# Amazon Redshift
# AWS Service Delivery Program
## Consulting Partner Validation Checklist

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Version 2.2

aws partner network

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# Introduction

The goal of the AWS Service Delivery Program is to recognize APN Partners who demonstrate successful customer delivery and experience in specific AWS services. The AWS Service Delivery Validation Checklist is intended to prepare APN Partners who are interested in applying for AWS Service Delivery. This checklist provides the criteria necessary to achieve the designation(s) under the AWS Service Delivery Program.

# Expectations of Parties

Once APN Partners have applied to a designation within AWS Service Delivery, APN Partners undergo a validation of their capabilities known as the technical validation upon applying for any AWS Service Delivery designation, and every 12 months thereafter. AWS leverages in-house expertise and may leverage a third-party firm to facilitate the review.

AWS reserves the right to make changes to this document at any time. **It is expected that APN Partners will review this document in detail *before* submitting an AWS Service Delivery application, even if pre-requisites are met.** If items in this document are unclear and require further explanation, please contact your Partner Development Representative (PDR) or Partner Development Manager (PDM) as the first step. Your PDR/PDM will contact the Program Office if further assistance is required.

In order to begin the validation process, please follow the steps outlined below:

- Step #1: Review the Partner Validation Checklist and ensure all requirements are met
- Step #2: Submit an AWS Service Delivery Application through the APN Partner Central
  - Login to the APN Partner Central
  - Click "View My APN Account" in left navigation
  - On this page, first submit the following:
    - Your AWS Service Specific AWS Customer Case Study (2) with attached Architecture Diagrams
    - Your AWS Service Specific Consulting Practice
  - Next, scroll to AWS Service Deliveries and select the AWS service you want to apply for
  - Complete the Service Delivery Application
- Step #3: Email completed Self-Assessment to aws-service-delivery@amazon.com

Incomplete applications will not be considered and will be declined until all requirements are met.

Once your firm's application has been submitted through the APN Partner Central, the APN Team will review for completeness and for compliance with the prerequisites. Next, we send applications to in-house or third-party experts to complete a Technical Validation.

AWS recommends that APN Partners have individuals who are able to 1) provide evidence of compliance and 2) speak in-depth to the technical requirements about the AWS Service during the validation process.

Upon completion of the Technical Validation, APN Partners will receive a final status for the submitted application either confirming or not confirming the APN Partners' acceptance into the Service Delivery Designation. APN Partners may attain one or more AWS Service Delivery Designations. Attaining one designation does not guarantee approval into additional Service Delivery Designations.

# AWS Service Delivery Program Prerequisites

AWS Service Delivery Partners have demonstrated success helping customers evaluate and use AWS services productively, at varying levels of complexity, and at scale by completing the below requirements.

The following items must be met before a Technical Validation review will be scheduled. These items will be validated by the AWS Service Delivery Program Manager; any deficiencies must be addressed prior to scheduling a validation review.

| 1.0 APN Program Requirements | | Met Y/N |
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| **1.1 Program Guidelines** | The APN Partner must read the Program guidelines and Definitions before submitting the application. Click here for Program details. | |
| **1.2 Program Requirements** | APN Partner is Select, Advanced, or Premier APN Consulting Partner (view requirements) | |
| **2.0 AWS Customer Case Studies** | | |
| **2.1 AWS Customer Case Studies** | APN Partner has two (2) case studies demonstrating successful delivery of the AWS service(s). **Case studies must be for projects that are in production, rather than in pilot or proof of concept stage. Projects that are still in development stage will not be accepted. AWS will not accept case studies in which the partner's customer is an internal or affiliate company.**<br><br>***Note**: Public-facing case studies are encouraged over private case studies, as they may be used by AWS for marketing purposes. Evidence of a publicly referenceable case study must be provided in the form of a case study, white paper, blog post, or equivalent, and must be easily discoverable on the APN Partner's website. For best practice on how to write a Public Case Study See Here* | |
| | APN Partner provides for each case study:<br>▪ Name of the customer (Internal or affiliate case studies will not be accepted)<br>▪ AWS Account ID (Will be used to verify AWS service usage)<br>▪ Problem statement/definition<br>▪ What you proposed<br>▪ How AWS services were used as part of the solution<br>▪ Third party applications or solutions used<br>▪ Start and end dates of project (Case studies must be for projects started within the past 24 months, and must be for projects that are in production)<br>▪ Outcome(s)/results<br>▪ Lessons Learned | |
| **2.2 Architecture Diagrams** | Submitted case studies must include architecture diagrams.<br>▪ Architecture diagrams must detail how the solution interacts with the AWS Cloud; specifically, what AWS tools and services are used in the solution<br>▪ Diagrams must also include evidence of AWS best practices for architecture and security<br><br>**Note:** *For best practice on how to build an accepted Architecture Diagram See Here* | |
| **2.3 Partner Practice Microsite** | APN Partner must have an AWS-branded microsite that is related to or specific to AWS service.<br>▪ APN Partner microsite must be accessible from APN Partner home page; Home page is not acceptable as a microsite.<br>**Note:** *For best practice on how to build an accepted Microsite See Here* | |
| **3.0 APN Partner Self-Assessment** | | |
| **3.1 Program Validation Checklist Self-Assessment** | APN Partner must conduct a self-assessment against designation requirements using the AWS Service Delivery Validation Checklist.<br>▪ APN Partner must complete all sections of the checklist. | |

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| | ▪ Completed self-assessment must be emailed to aws-service-delivery@amazon.com, using the following convention for the email subject line: "[APN Partner Name], Service Delivery Partner Completed Self-Assessment." | |

# AWS Service Delivery Program Requirements

In preparation for the validation process, Partners should become familiar with the items outlined in this document, and prepare objective evidence, including but not limited to: prepared demonstration to show capabilities, process documentation, and/or actual customer examples.

# Amazon Redshift Approval Criteria

The AWS Service Delivery Program is guided by AWS best practices and Well Architected Framework.

| Amazon Redshift Validation Checklist | | Detailed Description of Evidence | Met Y/N |
|---|---|---|---|
| **1.0 Case Study Requirements** | **Two customer case studies are provided that contain one or more of the following to receive a designation:**<br>▪ Amazon Redshift<br>▪ Amazon Redshift Spectrum<br>▪ Amazon S3 Data Lake implementation using Amazon Redshift | Customer implementation description or documentation | |
| | **For engagements where the customer will have responsibility for managing the database, details on customer enablement to allow the customer to use and evolve the solution over time. This customer enablement information should include at least the following evidence:**<br>▪ Training and reference materials provided to the customer to ensure that they understand the Amazon Redshift service.<br>▪ Training and reference materials provided to the customer to demonstrate how they are able to operate and evolve their Amazon Redshift cluster(s) to meet their current and future requirements.<br>▪ Training and reference materials that show the customer how to measure the performance of their Amazon Redshift cluster(s) as well as how to evaluate the current cost of their cluster(s).<br>▪ Training and reference materials that show the customer how to adjust their Amazon Redshift cluster(s) based on performance and cost measurements.<br><br>**Details of a properly sized Amazon Redshift architecture based on the customer's pre-Amazon Redshift architecture or requirements for a new application being developed. The purpose of this information is to show the ability to match up customer requirements and usage patterns with what can be done in an Amazon Redshift cluster. Details should include:**<br>Existing Architecture:<br>▪ Pre-Amazon Redshift architecture and what its performance and availability characteristics were.<br>▪ High Availability and Recovery model of the existing architecture.<br>▪ Shortcomings of the existing architecture.<br>▪ Final Amazon Redshift architecture, how it lines up against the previous architecture, and how it meets or exceeds the current | Customer implementation description, documentation, and proof. | |

customer implementation in regards to cost, operations, and performance.

New Application:

- Requirements for the new application and what the database needs were. Details should include: availability needs, regional or multi-regional access needs, transactions per second, database initial size, and expected growth rate of the size of the database.
- Final Amazon Redshift architecture and details on how the final architecture lines up with the application requirements.

**Details on what the customer was provided in relation to implementing database security related to their Amazon Redshift cluster(s). This would include such items as:**

- How to implement password policies for their database (password strength, rotation policies, etc.)
- How to implement secure password storage, retrieval, and rotation for human and application access to the database.
- How to capture and analyze available log files for potential security events related to their database.
- Encryption options for data at rest or at the column level.
- Relevant AWS security features:
    - Identity and Access Management configuration.
    - Configuration of the VPC and overall network containing the database and applications interacting with the database.
    - Access controls to the database and database subnets via security groups and Access Control Lists.

**Details on what assistance was provided to the customer on how their application could be architected to take advantage of functionality that exists within Amazon Redshift. This would include, but is not limited to:**

- Design, build, and load of tables to leverage massively parallel processing, columnar data storage, and columnar data compression
- Query design (give examples)
- Workload management (give examples)

**Details on what assistance was provided to the customer on how their application and Redshift cluster can be monitored. This would include, but is not limited to:**

- Metrics for compute and storage utilization and read/write traffic to the Amazon Redshift cluster(s)
- Metrics around Amazon Redshift query and cluster performance
- Monitoring of error logs for operational failure

**For engagements where the customer will have responsibility for managing the database, details on guidance that was provided to the customer in order to enable them to meet their Recovery Time Objective (RTO) and Recovery Point Objective (RPO).**

This guidance would be specific to Amazon Redshift and should include the following:

- How to recover in the same AWS region and in a different AWS region. This would involve techniques such as creating snapshots and replicating snapshots.
- Use cases where snapshots can be used. This would include, but not be limited to:

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| | ○ Recovery due to unavailability of a region.<br>○ Recovery and research due to operator error and application bugs.<br>○ Recovery due to unexpected data loss or corruption.<br>▪ How to perform periodic testing of the customer's recovery/restore process to confirm that processes and procedures are known and proved to work in advance of actually needing them.<br><br>**For engagements where the partner will be managing the customer's database, provide details on what is in place to enable the customer to meet their Recovery Time Objective (RTO) and Recovery Point Objective (RPO).**<br>This recovery plan would be specific to Amazon Redshift and should include the following:<br>▪ Techniques being used to recover in the same AWS region or a different AWS region, based on customer requirements.<br>▪ Outline how testing of the recovery and restore process is done and how frequently this testing is performed for each customer. | | |
| **2.0 AWS Service Requirements** | **2.1 Solution Characteristics:**<br>Each submitted customer case study includes and describes in detail the approach, implementation, and customer acceptance testing for at least one the following use cases. While at least one use-case is needed, please highlight all the use cases that applied to the customer case study.<br>▪ An Amazon S3 based data lake using Amazon Redshift and/or Amazon Redshift Spectrum<br>▪ Use of encryption in the database (either server side or client side).<br>▪ A migration to Amazon Redshift from a different data warehouse or RDBMS. | | |
| | **2.2 Solution Complexity:**<br>Each submitted customer case study is for a database at least 50GB in size. Please provide the following characteristics of the database:<br>▪ Initial size of the database.<br>▪ Expected yearly growth of the database.<br>▪ Anticipated number of tables in the database.<br>▪ Anticipated number of concurrent requests during peak use of the database.<br>▪ Anticipated percentage of read operations against the entire database during peak usage.<br>▪ Anticipated percentage of write operations against the entire database during peak usage. | | |

# AWS Resources

| Title | Description |
|---|---|
| How to Build a Practice Microsite | Provides guidance how to build a Practice/solution page that will meet the prerequisites of the Program. |
| How to Write a Public Case Study | Provides guidance how to build a Public Customer Case Study that will meet the prerequisites of the Program. |
| How to Build an Architecture Diagram | Provides guidance how to build a architecture diagrams that will meet the prerequisites of the Program. |
| Amazon Redshift Cluster Management<br>Amazon Redshift Database Developer Guide<br>Amazon Redshift Designing Tables<br>Amazon Redshift Data Loading<br>Amazon Redshift Distribution<br>Amazon Redshift Workload Management | Amazon Redshift Best Practices for getting started and configuration guides |
| Performance Tuning<br>High Performance ETL<br>Amazon Redshift Metrics | Best practices for high-performance tuning and techniques using Amazon Redshift |

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