Testing shows that Azure Databricks delivers performance advantages for decision support system workloads

Principled Technologies (PT) saw faster query processing from an Azure Databricks cluster compared to a Databricks cluster on AWS in multiple tests.

REDMOND, WA, UNITED STATES, July 15, 2025 /EINPresswire.com/ -- In a time when data-driven decision-making is paramount, organizations increasingly rely on advanced analytics platforms, such as Databricks, to process data quickly. Efficient query processing influences how fast organizations can extract actionable insights from their data. PT recently conducted a performance analysis that revealed Azure Databricks outperformed Databricks on Amazon Web Services (AWS) in decision support system (DSS) workloads, delivering faster query processing. The study evaluated both platforms using an industry-standard TPC-DS-like benchmark on a 10TB dataset, measuring the time to complete complex analytical queries under single and concurrent user scenarios.

Unlock faster insights with Azure Databricks

The testing framework included power tests, which simulate a single user running sequential queries, and throughput tests, which assess performance while multiple simulated users are executing queries concurrently. Results showed that Azure Databricks completed single query streams in up to 21.1% less time than its AWS counterpart when AutoScale was disabled, saving

nearly nine minutes per run. In throughput tests with four concurrent query streams, Azure Databricks finished in up to 9.4% less time, reducing execution time by over nine minutes compared to Databricks on AWS.

The report states that "Azure Databricks, running in Microsoft Azure VMs, processed queries faster than a Databricks cluster running in AWS instances, completing lone and concurrent query streams in less time. Both environments used the same Databricks solution but differed in underlying cloud infrastructure, integration, and support models. Choosing the higher-performing Azure Databricks service can lead to faster decision making, improved operational efficiency, and more relevant customer experiences."

The report also highlights key differentiators for Azure Databricks, such as centralized billing and dual support from Microsoft and Databricks. The Azure differentiators could help simplify management and security compliance.

To learn more about the PT analysis and their results, read the report at https://facts.pt/B9cZjZK.

About Principled Technologies, Inc.
Principled Technologies, Inc. is the leading provider of technology marketing and learning & development services.

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