only snapshots of the specified resource.

Type: String

Pattern: 0[0-9]{1,19}

Required: No

### [ResourceSnapshotTemplateIdentifier](#)

Filters the response to include only snapshots created using the specified template.

Type: String

Pattern: [a-zA-Z0-9]{3,80}

Required: No

### [ResourceType](#)

Filters the response to include only snapshots of the specified resource type.

Type: String

Valid Values: Opportunity

Required: No

## Response Syntax

```
{  
    "NextToken": "string",  
    "ResourceSnapshotSummaries": [  
        {  
            "Arn": "string",  
            "CreatedBy": "string",  
            "ResourceId": "string",  
            "ResourceSnapshotTemplateName": "string",  
            "ResourceType": "string",  
            "Revision": number  
        }  
    ]  
}
```

## Response Elements

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

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

## [ResourceSnapshotSummaries](#)

An array of resource snapshot summary objects.

Type: Array of [ResourceSnapshotSummary](#) objects

## [NextToken](#)

The token to retrieve the next set of results. If there are no additional results, this value is null.

Type: String

## Errors

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

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### **ThrottlingException**

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListSolutions

Retrieves a list of Partner Solutions that the partner registered on Partner Central. This API is used to generate a list of solutions that an end user selects from for association with an opportunity.

## Request Syntax

```
{  
    "Catalog": "string",  
    "Category": [ "string" ],  
    "Identifier": [ "string" ],  
    "MaxResults": number,  
    "NextToken": "string",  
    "Sort": {  
        "SortBy": "string",  
        "SortOrder": "string"  
    },  
    "Status": [ "string" ]  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog associated with the request. This field takes a string value from a predefined list: AWS or Sandbox. The catalog determines which environment the solutions are listed in. Use AWS to list solutions in the AWS catalog, and Sandbox to list solutions in a secure and isolated testing environment.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### Category

Filters the solutions based on the category to which they belong. This allows partners to search for solutions within specific categories, such as Software, Consulting, or Managed Services.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 10 items.

Required: No

### Identifier

Filters the solutions based on their unique identifier. Use this filter to retrieve specific solutions by providing the solution's identifier for accurate results.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 20 items.

Pattern: S-[0-9]{1,19}

Required: No

### MaxResults

The maximum number of results returned by a single call. This value must be provided in the next call to retrieve the next set of results.

Default: 20

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

### NextToken

A pagination token used to retrieve the next set of results in subsequent calls. This token is included in the response only if there are additional result pages available.

Type: String

Required: No

## Sort

Object that configures sorting done on the response. Default Sort .SortBy is Identifier.

Type: [SolutionSort](#) object

Required: No

## Status

Filters solutions based on their status. This filter helps partners manage their solution portfolios effectively.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 10 items.

Valid Values: Active | Inactive | Draft

Required: No

## Response Syntax

```
{  
    "NextToken": "string",  
    "SolutionSummaries": [  
        {  
            "Arn": "string",  
            "Catalog": "string",  
            "Category": "string",  
            "CreatedDate": "string",  
            "Id": "string",  
            "Name": "string",  
            "Status": "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.

## SolutionSummaries

An array with minimal details for solutions matching the request criteria.

Type: Array of [SolutionBase](#) objects

## NextToken

A pagination token used to retrieve the next set of results in subsequent calls. This token is included in the response only if there are additional result pages available.

Type: String

## Errors

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

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **InternalServerException**

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListTagsForResource

Returns a list of tags for a resource.

## Request Syntax

```
{  
    "ResourceArn": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### ResourceArn

The Amazon Resource Name (ARN) of the resource for which you want to retrieve tags.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: arn:[\w+=/, .@-]+:partnercentral:[\w+=/, .@-]\*:[0-9]{12}:catalog/([a-zA-Z]+)/[\w+=, .@-]+(/[\w+=, .@-]+)\*

Required: Yes

## Response Syntax

```
{  
    "Tags": [  
        {
```

```
        "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.

### Tags

A map of the key-value pairs for the tag or tags assigned to the specified resource.

Type: Array of [Tag](#) objects

Array Members: Minimum number of 1 item. Maximum number of 200 items.

## Errors

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

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **InternalServerException**

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

## ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)

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

# PutSellingSystemSettings

Updates the currently set system settings, which include the IAM Role used for resource snapshot jobs.

## Request Syntax

```
{  
    "Catalog": "string",  
    "ResourceSnapshotJobRoleIdentifier": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog in which the settings will be updated. Acceptable values include AWS for production and Sandbox for testing environments.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### ResourceSnapshotJobRoleIdentifier

Specifies the ARN of the IAM Role used for resource snapshot job executions.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 2048.

Pattern: `(arn:aws:iam::\d{12}:role/([-+=,.@_a-zA-Z0-9]+/)*[-+=,.@_a-zA-Z0-9]{1,64})`

Required: No

## Response Syntax

```
{  
    "Catalog": "string",  
    "ResourceSnapshotJobRoleArn": "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.

### [Catalog](#)

Specifies the catalog in which the settings are defined. Acceptable values include AWS for production and Sandbox for testing environments.

Type: String

Pattern: `[a-zA-Z]+`

### [ResourceSnapshotJobRoleArn](#)

Specifies the ARN of the IAM Role used for resource snapshot job executions.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 2048.

Pattern: `arn:aws:iam::\d{12}:role/([-+=,.@_a-zA-Z0-9]+/)*[-+=,.@_a-zA-Z0-9]{1,64}`

## Errors

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

## AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

## ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# RejectEngagementInvitation

This action rejects an EngagementInvitation that AWS shared. Rejecting an invitation indicates that the partner doesn't want to pursue the opportunity, and all related data will become inaccessible thereafter.

## Request Syntax

```
{  
  "Catalog": "string",  
  "Identifier": "string",  
  "RejectionReason": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### Catalog

This is the catalog that's associated with the engagement invitation. Acceptable values are AWS or Sandbox, and these values determine the environment in which the opportunity is managed.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### Identifier

This is the unique identifier of the rejected EngagementInvitation. Providing the correct identifier helps to ensure that the intended invitation is rejected.

Type: String

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

Pattern: (arn:.\*|engi-[0-9a-z]{13})

Required: Yes

### **RejectionReason**

This describes the reason for rejecting the engagement invitation, which helps AWS track usage patterns. Acceptable values include the following:

- *Customer problem unclear*: The customer's problem isn't understood.
- *Next steps unclear*: The next steps required to proceed aren't understood.
- *Unable to support*: The partner is unable to provide support due to resource or capability constraints.
- *Duplicate of partner referral*: The opportunity is a duplicate of an existing referral.
- *Other*: Any reason not covered by other values.

Type: String

Pattern: [\u0020-\u007E\u00A0-\uD7FF\uE000-\uFFFD]{1,80}

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](#).

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

## ConflictException

This error occurs when the request can't be processed due to a conflict with the target resource's current state, which could result from updating or deleting the resource.

Suggested action: Fetch the latest state of the resource, verify the state, and retry the request.

HTTP Status Code: 400

## InternalServerException

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

## ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

## 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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# StartEngagementByAcceptingInvitationTask

This action starts the engagement by accepting an EngagementInvitation. The task is asynchronous and involves the following steps: accepting the invitation, creating an opportunity in the partner's account from the AWS opportunity, and copying details for tracking. When completed, an Opportunity Created event is generated, indicating that the opportunity has been successfully created in the partner's account.

## Request Syntax

```
{  
    "Catalog": "string",  
    "ClientToken": "string",  
    "Identifier": "string",  
    "Tags": [  
        {  
            "Key": "string",  
            "Value": "string"  
        }  
    ]  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog related to the task. Use AWS for production engagements and Sandbox for testing scenarios.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### [ClientToken](#)

A unique, case-sensitive identifier provided by the client that helps to ensure the idempotency of the request. This can be a random or meaningful string but must be unique for each request.

Type: String

Length Constraints: Minimum length of 1.

Pattern: [ ! -~]{1,64}

Required: Yes

### [Identifier](#)

Specifies the unique identifier of the EngagementInvitation to be accepted. Providing the correct identifier helps ensure that the correct engagement is processed.

Type: String

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

Pattern: (arn:.\*|engi-[0-9a-z]{13})

Required: Yes

### [Tags](#)

A map of the key-value pairs of the tag or tags to assign.

Type: Array of [Tag](#) objects

Array Members: Minimum number of 1 item. Maximum number of 200 items.

Required: No

## Response Syntax

```
{  
    "EngagementInvitationId": "string",  
    "Message": "string",  
    "OpportunityId": "string",  
}
```

```
"ReasonCode": "string",
"ResourceSnapshotJobId": "string",
"StartTime": "string",
"TaskArn": "string",
"TaskId": "string",
"TaskStatus": "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.

### EngagementInvitationId

Returns the identifier of the engagement invitation that was accepted and used to create the opportunity.

Type: String

Pattern: engi-[0-9,a-z]{13}

### Message

If the task fails, this field contains a detailed message describing the failure and possible recovery steps.

Type: String

### OpportunityId

Returns the original opportunity identifier passed in the request. This is the unique identifier for the opportunity.

Type: String

Pattern: 0[0-9]{1,19}

### ReasonCode

Indicates the reason for task failure using an enumerated code.

Type: String

Valid Values: InvitationAccessDenied | InvitationValidationFailed  
| EngagementAccessDenied | OpportunityAccessDenied |  
ResourceSnapshotJobAccessDenied | ResourceSnapshotJobValidationFailed  
| ResourceSnapshotJobConflict | EngagementValidationFailed  
| EngagementConflict | OpportunitySubmissionFailed  
| EngagementInvitationConflict | InternalError |  
OpportunityValidationFailed | OpportunityConflict |  
ResourceSnapshotAccessDenied | ResourceSnapshotValidationFailed |  
ResourceSnapshotConflict | ServiceQuotaExceeded | RequestThrottled

### [ResourceSnapshotJobId](#)

The identifier of the Resource Snapshot Job created as part of this task.

Type: String

Pattern: job-[0-9a-z]{13}

### [StartTime](#)

The timestamp indicating when the task was initiated. The format follows RFC 3339 section 5.6.

Type: Timestamp

### [TaskArn](#)

The Amazon Resource Name (ARN) of the task, used for tracking and managing the task within AWS.

Type: String

Pattern: arn:.\*

### [TaskId](#)

The unique identifier of the task, used to track the task's progress.

Type: String

Pattern: .\*task-[0-9a-z]{13}

### [TaskStatus](#)

Indicates the current status of the task.

Type: String

Valid Values: IN\_PROGRESS | COMPLETE | FAILED

## Errors

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

### AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### ConflictException

This error occurs when the request can't be processed due to a conflict with the target resource's current state, which could result from updating or deleting the resource.

Suggested action: Fetch the latest state of the resource, verify the state, and retry the request.

HTTP Status Code: 400

### InternalServerException

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

### ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### **ServiceQuotaExceededException**

This error occurs when the request would cause a service quota to be exceeded. Service quotas represent the maximum allowed use of a specific resource, and this error indicates that the request would surpass that limit.

Suggested action: Review the [Quotas](#) for the resource, and either reduce usage or request a quota increase.

HTTP Status Code: 400

### **ThrottlingException**

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### **ValidationException**

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)

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

# StartEngagementFromOpportunityTask

Similar to StartEngagementByAcceptingInvitationTask, this action is asynchronous and performs multiple steps before completion. This action orchestrates a comprehensive workflow that combines multiple API operations into a single task to create and initiate an engagement from an existing opportunity. It automatically executes a sequence of operations including GetOpportunity, CreateEngagement (if it doesn't exist), CreateResourceSnapshot, CreateResourceSnapshotJob, CreateEngagementInvitation (if not already invited/accepted), and SubmitOpportunity.

## Request Syntax

```
{  
    "AwsSubmission": {  
        "InvolvementType": "string",  
        "Visibility": "string"  
    },  
    "Catalog": "string",  
    "ClientToken": "string",  
    "Identifier": "string",  
    "Tags": [  
        {  
            "Key": "string",  
            "Value": "string"  
        }  
    ]  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

## AwsSubmission

Indicates the level of AWS involvement in the opportunity. This field helps track AWS participation throughout the engagement, such as providing technical support, deal assistance, and sales support.

Type: [AwsSubmission](#) object

Required: Yes

## Catalog

Specifies the catalog in which the engagement is tracked. Acceptable values include AWS for production and Sandbox for testing environments.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

## ClientToken

A unique token provided by the client to help ensure the idempotency of the request. It helps prevent the same task from being performed multiple times.

Type: String

Length Constraints: Minimum length of 1.

Pattern: [!-~]{1,64}

Required: Yes

## Identifier

The unique identifier of the opportunity from which the engagement task is to be initiated. This helps ensure that the task is applied to the correct opportunity.

Type: String

Pattern: 0[0-9]{1,19}

Required: Yes

## Tags

A map of the key-value pairs of the tag or tags to assign.

Type: Array of [Tag](#) objects

Array Members: Minimum number of 1 item. Maximum number of 200 items.

Required: No

## Response Syntax

```
{  
    "EngagementId": "string",  
    "EngagementInvitationId": "string",  
    "Message": "string",  
    "OpportunityId": "string",  
    "ReasonCode": "string",  
    "ResourceSnapshotJobId": "string",  
    "StartTime": "string",  
    "TaskArn": "string",  
    "TaskId": "string",  
    "TaskStatus": "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.

### [EngagementId](#)

The identifier of the newly created Engagement. Only populated if TaskStatus is COMPLETE.

Type: String

Pattern: eng-[0-9a-z]{14}

### [EngagementInvitationId](#)

The identifier of the new Engagement invitation. Only populated if TaskStatus is COMPLETE.

Type: String

Pattern: engi-[0-9,a-z]{13}

### Message

If the task fails, this field contains a detailed message describing the failure and possible recovery steps.

Type: String

### OpportunityId

Returns the original opportunity identifier passed in the request, which is the unique identifier for the opportunity created in the partner's system.

Type: String

Pattern: 0[0-9]{1,19}

### ReasonCode

Indicates the reason for task failure using an enumerated code.

Type: String

Valid Values: InvitationAccessDenied | InvitationValidationFailed  
| EngagementAccessDenied | OpportunityAccessDenied |  
ResourceSnapshotJobAccessDenied | ResourceSnapshotJobValidationFailed  
| ResourceSnapshotJobConflict | EngagementValidationFailed  
| EngagementConflict | OpportunitySubmissionFailed  
| EngagementInvitationConflict | InternalError |  
OpportunityValidationFailed | OpportunityConflict |  
ResourceSnapshotAccessDenied | ResourceSnapshotValidationFailed |  
ResourceSnapshotConflict | ServiceQuotaExceeded | RequestThrottled

### ResourceSnapshotJobId

The identifier of the resource snapshot job created to add the opportunity resource snapshot to the Engagement. Only populated if TaskStatus is COMPLETE

Type: String

Pattern: job-[0-9a-z]{13}

## StartTime

The timestamp indicating when the task was initiated. The format follows RFC 3339 section 5.6.

Type: Timestamp

## TaskArn

The Amazon Resource Name (ARN) of the task, used for tracking and managing the task within AWS.

Type: String

Pattern: arn: .\*

## TaskId

The unique identifier of the task, used to track the task's progress. This value follows a specific pattern: ^oit-[0-9a-z]{13}\$.

Type: String

Pattern: .\*task-[0-9a-z]{13}

## TaskStatus

Indicates the current status of the task. Valid values include IN\_PROGRESS, COMPLETE, and FAILED.

Type: String

Valid Values: IN\_PROGRESS | COMPLETE | FAILED

## Errors

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

### AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **ConflictException**

This error occurs when the request can't be processed due to a conflict with the target resource's current state, which could result from updating or deleting the resource.

Suggested action: Fetch the latest state of the resource, verify the state, and retry the request.

HTTP Status Code: 400

### **InternalServerException**

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### **ServiceQuotaExceededException**

This error occurs when the request would cause a service quota to be exceeded. Service quotas represent the maximum allowed use of a specific resource, and this error indicates that the request would surpass that limit.

Suggested action: Review the [Quotas](#) for the resource, and either reduce usage or request a quota increase.

HTTP Status Code: 400

### **ThrottlingException**

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# StartResourceSnapshotJob

Starts a resource snapshot job that has been previously created.

## Request Syntax

```
{  
    "Catalog": "string",  
    "ResourceSnapshotJobIdentifier": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog related to the request. Valid values are:

- AWS: Starts the request from the production AWS environment.
- Sandbox: Starts the request from a sandbox environment used for testing or development purposes.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### ResourceSnapshotJobIdentifier

The identifier of the resource snapshot job to start.

Type: String

Pattern: job-[0-9a-z]{13}

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](#).

### AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# StopResourceSnapshotJob

Stops a resource snapshot job. The job must be started prior to being stopped.

## Request Syntax

```
{  
    "Catalog": "string",  
    "ResourceSnapshotJobIdentifier": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog related to the request. Valid values are:

- AWS: Stops the request from the production AWS environment.
- Sandbox: Stops the request from a sandbox environment used for testing or development purposes.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### ResourceSnapshotJobIdentifier

The identifier of the job to stop.

Type: String

Pattern: job-[0-9a-z]{13}

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](#).

### AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# SubmitOpportunity

Use this action to submit an Opportunity that was previously created by partner for AWS review. After you perform this action, the Opportunity becomes non-editable until it is reviewed by AWS and has `LifeCycle.ReviewStatus` as either Approved or Action Required.

## Request Syntax

```
{  
    "Catalog": "string",  
    "Identifier": "string",  
    "InvolvementType": "string",  
    "Visibility": "string"  
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog related to the request. Valid values are:

- AWS: Submits the opportunity request from the production AWS environment.
- Sandbox: Submits the opportunity request from a sandbox environment used for testing or development purposes.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

## Identifier

The identifier of the Opportunity previously created by partner and needs to be submitted.

Type: String

Pattern: 0[0-9]{1,19}

Required: Yes

## InvolvementType

Specifies the level of AWS sellers' involvement on the opportunity. Valid values:

- Co-sell: Indicates the user wants to co-sell with AWS. Share the opportunity with AWS to receive deal assistance and support.
- For Visibility Only: Indicates that the user does not need support from AWS Sales Rep. Share this opportunity with AWS for visibility only, you will not receive deal assistance and support.

Type: String

Valid Values: For Visibility Only | Co-Sell

Required: Yes

## Visibility

Determines whether to restrict visibility of the opportunity from AWS sales. Default value is Full. Valid values:

- Full: The opportunity is fully visible to AWS sales.
- Limited: The opportunity has restricted visibility to AWS sales.

Type: String

Valid Values: Full | Limited

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](#).

### AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### InternalServerException

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

### ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# TagResource

Assigns one or more tags (key-value pairs) to the specified resource.

## Request Syntax

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

## Request Parameters

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

The request accepts the following data in JSON format.

### Note

In the following list, the required parameters are described first.

### ResourceArn

The Amazon Resource Name (ARN) of the resource that you want to tag.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: arn:[\w+=/, .@-]+:partnercentral:[\w+=/, .@-]\*:[0-9]{12}:catalog/([a-zA-Z]+)/[\w+=, .@-]+(/[\w+=, .@-]+)\*

Required: Yes

### Tags

A map of the key-value pairs of the tag or tags to assign.

Type: Array of [Tag](#) objects

Array Members: Minimum number of 1 item. Maximum number of 200 items.

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](#).

### AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### ConflictException

This error occurs when the request can't be processed due to a conflict with the target resource's current state, which could result from updating or deleting the resource.

Suggested action: Fetch the latest state of the resource, verify the state, and retry the request.

HTTP Status Code: 400

### InternalServerException

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

## ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)

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

# UntagResource

Removes a tag or tags from a resource.

## Request Syntax

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

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### ResourceArn

The Amazon Resource Name (ARN) of the resource that you want to untag.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: `arn:[\w+=/, .@-]+:partnercentral:[\w+=/, .@-]*:[0-9]{12}:catalog/([a-zA-Z]+)/[\w+=., @-]+(/[\w+=., @-]+)*`

Required: Yes

### TagKeys

The keys of the key-value pairs for the tag or tags you want to remove from the specified resource.

Type: Array of strings

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

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

Pattern: ( [\p{L}\p{Z}\p{N}\_.:=/+\\-@]\* )

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](#).

### AccessDeniedException

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### ConflictException

This error occurs when the request can't be processed due to a conflict with the target resource's current state, which could result from updating or deleting the resource.

Suggested action: Fetch the latest state of the resource, verify the state, and retry the request.

HTTP Status Code: 400

### InternalServerError

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

## ResourceNotFoundException

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

## ThrottlingException

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

## ValidationException

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)

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

# UpdateOpportunity

Updates the Opportunity record identified by a given Identifier. This operation allows you to modify the details of an existing opportunity to reflect the latest information and progress. Use this action to keep the opportunity record up-to-date and accurate.

When you perform updates, include the entire payload with each request. If any field is omitted, the API assumes that the field is set to null. The best practice is to always perform a GetOpportunity to retrieve the latest values, then send the complete payload with the updated values to be changed.

## Request Syntax

```
{
  "Catalog": "string",
  "Customer": {
    "Account": {
      "Address": {
        "City": "string",
        "CountryCode": "string",
        "PostalCode": "string",
        "StateOrRegion": "string",
        "StreetAddress": "string"
      },
      "AwsAccountId": "string",
      "CompanyName": "string",
      "Duns": "string",
      "Industry": "string",
      "OtherIndustry": "string",
      "WebsiteUrl": "string"
    },
    "Contacts": [
      {
        "BusinessTitle": "string",
        "Email": "string",
        "FirstName": "string",
        "LastName": "string",
        "Phone": "string"
      }
    ]
  },
  "Identifier": "string",
}
```

```
"LastModifiedDate": "string",
"LifeCycle": {
    "ClosedLostReason": "string",
    "NextSteps": "string",
    "NextStepsHistory": [
        {
            "Time": "string",
            "Value": "string"
        }
    ],
    "ReviewComments": "string",
    "ReviewStatus": "string",
    "ReviewStatusReason": "string",
    "Stage": "string",
    "TargetCloseDate": "string"
},
"Marketing": {
    "AwsFundingUsed": "string",
    "CampaignName": "string",
    "Channels": [ "string" ],
    "Source": "string",
    "UseCases": [ "string" ]
},
"NationalSecurity": "string",
"OpportunityType": "string",
"PartnerOpportunityIdentifier": "string",
"PrimaryNeedsFromAws": [ "string" ],
"Project": {
    "AdditionalComments": "string",
    "ApnPrograms": [ "string" ],
    "CompetitorName": "string",
    "CustomerBusinessProblem": "string",
    "CustomerUseCase": "string",
    "DeliveryModels": [ "string" ],
    "ExpectedCustomerSpend": [
        {
            "Amount": "string",
            "CurrencyCode": "string",
            "EstimationUrl": "string",
            "Frequency": "string",
            "TargetCompany": "string"
        }
    ],
    "OtherCompetitorNames": "string",
}
```

```
"OtherSolutionDescription": "string",
"RelatedOpportunityIdentifier": "string",
"SalesActivities": [ "string" ],
"Title": "string"
},
"SoftwareRevenue": {
  "DeliveryModel": "string",
  "EffectiveDate": "string",
  "ExpirationDate": "string",
  "Value": {
    "Amount": "string",
    "CurrencyCode": "string"
  }
}
}
```

## Request Parameters

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

The request accepts the following data in JSON format.

 **Note**

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog associated with the request. This field takes a string value from a predefined list: AWS or Sandbox. The catalog determines which environment the opportunity is updated in. Use AWS to update real opportunities in the production environment, and Sandbox for testing in secure, isolated environments. When you use the Sandbox catalog, it allows you to simulate and validate your interactions with AWS services without affecting live data or operations.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

## Identifier

Read-only, system generated Opportunity unique identifier.

Type: String

Pattern: 0[0-9]{1,19}

Required: Yes

## LastModifiedDate

DateTime when the opportunity was last modified.

Type: Timestamp

Required: Yes

## Customer

Specifies details of the customer associated with the Opportunity.

Type: [Customer](#) object

Required: No

## LifeCycle

An object that contains lifecycle details for the Opportunity.

Type: [LifeCycle](#) object

Required: No

## Marketing

An object that contains marketing details for the Opportunity.

Type: [Marketing](#) object

Required: No

## NationalSecurity

Specifies if the opportunity is associated with national security concerns. This flag is only applicable when the industry is Government. For national-security-related opportunities,

validation and compliance rules may apply, impacting the opportunity's visibility and processing.

Type: String

Valid Values: Yes | No

Required: No

### OpportunityType

Specifies the opportunity type as a renewal, new, or expansion.

Opportunity types:

- New opportunity: Represents a new business opportunity with a potential customer that's not previously engaged with your solutions or services.
- Renewal opportunity: Represents an opportunity to renew an existing contract or subscription with a current customer, ensuring continuity of service.
- Expansion opportunity: Represents an opportunity to expand the scope of an existing contract or subscription, either by adding new services or increasing the volume of existing services for a current customer.

Type: String

Valid Values: Net New Business | Flat Renewal | Expansion

Required: No

### PartnerOpportunityIdentifier

Specifies the opportunity's unique identifier in the partner's CRM system. This value is essential to track and reconcile because it's included in the outbound payload sent back to the partner.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Required: No

### PrimaryNeedsFromAws

Identifies the type of support the partner needs from AWS.

Valid values:

- Cosell—Architectural Validation: Confirmation from AWS that the partner's proposed solution architecture is aligned with AWS best practices and poses minimal architectural risks.
- Cosell—Business Presentation: Request AWS seller's participation in a joint customer presentation.
- Cosell—Competitive Information: Access to AWS competitive resources and support for the partner's proposed solution.
- Cosell—Pricing Assistance: Connect with an AWS seller for support situations where a partner may be receiving an upfront discount on a service (for example: EDP deals).
- Cosell—Technical Consultation: Connection with an AWS Solutions Architect to address the partner's questions about the proposed solution.
- Cosell—Total Cost of Ownership Evaluation: Assistance with quoting different cost savings of proposed solutions on AWS versus on-premises or a traditional hosting environment.
- Cosell—Deal Support: Request AWS seller's support to progress the opportunity (for example: joint customer call, strategic positioning).
- Cosell—Support for Public Tender/RFx: Opportunity related to the public sector where the partner needs RFx support from AWS.

Type: Array of strings

Valid Values: Co-Sell - Architectural Validation | Co-Sell - Business Presentation | Co-Sell - Competitive Information | Co-Sell - Pricing Assistance | Co-Sell - Technical Consultation | Co-Sell - Total Cost of Ownership Evaluation | Co-Sell - Deal Support | Co-Sell - Support for Public Tender / RFx

Required: No

## Project

An object that contains project details summary for the Opportunity.

Type: [Project](#) object

Required: No

## SoftwareRevenue

Specifies details of a customer's procurement terms. Required only for partners in eligible programs.

Type: [SoftwareRevenue](#) object

Required: No

## Response Syntax

```
{  
  "Id": "string",  
  "LastModifiedDate": "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.

### [Id](#)

Read-only, system generated Opportunity unique identifier.

Type: String

Pattern: 0[0-9]{1,19}

### [LastModifiedDate](#)

DateTime when the opportunity was last modified.

Type: Timestamp

## Errors

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

### **AccessDeniedException**

This error occurs when you don't have permission to perform the requested action.

You don't have access to this action or resource. Review IAM policies or contact your AWS administrator for assistance.

HTTP Status Code: 400

### **ConflictException**

This error occurs when the request can't be processed due to a conflict with the target resource's current state, which could result from updating or deleting the resource.

Suggested action: Fetch the latest state of the resource, verify the state, and retry the request.

HTTP Status Code: 400

### **InternalServerException**

This error occurs when the specified resource can't be found or doesn't exist. Resource ID and type might be incorrect.

Suggested action: This is usually a transient error. Retry after the provided retry delay or a short interval. If the problem persists, contact AWS support.

HTTP Status Code: 500

### **ResourceNotFoundException**

This error occurs when the specified resource can't be found. The resource might not exist, or isn't visible with the current credentials.

Suggested action: Verify that the resource ID is correct and the resource is in the expected AWS region. Check IAM permissions for accessing the resource.

HTTP Status Code: 400

### **ThrottlingException**

This error occurs when there are too many requests sent. Review the provided quotas and adapt your usage to avoid throttling.

This error occurs when there are too many requests sent. Review the provided [Quotas](#) and retry after the provided delay.

HTTP Status Code: 400

### **ValidationException**

The input fails to satisfy the constraints specified by the service or business validation rules.

Suggested action: Review the error message, including the failed fields and reasons, to correct the request payload.

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# Data Types

The Partner Central Selling API 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:

- [Account](#)
- [AccountReceiver](#)
- [AccountSummary](#)
- [Address](#)
- [AddressSummary](#)
- [AssigneeContact](#)
- [AwsOpportunityCustomer](#)
- [AwsOpportunityInsights](#)
- [AwsOpportunityLifeCycle](#)
- [AwsOpportunityProject](#)
- [AwsOpportunityRelatedEntities](#)
- [AwsSubmission](#)
- [AwsTeamMember](#)
- [Contact](#)
- [Customer](#)
- [CustomerProjectsContext](#)
- [CustomerSummary](#)
- [EngagementContextDetails](#)
- [EngagementContextPayload](#)
- [EngagementCustomer](#)

- [EngagementCustomerProjectDetails](#)
- [EngagementInvitationSummary](#)
- [EngagementMember](#)
- [EngagementMemberSummary](#)
- [EngagementResourceAssociationSummary](#)
- [EngagementSort](#)
- [EngagementSummary](#)
- [ExpectedCustomerSpend](#)
- [Invitation](#)
- [LastModifiedDate](#)
- [LifeCycle](#)
- [LifeCycleForView](#)
- [LifeCycleSummary](#)
- [ListEngagementByAcceptingInvitationTaskSummary](#)
- [ListEngagementFromOpportunityTaskSummary](#)
- [ListTasksSortBase](#)
- [Marketing](#)
- [MonetaryValue](#)
- [NextStepsHistory](#)
- [OpportunityEngagementInvitationSort](#)
- [OpportunityInvitationPayload](#)
- [OpportunitySort](#)
- [OpportunitySummary](#)
- [OpportunitySummaryView](#)
- [Payload](#)
- [ProfileNextStepsHistory](#)
- [Project](#)
- [ProjectDetails](#)
- [ProjectSummary](#)
- [ProjectView](#)

- [Receiver](#)
- [RelatedEntityIdentifiers](#)
- [ResourceSnapshotJobSummary](#)
- [ResourceSnapshotPayload](#)
- [ResourceSnapshotSummary](#)
- [SenderContact](#)
- [SoftwareRevenue](#)
- [SolutionBase](#)
- [SolutionSort](#)
- [SortObject](#)
- [Tag](#)
- [ValidationExceptionError](#)

# Account

Specifies the Customer's account details associated with the Opportunity.

## Contents

### Note

In the following list, the required parameters are described first.

### CompanyName

Specifies the end Customer's company name associated with the Opportunity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 120.

Required: Yes

### Address

Specifies the end Customer's address details associated with the Opportunity.

Type: [Address](#) object

Required: No

### AwsAccountId

Specifies the Customer AWS account ID associated with the Opportunity.

Type: String

Pattern: ([0-9]{12}|\w{1,12})

Required: No

### Duns

Indicates the Customer DUNS number, if available.

Type: String

Pattern: [0-9]{9}

Required: No

## Industry

Specifies the industry the end Customer belongs to that's associated with the Opportunity. It refers to the category or sector where the customer's business operates. This is a required field.

Type: String

Valid Values: Aerospace | Agriculture | Automotive | Computers and Electronics | Consumer Goods | Education | Energy - Oil and Gas | Energy - Power and Utilities | Financial Services | Gaming | Government | Healthcare | Hospitality | Life Sciences | Manufacturing | Marketing and Advertising | Media and Entertainment | Mining | Non-Profit Organization | Professional Services | Real Estate and Construction | Retail | Software and Internet | Telecommunications | Transportation and Logistics | Travel | Wholesale and Distribution | Other

Required: No

## OtherIndustry

Specifies the end Customer's industry associated with the Opportunity, when the selected value in the Industry field is Other.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Required: No

## WebsiteUrl

Specifies the end customer's company website URL associated with the Opportunity. This value is crucial to map the customer within the AWS CRM system. This field is required in all cases except when the opportunity is related to national security.

Type: String

Length Constraints: Minimum length of 4. 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# AccountReceiver

Contains the account details of the partner who received the Engagement Invitation, including the AWS account ID and company name.

## Contents

### Note

In the following list, the required parameters are described first.

### AwsAccountId

Indicates the AWS account ID of the partner who received the Engagement Invitation. This is a unique identifier for managing engagements with specific AWS accounts.

Type: String

Pattern: ([0-9]{12}|\w{1,12})

Required: Yes

### Alias

Represents the alias of the partner account receiving the Engagement Invitation, making it easier to identify and track the recipient in reports or logs.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

Pattern: [\p{L}\p{N}\p{P}\p{Z}]<sup>+</sup>

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

# AccountSummary

An object that contains an Account's subset of fields.

## Contents

### Note

In the following list, the required parameters are described first.

### CompanyName

Specifies the end Customer's company name associated with the Opportunity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 120.

Required: Yes

### Address

Specifies the end Customer's address details associated with the Opportunity.

Type: [AddressSummary](#) object

Required: No

### Industry

Specifies which industry the end Customer belongs to associated with the Opportunity. It refers to the category or sector that the customer's business operates in.

To submit a value outside the picklist, use Other.

Conditionally mandatory if Other is selected for Industry Vertical in LOVs.

Type: String

Valid Values: Aerospace | Agriculture | Automotive | Computers and Electronics | Consumer Goods | Education | Energy - Oil and Gas | Energy - Power and Utilities | Financial Services | Gaming | Government |

Healthcare | Hospitality | Life Sciences | Manufacturing | Marketing and Advertising | Media and Entertainment | Mining | Non-Profit Organization | Professional Services | Real Estate and Construction | Retail | Software and Internet | Telecommunications | Transportation and Logistics | Travel | Wholesale and Distribution | Other

Required: No

### **OtherIndustry**

Specifies the end Customer's industry associated with the Opportunity, when the selected value in the Industry field is Other. This field is relevant when the customer's industry doesn't fall under the predefined picklist values and requires a custom description.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Required: No

### **WebsiteUrl**

Specifies the end customer's company website URL associated with the Opportunity. This value is crucial to map the customer within the AWS CRM system.

Type: String

Length Constraints: Minimum length of 4. 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# Address

Specifies the end Customer's address details associated with the Opportunity.

## Contents

### Note

In the following list, the required parameters are described first.

### City

Specifies the end Customer's city associated with the Opportunity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Required: No

### CountryCode

Specifies the end Customer's country associated with the Opportunity.

Type: String

Valid Values: US | AF | AX | AL | DZ | AS | AD | AO | AI | AQ | AG | AR | AM | AW | AU | AT | AZ | BS | BH | BD | BB | BY | BE | BZ | BJ | BM | BT | BO | BQ | BA | BW | BV | BR | IO | BN | BG | BF | BI | KH | CM | CA | CV | KY | CF | TD | CL | CN | CX | CC | CO | KM | CG | CK | CR | CI | HR | CU | CW | CY | CZ | CD | DK | DJ | DM | DO | EC | EG | SV | GQ | ER | EE | ET | FK | FO | FJ | FI | FR | GF | PF | TF | GA | GM | GE | DE | GH | GI | GR | GL | GD | GP | GU | GT | GG | GN | GW | GY | HT | HM | VA | HN | HK | HU | IS | IN | ID | IR | IQ | IE | IM | IL | IT | JM | JP | JE | JO | KZ | KE | KI | KR | KW | KG | LA | LV | LB | LS | LR | LY | LI | LT | LU | MO | MK | MG | MW | MY | MV | ML | MT | MH | MQ | MR | MU | YT | MX | FM | MD | MC | MN | ME | MS | MA | MZ | MM | NA | NR | NP | NL | AN | NC | NZ | NI | NE | NG | NU | NF | MP | NO | OM | PK | PW | PS | PA | PG | PY | PE | PH | PN | PL | PT | PR | QA | RE | RO | RU | RW | BL | SH

| KN | LC | MF | PM | VC | WS | SM | ST | SA | SN | RS | SC | SL | SG |  
SX | SK | SI | SB | SO | ZA | GS | SS | ES | LK | SD | SR | SJ | SZ | SE  
| CH | SY | TW | TJ | TZ | TH | TL | TG | TK | TO | TT | TN | TR | TM |  
TC | TV | UG | UA | AE | GB | UM | UY | UZ | VU | VE | VN | VG | VI | WF  
| EH | YE | ZM | ZW

Required: No

### **PostalCode**

Specifies the end Customer's postal code associated with the Opportunity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 20.

Required: No

### **StateOrRegion**

Specifies the end Customer's state or region associated with the Opportunity.

Valid values: Alabama | Alaska | American Samoa | Arizona | Arkansas | California | Colorado | Connecticut | Delaware | Dist. of Columbia | Federated States of Micronesia | Florida | Georgia | Guam | Hawaii | Idaho | Illinois | Indiana | Iowa | Kansas | Kentucky | Louisiana | Maine | Marshall Islands | Maryland | Massachusetts | Michigan | Minnesota | Mississippi | Missouri | Montana | Nebraska | Nevada | New Hampshire | New Jersey | New Mexico | New York | North Carolina | North Dakota | Northern Mariana Islands | Ohio | Oklahoma | Oregon | Palau | Pennsylvania | Puerto Rico | Rhode Island | South Carolina | South Dakota | Tennessee | Texas | Utah | Vermont | Virginia | Virgin Islands | Washington | West Virginia | Wisconsin | Wyoming | APO/AE | AF0/FPO | FPO, AP

Type: String

Required: No

### **StreetAddress**

Specifies the end Customer's street address associated with the Opportunity.

Type: String

Length Constraints: Minimum length of 0. 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# AddressSummary

An object that contains an Address object's subset of fields.

## Contents

### Note

In the following list, the required parameters are described first.

### City

Specifies the end Customer's city associated with the Opportunity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Required: No

### CountryCode

Specifies the end Customer's country associated with the Opportunity.

Type: String

Valid Values: US | AF | AX | AL | DZ | AS | AD | AO | AI | AQ | AG | AR | AM | AW | AU | AT | AZ | BS | BH | BD | BB | BY | BE | BZ | BJ | BM | BT | BO | BQ | BA | BW | BV | BR | IO | BN | BG | BF | BI | KH | CM | CA | CV | KY | CF | TD | CL | CN | CX | CC | CO | KM | CG | CK | CR | CI | HR | CU | CW | CY | CZ | CD | DK | DJ | DM | DO | EC | EG | SV | GQ | ER | EE | ET | FK | FO | FJ | FI | FR | GF | PF | TF | GA | GM | GE | DE | GH | GI | GR | GL | GD | GP | GU | GT | GG | GN | GW | GY | HT | HM | VA | HN | HK | HU | IS | IN | ID | IR | IQ | IE | IM | IL | IT | JM | JP | JE | JO | KZ | KE | KI | KR | KW | KG | LA | LV | LB | LS | LR | LY | LI | LT | LU | MO | MK | MG | MW | MY | MV | ML | MT | MH | MQ | MR | MU | YT | MX | FM | MD | MC | MN | ME | MS | MA | MZ | MM | NA | NR | NP | NL | AN | NC | NZ | NI | NE | NG | NU | NF | MP | NO | OM | PK | PW | PS | PA | PG | PY | PE | PH | PN | PL | PT | PR | QA | RE | RO | RU | RW | BL | SH | KN | LC | MF | PM | VC | WS | SM | ST | SA | SN | RS | SC | SL | SG |

SX | SK | SI | SB | SO | ZA | GS | SS | ES | LK | SD | SR | SJ | SZ | SE  
| CH | SY | TW | TJ | TZ | TH | TL | TG | TK | TO | TT | TN | TR | TM |  
TC | TV | UG | UA | AE | GB | UM | UY | UZ | VU | VE | VN | VG | VI | WF  
| EH | YE | ZM | ZW

Required: No

### **PostalCode**

Specifies the end Customer's postal code associated with the Opportunity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 20.

Required: No

### **StateOrRegion**

Specifies the end Customer's state or region associated with the Opportunity.

Valid values: Alabama | Alaska | American Samoa | Arizona | Arkansas | California | Colorado | Connecticut | Delaware | Dist. of Columbia | Federated States of Micronesia | Florida | Georgia | Guam | Hawaii | Idaho | Illinois | Indiana | Iowa | Kansas | Kentucky | Louisiana | Maine | Marshall Islands | Maryland | Massachusetts | Michigan | Minnesota | Mississippi | Missouri | Montana | Nebraska | Nevada | New Hampshire | New Jersey | New Mexico | New York | North Carolina | North Dakota | Northern Mariana Islands | Ohio | Oklahoma | Oregon | Palau | Pennsylvania | Puerto Rico | Rhode Island | South Carolina | South Dakota | Tennessee | Texas | Utah | Vermont | Virginia | Virgin Islands | Washington | West Virginia | Wisconsin | Wyoming | APO/AE | AFO/FPO | FPO, AP

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

# AssigneeContact

Represents the contact details of the individual assigned to manage the opportunity within the partner organization. This helps to ensure that there is a point of contact for the opportunity's progress.

## Contents

### Note

In the following list, the required parameters are described first.

### BusinessTitle

Specifies the business title of the assignee managing the opportunity. This helps clarify the individual's role and responsibilities within the organization. Use the value `PartnerAccountManager` to update details of the opportunity owner.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

Required: Yes

### Email

Provides the email address of the assignee. This email is used for communications and notifications related to the opportunity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

Pattern: `[a-zA-Z0-9!#$%&'*+/?^`{|}~-]+(?:\.[a-zA-Z0-9!#$%&'*+/?^`{|}~-]+)*@[a-zA-Z0-9](?:[a-zA-Z0-9-]*[a-zA-Z0-9])?(\.[a-zA-Z0-9-]*[a-zA-Z0-9])?`

Required: Yes

## FirstName

Specifies the first name of the assignee managing the opportunity. The system automatically retrieves this value from the user profile by referencing the associated email address.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

Required: Yes

## LastName

Specifies the last name of the assignee managing the opportunity. The system automatically retrieves this value from the user profile by referencing the associated email address.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

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

# AwsOpportunityCustomer

Represents the customer associated with the AWS opportunity. This field captures key details about the customer that are necessary for managing the opportunity.

## Contents

### Note

In the following list, the required parameters are described first.

### Contacts

Provides a list of customer contacts involved in the opportunity. These contacts may include decision makers, influencers, and other stakeholders within the customer's organization.

Type: Array of [Contact](#) 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# AwsOpportunityInsights

Contains insights provided by AWS for the opportunity, offering recommendations and analysis that can help the partner optimize their engagement and strategy.

## Contents

### Note

In the following list, the required parameters are described first.

### EngagementScore

Represents a score assigned by AWS to indicate the level of engagement and potential success for the opportunity. This score helps partners prioritize their efforts.

Type: String

Valid Values: High | Medium | Low

Required: No

### NextBestActions

Provides recommendations from AWS on the next best actions to take in order to move the opportunity forward and increase the likelihood of success.

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



# AwsOpportunityLifeCycle

Tracks the lifecycle of the AWS opportunity, including stages such as qualification, validation, and closure. This field helps partners understand the current status and progression of the opportunity.

## Contents

### Note

In the following list, the required parameters are described first.

### ClosedLostReason

Indicates the reason why an opportunity was marked as Closed Lost. This helps in understanding the context behind the lost opportunity and aids in refining future strategies.

Type: String

Valid Values: Administrative | Business Associate Agreement | Company Acquired/Dissolved | Competitive Offering | Customer Data Requirement | Customer Deficiency | Customer Experience | Delay / Cancellation of Project | Duplicate | Duplicate Opportunity | Executive Blocker | Failed Vetting | Feature Limitation | Financial/Commercial | Insufficient Amazon Value | Insufficient AWS Value | International Constraints | Legal / Tax / Regulatory | Legal Terms and Conditions | Lost to Competitor | Lost to Competitor - Google | Lost to Competitor - Microsoft | Lost to Competitor - Other | Lost to Competitor - Rackspace | Lost to Competitor - SoftLayer | Lost to Competitor - VMWare | No Customer Reference | No Integration Resources | No Opportunity | No Perceived Value of MP | No Response | Not Committed to AWS | No Update | On Premises Deployment | Other | Other (Details in Description) | Partner Gap | Past Due | People/Relationship/Governance | Platform Technology Limitation | Preference for Competitor | Price | Product/Technology | Product Not on AWS | Security / Compliance | Self-Service | Technical Limitations | Term Sheet Impasse

Required: No

## NextSteps

Specifies the immediate next steps required to progress the opportunity. These steps are based on AWS guidance and the current stage of the opportunity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Required: No

## NextStepsHistory

Provides a historical log of previous next steps that were taken to move the opportunity forward. This helps in tracking the decision-making process and identifying any delays or obstacles encountered.

Type: Array of [ProfileNextStepsHistory](#) objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: No

## Stage

Represents the current stage of the opportunity in its lifecycle, such as Qualification, Validation, or Closed Won. This helps in understanding the opportunity's progress.

Type: String

Valid Values: Not Started | In Progress | Prospect | Engaged | Identified | Qualify | Research | Seller Engaged | Evaluating | Seller Registered | Term Sheet Negotiation | Contract Negotiation | Onboarding | Building Integration | Qualified | On-hold | Technical Validation | Business Validation | Committed | Launched | Deferred to Partner | Closed Lost | Completed | Closed Incomplete

Required: No

## TargetCloseDate

Indicates the expected date by which the opportunity is projected to close. This field helps in planning resources and timelines for both the partner and AWS.

Type: String

Pattern: [1-9][0-9]{3}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])

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

# AwsOpportunityProject

Captures details about the project associated with the opportunity, including objectives, scope, and customer requirements.

## Contents

 **Note**

In the following list, the required parameters are described first.

### ExpectedCustomerSpend

Indicates the expected spending by the customer over the course of the project. This value helps partners and AWS estimate the financial impact of the opportunity. Use the [AWS Pricing Calculator](#) to create an estimate of the customer's total spend. If only annual recurring revenue (ARR) is available, distribute it across 12 months to provide an average monthly value.

Type: Array of [ExpectedCustomerSpend](#) objects

Array Members: Minimum number of 1 item.

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

# AwsOpportunityRelatedEntities

Represents other entities related to the AWS opportunity, such as AWS products, partner solutions, and marketplace offers. These associations help build a complete picture of the solution being sold.

## Contents

### Note

In the following list, the required parameters are described first.

### AwsProducts

Specifies the AWS products associated with the opportunity. This field helps track the specific products that are part of the proposed solution.

Type: Array of strings

Required: No

### Solutions

Specifies the partner solutions related to the opportunity. These solutions represent the partner's offerings that are being positioned as part of the overall AWS opportunity.

Type: Array of strings

Pattern: S-[0-9]{1,19}

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



# AwsSubmission

Indicates the level of AWS involvement in the opportunity. This field helps track AWS participation throughout the engagement, such as providing technical support, deal assistance, and sales support.

## Contents

 **Note**

In the following list, the required parameters are described first.

### **InvolveType**

Specifies the type of AWS involvement in the opportunity, such as coselling, deal support, or technical consultation. This helps categorize the nature of AWS participation.

Type: String

Valid Values: For Visibility Only | Co-Sell

Required: Yes

### **Visibility**

Determines who can view AWS involvement in the opportunity. Typically, this field is set to Full for most cases, but it may be restricted based on special program requirements or confidentiality needs.

Type: String

Valid Values: Full | Limited

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

# AwsTeamMember

Represents an AWS team member for the engagement. This structure includes details such as name, email, and business title.

## Contents

### Note

In the following list, the required parameters are described first.

### **BusinessTitle**

Specifies the AWS team member's business title and indicates their organizational role.

Type: String

Valid Values: AWSSalesRep | AWSAccountOwner | WWPSPDM | PDM | PSM | ISVSM

Required: No

### **Email**

Provides the AWS team member's email address.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

Pattern: [a-zA-Z0-9!#\$%&'\*+/?^`{|}~-]+(?:\.[a-zA-Z0-9!#\$%&'\*+/?^`{|}~-]+)\*@[a-zA-Z0-9](?:[a-zA-Z0-9-]\*[a-zA-Z0-9])?\\.(?:[a-zA-Z0-9-]\*[a-zA-Z0-9])?

Required: No

### **FirstName**

Provides the AWS team member's first name.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

Required: No

## LastName

Provides the AWS team member's last name.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

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

# Contact

An object that contains a Customer Partner's contact details.

## Contents

### Note

In the following list, the required parameters are described first.

### **BusinessTitle**

The partner contact's title (job title or role) associated with the Opportunity.

`BusinessTitle` supports either `PartnerAccountManager` or `OpportunityOwner`.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

Required: No

### **Email**

The contact's email address associated with the Opportunity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

Pattern: [a-zA-Z0-9!#\$%&'\*+/?^`{|}~-]+(?:\.[a-zA-Z0-9!#\$%&'\*+/?^`{|}~-]+)\*@[a-zA-Z0-9](?:[a-zA-Z0-9-]\*[a-zA-Z0-9])?\.+[a-zA-Z0-9](?:[a-zA-Z0-9-]\*[a-zA-Z0-9])?

Required: No

### **FirstName**

The contact's first name associated with the Opportunity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

Required: No

### **Last**Name****

The contact's last name associated with the Opportunity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

Required: No

### **Phone**

The contact's phone number associated with the Opportunity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 40.

Pattern: \+[1-9]\d{1,14}

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

# Customer

An object that contains the customer's Account and Contact.

## Contents

### Note

In the following list, the required parameters are described first.

### Account

An object that contains the customer's account details.

Type: [Account](#) object

Required: No

### Contacts

Represents the contact details for individuals associated with the customer of the Opportunity. This field captures relevant contacts, including decision-makers, influencers, and technical stakeholders within the customer organization. These contacts are key to progressing the opportunity.

Type: Array of [Contact](#) 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# CustomerProjectsContext

The CustomerProjects structure in Engagements offers a flexible framework for managing customer-project relationships. It supports multiple customers per Engagement and multiple projects per customer, while also allowing for customers without projects and projects without specific customers.

All Engagement members have full visibility of customers and their associated projects, enabling the capture of relevant context even when project details are not fully defined. This structure also facilitates targeted invitations, allowing partners to focus on specific customers and their business problems when sending Engagement invitations.

## Contents

 **Note**

In the following list, the required parameters are described first.

### Customer

Contains details about the customer associated with the Engagement Invitation, including company information and industry.

Type: [EngagementCustomer](#) object

Required: No

### Project

Information about the customer project associated with the Engagement.

Type: [EngagementCustomerProjectDetails](#) 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# CustomerSummary

An object that contains a Customer object's subset of fields.

## Contents

 **Note**

In the following list, the required parameters are described first.

### Account

An object that contains a customer's account details.

Type: [AccountSummary](#) 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# EngagementContextDetails

Provides detailed context information for an Engagement. This structure allows for specifying the type of context and its associated payload.

## Contents

### Note

In the following list, the required parameters are described first.

### Type

Specifies the type of Engagement context. Valid values are "CustomerProject" or "Document", indicating whether the context relates to a customer project or a document respectively.

Type: String

Valid Values: CustomerProject

Required: Yes

### Payload

Contains the specific details of the Engagement context. The structure of this payload varies depending on the Type field.

Type: [EngagementContextPayload](#) object

**Note:** This object is a Union. Only one member of this object can be specified or returned.

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

# EngagementContextPayload

Represents the payload of an Engagement context. The structure of this payload varies based on the context type specified in the EngagementContextDetails.

## Contents

 **Note**

In the following list, the required parameters are described first.

 **Important**

This data type is a UNION, so only one of the following members can be specified when used or returned.

### CustomerProject

Contains detailed information about a customer project when the context type is "CustomerProject". This field is present only when the Type in EngagementContextDetails is set to "CustomerProject".

Type: [CustomerProjectsContext](#) 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# EngagementCustomer

Contains details about the customer associated with the Engagement Invitation, including company information and industry.

## Contents

### Note

In the following list, the required parameters are described first.

### CompanyName

Represents the name of the customer's company associated with the Engagement Invitation. This field is used to identify the customer.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 120.

Pattern: [\p{L}\p{N}\p{P}\p{Z}]+

Required: Yes

### CountryCode

Indicates the country in which the customer's company operates. This field is useful for understanding regional requirements or compliance needs.

Type: String

Valid Values: US | AF | AX | AL | DZ | AS | AD | AO | AI | AQ | AG | AR | AM | AW | AU | AT | AZ | BS | BH | BD | BB | BY | BE | BZ | BJ | BM | BT | BO | BQ | BA | BW | BV | BR | IO | BN | BG | BF | BI | KH | CM | CA | CV | KY | CF | TD | CL | CN | CX | CC | CO | KM | CG | CK | CR | CI | HR | CU | CW | CY | CZ | CD | DK | DJ | DM | DO | EC | EG | SV | GQ | ER | EE | ET | FK | FO | FJ | FI | FR | GF | PF | TF | GA | GM | GE | DE | GH | GI | GR | GL | GD | GP | GU | GT | GG | GN | GW | GY | HT | HM | VA | HN | HK | HU | IS | IN | ID | IR | IQ | IE | IM | IL | IT | JM | JP | JE | JO | KZ | KE | KI | KR | KW | KG | LA | LV | LB | LS | LR | LY | LI | LT

| LU | MO | MK | MG | MW | MY | MV | ML | MT | MH | MQ | MR | MU | YT |  
MX | FM | MD | MC | MN | ME | MS | MA | MZ | MM | NA | NR | NP | NL | AN  
| NC | NZ | NI | NE | NG | NU | NF | MP | NO | OM | PK | PW | PS | PA |  
PG | PY | PE | PH | PN | PL | PT | PR | QA | RE | RO | RU | RW | BL | SH  
| KN | LC | MF | PM | VC | WS | SM | ST | SA | SN | RS | SC | SL | SG |  
SX | SK | SI | SB | SO | ZA | GS | SS | ES | LK | SD | SR | SJ | SZ | SE  
| CH | SY | TW | TJ | TZ | TH | TL | TG | TK | TO | TT | TN | TR | TM |  
TC | TV | UG | UA | AE | GB | UM | UY | UZ | VU | VE | VN | VG | VI | WF  
| EH | YE | ZM | ZW

Required: Yes

## Industry

Specifies the industry to which the customer's company belongs. This field helps categorize the opportunity based on the customer's business sector.

Type: String

Valid Values: Aerospace | Agriculture | Automotive | Computers and Electronics | Consumer Goods | Education | Energy - Oil and Gas | Energy - Power and Utilities | Financial Services | Gaming | Government | Healthcare | Hospitality | Life Sciences | Manufacturing | Marketing and Advertising | Media and Entertainment | Mining | Non-Profit Organization | Professional Services | Real Estate and Construction | Retail | Software and Internet | Telecommunications | Transportation and Logistics | Travel | Wholesale and Distribution | Other

Required: Yes

## WebsiteUrl

Provides the website URL of the customer's company. This field helps partners verify the legitimacy and size of the customer organization.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 255.

Pattern: ((http|https)://)?(www[.])?([a-zA-Z0-9]|-)+?([.][a-zA-Z0-9(-|/=|?)?]+)?+?

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

# EngagementCustomerProjectDetails

Provides comprehensive details about a customer project associated with an Engagement. This may include information such as project goals, timelines, and specific customer requirements.

## Contents

 **Note**

In the following list, the required parameters are described first.

### BusinessProblem

A description of the business problem the project aims to solve.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 255.

Required: Yes

### TargetCompletionDate

The target completion date for the customer's project.

Type: String

Pattern: [1-9][0-9]{3}-(0[1-9]|1[012])-(0[1-9]|12)[0-9]3[01]

Required: Yes

### Title

The title of the project.

Type: String

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

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

# EngagementInvitationSummary

Provides a summarized view of the Engagement Invitation, including details like the identifier, status, and sender. This summary helps partners track and manage AWS originated opportunities.

## Contents

### Note

In the following list, the required parameters are described first.

## Catalog

Specifies the catalog in which the Engagement Invitation resides. This can be either the AWS or Sandbox catalog, indicating whether the opportunity is live or being tested.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

## Id

Represents the unique identifier of the Engagement Invitation. This identifier is used to track the invitation and to manage responses like acceptance or rejection.

Type: String

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

Pattern: (arn:.\*|engi-[0-9a-z]{13})

Required: Yes

## Arn

The Amazon Resource Name (ARN) of the Engagement Invitation. The ARN is a unique identifier that allows partners to reference the invitation in their system and manage its lifecycle.

Type: String

Required: No

### **EngagementId**

The identifier of the Engagement associated with this invitation. This links the invitation to its parent Engagement.

Type: String

Pattern: eng-[0-9a-z]{14}

Required: No

### **EngagementTitle**

Provides a short title or description of the Engagement Invitation. This title helps partners quickly identify and differentiate between multiple engagement opportunities.

Type: String

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

Required: No

### **ExpirationDate**

Indicates the date and time when the Engagement Invitation will expire. After this date, the invitation can no longer be accepted, and the opportunity will be unavailable to the partner.

Type: Timestamp

Required: No

### **InvitationDate**

Indicates the date when the Engagement Invitation was sent to the partner. This provides context for when the opportunity was shared and helps in tracking the timeline for engagement.

Type: Timestamp

Required: No

### **ParticipantType**

Identifies the role of the caller in the engagement invitation.

Type: String

Valid Values: SENDER | RECEIVER

Required: No

### PayloadType

Describes the type of payload associated with the Engagement Invitation, such as Opportunity or MarketplaceOffer. This helps partners understand the nature of the engagement request from AWS.

Type: String

Valid Values: OpportunityInvitation

Required: No

### Receiver

Specifies the partner company or individual that received the Engagement Invitation. This field is important for tracking who the invitation was sent to within the partner organization.

Type: [Receiver](#) object

**Note:** This object is a Union. Only one member of this object can be specified or returned.

Required: No

### SenderAwsAccountId

Specifies the AWS account ID of the sender who initiated the Engagement Invitation. This allows the partner to identify the AWS entity or representative responsible for sharing the opportunity.

Type: String

Pattern: ([0-9]{12}|\w{1,12})

Required: No

### SenderCompanyName

Indicates the name of the company or AWS division that sent the Engagement Invitation. This information is useful for partners to know which part of AWS is requesting engagement.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 120.

Required: No

## Status

Represents the current status of the Engagement Invitation, such as Pending, Accepted, or Rejected. The status helps track the progress and response to the invitation.

Type: String

Valid Values: ACCEPTED | PENDING | REJECTED | EXPIRED

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

# EngagementMember

Engagement members are the participants in an Engagement, which is likely a collaborative project or business opportunity within the AWS partner network. Members can be different partner organizations or AWS accounts that are working together on a specific engagement.

Each member is represented by their AWS Account ID, Company Name, and associated details. Members have a status within the Engagement (PENDING, ACCEPTED, REJECTED, or WITHDRAWN), indicating their current state of participation. Only existing members of an Engagement can view the list of other members. This implies a level of privacy and access control within the Engagement structure.

## Contents

### Note

In the following list, the required parameters are described first.

### AccountId

This is the unique identifier for the AWS account associated with the member organization. It's used for AWS-related operations and identity verification.

Type: String

Pattern: ([0-9]{12}|\w{1,12})

Required: No

### CompanyName

The official name of the member's company or organization.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 120.

Required: No

## WebsiteUrl

The URL of the member company's website. This offers a way to find more information about the member organization and serves as an additional identifier.

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

# EngagementMemberSummary

The EngagementMemberSummary provides a snapshot of essential information about participants in an AWS Partner Central Engagement. This compact data structure encapsulates key details of each member, facilitating efficient collaboration and management within the Engagement.

## Contents

### Note

In the following list, the required parameters are described first.

### CompanyName

The official name of the member's company or organization.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 120.

Required: No

### WebsiteUrl

The URL of the member company's website. This offers a way to find more information about the member organization and serves as an additional identifier.

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



# EngagementResourceAssociationSummary

This provide a streamlined view of the relationships between engagements and resources. These summaries offer a crucial link between collaborative engagements and the specific resources involved, such as opportunities. These summaries are particularly valuable for partners navigating complex engagements with multiple resources. They enable quick insights into resource distribution across engagements, support efficient resource management, and help maintain a clear overview of collaborative activities.

## Contents

### Note

In the following list, the required parameters are described first.

### Catalog

Indicates the environment in which the resource and engagement exist.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### CreatedBy

The AWS account ID of the entity that owns the resource. Identifies the account responsible for or having primary control over the resource.

Type: String

Pattern: ([0-9]{12}|\w{1,12})

Required: No

### EngagementId

A unique identifier for the engagement associated with the resource.

Type: String

Pattern: eng-[0-9a-z]{14}

Required: No

## ResourceId

A unique identifier for the specific resource. Varies depending on the resource type.

Type: String

Pattern: 0[0-9]{1,19}

Required: No

## ResourceType

Categorizes the type of resource associated with the engagement.

Type: String

Valid Values: Opportunity

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

# EngagementSort

Specifies the sorting parameters for listing Engagements.

## Contents

### Note

In the following list, the required parameters are described first.

### SortBy

The field by which to sort the results.

Type: String

Valid Values: CreatedDate

Required: Yes

### SortOrder

The order in which to sort the results.

Type: String

Valid Values: ASCENDING | DESCENDING

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

# EngagementSummary

An object that contains an Engagement's subset of fields.

## Contents

### Note

In the following list, the required parameters are described first.

### Arn

The Amazon Resource Name (ARN) of the created Engagement.

Type: String

Pattern: arn: . \*

Required: No

### CreatedAt

The date and time when the Engagement was created.

Type: Timestamp

Required: No

### CreatedBy

The AWS Account ID of the Engagement creator.

Type: String

Pattern: ([0-9]{12}|\w{1,12})

Required: No

### Id

The unique identifier for the Engagement.

Type: String

Pattern: eng-[0-9a-z]{14}

Required: No

## MemberCount

The number of members in the Engagement.

Type: Integer

Required: No

## Title

The title of the Engagement.

Type: String

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

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

# ExpectedCustomerSpend

Provides an estimate of the revenue that the partner is expected to generate from the opportunity. This information helps partners assess the financial value of the project.

## Contents

### Note

In the following list, the required parameters are described first.

### Amount

Represents the estimated monthly revenue that the partner expects to earn from the opportunity. This helps in forecasting financial returns.

Type: String

Required: Yes

### CurrencyCode

Indicates the currency in which the revenue estimate is provided. This helps in understanding the financial impact across different markets.

Type: String

Pattern: USD

Valid Values: USD | EUR | GBP | AUD | CAD | CNY | NZD | INR | JPY | CHF | SEK | AED | AFN | ALL | AMD | ANG | AOA | ARS | AWG | AZN | BAM | BBD | BDT | BGN | BHD | BIF | BMD | BND | BOB | BOV | BRL | BSD | BTN | BWP | BYN | BZD | CDF | CHE | CHW | CLF | CLP | COP | COU | CRC | CUC | CUP | CVE | CZK | DJF | DKK | DOP | DZD | EGP | ERN | ETB | FJD | FKP | GEL | GHS | GIP | GMD | GNF | GTQ | GYD | HKD | HNL | HRK | HTG | HUF | IDR | ILS | IQD | IRR | ISK | JMD | JOD | KES | KGS | KHR | KMF | KPW | KRW | KWD | KYD | KZT | LAK | LBP | LKR | LRD | LSL | LYD | MAD | MDL | MGA | MKD | MMK | MNT | MOP | MRU | MUR | MVR | MWK | MXN | MXV | MYR | MZN | NAD | NGN | NIO | NOK | NPR | OMR | PAB | PEN | PGK | PHP | PKR | PLN | PYG | QAR | RON | RSD | RUB | RWF | SAR | SBD | SCR | SDG | SGD | SHP |

|     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |
|-----|--|-----|--|-----|--|-----|--|-----|--|-----|--|-----|--|-----|--|-----|--|-----|--|-----|--|-----|--|
| SLL |  | SOS |  | SRD |  | SSP |  | STN |  | SVC |  | SYP |  | SZL |  | THB |  | TJS |  | TMT |  | TND |  |
| TOP |  | TRY |  | TTD |  | TWD |  | TZS |  | UAH |  | UGX |  | USN |  | UYI |  | UYU |  | UZS |  | VEF |  |
| VND |  | VUV |  | WST |  | XAF |  | XCD |  | XDR |  | XOF |  | XPF |  | XSU |  | XUA |  | YER |  | ZAR |  |
| ZMW |  | ZWL |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |

Required: Yes

### Frequency

Indicates how frequently the customer is expected to spend the projected amount. Only the value Monthly is allowed for the Frequency field, representing recurring monthly spend.

Type: String

Valid Values: Monthly

Required: Yes

### TargetCompany

Specifies the name of the partner company that is expected to generate revenue from the opportunity. This field helps track the partner's involvement in the opportunity. This field only accepts the value AWS. If any other value is provided, the system will automatically set it to AWS.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

Required: Yes

### EstimationUrl

A URL providing additional information or context about the spend estimation.

Type: String

Length Constraints: Minimum length of 4. 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# Invitation

The Invitation structure represents an invitation exchanged between partners and AWS. It includes a message, receiver information, and a payload providing context for the invitation.

## Contents

### Note

In the following list, the required parameters are described first.

### Message

A message accompanying the invitation.

Type: String

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

Required: Yes

### Payload

Contains the data payload associated with the Engagement Invitation. This payload includes essential details related to the AWS opportunity and is used by partners to evaluate whether to accept or reject the engagement.

Type: [Payload](#) object

**Note:** This object is a Union. Only one member of this object can be specified or returned.

Required: Yes

### Receiver

Represents the entity that received the Engagement Invitation, including account and company details. This field is essential for tracking the partner who is being invited to collaborate.

Type: [Receiver](#) object

**Note:** This object is a Union. Only one member of this object can be specified or returned.

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

# LastModifiedDate

Defines a filter to retrieve opportunities based on the last modified date. This filter is useful for tracking changes or updates to opportunities over time.

## Contents

### Note

In the following list, the required parameters are described first.

### AfterLastModifiedDate

Specifies the date after which the opportunities were modified. Use this filter to retrieve only those opportunities that were modified after a given timestamp.

Type: Timestamp

Required: No

### BeforeLastModifiedDate

Specifies the date before which the opportunities were modified. Use this filter to retrieve only those opportunities that were modified before a given timestamp.

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

# LifeCycle

An object that contains the Opportunity lifecycle's details.

## Contents

### Note

In the following list, the required parameters are described first.

### ClosedLostReason

Specifies the reason code when an opportunity is marked as *Closed Lost*. When you select an appropriate reason code, you communicate the context for closing the Opportunity, and aid in accurate reports and analysis of opportunity outcomes. The possible values are:

- Customer Deficiency: The customer lacked necessary resources or capabilities.
- Delay/Cancellation of Project: The project was delayed or canceled.
- Legal/Tax/Regulatory: Legal, tax, or regulatory issues prevented progress.
- Lost to Competitor—Google: The opportunity was lost to Google.
- Lost to Competitor—Microsoft: The opportunity was lost to Microsoft.
- Lost to Competitor—SoftLayer: The opportunity was lost to SoftLayer.
- Lost to Competitor—VMWare: The opportunity was lost to VMWare.
- Lost to Competitor—Other: The opportunity was lost to a competitor not listed above.
- No Opportunity: There was no opportunity to pursue.
- On Premises Deployment: The customer chose an on-premises solution.
- Partner Gap: The partner lacked necessary resources or capabilities.
- Price: The price was not competitive or acceptable to the customer.
- Security/Compliance: Security or compliance issues prevented progress.
- Technical Limitations: Technical limitations prevented progress.
- Customer Experience: Issues related to the customer's experience impacted the decision.
- Other: Any reason not covered by the other values.
- People/Relationship/Governance: Issues related to people, relationships, or governance.
- Product/Technology: Issues related to the product or technology.

- Financial/Commercial: Financial or commercial issues impacted the decision.

Type: String

Valid Values: Customer Deficiency | Delay / Cancellation of Project | Legal / Tax / Regulatory | Lost to Competitor - Google | Lost to Competitor - Microsoft | Lost to Competitor - SoftLayer | Lost to Competitor - VMWare | Lost to Competitor - Other | No Opportunity | On Premises Deployment | Partner Gap | Price | Security / Compliance | Technical Limitations | Customer Experience | Other | People/Relationship/Governance | Product/Technology | Financial/Commercial

Required: No

## NextSteps

Specifies the upcoming actions or tasks for the Opportunity. Use this field to communicate with AWS about the next actions required for the Opportunity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Required: No

## NextStepsHistory

Captures a chronological record of the next steps or actions planned or taken for the current opportunity, along with the timestamp.

Type: Array of [NextStepsHistory](#) objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: No

## ReviewComments

Contains detailed feedback from AWS when requesting additional information from partners. Provides specific guidance on what partners need to provide or clarify for opportunity validation, complementing the ReviewStatusReason field.

Type: String

Required: No

## ReviewStatus

Indicates the review status of an opportunity referred by a partner. This field is read-only and only applicable for partner referrals. The possible values are:

- Pending Submission: Not submitted for validation (editable).
- Submitted: Submitted for validation, and AWS hasn't reviewed it (read-only).
- In Review: AWS is validating (read-only).
- Action Required: Issues that AWS highlights need to be addressed. Partners should use the UpdateOpportunity API action to update the opportunity and helps to ensure that all required changes are made. Only the following fields are editable when the Lifecycle.ReviewStatus is Action Required:
  - Customer.Account.Address.City
  - Customer.Account.Address.CountryCode
  - Customer.Account.Address.PostalCode
  - Customer.Account.Address.StateOrRegion
  - Customer.Account.Address.StreetAddress
  - Customer.Account.WebsiteUrl
  - LifeCycle.TargetCloseDate
  - Project.ExpectedMonthlyAWSRevenue.Amount
  - Project.ExpectedMonthlyAWSRevenue.CurrencyCode
  - Project.CustomerBusinessProblem
  - PartnerOpportunityIdentifier

After updates, the opportunity re-enters the validation phase. This process repeats until all issues are resolved, and the opportunity's Lifecycle.ReviewStatus is set to Approved or Rejected.

- Approved: Validated and converted into the AWS seller's pipeline (editable).
- Rejected: Disqualified (read-only).

Type: String

Valid Values: Pending Submission | Submitted | In review | Approved | Rejected | Action Required

Required: No

### ReviewStatusReason

Code indicating the validation decision during the AWS opportunity review. Applies when status is Rejected or Action Required. Used to document validation results for AWS Partner Referrals and indicate when additional information is needed from partners as part of the APN Customer Engagement (ACE) program.

Type: String

Required: No

### Stage

Specifies the current stage of the Opportunity's lifecycle as it maps to AWS stages from the current stage in the partner CRM. This field provides a translated value of the stage, and offers insight into the Opportunity's progression in the sales cycle, according to AWS definitions.

#### Note

A lead and a prospect must be further matured to a Qualified opportunity before submission. Opportunities that were closed/lost before submission aren't suitable for submission.

The descriptions of each sales stage are:

- Prospect: AWS identifies the opportunity. It can be active (Comes directly from the end customer through a lead) or latent (Your account team believes it exists based on research, account plans, sales plays).
- Qualified: Your account team engaged with the customer to discuss viability and requirements. The customer agreed that the opportunity is real, of interest, and may solve business/technical needs.
- Technical Validation: All parties understand the implementation plan.
- Business Validation: Pricing was proposed, and all parties agree to the steps to close.
- Committed: The customer signed the contract, but AWS hasn't started billing.
- Launched: The workload is complete, and AWS has started billing.
- Closed Lost: The opportunity is lost, and there are no steps to move forward.

Type: String

Valid Values: Prospect | Qualified | Technical Validation | Business Validation | Committed | Launched | Closed Lost

Required: No

### TargetCloseDate

Specifies the date when AWS expects to start significant billing, when the project finishes, and when it moves into production. This field informs the AWS seller about when the opportunity launches and starts to incur AWS usage.

Ensure the Target Close Date isn't in the past.

Type: String

Pattern: [1-9][0-9]{3}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])

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

# LifeCycleForView

Provides the lifecycle view of an opportunity resource shared through a snapshot.

## Contents

### Note

In the following list, the required parameters are described first.

### NextSteps

Describes the next steps for the opportunity shared through a snapshot.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Required: No

### ReviewStatus

Defines the approval status of the opportunity shared through a snapshot.

Type: String

Valid Values: Pending Submission | Submitted | In review | Approved | Rejected | Action Required

Required: No

### Stage

Defines the current stage of the opportunity shared through a snapshot.

Type: String

Valid Values: Prospect | Qualified | Technical Validation | Business Validation | Committed | Launched | Closed Lost

Required: No

## TargetCloseDate

The projected launch date of the opportunity shared through a snapshot.

Type: String

Pattern: [1-9][0-9]{3}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])

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

# LifeCycleSummary

An object that contains a LifeCycle object's subset of fields.

## Contents

### Note

In the following list, the required parameters are described first.

### ClosedLostReason

Specifies the reason code when an opportunity is marked as *Closed Lost*. When you select an appropriate reason code, you communicate the context for closing the Opportunity, and aid in accurate reports and analysis of opportunity outcomes.

Type: String

Valid Values: Customer Deficiency | Delay / Cancellation of Project | Legal / Tax / Regulatory | Lost to Competitor - Google | Lost to Competitor - Microsoft | Lost to Competitor - SoftLayer | Lost to Competitor - VMWare | Lost to Competitor - Other | No Opportunity | On Premises Deployment | Partner Gap | Price | Security / Compliance | Technical Limitations | Customer Experience | Other | People/Relationship/Governance | Product/Technology | Financial/Commercial

Required: No

### NextSteps

Specifies the upcoming actions or tasks for the Opportunity. This field is utilized to communicate to AWS the next actions required for the Opportunity.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Required: No

## ReviewComments

Indicates why an opportunity was sent back for further details. Partners must take corrective action based on the ReviewComments.

Type: String

Required: No

## ReviewStatus

Indicates the review status of a partner referred opportunity. This field is read-only and only applicable for partner referrals. Valid values:

- Pending Submission: Not submitted for validation (editable).
- Submitted: Submitted for validation and not yet AWS reviewed (read-only).
- In Review: Undergoing AWS validation (read-only).
- Action Required: Address any issues AWS highlights. Use the UpdateOpportunity API action to update the opportunity, and ensure you make all required changes. Only these fields are editable when the Lifecycle.ReviewStatus is Action Required:
  - Customer.Account.Address.City
  - Customer.Account.Address.CountryCode
  - Customer.Account.Address.PostalCode
  - Customer.Account.Address.StateOrRegion
  - Customer.Account.Address.StreetAddress
  - Customer.Account.WebsiteUrl
  - LifeCycle.TargetCloseDate
  - Project.ExpectedCustomerSpend.Amount
  - Project.ExpectedCustomerSpend.CurrencyCode
  - Project.CustomerBusinessProblem
  - PartnerOpportunityIdentifier

After updates, the opportunity re-enters the validation phase. This process repeats until all issues are resolved, and the opportunity's Lifecycle.ReviewStatus is set to Approved or Rejected.

- Approved: Validated and converted into the AWS seller's pipeline (editable).
- Rejected: Disqualified (read-only).

Type: String

Valid Values: Pending Submission | Submitted | In review | Approved | Rejected | Action Required

Required: No

### ReviewStatusReason

Indicates the reason a specific decision was taken during the opportunity review process. This field combines the reasons for both disqualified and action required statuses, and provides clarity for why an opportunity was disqualified or required further action.

Type: String

Required: No

### Stage

Specifies the current stage of the Opportunity's lifecycle as it maps to AWS stages from the current stage in the partner CRM. This field provides a translated value of the stage, and offers insight into the Opportunity's progression in the sales cycle, according to AWS definitions.

#### Note

A lead and a prospect must be further matured to a Qualified opportunity before submission. Opportunities that were closed/lost before submission aren't suitable for submission.

The descriptions of each sales stage are:

- Prospect: AWS identifies the opportunity. It can be active (Comes directly from the end customer through a lead) or latent (Your account team believes it exists based on research, account plans, sales plays).
- Qualified: Your account team engaged with the customer to discuss viability and understand requirements. The customer agreed that the opportunity is real, of interest, and may solve business/technical needs.
- Technical Validation: All parties understand the implementation plan.
- Business Validation: Pricing was proposed, and all parties agree to the steps to close.
- Committed: The customer signed the contract, but AWS hasn't started billing.

- Launched: The workload is complete, and AWS has started billing.
- Closed Lost: The opportunity is lost, and there are no steps to move forward.

Type: String

Valid Values: Prospect | Qualified | Technical Validation | Business Validation | Committed | Launched | Closed Lost

Required: No

### TargetCloseDate

Specifies the date when AWS expects to start significant billing, when the project finishes, and when it moves into production. This field informs the AWS seller about when the opportunity launches and starts to incur AWS usage.

Ensure the Target Close Date isn't in the past.

Type: String

Pattern: [1-9][0-9]{3}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])

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

# ListEngagementByAcceptingInvitationTaskSummary

Specifies a subset of fields associated with tasks related to accepting an engagement invitation.

## Contents

### Note

In the following list, the required parameters are described first.

### EngagementInvitationId

The unique identifier of the engagement invitation that was accepted.

Type: String

Pattern: engi-[0-9,a-z]{13}

Required: No

### Message

Detailed message describing the failure and possible recovery steps.

Type: String

Required: No

### OpportunityId

Unique identifier of opportunity that was created.

Type: String

Pattern: 0[0-9]{1,19}

Required: No

### ReasonCode

A code pointing to the specific reason for the failure.

Type: String

Valid Values: InvitationAccessDenied | InvitationValidationFailed  
| EngagementAccessDenied | OpportunityAccessDenied |  
ResourceSnapshotJobAccessDenied | ResourceSnapshotJobValidationFailed  
| ResourceSnapshotJobConflict | EngagementValidationFailed  
| EngagementConflict | OpportunitySubmissionFailed  
| EngagementInvitationConflict | InternalError |  
OpportunityValidationFailed | OpportunityConflict |  
ResourceSnapshotAccessDenied | ResourceSnapshotValidationFailed |  
ResourceSnapshotConflict | ServiceQuotaExceeded | RequestThrottled

Required: No

### **ResourceSnapshotJobId**

Unique identifier of the resource snapshot job that was created.

Type: String

Pattern: job-[0-9a-z]{13}

Required: No

### **StartTime**

Task start timestamp.

Type: Timestamp

Required: No

### **TaskArn**

The Amazon Resource Name (ARN) that uniquely identifies the task.

Type: String

Pattern: arn:.\*

Required: No

### **TaskId**

Unique identifier of the task.

Type: String

Pattern: `.*task-[0-9a-z]{13}`

Required: No

## TaskStatus

Status of the task.

Type: String

Valid Values: IN\_PROGRESS | COMPLETE | FAILED

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

# ListEngagementFromOpportunityTaskSummary

Provides a summary of a task related to creating an engagement from an opportunity. This structure contains key information about the task's status, associated identifiers, and any failure details.

## Contents

### Note

In the following list, the required parameters are described first.

### EngagementId

The unique identifier of the engagement created as a result of the task. This field is populated when the task is completed successfully.

Type: String

Pattern: eng-[0-9a-z]{14}

Required: No

### EngagementInvitationId

The unique identifier of the Engagement Invitation.

Type: String

Pattern: engi-[0-9,a-z]{13}

Required: No

### Message

A detailed message providing additional information about the task, especially useful in case of failures. This field may contain error details or other relevant information about the task's execution

Type: String

Required: No

## OpportunityId

The unique identifier of the original Opportunity from which the Engagement is being created. This field helps track the source of the Engagement creation task.

Type: String

Pattern: 0[0-9]{1,19}

Required: No

## ReasonCode

A code indicating the specific reason for a task failure. This field is populated when the task status is FAILED and provides a categorized reason for the failure.

Type: String

Valid Values: InvitationAccessDenied | InvitationValidationFailed  
| EngagementAccessDenied | OpportunityAccessDenied |  
ResourceSnapshotJobAccessDenied | ResourceSnapshotJobValidationFailed  
| ResourceSnapshotJobConflict | EngagementValidationFailed  
| EngagementConflict | OpportunitySubmissionFailed  
| EngagementInvitationConflict | InternalError |  
OpportunityValidationFailed | OpportunityConflict |  
ResourceSnapshotAccessDenied | ResourceSnapshotValidationFailed |  
ResourceSnapshotConflict | ServiceQuotaExceeded | RequestThrottled

Required: No

## ResourceSnapshotJobId

The identifier of the resource snapshot job associated with this task, if a snapshot was created as part of the Engagement creation process.

Type: String

Pattern: job-[0-9a-z]{13}

Required: No

## StartTime

The timestamp indicating when the task was initiated, in RFC 3339 5.6 date-time format.

Type: Timestamp

Required: No

## TaskArn

The Amazon Resource Name (ARN) uniquely identifying this task within AWS. This ARN can be used for referencing the task in other AWS services or APIs.

Type: String

Pattern: arn:.\*

Required: No

## TaskId

A unique identifier for a specific task.

Type: String

Pattern: .\*task-[0-9a-z]{13}

Required: No

## TaskStatus

The current status of the task.

Type: String

Valid Values: IN\_PROGRESS | COMPLETE | FAILED

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



# ListTasksSortBase

Defines the sorting parameters for listing tasks. This structure allows for specifying the field to sort by and the order of sorting.

## Contents

### Note

In the following list, the required parameters are described first.

### SortBy

Specifies the field by which the task list should be sorted.

Type: String

Valid Values: StartTime

Required: Yes

### SortOrder

Determines the order in which the sorted results are presented.

Type: String

Valid Values: ASCENDING | DESCENDING

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



# Marketing

An object that contains marketing details for the Opportunity.

## Contents

### Note

In the following list, the required parameters are described first.

### AwsFundingUsed

Indicates if the Opportunity is a marketing development fund (MDF) funded activity.

Type: String

Valid Values: Yes | No

Required: No

### CampaignName

Specifies the Opportunity marketing campaign code. The AWS campaign code is a reference to specific marketing initiatives, promotions, or activities. This field captures the identifier used to track and categorize the Opportunity within marketing campaigns. If you don't have a campaign code, contact your AWS point of contact to obtain one.

Type: String

Required: No

### Channels

Specifies the Opportunity's channel that the marketing activity is associated with or was contacted through. This field provides information about the specific marketing channel that contributed to the generation of the lead or contact.

Type: Array of strings

Valid Values: AWS Marketing Central | Content Syndication | Display | Email | Live Event | Out Of Home (OOH) | Print | Search | Social | Telemarketing | TV | Video | Virtual Event

Required: No

## Source

Indicates if the Opportunity was sourced from an AWS marketing activity. Use the value Marketing Activity. Use None if it's not associated with an AWS marketing activity. This field helps AWS track the return on marketing investments and enables better distribution of marketing budgets among partners.

Type: String

Valid Values: Marketing Activity | None

Required: No

## UseCases

Specifies the marketing activity use case or purpose that led to the Opportunity's creation or contact. This field captures the context or marketing activity's execution's intention and the direct correlation to the generated opportunity or contact. Must be empty when Marketing.AWSFundingUsed = No.

Valid values: AI/ML | Analytics | Application Integration | Blockchain | Business Applications | Cloud Financial Management | Compute | Containers | Customer Engagement | Databases | Developer Tools | End User Computing | Front End Web & Mobile | Game Tech | IoT | Management & Governance | Media Services | Migration & Transfer | Networking & Content Delivery | Quantum Technologies | Robotics | Satellite | Security | Serverless | Storage | VR & AR

Type: Array of strings

Required: No

## See Also

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

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

- [AWS SDK for Ruby V3](#)

# MonetaryValue

Specifies payments details.

## Contents

### Note

In the following list, the required parameters are described first.

### Amount

Specifies the payment amount.

Type: String

Pattern: (0|([1-9][0-9]{0,30}))(\.[0-9]{0,2})?

Required: Yes

### CurrencyCode

Specifies the payment currency.

Type: String

Valid Values: USD | EUR | GBP | AUD | CAD | CNY | NZD | INR | JPY | CHF | SEK | AED | AFN | ALL | AMD | ANG | AOA | ARS | AWG | AZN | BAM | BBD | BDT | BGN | BHD | BIF | BMD | BND | BOB | BOV | BRL | BSD | BTN | BWP | BYN | BZD | CDF | CHE | CHW | CLF | CLP | COP | COU | CRC | CUC | CUP | CVE | CZK | DJF | DKK | DOP | DZD | EGP | ERN | ETB | FJD | FKP | GEL | GHS | GIP | GMD | GNF | GTQ | GYD | HKD | HNL | HRK | HTG | HUF | IDR | ILS | IQD | IRR | ISK | JMD | JOD | KES | KGS | KHR | KMF | KPW | KRW | KWD | KYD | KZT | LAK | LBP | LKR | LRD | LSL | LYD | MAD | MDL | MGA | MKD | MMK | MNT | MOP | MRU | MUR | MVR | MWK | MXN | MXV | MYR | MZN | NAD | NGN | NIO | NOK | NPR | OMR | PAB | PEN | PGK | PHP | PKR | PLN | PYG | QAR | RON | RSD | RUB | RWF | SAR | SBD | SCR | SDG | SGD | SHP | SLL | SOS | SRD | SSP | STN | SVC | SYP | SZL | THB | TJS | TMT | TND | TOP | TRY | TTD | TWD | TZS | UAH | UGX | USN | UYI | UYU | UZS | VEF |

VND | VUV | WST | XAF | XCD | XDR | XOF | XPF | XSU | XUA | YER | ZAR |  
ZMW | ZWL

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

# NextStepsHistory

Read-only; shows the last 50 values and change dates for the NextSteps field.

## Contents

### Note

In the following list, the required parameters are described first.

### Time

Indicates the step execution time.

Type: Timestamp

Required: Yes

### Value

Indicates the step's execution details.

Type: String

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

# OpportunityEngagementInvitationSort

Defines sorting options for retrieving Engagement Invitations. Sorting can be done based on various criteria like the invitation date or status.

## Contents

### Note

In the following list, the required parameters are described first.

### SortBy

Specifies the field by which the Engagement Invitations are sorted. Common values include InvitationDate and Status.

Type: String

Valid Values: InvitationDate

Required: Yes

### SortOrder

Defines the order in which the Engagement Invitations are sorted. The values can be ASC (ascending) or DESC (descending).

Type: String

Valid Values: ASCENDING | DESCENDING

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

# OpportunityInvitationPayload

Represents the data payload of an Engagement Invitation for a specific opportunity. This contains detailed information that partners use to evaluate the engagement.

## Contents

### Note

In the following list, the required parameters are described first.

### Customer

Contains information about the customer related to the opportunity in the Engagement Invitation. This data helps partners understand the customer's profile and requirements.

Type: [EngagementCustomer](#) object

Required: Yes

### Project

Describes the project details associated with the opportunity, including the customer's needs and the scope of work expected to be performed.

Type: [ProjectDetails](#) object

Required: Yes

### ReceiverResponsibilities

Outlines the responsibilities or expectations of the receiver in the context of the invitation.

Type: Array of strings

Valid Values: Distributor | Reseller | Hardware Partner | Managed Service Provider | Software Partner | Services Partner | Training Partner | Co-Sell Facilitator | Facilitator

Required: Yes

## SenderContacts

Represents the contact details of the AWS representatives involved in sending the Engagement Invitation. These contacts are opportunity stakeholders.

Type: Array of [SenderContact](#) objects

Array Members: Minimum number of 1 item. Maximum number of 3 items.

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

# OpportunitySort

Object that configures response sorting.

## Contents

### Note

In the following list, the required parameters are described first.

### SortBy

Field name to sort by.

Type: String

Valid Values: LastModifiedDate | Identifier | CustomerCompanyName

Required: Yes

### SortOrder

Sort order.

Default: Descending

Type: String

Valid Values: ASCENDING | DESCENDING

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



# OpportunitySummary

An object that contains an Opportunity's subset of fields.

## Contents

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog associated with the opportunity, either AWS or Sandbox. This indicates the environment in which the opportunity is managed.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### Arn

The Amazon Resource Name (ARN) for the opportunity. This globally unique identifier can be used for IAM policies and cross-service references.

Type: String

Pattern: arn:.\*

Required: No

### CreatedDate

DateTime when the Opportunity was last created.

Type: Timestamp

Required: No

### Customer

An object that contains the Opportunity's customer details.

Type: [CustomerSummary](#) object

Required: No

## Id

Read-only, system-generated Opportunity unique identifier.

Type: String

Pattern: 0[0-9]{1,19}

Required: No

## LastModifiedDate

DateTime when the Opportunity was last modified.

Type: Timestamp

Required: No

## LifeCycle

An object that contains the Opportunity's lifecycle details.

Type: [LifeCycleSummary](#) object

Required: No

## OpportunityType

Specifies opportunity type as a renewal, new, or expansion.

Opportunity types:

- New Opportunity: Represents a new business opportunity with a potential customer that's not previously engaged with your solutions or services.
- Renewal Opportunity: Represents an opportunity to renew an existing contract or subscription with a current customer, ensuring continuity of service.
- Expansion Opportunity: Represents an opportunity to expand the scope of an existing contract or subscription, either by adding new services or increasing the volume of existing services for a current customer.

Type: String

Valid Values: Net New Business | Flat Renewal | Expansion

Required: No

### **PartnerOpportunityIdentifier**

Specifies the Opportunity's unique identifier in the partner's CRM system. This value is essential to track and reconcile because it's included in the outbound payload sent back to the partner. It allows partners to link an opportunity to their CRM.

Type: String

Required: No

### **Project**

An object that contains the Opportunity's project details summary.

Type: [ProjectSummary](#) 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# OpportunitySummaryView

Provides a comprehensive view of an opportunity summary, including lifecycle information, team details, opportunity type, primary needs from AWS, and associated project information.

## Contents

### Note

In the following list, the required parameters are described first.

### **Customer**

An object that contains the customer's Account and Contact.

Type: [Customer](#) object

Required: No

### **Lifecycle**

Contains information about the opportunity's lifecycle, including its current stage, status, and important dates such as creation and last modification times.

Type: [LifeCycleForView](#) object

Required: No

### **OpportunityTeam**

Represents the internal team handling the opportunity. Specify the members involved in collaborating on an opportunity within the partner's organization.

Type: Array of [Contact](#) objects

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Required: No

### **OpportunityType**

Specifies the opportunity type.

Type: String

Valid Values: Net New Business | Flat Renewal | Expansion

Required: No

### **PrimaryNeedsFromAws**

Identifies the type of support the partner needs from AWS.

Type: Array of strings

Valid Values: Co-Sell - Architectural Validation | Co-Sell - Business Presentation | Co-Sell - Competitive Information | Co-Sell - Pricing Assistance | Co-Sell - Technical Consultation | Co-Sell - Total Cost of Ownership Evaluation | Co-Sell - Deal Support | Co-Sell - Support for Public Tender / RFx

Required: No

### **Project**

Contains summary information about the project associated with the opportunity, including project name, description, timeline, and other relevant details.

Type: [ProjectView](#) object

Required: No

### **RelatedEntityIdentifiers**

This field provides the associations' information for other entities with the opportunity. These entities include identifiers for AWSProducts, Partner Solutions, and AWSMarketplaceOffers.

Type: [RelatedEntityIdentifiers](#) 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# Payload

Contains the data payload associated with the Engagement Invitation. This payload includes essential details related to the AWS opportunity and is used by partners to evaluate whether to accept or reject the engagement.

## Contents

### Note

In the following list, the required parameters are described first.

### Important

This data type is a UNION, so only one of the following members can be specified when used or returned.

## OpportunityInvitation

Specifies the details of the opportunity invitation within the Engagement Invitation payload. This data helps partners understand the context, scope, and expected involvement for the opportunity from AWS.

Type: [OpportunityInvitationPayload](#) 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# ProfileNextStepsHistory

Tracks the history of next steps associated with the opportunity. This field captures the actions planned for the future and their timeline.

## Contents

### Note

In the following list, the required parameters are described first.

### Time

Indicates the date and time when a particular next step was recorded or planned. This helps in managing the timeline for the opportunity.

Type: Timestamp

Required: Yes

### Value

Represents the details of the next step recorded, such as follow-up actions or decisions made. This field helps in tracking progress and ensuring alignment with project goals.

Type: String

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

# Project

An object that contains the Opportunity's project details.

## Contents

 **Note**

In the following list, the required parameters are described first.

### AdditionalComments

Captures additional comments or information for the Opportunity that weren't captured in other fields.

Type: String

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

Required: No

### ApnPrograms

Specifies the Amazon Partner Network (APN) program that influenced the Opportunity. APN programs refer to specific partner programs or initiatives that can impact the Opportunity.

Valid values: APN Immersion Days | APN Solution Space | ATO (Authority to Operate) | AWS Marketplace Campaign | IS Immersion Day SFID Program | ISV Workload Migration | Migration Acceleration Program | P3 | Partner Launch Initiative | Partner Opportunity Acceleration Funded | The Next Smart | VMware Cloud on AWS | Well-Architected | Windows | Workspaces/ AppStream Accelerator Program | WWPS NDPP

Type: Array of strings

Required: No

### CompetitorName

Name of the Opportunity's competitor (if any). Use Other to submit a value not in the picklist.

Type: String

Valid Values: Oracle Cloud | On-Prem | Co-location | Akamai | AliCloud | Google Cloud Platform | IBM Softlayer | Microsoft Azure | Other- Cost Optimization | No Competition | \*Other

Required: No

### **CustomerBusinessProblem**

Describes the problem the end customer has, and how the partner is helping. Utilize this field to provide a concise narrative that outlines the customer's business challenge or issue. Elaborate on how the partner's solution or offerings align to resolve the customer's business problem. Include relevant information about the partner's value proposition, unique selling points, and expertise to tackle the issue. Offer insights on how the proposed solution meets the customer's needs and provides value. Use concise language and precise descriptions to convey the context and significance of the Opportunity. The content in this field helps AWS understand the nature of the Opportunity and the strategic fit of the partner's solution.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2000.

Required: No

### **CustomerUseCase**

Specifies the proposed solution focus or type of workload for the Opportunity. This field captures the primary use case or objective of the proposed solution, and provides context and clarity to the addressed workload.

Valid values: AI Machine Learning and Analytics | Archiving | Big Data: Data Warehouse/Data Integration/ETL/Data Lake/BI | Blockchain | Business Applications: Mainframe Modernization | Business Applications & Contact Center | Business Applications & SAP Production | Centralized Operations Management | Cloud Management Tools | Cloud Management Tools & DevOps with Continuous Integration & Continuous Delivery (CICD) | Configuration, Compliance & Auditing | Connected Services | Containers & Serverless | Content Delivery & Edge Services | Database | Edge Computing/End User Computing | Energy | Enterprise Governance & Controls | Enterprise Resource Planning | Financial Services | Healthcare

and Life Sciences | High Performance Computing | Hybrid Application Platform | Industrial Software | IOT | Manufacturing, Supply Chain and Operations | Media & High performance computing (HPC) | Migration/Database Migration | Monitoring, logging and performance | Monitoring & Observability | Networking | Outpost | SAP | Security & Compliance | Storage & Backup | Training | VMC | VMWare | Web development & DevOps

Type: String

Required: No

## **DeliveryModels**

Specifies the deployment or consumption model for your solution or service in the Opportunity's context. You can select multiple options.

Options' descriptions from the Delivery Model field are:

- SaaS or PaaS: Your AWS based solution deployed as SaaS or PaaS in your AWS environment.
- BYOL or AMI: Your AWS based solution deployed as BYOL or AMI in the end customer's AWS environment.
- Managed Services: The end customer's AWS business management (For example: Consulting, design, implementation, billing support, cost optimization, technical support).
- Professional Services: Offerings to help enterprise end customers achieve specific business outcomes for enterprise cloud adoption (For example: Advisory or transformation planning).
- Resell: AWS accounts and billing management for your customers.
- Other: Delivery model not described above.

Type: Array of strings

Valid Values: SaaS or PaaS | BYOL or AMI | Managed Services | Professional Services | Resell | Other

Required: No

## **ExpectedCustomerSpend**

Represents the estimated amount that the customer is expected to spend on AWS services related to the opportunity. This helps in evaluating the potential financial value of the opportunity for AWS.

Type: Array of [ExpectedCustomerSpend](#) objects

Array Members: Minimum number of 1 item.

Required: No

### **OtherCompetitorNames**

Only allowed when CompetitorNames has Other selected.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Required: No

### **OtherSolutionDescription**

Specifies the offered solution for the customer's business problem when the RelatedEntityIdentifiers.Solutions field value is Other.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Required: No

### **RelatedOpportunityIdentifier**

Specifies the current opportunity's parent opportunity identifier.

Type: String

Pattern: 0[0-9]{1,19}

Required: No

### **SalesActivities**

Specifies the Opportunity's sales activities conducted with the end customer. These activities help drive AWS assignment priority.

Valid values:

- Initialized discussions with customer: Initial conversations with the customer to understand their needs and introduce your solution.

- Customer has shown interest in solution: After initial discussions, the customer is interested in your solution.
- Conducted POC/demo: You conducted a proof of concept (POC) or demonstration of the solution for the customer.
- In evaluation/planning stage: The customer is evaluating the solution and planning potential implementation.
- Agreed on solution to Business Problem: Both parties agree on how the solution addresses the customer's business problem.
- Completed Action Plan: A detailed action plan is complete and outlines the steps for implementation.
- Finalized Deployment Need: Both parties agree with and finalized the deployment needs.
- SOW Signed: Both parties signed a statement of work (SOW), and formalize the agreement and detail the project scope and deliverables.

Type: Array of strings

Valid Values: Initialized discussions with customer | Customer has shown interest in solution | Conducted POC / Demo | In evaluation / planning stage | Agreed on solution to Business Problem | Completed Action Plan | Finalized Deployment Need | SOW Signed

Required: No

### Title

Specifies the Opportunity's title or name.

Type: String

Length Constraints: Minimum length of 0. 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# ProjectDetails

Contains details about the project associated with the Engagement Invitation, including the business problem and expected outcomes.

## Contents

### Note

In the following list, the required parameters are described first.

### BusinessProblem

Describes the business problem that the project aims to solve. This information is crucial for understanding the project's goals and objectives.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 255.

Required: Yes

### ExpectedCustomerSpend

Contains revenue estimates for the partner related to the project. This field provides an idea of the financial potential of the opportunity for the partner.

Type: Array of [ExpectedCustomerSpend](#) objects

Array Members: Minimum number of 1 item.

Required: Yes

### TargetCompletionDate

Specifies the estimated date of project completion. This field helps track the project timeline and manage expectations.

Type: String

Pattern: [1-9][0-9]{3}-(0[1-9]|1[012])-(0[1-9]|12)[0-9]|3[01])

Required: Yes

## Title

Specifies the title of the project. This title helps partners quickly identify and understand the focus of the project.

Type: String

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

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

# ProjectSummary

An object that contains a Project object's subset of fields.

## Contents

### Note

In the following list, the required parameters are described first.

### DeliveryModels

Specifies your solution or service's deployment or consumption model in the Opportunity's context. You can select multiple options.

Options' descriptions from the Delivery Model field are:

- SaaS or PaaS: Your AWS based solution deployed as SaaS or PaaS in your AWS environment.
- BYOL or AMI: Your AWS based solution deployed as BYOL or AMI in the end customer's AWS environment.
- Managed Services: The end customer's AWS business management (For example: Consulting, design, implementation, billing support, cost optimization, technical support).
- Professional Services: Offerings to help enterprise end customers achieve specific business outcomes for enterprise cloud adoption (For example: Advisory or transformation planning).
- Resell: AWS accounts and billing management for your customers.
- Other: Delivery model not described above.

Type: Array of strings

Valid Values: SaaS or PaaS | BYOL or AMI | Managed Services | Professional Services | Resell | Other

Required: No

### ExpectedCustomerSpend

Provides a summary of the expected customer spend for the project, offering a high-level view of the potential financial impact.

Type: Array of [ExpectedCustomerSpend](#) objects

Array Members: Minimum number of 1 item.

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

# ProjectView

Provides the project view of an opportunity resource shared through a snapshot.

## Contents

### Note

In the following list, the required parameters are described first.

### CustomerUseCase

Specifies the proposed solution focus or type of workload for the project.

Type: String

Required: No

### DeliveryModels

Describes the deployment or consumption model for the partner solution or offering. This field indicates how the project's solution will be delivered or implemented for the customer.

Type: Array of strings

Valid Values: SaaS or PaaS | BYOL or AMI | Managed Services | Professional Services | Resell | Other

Required: No

### ExpectedCustomerSpend

Provides information about the anticipated customer spend related to this project. This may include details such as amount, frequency, and currency of expected expenditure.

Type: Array of [ExpectedCustomerSpend](#) objects

Array Members: Minimum number of 1 item.

Required: No

## OtherSolutionDescription

Offers a description of other solutions if the standard solutions do not adequately cover the project's scope.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Required: No

## SalesActivities

Lists the pre-sales activities that have occurred with the end-customer related to the opportunity. This field is conditionally mandatory when the project is qualified for Co-Sell and helps drive assignment priority on the AWS side. It provides insight into the engagement level with the customer.

Type: Array of strings

Valid Values: Initialized discussions with customer | Customer has shown interest in solution | Conducted POC / Demo | In evaluation / planning stage | Agreed on solution to Business Problem | Completed Action Plan | Finalized Deployment Need | SOW Signed

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

# Receiver

Represents the entity that received the Engagement Invitation, including account and company details. This field is essential for tracking the partner who is being invited to collaborate.

## Contents

 **Note**

In the following list, the required parameters are described first.

 **Important**

This data type is a UNION, so only one of the following members can be specified when used or returned.

### Account

Specifies the AWS account of the partner who received the Engagement Invitation. This field is used to track the invitation recipient within the AWS ecosystem.

Type: [AccountReceiver](#) 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# RelatedEntityIdentifiers

This field provides the associations' information for other entities with the opportunity. These entities include identifiers for AWSProducts, Partner Solutions, and AWSMarketplaceOffers.

## Contents

### Note

In the following list, the required parameters are described first.

### AwsMarketplaceOffers

Takes one value per opportunity. Each value is an Amazon Resource Name (ARN), in this format: "offers": ["arn:aws:aws-marketplace:us-east-1:999999999999:AWSMarketplace/Offer/offer-sampleOffer32"].

Use the [ListEntities](#) action in the Marketplace Catalog APIs for a list of offers in the associated Marketplace seller account.

Type: Array of strings

Pattern: arn:aws:aws-marketplace:[a-z]{1,2}-[a-z]\*-\d+:\d{12}:AWSMarketplace/Offer/.\*

Required: No

### AwsProducts

Enables the association of specific AWS products with the Opportunity. Partners can indicate the relevant AWS products for the Opportunity's solution and align with the customer's needs. Returns multiple values separated by commas. For example, "AWSProducts" : ["AmazonRedshift", "AWSAppFabric", "AWSCleanRooms"].

Use the file with the list of AWS products hosted on GitHub: [AWS products](#).

Type: Array of strings

Required: No

## Solutions

Enables partner solutions or offerings' association with an opportunity. To associate a solution, provide the solution's unique identifier, which you can obtain with the `ListSolutions` operation.

If the specific solution identifier is not available, you can use the value `Other` and provide details about the solution in the `otherSolutionOffered` field. But when the opportunity reaches the `Committed` stage or beyond, the `Other` value cannot be used, and a valid solution identifier must be provided.

By associating the relevant solutions with the opportunity, you can communicate the offerings that are being considered or implemented to address the customer's business problem.

Type: Array of strings

Pattern: S-[0-9]{1,19}

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

# ResourceSnapshotJobSummary

An object that contains a Resource Snapshot Job's subset of fields.

## Contents

### Note

In the following list, the required parameters are described first.

### Arn

The Amazon Resource Name (ARN) for the resource snapshot job.

Type: String

Pattern: `arn:.*`

Required: No

### EngagementId

The unique identifier of the Engagement.

Type: String

Pattern: `eng-[0-9a-z]{14}`

Required: No

### Id

The unique identifier for the resource snapshot job within the AWS Partner Central system. This ID is used for direct references to the job within the service.

Type: String

Pattern: `job-[0-9a-z]{13}`

Required: No

### Status

The current status of the snapshot job.

Valid values:

- STOPPED: The job is not currently running.
- RUNNING: The job is actively executing.

Type: String

Valid Values: Running | Stopped

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

# ResourceSnapshotPayload

Represents the payload of a resource snapshot. This structure is designed to accommodate different types of resource snapshots, currently supporting opportunity summaries.

## Contents

 **Note**

In the following list, the required parameters are described first.

 **Important**

This data type is a UNION, so only one of the following members can be specified when used or returned.

## OpportunitySummary

An object that contains an opportunity's subset of fields.

Type: [OpportunitySummaryView](#) 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# ResourceSnapshotSummary

Provides a concise summary of a resource snapshot, including its unique identifier and version information. This structure is used to quickly reference and identify specific versions of resource snapshots.

## Contents

### Note

In the following list, the required parameters are described first.

### Arn

The Amazon Resource Name (ARN) of the snapshot. This globally unique identifier can be used for cross-service references and in IAM policies.

Type: String

Pattern: `arn: .*`

Required: No

### CreatedBy

The AWS account ID of the entity that owns the resource from which the snapshot was created.

Type: String

Pattern: `( [0-9]{12} | \w{1,12} )`

Required: No

### ResourceId

The identifier of the specific resource snapshotted. The format might vary depending on the `ResourceType`.

Type: String

Pattern: `0[0-9]{1,19}`

Required: No

### **ResourceSnapshotTemplateName**

The name of the template used to create the snapshot.

Type: String

Pattern: [a-zA-Z0-9]{3,80}

Required: No

### **ResourceType**

The type of resource snapshotted.

Type: String

Valid Values: Opportunity

Required: No

### **Revision**

The revision number of the snapshot. This integer value is incremented each time the snapshot is updated, allowing for version tracking of the resource snapshot.

Type: Integer

Valid Range: Minimum value 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# SenderContact

An object that contains the details of the sender-provided contact person for the EngagementInvitation.

## Contents

### Note

In the following list, the required parameters are described first.

### Email

The sender-provided contact's email address associated with the EngagementInvitation.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

Pattern: [a-zA-Z0-9. !#\$%& '\*+/?^\_{}|~-]+@[a-zA-Z0-9-]+(?:.[a-zA-Z0-9-]+)\*

Required: Yes

### BusinessTitle

The sender-provided contact's title (job title or role) associated with the EngagementInvitation.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

Required: No

### FirstName

The sender-provided contact's last name associated with the EngagementInvitation.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

Required: No

### **Last**Name****

The sender-provided contact's first name associated with the EngagementInvitation.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 80.

Required: No

### **Phone**

The sender-provided contact's phone number associated with the EngagementInvitation.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 40.

Pattern: \+[1-9]\d{1,14}

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

# SoftwareRevenue

Specifies a customer's procurement terms details. Required only for partners in eligible programs.

## Contents

### Note

In the following list, the required parameters are described first.

### DeliveryModel

Specifies the customer's intended payment type agreement or procurement method to acquire the solution or service outlined in the Opportunity.

Type: String

Valid Values: Contract | Pay-as-you-go | Subscription

Required: No

### EffectiveDate

Specifies the Opportunity's customer engagement start date for the contract's effectiveness.

Type: String

Pattern: [1-9][0-9]{3}-(0[1-9]|1[012])-(0[1-9]|12)[0-9]|3[01])

Required: No

### ExpirationDate

Specifies the expiration date for the contract between the customer and AWS partner. It signifies the termination date of the agreed-upon engagement period between both parties.

Type: String

Pattern: [1-9][0-9]{3}-(0[1-9]|1[012])-(0[1-9]|12)[0-9]|3[01])

Required: No

## Value

Specifies the payment value (amount and currency).

Type: [MonetaryValue 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# SolutionBase

Specifies minimal information for the solution offered to solve the customer's business problem.

## Contents

### Note

In the following list, the required parameters are described first.

### Catalog

Specifies the catalog in which the solution is hosted, either AWS or Sandbox. This helps partners differentiate between live solutions and those in testing environments.

Type: String

Pattern: [a-zA-Z]+

Required: Yes

### Category

Specifies the solution category, which helps to categorize and organize the solutions partners offer. Valid values: Software Product | Consulting Service | Hardware Product | Communications Product | Professional Service | Managed Service | Value-Added Resale AWS Service | Distribution Service | Training Service | Merger and Acquisition Advising Service.

Type: String

Required: Yes

### CreatedDate

Indicates the solution creation date. This is useful to track and audit.

Type: Timestamp

Required: Yes

**Id**

Enables the association of solutions (offerings) to opportunities.

Type: String

Pattern: S-[0-9]{1,19}

Required: Yes

**Name**

Specifies the solution name.

Type: String

Required: Yes

**Status**

Specifies the solution's current status, which indicates its state in the system. Valid values: Active | Inactive | Draft. The status helps partners and AWS track the solution's lifecycle and availability. Filter for Active solutions for association to an opportunity.

Type: String

Valid Values: Active | Inactive | Draft

Required: Yes

**Arn**

The SolutionBase structure provides essential information about a solution.

Type: String

Pattern: S-[0-9]{1,19}

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

# SolutionSort

Configures the solutions' response sorting that enables partners to order solutions based on specified attributes.

## Contents

### Note

In the following list, the required parameters are described first.

### SortBy

Specifies the attribute to sort by, such as Name, CreatedDate, or Status.

Type: String

Valid Values: Identifier | Name | Status | Category | CreatedDate

Required: Yes

### SortOrder

Specifies the sorting order, either Ascending or Descending. The default is Descending.

Type: String

Valid Values: ASCENDING | DESCENDING

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



# SortObject

Defines the sorting parameters for listing resource snapshot jobs. This structure allows you to specify the field to sort by and the order of sorting.

## Contents

### Note

In the following list, the required parameters are described first.

### SortBy

Specifies the field by which to sort the resource snapshot jobs.

Type: String

Valid Values: CreatedDate

Required: No

### SortOrder

Determines the order in which the sorted results are presented.

Type: String

Valid Values: ASCENDING | DESCENDING

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



# Tag

The key-value pair assigned to a specified resource.

## Contents

### Note

In the following list, the required parameters are described first.

### Key

The key in the tag.

Type: String

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

Pattern: ([\p{L}\p{Z}\p{N}\_.:=/=+\-@\"]\*)

Required: Yes

### Value

The value in the tag.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: ([\p{L}\p{Z}\p{N}\_.:=/=+\-@\"]\*)

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

# ValidationExceptionError

Indicates an invalid value for a field.

- *REQUIRED\_FIELD\_MISSING*: The request is missing a required field.

Fix: Verify your request payload includes all required fields.

- *INVALID\_ENUM\_VALUE*: The enum field value isn't an accepted values.

Fix: Check the documentation for the list of valid enum values, and update your request with a valid value.

- *INVALID\_STRING\_FORMAT*: The string format is invalid.

Fix: Confirm that the string is in the expected format (For example: email address, date).

- *INVALID\_VALUE*: The value isn't valid.

Fix: Confirm that the value meets the expected criteria and is within the allowable range or set.

- *TOO\_MANY\_VALUES*: There are too many values in a field that expects fewer entries.

Fix: Reduce the number of values to match the expected limit.

- *ACTION\_NOT\_PERMITTED*: The action isn't permitted due to current state or permissions.

Fix: Verify that the action is appropriate for the current state, and that you have the necessary permissions to perform it.

- *DUPLICATE\_KEY\_VALUE*: The value in a field duplicates a value that must be unique.

Fix: Verify that the value is unique and doesn't duplicate an existing value in the system.

## Contents

### Note

In the following list, the required parameters are described first.

## Code

Specifies the error code for the invalid field value.

Type: String

Valid Values: REQUIRED\_FIELD\_MISSING | INVALID\_ENUM\_VALUE | INVALID\_STRING\_FORMAT | INVALID\_VALUE | TOO\_MANY\_VALUES | INVALID\_RESOURCE\_STATE | DUPLICATE\_KEY\_VALUE | VALUE\_OUT\_OF\_RANGE | ACTION\_NOT\_PERMITTED

Required: Yes

## Message

Specifies the detailed error message for the invalid field value.

Type: String

Required: Yes

## FieldName

Specifies the field name with the invalid value.

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 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

## **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

## **ValidationException**

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

HTTP Status Code: 400

# Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see [Signing AWS API requests](#) in the *IAM User Guide*.

## Action

The action to be performed.

Type: string

Required: Yes

## Version

The API version that the request is written for, expressed in the format YYYY-MM-DD.

Type: string

Required: Yes

## X-Amz-Algorithm

The hash algorithm that you used to create the request signature.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Valid Values: AWS4-HMAC-SHA256

Required: Conditional

## X-Amz-Credential

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4\_request").

The value is expressed in the following format: *access\_key/YYYYMMDD/region/service/aws4\_request*.

For more information, see [Create a signed AWS API request](#) in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

### X-Amz-Date

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: 20120325T120000Z.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see [Elements of an AWS API request signature](#) in the *IAM User Guide*.

Type: string

Required: Conditional

### X-Amz-Security-Token

The temporary security token that was obtained through a call to AWS Security Token Service (AWS STS). For a list of services that support temporary security credentials from AWS STS, see [AWS services that work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from AWS STS, you must include the security token.

Type: string

Required: Conditional

### X-Amz-Signature

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

### X-Amz-SignedHeaders

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see [Create a signed AWS API request](#) in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

# Release notes

This page contains a summary of the significant changes to the documentation for the AWS Partner Central API, starting with the most recent update.

## Revision history

| Change | Description  | Date       |
|--------|--|------------|
| RC 3   | <ul style="list-style-type: none"><li>Updated API permission policies: Policies have been updated to reflect the new actions introduced in this release. Ensure your IAM roles and permissions are adjusted accordingly.</li><li>Custom header usage details: Added details on how to use the custom header X-Amzn-User-Agent to help audit and measure API usage.</li><li>Replaced actions with asynchronous actions: Replaced AcceptOpp ortunityEngagement Invitation with the asynchronous action StartEngagementByA cceptingInvitation Task and payload format has changed with respect to RC2.</li><li>Entity and action renaming: Changed Opportuni tyEngagementInvita</li></ul> | 2024-10-17 |

| Change | Description   | Date |
|--------|---|------|
|        | <p>tion to EngagementInvitation. The attributes for these actions have also changed to align with the new entity. The following actions were replaced:</p> <ul style="list-style-type: none"><li>• GetOpportunityEngagementInvitation is now GetEngagementInvitation. Multiple attributes in the invitation have been changed, added, or removed.</li><li>• ListOpportunityEngagementInvitations is now ListEngagementInvitations.</li><li>• RejectOpportunityEngagementInvitation is now RejectEngagementInvitation.</li><li>• AssignOpportunity parameter update: AssignOpportunity now takes Assignee instead of AssigneeEmail. Update your implementations accordingly.</li></ul> |      |

| Change | Description  | Date |
|--------|--|------|
|        | <ul style="list-style-type: none"><li>SubmitOpportunity functionality change: SubmitOpportunity is now performed by the asynchronous action StartEngagementFromOpportunityTask . SubmitOpportunity now accepts InvolveMe ntType and Visibilit y .</li><li>Attribute renaming and expansion: Estimated AwsMonthlyRevenue changed to ExpectedCustomerSpend . ExpectedCustomerSp end now includes new attributes, such as Frequency and TargetCompany .</li><li>New action for AWS opportunity summary: Opportunity visibility is now provided through a separate action called GetAwsOpportunityS ummary .</li><li>Workflow updates for working with opportunities: The workflow for <i>Working with your opportunities</i> was updated to use the new</li></ul> |      |

| Change | Description   | Date |
|--------|---|------|
|        | <p>actions introduced in this release.</p> <ul style="list-style-type: none"><li>• Workflow updates for working with opportunities: The workflow for <i>Working with opportunities</i> was updated to use <code>EngagementInvitations</code>, which improves handling opportunities provided by AWS.</li><li>• Workflow updates for tracking updates: The workflow to <i>Track Updates</i> is now <i>Working with opportunity updates</i>, enhancing clarity and efficiency in monitoring opportunity status.</li><li>• New filters for listing actions: New filters are available for <code>ListSolutions</code> and <code>ListOpportunities</code> actions.<ul style="list-style-type: none"><li>• For <code>ListSolutions</code>, the new filters are <code>FilterCategory</code>, <code>FilterIdentifier</code>, and <code>FilterStatus</code>.</li><li>• For <code>ListOpportunities</code>, the new filters are <code>FilterCustomerCompanName</code>, <code>FilterIde</code></li></ul></li></ul> |      |

| Change | Description   | Date |
|--------|---|------|
|        | <p>ntifier , FilterLastModified , FilterLifecycleApprovers , FilterLifecycleStage , and FilterOrigin .</p> <ul style="list-style-type: none"><li>• Removal of AccessControl subobject: The AccessControl subobject in the opportunity model was removed. NationalSecurity is now a top-level attribute.</li><li>• Attributes relocated to GetAwsOpportunitySummary : Attributes such as AWSOpportunityTeam , insights (EngagementScore , NextBestAction ), origin, and InvolvementType are now available through GetAwsOpportunitySummary instead of GetOpportunity .</li><li>• Introduction of InvolvementType field: Introduced the InvolvementType field to differentiate between cosell and visibility-only opportunities.</li><li>• Event name updates: Events were updated with</li></ul> |      |

| Change | Description   | Date |
|--------|---|------|
|        | <p>to reflect the changes.</p> <p>For example, <i>Opportunity engagement invitation created</i> is now <i>Engagement invitation created</i>.</p> <ul style="list-style-type: none"><li>• Response payload updates:<br/>All response payloads now include an ID and/or ARN.</li><li>• Request payload updates:<br/>All request payloads now use identifiers as input, which accept either an ID or ARN.</li><li>• Engagement entity update:<br/>The title attribute in the engagement entity was renamed <code>Engagement.tTitle</code>.</li><li>• Filter prefix removal: All filters no longer include the filter prefix, simplifying the filtering mechanism.</li><li>• <code>StartEngagementFromOpportunity</code> action update: The attribute <code>AwsInvolvement</code> was changed to <code>AwsSubmission</code>.</li><li>• Invitation project details update: <code>Invitation.ProjectDetails.TargetCompletionDate</code> was renamed</li></ul> |      |

| Change | Description   | Date |
|--------|---|------|
|        | <p>Invitation.Project<br/>Details.EstimatedC<br/>ompletionDate .</p> <ul style="list-style-type: none"><li>Revenue estimate update:<br/>Invitation.Partner<br/>RevenueEstimate<br/>is now ExpectedC<br/>ustomerSpend . The<br/>data type changed from<br/>one object to an array<br/>containing one object.</li><li>Receiver account update:<br/>The field ReceiverA<br/>ccount was renamed<br/>AccountReceiver .</li><li>Engagement invitation<br/>new attribute: SenderCon<br/>tact attribute was<br/>introduced for engagement<br/>invitations.</li><li>Customer.Contact is<br/>now an array instead of<br/>an object. Opportuni<br/>tyOwner , PartnerAc<br/>countManager are<br/>supported values as<br/>BusinessTitle .</li><li>PartnerOpportunity<br/>Team is now called<br/>OpportunityTeam .</li><li>APNPrograms is now<br/>ApnPrograms</li></ul> |      |

| Change | Description  | Date |
|--------|--|------|
|        | <ul style="list-style-type: none"><li>Engagement invitation statuses were updated.</li><li>ListEngagementInvitations now requires ParticipantType as RECEIVER.</li></ul> |      |

| Change | Description  | Date       |
|--------|--|------------|
| RC 2   | <ul style="list-style-type: none"><li>Introduced a new entity called OpportunityEngagementInvitation.</li><li>Introduced a new action: ListOpportunityEngagementInvitations.</li><li>Introduced a new action: GetOpportunityEngagementInvitation.</li><li>Introduced a new event: "Opportunity Engagement Invitation Created".</li><li>Replaced AcceptOpportunity with AcceptOpportunityEngagementInvitation.</li><li>Replaced RejectOpportunity with RejectOpportunityEngagementInvitation.</li><li>Replaced "Opportunity Accepted" with "Opportunity Engagement Invitation Accepted".</li><li>Replaced "Opportunity Rejected" with "Opportunity Engagement Invitation Rejected".</li><li>PrimaryNeedsFromAWS changed to PrimaryNeedsFromAws.</li></ul> | 2024-08-07 |

| Change | Description  | Date |
|--------|--|------|
|        | <ul style="list-style-type: none"><li>• AWSOpportunityTeam changed to AwsOpportunityTeam .</li><li>• AWSSalesLifeCycle changed to AwsSalesLifeCycle .</li><li>• PrimaryNeedsFromAWSChangeReason changed to PrimaryNeedsFromAwsChangeReason .</li><li>• AWSAccountId changed to AwsAccountId .</li><li>• ExpectedMonthlyAWSRevenue changed to ExpectedMonthlyAwsRevenue .</li><li>• AWSFundingUsed changed to AwsFundingUsed .</li><li>• AWSMarketplaceOffers changed to AwsMarketplaceOffers .</li><li>• Country changed to CountryCode .</li><li>• PartnerOpportunityContact changed to PartnerOpportunityTeam .</li><li>• Updated field Contact.Title to Contact.BusinessTitle .</li></ul> |      |

| Change | Description   | Date |
|--------|---|------|
|        | <ul style="list-style-type: none"><li>• Updated field ContactInfo to OwnerInfo.</li><li>• Changed AWS Team from a map to a list.</li><li>• Added details about the list of accepted Rejection Reasons.</li><li>• Provided information on how to use Client Token.</li><li>• Included details on how to use UpdateOpportunity.</li><li>• Added guidance on using AWS Products and Partner Solutions.</li><li>• Provided details about the OpportunityEngagementInvitation entity.</li><li>• Updated StateOrRegion to include a revised list of accepted values.</li><li>• Implemented multiple bug fixes to improve performance and error messaging.</li></ul> |      |

| Change | Description  | Date       |
|--------|--|------------|
| RC 1   | <ul style="list-style-type: none"><li>• [Breaking] Renaming of ApprovalStatus to ReviewStatus: We have renamed the ApprovalStatus field to ReviewStatus to better reflect its purpose. Additionally, we're introducing a new status, Pending Submission, to indicate a draft opportunity. The ReviewStatus will now accept the following values: Pending Submission, Submitted, In Review, Approved, Rejected, and Action Required. The former Draft status will be replaced by Pending Submission.</li><li>• [Breaking] Introduction of SubmitOpportunity Action: A new action, SubmitOpportunity, has been introduced. Unlike the current behavior where CreateOpportunity also submits the opportunity, you can now create an opportunity in the Pending Submission state without linking a Solution or AWS Product immediately. To complete the submission, use the AssociateOpportunity action.</li></ul> | 2024-06-21 |

| Change | Description  | Date |
|--------|--|------|
|        | <p>ty action to link a solution or product, followed by SubmitOpportunity. This separation provides better API response performance and a flexible preparation phase before submission.</p> <ul style="list-style-type: none"><li>• [Breaking] Requirement of a Catalog Parameter and Deprecation of Sandbox Endpoint: The 'gamma' endpoint (partnercentral-selling-gamma.us-east-1.amazonaws.com) will become unavailable after 7/30/2024. All API actions now require a Catalog parameter to specify whether the operation is performed on the Sandbox or AWS catalog. Notification rules will now filter on catalog instead of environmentName.</li><li>• [Breaking] Renaming of OpportunityIdentifier to Identifier: Actions AssignOpportunity, AcceptOpportunity, and RejectOpportunity now take Identifier instead of OpportunityIdentifier to keep consistent with UpdateOpportunity.</li></ul> |      |

| Change | Description   | Date |
|--------|---|------|
|        | <ul style="list-style-type: none"><li>Changes from type Enum to String for APNProgram.CustomerUseCase, and UseCase: We will be converting Project.APNPrograms, Marketing.ActivityUseCases, and Project.CustomerUseCase from enumeration type to string type to reduce the risks associated with changing values. These fields will accept values only from predefined lists but not natively available in the SDKs.</li><li>Enhanced Error Handling: Error handling within the APIs has been significantly improved to facilitate easier debugging and quicker resolution of issues. The new error handling structures errors in two stages: 1. Request Validation Failed: Checks for data types and format, or 2. Business Validation Failed: All issues in a payload will be listed in one response, specifying the field that has errors. This consolidated feedback allows you to troubleshoot and correct errors more efficiently.</li></ul> |      |

| Change | Description   | Date |
|--------|---|------|
|        | <p>Errors codes and formats have been standardized.</p> <ul style="list-style-type: none"><li>Client Source Identifier: Ability for partners include the X-Amzn-User-Agent header in their requests, which helps identify the source of the traffic. Use the format [Solution Name including solution provider]   [Version] For Example: AWS Partner CRM Connector   v2.0.1</li><li>Bug fix, already deployed, no change to SDK] Opportunity Creation and AWS Account ID: Partners can now launch an opportunity while changing the AWS Account ID from null to a valid value without encountering errors. Previously, a bug prevented partners from performing these actions separately.</li><li>Bug fix, already deployed, no change to SDK] Solution Association with New Opportunities: Partners can associate a solution with a newly created opportunity. Before, when partners created a new opportuni</li></ul> |      |

| Change | Description  | Date |
|--------|--|------|
|        | <p>ty and simultaneously associated a solution, the solution information was being lost. This issue has been resolved.</p> <ul style="list-style-type: none"><li>• Bug fix, already deployed, no change to SDK]</li></ul> <p>Opportunity Owner's Details Display: The issue where some opportunities were displaying the owner's details in a combined "LastName" field instead of the expected "Email", "FirstName", and "LastName" fields has been corrected.</p> <ul style="list-style-type: none"><li>• Bug fix, already deployed, no change to SDK]</li></ul> <p>Customer.Account.WebsiteUrl Field Optional: The Customer.Account.WebsiteUrl field has been made optional when AccessControls.NationalSecurity field is "Yes" thus aligning the API behavior with the existing UI behavior. If the AccessControls.NationalSecurity field is "No" or null, the WebsiteUrl field will be required as a business validation.</p> |      |

| Change | Description   | Date |
|--------|---|------|
|        | <ul style="list-style-type: none"><li>• Bug fix, already deployed, no change to SDK] AWS Account ID Requirement for Consulting Partners: The inconsistency in the UI that showed the AWS Account ID field as optional for Consulting Partners has been resolved. It is now a conditional mandatory field, as per the documentation.</li><li>• Bug fix, To be deployed on 6/19, no change to SDK] Stage of a Co-sell Opportunity to Closed Lost: Partners can now successfully update the Stage of a Co-sell Opportunity to Closed Lost, as long as a Closed Lost Reason is provided. This resolves the previous error stating "Missing Required Field: Closed Lost Reason is required when closing the opportunity."</li><li>• Documentation] Improvements to documentation: Made several improvements to documentation to reflect the changes.</li></ul> |      |

| Change | Description  | Date |
|--------|--|------|
|        | <ul style="list-style-type: none"><li>• Known issues with a pending fix and list of upcoming features:<ul style="list-style-type: none"><li>• While performing AssociateOpportunity action with Solutions or Products, the error messages from Offers are shown incorrectly.</li><li>• Ability to remotely create opportunities and simulate AWS validation process in Sandbox</li><li>• Postal Code returns null when it is of the format XXXXX-XXXX for US.</li><li>• Next Steps and Next Step History are not available for opportunities that are marked as "Do not need support from AWS."</li><li>• Unable to get historical opportunities with Customer Business Problem descriptions longer than 255 characters.</li><li>• Ability to delete opportunities that are pending submission.</li><li>• LeadSource is not available in the data model.</li></ul></li></ul> |      |

| Change | Description   | Date       |
|--------|---|------------|
| Beta 5 | <ul style="list-style-type: none"><li>• Changed LifeCycle.ApprovalStatus to LifeCycle.ReviewStatus</li><li>• Changed Insights.ReviewComments to LifeCycle.ReviewComments</li><li>• Added LifeCycle.ReviewStatusReason (new attribute)</li><li>• Added New Value "Pending" to PartnerAcceptance.Status</li><li>• Released SDKs for dotnet, java, javascript, python, ruby.</li><li>• Updated API Reference Guide to reflect the above changes.</li></ul> | 2024-04-19 |

| Change | Description  | Date       |
|--------|--|------------|
| Beta 4 | <ul style="list-style-type: none"><li>• Added Sandbox Testing: Ability to test Opportunity Event notification in Sandbox.</li><li>• Added Documentation: Introduced Opportunity Event notification sample rules.</li><li>• Added SDK Releases: Released SDKs for Java (V2), Javascript (V2), DotNet (V3), and Python (V3).</li><li>• Updated Date Format: Updated to follow ISO standards.</li></ul> | 2024-03-04 |

| Change | Description   | Date       |
|--------|---|------------|
| Beta 3 | <ul style="list-style-type: none"><li>• Added Change Log File: Introduced a change log file for better tracking of updates and changes.</li><li>• Updated API Reference Guide (PDF): Released a new version of the API Reference Guide in PDF format.</li><li>• Updated API Reference Guide (Web Version): Updated the web version of the API Reference Guide.</li><li>• Added DotNet SDK: Released the DotNet SDK, expanding our support for different programming environments.</li><li>• Updated Python Boto 3 SDK (V2): Released Version 2 of the Python Boto 3 SDK, introducing new features and improvements.</li></ul> | 2024-01-24 |
| Beta 2 | <ul style="list-style-type: none"><li>• Added API Reference Guide (Web Version): Released a new version of the API Reference Guide (Web Version). Note: This version requires a local webserver to be run after extraction for proper functionality.</li></ul>  | 2024-01-07 |

| Change | Description  | Date       |
|--------|--|------------|
| Beta 1 | <ul style="list-style-type: none"><li>• Added Boto3 (Initial Release): Launched the initial release of Boto3, a Python SDK for our services.</li><li>• Added Beta Program Guide: Introduced a guide for participants in our Beta testing program.</li><li>• Added API Reference Guide (PDF): Uploaded the first version of our API Reference Guide in PDF format, providing comprehensive documentation for our API.</li></ul> | 2023-12-15 |
| Beta 0 | This initial release provides a suite of functionalities to manage and optimize partner engagements and opportunities in AWS Partner Central.  | 2023-11-15 |

# Document history

The following is a list of documentation releases for this API reference.

| Change   | Description  | Date             |
|--|--|------------------|
| <a href="#"><u>Added documentation for multi-partner opportunities</u></a> | Multi-partner opportunities (in preview) is an integrated experience in AWS Partner Central that allows AWS Partners to find and connect with other Partners and co-sell together on customer deals. | December 4, 2024 |
| <a href="#"><u>RC 3 release</u></a>  | Candidate 3 version of the AWS Partner Central API released  | October 17, 2024 |
| <a href="#"><u>RC 2 release</u></a>  | Candidate 2 version of the AWS Partner Central API released  | August 7, 2024   |
| <a href="#"><u>RC 1 release</u></a>  | Candidate 1 version of the AWS Partner Central API released  | June 21, 2024    |
| <a href="#"><u>Beta 5 release</u></a>                                      | Beta 5 of the AWS Partner Central API released   | April 19, 2024   |
| <a href="#"><u>Beta 4 release</u></a>                                      | Beta 4 of the AWS Partner Central API released   | March 4, 2024    |
| <a href="#"><u>Beta 3 release</u></a>                                      | Beta 3 of the AWS Partner Central API released   | January 24, 2024 |
| <a href="#"><u>Beta 2 release</u></a>                                      | Beta 2 of the AWS Partner Central API released   | January 7, 2024  |

|                                       |  |                   |
|---------------------------------------|--|-------------------|
| <a href="#"><u>Beta 1 release</u></a> | Beta 1 of the AWS Partner Central API released | December 15, 2023 |
| <a href="#"><u>Beta 0 release</u></a> | AWS Partner Central API initial release        | November 15, 2023 |