Actian Avalanche cloud platform expands with a collection of analytic and data management products

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The managed hybrid cloud data warehouse product leveraging Actian Corp's vectorized RDBMS technology is expanding. The company is adding a collection of data warehouse and data management offerings that integrate with Avalanche's capabilities and can be applied to specific market verticals.

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Introduction

Actian Avalanche – a managed hybrid cloud data warehouse offering with support for AWS, Azure and on-premises environments, leveraging the company's vectorized RDBMS technology – is expanding. The company is adding a collection of data warehouse and data management offerings: Avalanche Data Warehouse Modernization, providing a migration path from legacy data warehouse systems; Avalanche Real-Time Connected Data Warehouse, enabling diverse data ingestion and streaming for analytics; and Avalanche Edge to Cloud Analytics, geared to handle data managed from edge to cloud deployments. The data warehouse migration offering was released in late 2019 and the company is preparing to launch the real-time connected product this month, with the edge to cloud offering forthcoming. The products integrate with the company's high-performant vectorized analytics engine that sits at core of the Avalanche cloud data warehouse platform and is designed to be applied to specific market verticals.

451 TAKE

The company's current iteration of Avalanche is much improved from its initial release in early 2019 – and we think for the better. Initially, Avalanche leveraged HDFS (Hadoop Distributed File System) for cluster management but that has been replaced with support for object storage, which also opens the door for federated querying, among other benefits. The focus for Avalanche is now centered squarely on a general-purpose hybrid data warehouse service driven by the company's vectorized processing technology at the core. More targeted uses of Avalanche can be had with a collection of offerings the company is rolling out that can be applied to certain verticals – financial services, healthcare, telecommunications, manufacturing and retail – through specific add-on functionality. These products provide several benefits for Actian customers while also giving Actian a solid 'land and expand' strategy. The good news is that Actian is trending in the right direction here with Avalanche by adding integrated data ingestion capabilities for real-time analytics that should simplify deployment and provide material cost savings. While other vendors are moving toward platform strategies as well, Avalanche should likewise serve as a means to raise the company's profile in the data warehouse and analytics space.

Context

In April 2018, India-based IT services firm HCL Technologies teamed up with Sumeru Equity Partners (forming a joint venture) to acquire Palo Alto, California-based Actian for $330m. Actian, however, remains independent from HCL, and the company's current mission is to deliver data management, integration and analytics products to power the next shift in computing, which it refers to as 'hybrid data.' The vendor's market knowledge spans more than 20 years, with ability in data management, integration and analytics. Actian reports over $100m in revenue generated from more than 10,000 customers, with about 325 employees in offices located in 15 countries. It sells both directly to enterprises and through an OEM partnership business model.

The company is best known for its Actian X relational database (formerly known as Ingres), but Actian also offers data management and integration software – analytic, nonrelational and embedded databases. A component of the company's analytics strategy is Avalanche, which debuted in early 2019, and functions as a managed hybrid data warehouse offering for cloud and on-premises, leveraging the company's vectorized RDBMS technology, for which it is now rolling out vertical-specific approaches.

Products and services

Actian initially debuted Avalanche in March 2019 as a managed cloud service that incorporated VectorH, which provided a clustered option for Vector in the cloud. However, VectorH also functioned as the company's on-premises database that ran on top of HDFS and within the Apache Hadoop framework, where it also leveraged YARN for resource management. VectorH is now Actian Avalanche on-premises, a single-server deployment offering, that can run on-premises as well as the cloud as an IaaS deployment, while also taking advantage of HDFS.

Conversely, with its latest release, Avalanche sheds the VectorH tie-in, including HDFS and the Apache Hadoop framework functionality, in favor of object storage for clustering. That being the case, Avalanche is positioned as a managed data warehousing offering, which can run in the cloud as a DBaaS (AWS and Azure with GCP on the roadmap), private cloud (Q3 2020), on-premises or in a hybrid deployment spanning cloud and on-premises environments. At its core, Avalanche is an MPP relational database leveraging the Vector engine as its core technology. It is ANSI SQL compliant, provides integrated JSON functions, optimized memory cache and full-scale enterprise security.

Avalanche on-premises, however, diverges a bit from the cloud iteration in how it handles storage (attached) and scaling, but otherwise the core data warehousing functionality is the same for Avalanche in the cloud.

As a cloud or hybrid deployment, Avalanche provides all the above functionality, along with a few notable differences, including independent scaling for compute and storage, elastic scaling and federated querying, which leverages the MinIO object storage framework that provides an abstract layer into other cloud object stores such as Amazon S3.

But Avalanche can also function as a type of analytics or data management platform, which is where the company's new Avalanche offerings come into play. They are built atop Avalanche and are meant to be applied to vertical areas – financial services, healthcare, telecommunications, manufacturing and retail – by adding specific functionality.

In late 2019, Actian released the Data Warehouse Modernization product, targeted at enterprises looking to modernize their analytics environment whether that be increased performance or a move to the cloud or a hybrid environment. Most recently, the company released Avalanche Real-Time Connected Data Warehouse, which includes out-of-the-box connectivity to popular SaaS and on-premises applications driven by Avalanche Connect, which is powered by Spark and Kafka. The product comes with more than 200 built-in connectors and could cater to, for instance, a healthcare organization that may have a large collection of specialized data sources in which it needs to ingest. The 'real time' aspect of the product combines Spark and Kafka with the company's patented positional delta trees capabilities, which enable the database to be updated in real time from incoming data. A forthcoming Edge to Cloud Analytics offering is designed to streamline an enterprise data environment to a single data management environment.

Competition

Competition for Actian Avalanche is going to come from known data warehouse vendors, but the company is also likely to see competition from what we are calling the enterprise intelligence platform – platform offerings in which vendors are merging multiple products (data ingestion, modeling and visualization, for instance) that have historically been separate products from different vendors.

On AWS, Amazon Redshift would compete with Avalanche, but also would require other services like Kinesis Data Stream, AWS Lambda and Kinesis Data Firehouse, for instance, to handle ingesting data and real-time analytics. From Microsoft, there is Synapse that combines Azure SQL Data Warehouse and big-data capabilities and includes added data ingesting and data preparation capabilities. Google

has its BigQuery service for data warehousing that can be combined with Cloud Dataprep and Cloud Dataproc (Hadoop and Spark) services. Oracle continues to drive its autonomous strategy and has its Autonomous Data Warehouse services with tie-ins to other services, but Oracle has also stated aims at an Autonomous Data Platform that it expects to expand the benefits of automation beyond database administrators and operators to data wranglers, data stewards and data analysts, for instance.

IBM has Db2, which is available in several different product iterations, is likewise a competitor. There is also the company's Hybrid Data Management Platform that includes Db2 and support for hybrid multi-cloud, as well as integration with data management capabilities via AI/ML. Teradata has Vantage, the company's next-generation analytics platform, positioned as a software offering that can run not only on-premises but in the cloud and in a hybrid scenario. SAP has combined its HANA compute functionality with data virtualization and query federation with the launch of SAP HANA Cloud Services. Still others include Pivotal's Greenplum, Exasol, Micro Focus' Vertica, Yellowbrick Data and Cloudera's Data Warehouse service that is a part of the company's Cloudera Data Platform (CDP) offering.

SWOT Analysis

STRENGTHS
Actian packs a strong punch with Avalanche as a hybrid data warehouse offering capable of cloud, on-premises and/or hybrid deployments that also includes built-in data ingestion functionality while striking a favorable price-to-performance ratio.

WEAKNESSES
Changing strategies and product names have at times sent mixed messages to the market and has put the company in catchup mode. However, Avalanche has the potential to bring clarity to its lineup and put it back on organizations' analytics short list.

OPPORTUNITIES
Serving as a general-purpose analytics platform, Avalanche should meet many enterprise's needs, given its capabilities powered by Actian's vectorized columnar analytics engine. For those wanting more specialized capabilities, the newly released offerings should address that for many enterprises, driven by a broader land-and-expand strategy.

THREATS
The data warehousing market has been an evolving space the past several years. Vendors now are packing in added services and functionality to deliver analytical platforms. Actian is trending in the right direction but will see healthy competition from cloud-based as well as from traditional data warehouse vendors.