

How ScaleArc Database Load Balancing Software Augments AWS

Improving Application Uptime and Performance in the Cloud

Running IT workloads in the cloud offers compelling elasticity and flexibility. As cloud providers have offered more feature-rich database services, enterprises have sometimes assumed these offerings address all the needs for application uptime and performance. In reality, these database services stand to gain from the improvements enabled by database load balancing software much like on-premise database deployments do. The following feature matrix highlights the native capabilities in AWS IaaS and AWS PaaS offerings and shows how ScaleArc's database load balancing software augments the respective feature sets. Currently, the ScaleArc software supports RDS MySQL and RDS Aurora MySQL.

Feature	Native to AWS IaaS	Enhanced by ScaleArc + AWS IaaS	Native to AWS PaaS (RDS MySQL, RDS Aurora MySQL)	Enhanced by ScaleArc + AWS PaaS
Scalability Features				
Scale up of database capacity (bigger server)	yes	no change	yes	no change
Scale out of database capacity (multiple servers)	yes	no change	yes	no change
Scale out of database capacity (multiple servers) with no app changes, via automatic read/write split	no	yes	no	yes
Availability Features				
Database failover within a region	yes	no change	yes	no change
App-transparent database failover within a region	no	yes	no	yes
Database failover between regions (one cluster in multiple regions)	yes	no change	no for RDS MySQL yes for RDS Aurora	no change
App-transparent database failover between regions	no	yes	no	yes

(matrix continued on next page)

Feature	Native to AWS IaaS	Enhanced by ScaleArc + AWS IaaS	Native to AWS PaaS (RDS MySQL, RDS Aurora MySQL)	Enhanced by ScaleArc + AWS PaaS
Availability Features (cont.)				
Manual database switchover for zero downtime (at the app layer) maintenance	no	yes	no	no
Surge queue to avoid high traffic loads from crashing database servers	no	yes	no	yes
Performance Features				
Connection pooling and multiplexing	no	yes	no	yes
App-transparent read query caching	no	yes	no	yes
Dynamic TCP load balancing across multiple database servers	yes (via ELB)	no change	yes (via ELB)	no change
Dynamic SQL query load balancing across multiple database servers	no	yes	no	yes
Replication-aware SQL query load balancing	no	yes	no	yes
Query routing	no	yes	no	yes
Security and Analytics Features				
Query firewall	no	yes	no	yes
SSL support	yes	yes	yes	yes
Historical stats	no	yes	yes	yes
Query forensics and auditing	no	yes	no	yes
Centralized query logging (aggregated across cluster)	no	yes	no	yes



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ScaleArc enables consumer-grade apps for today's digital business – apps that are never down, are always fast, and scale anywhere. ScaleArc's database load balancing software helps organizations of all sizes eliminate application downtime from database outages or maintenance, improve application performance, and scale database capacity – all without writing a single line of code. As a result, ScaleArc customers increase revenue, reduce operational costs, and accelerate time to market. Learn more about ScaleArc and its customers and partners at www.ScaleArc.com.

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