

Griddable.io & AWS Data Migration Service

Today's digital business imperative means more data in more places across more platforms connected at ever increasing speed. This puts new pressures on traditional enterprise data to operate across hybrid clouds, feed data continuously into real-time applications, and connect to edge computing. A more flexible and highly connected approach is needed while making it easy to address performance and HA needs at scale.

Summary

The griddable.io cloud-first and SaaS platform for synchronized data integration delivers a new, flexible, hyper-connected, and policy-based approach for hybrid cloud.

While AWS Data Migration Service is the primary service to migrate from on-premise into AWS databases (Aurora, RDS, Redshift), it was not designed for non-AWS clouds, flexible topologies, HA, easy SaaS onboarding and compatibility with Oracle Golden Gate replication for the source database.

Griddable.io can run on AWS or any other cloud, synchronize/migrate between AWS, on-premise or other public clouds, and has a pluggable architecture to support any database including AWS native databases and on-premise Oracle GoldenGate installations. An intuitive user experience to quickly define flexible topologies and policies with data filtering, masking, or transformations in transit.

AWS Data Migration Service (DMS)

AWS Data Migration Service is a fee-based service that enables migration from Oracle, MySQL, SQL Server, and other databases with change data capture logs un-directionally into AWS databases like Aurora, RDS and Redshift. Amazon DMS does both initial load of the database as well as the incremental change capture. It includes a UI that supports schema and table level policies (filtering, renaming and limited masking) to control movement of data. The initial schema creation is supported by a separate Java based tool called Schema Conversion Tool (SCT) that runs on Windows hosts.

Griddable.io

Griddable.io is the industry's first *smart grid for enterprise data* which brings a new approach optimized for synchronized data integration across any cloud and database platform. Key attributes are:

- **A resilient scale-out grid** architecture that supports any topology and heterogeneous databases
- **Intelligent in-line grid services** that connect end-points and selectively filter, mask, or transform data while guaranteeing transaction consistency
- **Flexible grid policies easy to setup & change** using a declarative policy language, eliminating the need for complex custom coding or highly specialized skills across a myriad of single function tools



The griddable.io smart grid for enterprise data guarantees transaction consistency across any number of sources and destinations

	Griddable.io	AWS Data Migration Service
Easy to Use SaaS Experience across multi-clouds	<ul style="list-style-type: none"> • SaaS on-boarding in 15 minutes to synchronize between on-premise and public cloud or between public clouds • Available on AWS, GCE, and VMware VMC using your own credentials. Built-in support for public cloud data services and 3rd party database instances • Built-in UI to create grids and manage data integration across topologies 	<ul style="list-style-type: none"> • DMS is a migration only service that works only to bring data into AWS databases • For Oracle, only LogMiner is supported, no support for GoldenGate which is critical for Oracle RAC environments • Schema Conversion Tool (SCT) must be run separately from DMS • No support to move data out of AWS nor for non-AWS databases
Cloud-First Architecture	<ul style="list-style-type: none"> • Modern distributed and micro-services architecture is optimized for cloud deployments. • All core components are scale-out for performance and automated recovery • Cloud infrastructure automation with Kubernetes, StrongSwan VPN, ELK, and ZooKeeper 	<ul style="list-style-type: none"> • AWS DMS's foundation is based on Attunity which pre-dates cloud frameworks • DMS does not support on-demand scale, and on-demand patching • DMS is not container based, so will not support Kubernetes • No support for VPN connectivity. All setup is IP based (no DNS)
Cloud Scale Performance	<ul style="list-style-type: none"> • Scale-up and scale-down in cloud environments using dynamically-automated multi-cloud clusters • Minimal overhead on database sources when adding new destinations using Griddable.io Change History Servers • In-memory change delivery achieves very low latency. • Policy based filtering at source to reduce network payload 	<ul style="list-style-type: none"> • AWS DMS is a file based single instance architecture with in-memory optimization. Critical to size VMs with lots of memory • Does not include scale-up or scale-down or dynamic clustering across multi-clouds • 1: N topologies requires all reads from the source database which can cause significant overhead • Filtering cannot be done at source which increases network payload from source
Cloud Resilience	<ul style="list-style-type: none"> • High availability of all components enables synchronization to automatically recover from many failure scenarios while ensuring a consistent transaction timeline 	<ul style="list-style-type: none"> • With Multi-AZ option AWS DMS launches a primary and secondary replication instance in separate AZs as a passive standby
Customized Data Services	<ul style="list-style-type: none"> • JSON-like declarative policy language to do selective field-level masking, obfuscation, encryption at source or destination without downtime • Policy based Initial cloning that allows for partial data to be pre-populated, required for real-time analytics • Grouping mechanisms by tagging data with common attributes • Policies define data subsets to clone, with fast startup and automatic catch up and re-start from Change History Servers 	<ul style="list-style-type: none"> • Selective replication is configuration based which leads to complex and difficult to change policy definition for databases with many schemas/tables/columns • No support for data masking for private or regulated data means all data is migrated to AWS. • No custom data, transformation, tagging, or row level policies & downtime for changes • Can only do schema level selective initial load limiting real-time analytics use case where row/column/table level is required
Flexible topologies	<ul style="list-style-type: none"> • UI simplifies initial creation and change of topologies without service disruption, with policy CLI for advanced configurations 	<ul style="list-style-type: none"> • Single instance architecture, where you can define tasks to run multiple "migrations" which are source/destination only

griddable.io

2540 North First Street, Suite 201

San Jose CA 95131 USA

Phone 669.284.2143

www.griddable.io

© 2018 Griddable, Inc. All rights reserved. Griddable is a registered trademark of Griddable in the United States. All other company and product names may be trade names or trademarks