
AWS
re:Invent

GPS203

Database modernization with AWS Consulting Partners

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AWS

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Agenda

Database modernization trends

Common customer migration paths to AWS databases

Move to managed databases

Break free from legacy databases

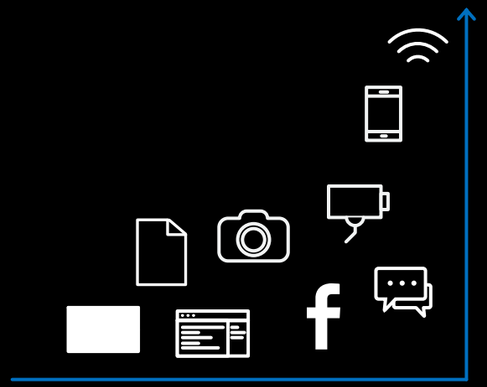
AWS database modernization best practices, programs, and funding



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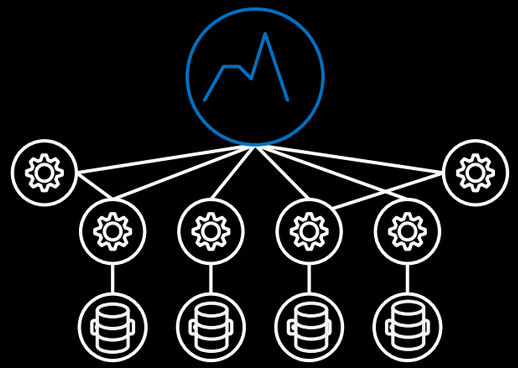
Rapid expansion of data requirements for modern workloads

Explosion of data



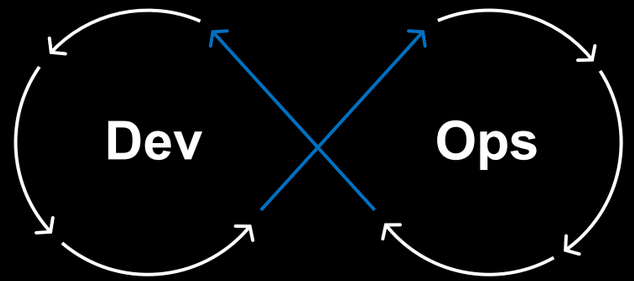
Driven by network connected smart devices, data grows 10x every 5 years

Micro-services change data and analytics requirements



Micro-services architecture decreases need for one-size fits all databases and increases need for real-time monitoring and analytics

Accelerated rate of change driven by DevOps



Transition from IT to DevOps increases rate of change

“75% of all databases will be migrated to the cloud by 2022.”

Gartner

The Future of the DBMS Market is Cloud, 2019



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Database Management Systems

$62.3B

MARKET OPPORTUNITY IN 2020

Customers are moving faster than ever to AWS managed database services

Customers are migrating from on-premises, legacy databases to AWS-managed database services so they can:



Spend less time managing infrastructure, and more time innovating



Break free from the costs and restrictions of legacy databases



Build modern applications on AWS

Over 300,000 databases migrated to AWS



Common customer migration paths to AWS databases



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Lift and Shift, Move to Managed, or Break Free

Lowered cost and saved time

Migrate - Lift and Shift
(re-host on Amazon Elastic Compute Cloud (Amazon EC2))

- Database runs exactly as on-premises
- Quickest way to onboard workloads
- Vendor lock-in
- Still on Oracle, SQL Server, etc.

Migrate - Move to Managed
(re-platform)

Break Free
(re-factor)



More scale, performance, innovation

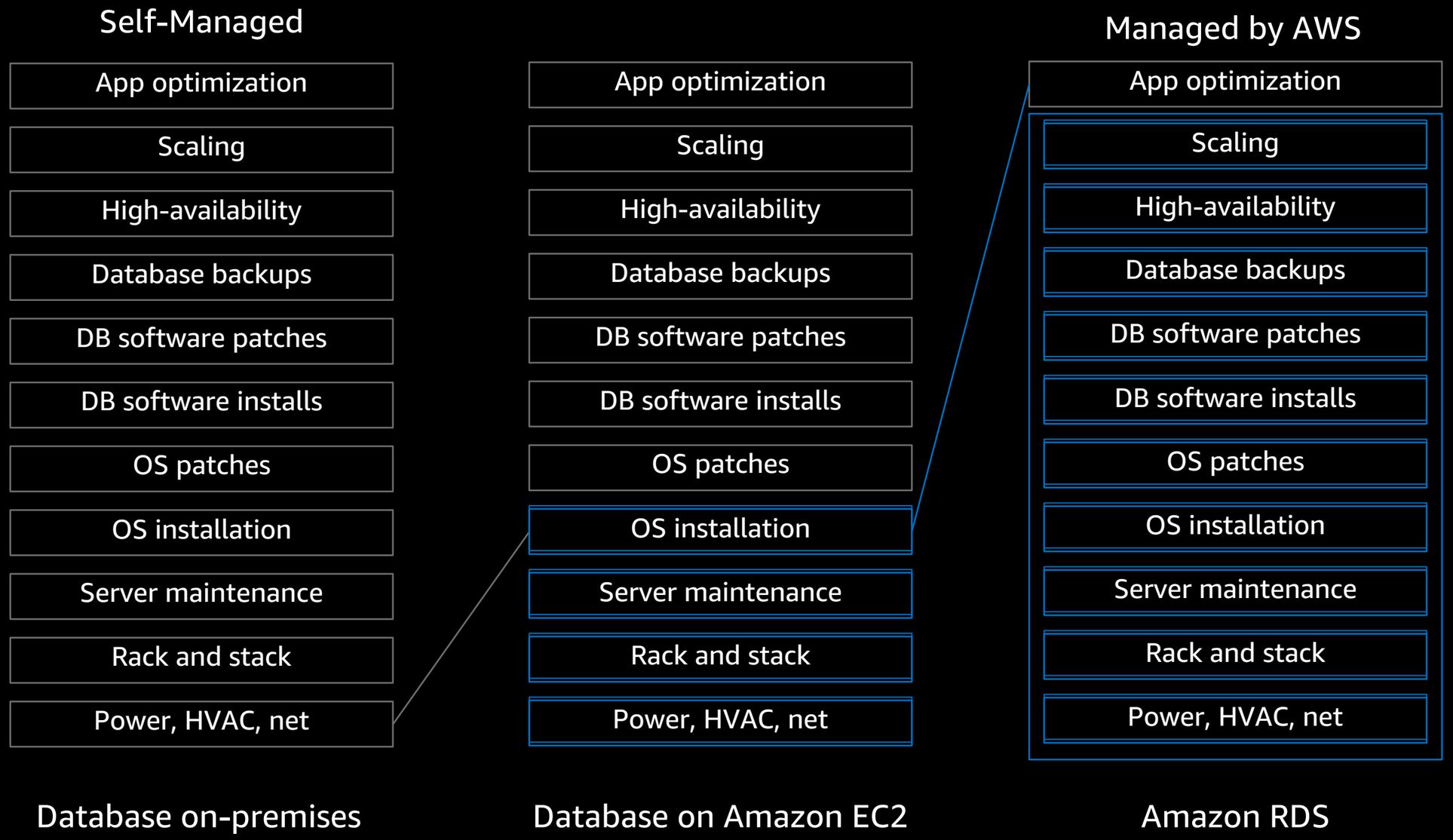
Move to managed databases



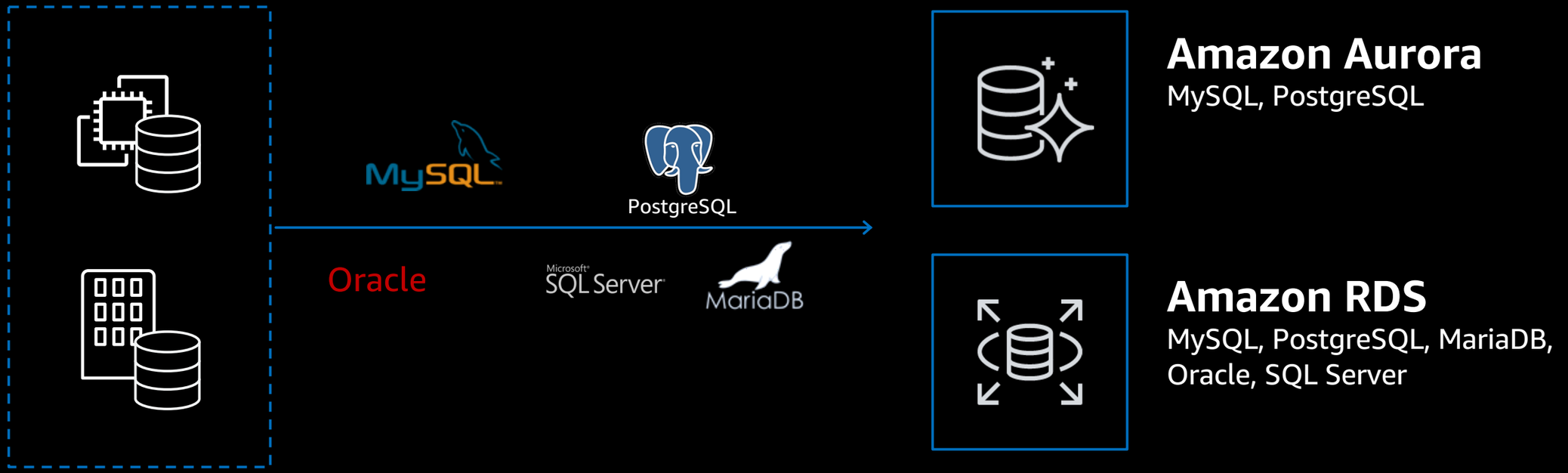
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With fully-managed services on AWS, customers spend time innovating, not managing infrastructure



Move to managed relational databases



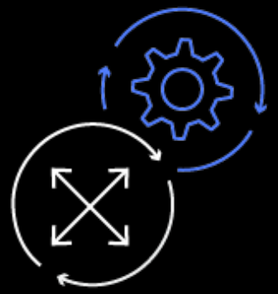
Amazon Aurora
MySQL, PostgreSQL

Amazon RDS
MySQL, PostgreSQL, MariaDB, Oracle, SQL Server

The target customer for a move to managed opportunities:



Is self-managing databases on-premises, in Amazon EC2, and/or in another public cloud



Wants to reduce DB admin burden and reallocate DBA resources to app-centric work



Does not want to re-architect applications



Needs a simple path to a managed service in the cloud for DB workloads

KAPLAN

Kaplan serves more than 1.2 million students globally each year.

Challenge:

Kaplan was running 12 different data centers and was dealing with end-of-life hardware, space issues in their data centers, and data center outages. To keep up with the growth, they needed flexible IT infrastructure that would allow for scale and provide improved resiliency, security, and agility.

Solution:

Migrated from on-premises Oracle and SQL Server to Amazon RDS which required less focus on the day-to-day maintenance. Reduced data center footprint from 12 to 4.

Result:

"We have a level of control and standardization that we could not achieve within our on-premises data centers."

- Chad Marino, Executive Director of Tech Services, Kaplan

Oracle

Microsoft SQL Server

MOVE TO MANAGED →

Amazon RDS for Oracle

Amazon RDS for SQL Server



Break free from legacy databases



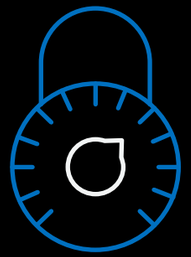
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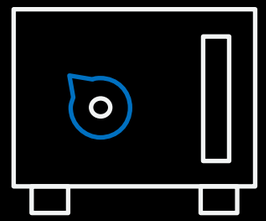
Challenges with legacy databases



Costly



Proprietary



Lock-in



Punitive licensing



You’ve got mail

Customers are moving to open databases







+

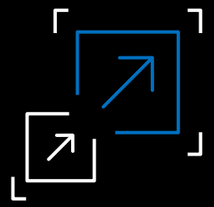
Commercial-grade performance and reliability?

Amazon Aurora

Performance and availability of commercial-grade databases at 1/10th the cost

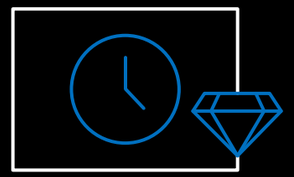


Highly Secure



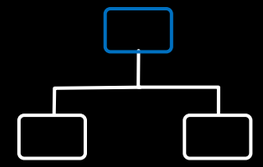
Performance and scalability

- 5x throughput of standard MySQL
- 3x of standard PostgreSQL



Availability and durability

- Fault-tolerant, self-healing storage
- Continuous backup to Amazon Simple Storage Service (Amazon S3)



Fully-managed

- Managed by Amazon RDS
- No hardware provisioning, software patching, setup, configuration, or backups

The target customer for break free opportunities:



Is running applications on commercial databases, like Oracle or Microsoft SQL Server



Has an open source strategy and is vocal about a desire to move off proprietary technologies



Has an upcoming contract expiration for commercial databases



Is seeking improved agility, flexibility, and significant reduction in database costs

Samsung migrates 1.1 billion users to Amazon Aurora with AWS Database Migration Service

Challenge

IT giant Samsung Electronics needed a more flexible, microservices-driven solution to replace its monolithic legacy internet data center, which was proving costly and unable to accommodate growing traffic.

Solution

The company migrated its 1.1 billion Samsung Account users to Amazon Aurora with minimal service disruption using AWS Database Migration Service, drastically reducing database costs and increasing scalability.

Results

- Underwent a global migration of a mission-critical workload in 18 months
- Enabled 60 months latency or less 90% of the time
- Reduced monthly database costs by 44%



Oracle ····· MIGRATIONS → ····· Amazon Aurora | Amazon Database Migration Service | Amazon DynamoDB

aws

AWS database modernization best practices, programs, and funding



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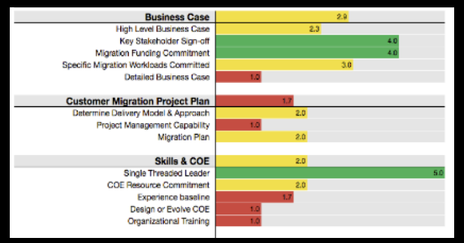
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Customer Migration Journey

APN CONSULTING PARTNERS LEVERAGE AWS BEST PRACTICES TO ACCELERATE CUSTOMER MIGRATIONS

Assess

Migration Readiness Assessment (MRA)



Migration Business Case

- Discovery
- TCO report

Mobilize

- Discovery and planning
- Landing zone
- Skills / Center of excellence
- Migration experience
- Business case
- Migration plan
- Operating model
- Security and compliance

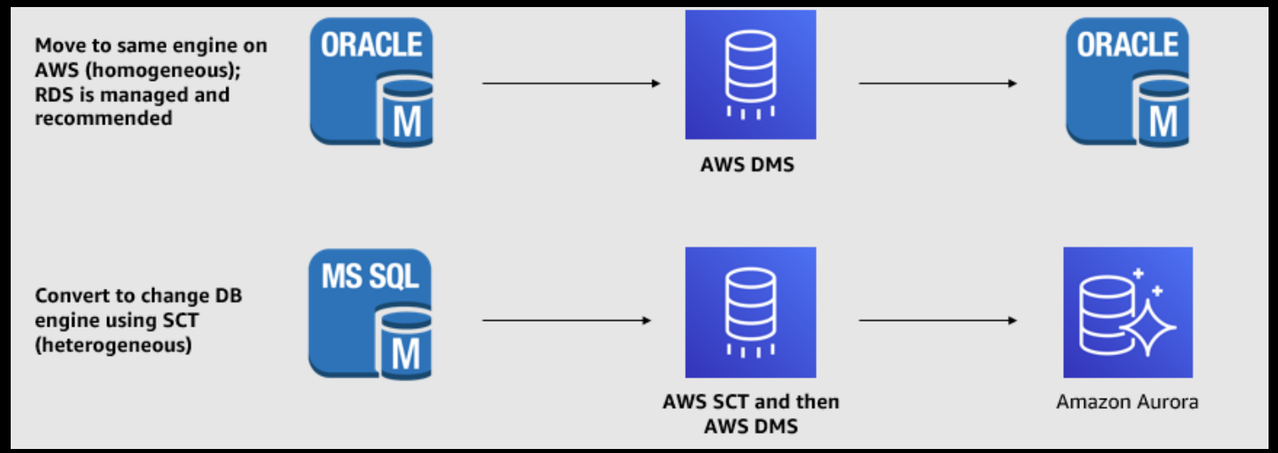
Migrate and modernize

- Migrate
- Operate
- Optimize

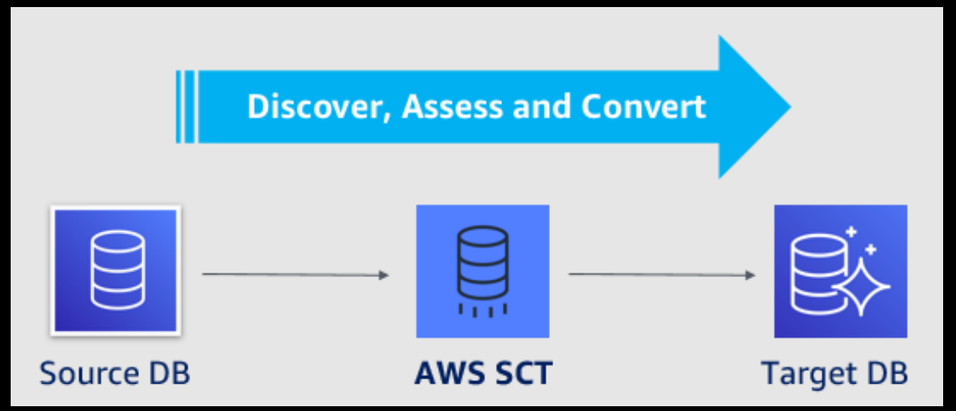
Flexible, powerful migration tooling

MOST SOURCES AND TARGETS, HIGHER CONVERSION AUTOMATION

Database Migration Service (DMS)



Schema Conversion Tool (SCT)



For heterogeneous migrations (e.g., Oracle to Aurora PostgreSQL or Aurora MySQL, and Cassandra to Amazon DynamoDB)

APN Navigate Program

Database Services



Aurora/RDS | DocumentDB | DynamoDB | Redshift | ElastiCache

The track enables APN Partners to learn how to build a practice around Amazon purpose-build databases including Amazon Redshift, Amazon ElastiCache, Amazon Aurora/RDS , Amazon DocumentDB & Amazon DynamoDB. Learn about the broadest selection of purpose-build databases for all your customers' application needs including use cases around internet scale, real-time open source, and enterprise applications. A minimum of two individuals (totaling at least two team members) are required to complete the required training(s) for your training path.

1. Self Paced Online Training
2. Deep Dive Workshops by AWS DB Experts
    1. **Move to managed for Amazon RDS Oracle / SQL Server Engines**
    2. **DB Modernization with Amazon RDS and Amazon Aurora**
    3. **DB Modernization with Amazon DynamoDB and Amazon DocumentDB (with MongoDB compatibility)**
    4. **Database modernization with AWS Database Services**

"AWS Navigate is helping us to fast-track onboarding our newest headcount so they can provide working software sooner for our customers. In addition, it is helping us to organize the collection of the collateral needed to apply for AWS Competencies." ***APN Consulting Partner***

"APN Navigate is an excellent tool to improve our scale to prepare ourselves to a competency or program." ***APN Technology Partner***

AWS Competency Program

HIGHLIGHT YOUR AWS TECHNICAL EXPERTISE AND SPECIALIZATION TO DIFFERENTIATE YOUR BUSINESS

Attaining an AWS Competency helps you market and differentiate your business to AWS customers by showcasing your skills in specialized areas, such as migration



Program benefits include:

- Increase visibility with customers and AWS
- Gain go-to-market support
- Access additional MDF funds and discounts
- Promote your business at AWS events

AWS Service Delivery Program

HIGHLIGHT YOUR AWS SERVICE EXPERTISE AND DIFFERENTIATE YOUR BUSINESS

To receive an AWS Service Delivery designation, APN Partners undergo service-specific technical validation by AWS Partner Solutions Architects, and complete a customer case business review



Amazon Aurora



Amazon RDS



Amazon Database Migration Service

Program benefits include:

- Access to funding and discounts
- Designation related AWS service-specific roadmaps
- AWS marketing support
- Priority consideration to publish technical content through AWS forums

Migration Acceleration Program (MAP)



Migration Methodology



AWS and Partner Tools



AWS Partners





AWS Investment



AWS Training



AWS Professional Services

Call to action

1. Learn



Read about Databases on AWS, and customer case studies

2. Join



Become a Database Service Delivery Designation Partner and achieve Migration Competency

3. Identify



Identify 3 Move-to-Managed or Break-Free opportunities

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Thank you!



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