Solution Brief:
Cloudly Database Migrator (CDM)

Introduction

Cloudly combines Amazon's *Database Migration Service (DMS)* -- an online, live database migration service with Cloudly's own *Cloudly Database Migrator (CDM)* -- an offline, automated database migration service. Together, we can offer the maximum flexibility for your database migration project that is further strengthened by Cloudly's deeply experienced database migration team. Our team can offer a wide range of consulting services from the simplest to the most complex database migration project end-to-end from pre-engineering to post-migration support.

Cloudly Database Migrator

A solid Database Migration strategy to Cloud is a must to maximize productivity and to ensure seamless transition from legacy applications or systems that addresses changing business needs in evolving technology landscape. Cloudly CDM offers a fast, efficient, and cost-effective way to re-deploy and manage data across hardware platforms, applications and operating systems over various cloud environments and platforms.

Features and Benefits

Seamless DMS Offerings

All core value propositions of DMS are offered: simple to use; zero downtime; supports most widely used databases; low cost; fast and easy to setup and reliable. When you come to Cloudly for your next database migration project to AWS, we will leverage DMS to the farthest extent possible gaining everything DMS and its evolution has to offer.

Automated Database Provisioning

Cloudly CDM automates your self-managed database systems on EC2 / EBS provisioning or Database-as-a-Service (DBaaS) provisioning on RDS / RedShift / DynamoDB incl. with a wide range of parameter tuning and optimization. CDM algorithms optimize a wide range of resources, e.g., disks, memories and I/O performance as well as parameters, e.g., VPC, security, subnet and database to ensure you have the database you expected on cloud (no surprise).

Additional Databases Support

Cloudly CDM supports several additional source and destination databases through a streamlined and intuitive user interface, strongly complementing Amazon's DMS supported set of databases. See the table below for detailed, comparative tables between the two services.

Migration Pre-Engineering

Migration pre-engineering undertakes complex analysis, planning and migration strategy design, esp. for multi-backend applications with either uni-directional or bi-directional conversion support. For complex databases that may support multiple applications, Cloudly CDM will take the necesseray actions (Automatic or Manual approach) to make database features, e.g., base data types, functions, triggers and procedures compatible between multiple database.

Testing & Validation

Cloudly CDM produces a comprehensive "Validation Report" that provides an overview about database migration status. It provides mapping for different database entities like tables, field names, row counts, etc, between source and destination databases. Based on this report, Cloud team undertakes manual testing and validation of all migrations. Automated validation and manual testing form the key components of customer's acceptance of a migration project.

Post-Migration Support

Cloudly CDM continues to provide a side-by-side of both source and destination databases incl. data statistics, monitors and alerts allowing any post-migration issue to be caught while the migrated database may be under limited or live operation. Additionally, Cloudly team can perform any additional service enablement or tune up necessary for resources and parameters for DBaaS or self-managed databases.

The following table shows various source and destination databases that are supported by Amazon's DMS and Cloudly's CDM.

Source Database	Target Database on AWS	DMS (Online)	CDM (Offline)
Oracle	MySQL, PostgreSQL	✓	✓
Oracle	Amazon Aurora, MariaDB	✓	
Oracle	SQL Server		✓
Oracle Data Warehouse	Amazon Redshift	✓	
Microsoft SQL Server	Amazon Aurora, MariaDB	✓	
Microsoft SQL Server	MySQL, PostgreSQL	✓	✓
Microsoft SQL Server	Oracle		✓
Microsoft SQL Server	Amazon Redshift		✓
MySQL and MariaDB	PostgreSQL	✓	✓
MySQL and MariaDB	Microsoft SQL Server, Oracle		✓
MySQL and MariaDB	Amazon Redshift		✓
PostgreSQL	Amazon Aurora, MariaDB	✓	
PostgreSQL	MySQL	✓	✓
PostgreSQL	Microsoft SQL Server, Oracle		✓
PostgreSQL	Amazon Redshift		✓
Teradata	Amazon Redshift	✓	
Netezza	Amazon Redshift	✓	
Greenplum	Amazon Redshift	✓	
Amazon Aurora	PostgreSQL	✓	

Cloudly

CloudlyIO was founded by a group of cloud experts of Silicon Valley, who started working on Amazon Web Services (AWS) platform when there were only two services available: EC2 and S3. They successfully migrated over 100 customers in North America, Europa, Asia and Australia over a period of five years. This experience showed them how migrating to cloud, esp. databases was one of the daunting challenges that almost all businesses who wanted to use public clouds for their workloads were facing. They decided to do something about it and built an automated database migration platform called: Cloud Database Migrator (CDM), which leverages AWS Database Migration Service (DMS) and automates various parts of the workflows, such as, provisioning of resources, validation of migrations and reporting of migrated features.