451 Research

Impact Report

IoT analytics firm Glassbeam readies new Studio tool, gears up for funding round

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Glassbeam has shared two notable pieces of news with us: it's about to launch a new Glassbeam Studio tool to make it easier for developers to build applications for the company's platform, and it's also beginning active discussions with private equity firms to raise its first institutional investment round.

The 451 Take

One of the challenges with applications that help analyze vast amounts of rapidly moving data coming from sensors and smart devices in the era of the Internet of Things (IoT) has been the complexity of handling the data ingestion, building the applications, adding rules and alerts, and designing dashboards and charts – often with a range of different commercial and open source tools. Glassbeam, founded in just 2009, is trying to reduce some of that complexity with a more complete platform for ingestion, analytics and visualization. Its latest Glassbeam Studio offering should help make the initial build far simpler – and up to 10 times faster, according to the company – giving it the confidence to start active discussions with investors about its first institutional round. Glassbeam might still only have about 10 paying customers, but we think it's one to watch in the IoT space.

Context

It was November 2014 when we last caught up with machine data analytics firm Glassbeam, which has a particular focus on building applications for the Internet of Things. Much of the IoT analytics concept revolves around the analysis of data that is produced by sensors and other smart devices in order to discover new patterns and trends, and trigger alerts and events.

By that point, Glassbeam had grown its staff to 40, having been founded five years earlier by Puneet Pandit. Pandit was founder and CEO of Orchesys, where he incubated Glassbeam. (Prior to Orchesys, Puneet was senior director at NetApp, and before that he worked at EY strategic advisory services and Tata Unisys as a management consultant.) Employee count has now grown to 50, of which 15 are in the US and the rest in India.

To date, the company has raised roughly $10m in funding from angel investors. Pandit says Glassbeam is now beginning serious discussions with institutional investors about a first VC round of funding. It has about 10 paying customers, most of which tend to be manufacturers or OEMs building analytic applications for their own customers, rather than Glassbeam selling directly to end users. Glassbeam notes that it has several more clients actively doing pilots, and a significant prospect list.

Technology

The company's first technology was Glassbeam Analytics for standard and custom analytics on machine-generated data, and it later introduced Glassbeam Explorer for search and exploratory analysis in 2013. Since then, it's added a back-end platform to its portfolio, dubbed SCALAR, which is designed to bring performance and scalability to the process of analyzing data from the IoT and is delivered via the cloud in a SaaS model. The latest version is also tightly integrated with Apache Spark, the open source data-streaming platform for the (also open source) Hadoop data-processing engine. It can reportedly run programs 100x faster than Hadoop MapReduce in memory, or 10x faster on disk.

Apache Spark also gives Glassbeam MLlib library integration with its machine-learning algorithms that can perform predictive analytics on large sets of machine data in the cloud. Furthermore, implementing Apache Spark SQL directly on Cassandra data – which SCALAR was already based on – allows real-time analytics on data as it is streaming in and getting parsed and transformed through the Glassbeam platform.

At the front end, customers use Glassbeam Workbench to build the graphs, charts or other visualizations they want to add on top of their data. However, when its OEM customers and manufacturers wanted to start ingesting their machine data and start building an application to analyze it, they would have to either come to grips with Glassbeam's own proprietary language, Semiotic Parsing Language (SPL), or ask Glassbeam to build it for them. In response, the company created Glassbeam Studio, a graphical tool that it used internally to help its own developers build applications faster and more accurately.

Currently, the plan is to offer Glassbeam Studio to the company's OEM and manufacturer customers, now that it has made it even easier to use. Using the graphical tool should reportedly help make developers up to 10x more efficient at building their applications, compared with trying to write them using SPL.

Glassbeam supports the ingestion of multiple data types and formats, including text, XML, JSON and .CSV. The REST API allows access to the data via third-party tools for further visualization, such as Tableau. The application comes out of the box with a number of features: a log vault to store all log data, Explorer, and Rules and Alerts to define rules on machine data. The SaaS app currently runs on Amazon Web Services, but it has also been hosted by Glassbeam partners Dimension Data and Cisco. The company says it might offer it on IBM SoftLayer, as well, in order to give customers more choice.

Customers

As noted, Glassbeam has about 10 paying customers, with several more in active pilots. Clients tend to be manufacturers and OEMs, including the likes of IBM's Systems and Technology Group and VCE – the alliance between VMware, Cisco and EMC.

Another recently announced Glassbeam customer is Romi, a global manufacturing vendor based in Brazil. Romi reportedly selected Glassbeam's IoT analytics offering to examine real-time machine data information and provide insights into its equipment performance.

Glassbeam also recently signed a deal with Gridscape Solutions, which is using the technology for remote monitoring and maintenance of its more than 400 electric vehicle charging stations. The Glassbeam platform takes in streaming data from the stations, parses and analyzes that data in real-time, and provides feedback to streamline the service, lower maintenance costs and provide insights on optimal designs.

Competition

Although there's a lot of hype around the Internet of Things, there are surprisingly few companies willing to stick their necks out and boast that what they offer is a platform for IoT, which is exactly what Glassbeam claims to have. However, another player that does so is ParStream, which has taken a slightly different approach, starting with an analytics database, ParStream DB, and layering applications on top.

Depending on what businesses are trying to achieve with their analytics, we'd also expect Glassbeam to be compared with the erstwhile log management firms, which have broadened their remits to analyze more types of machine data. Players in this space include Splunk, Sumo Logic,

Loggly, Logentries, X15 Software and TIBCO (via its acquisition of LogLogic). For the rapid analysis of streaming data, some vendors might also look to data-streaming technologies such as IBM InfoSphere Streams, DataTorrent, SQLstream and AWS's Kinesis.

Again, depending on what businesses are trying to do, Glassbeam could also find itself compared with the complex event-processing technologies of StreamBase, Apama and Aleri – now owned by TIBCO, Software AG and SAP, respectively. Younger contenders such as Glassbeam argue that these technologies are far more complicated, and are difficult to change once in production. Those companies, on the other hand, can point to far more reference customers and claim that their products have many more years of investment behind them.

SWOT Analysis

Strengths

The addition of Glassbeam Studio should help improve ease of use of the company's technology, something that has certainly been an issue for businesses having to code in the SPL parsing language.

Weaknesses

While potentially lucrative, we'd expect sales cycles with manufacturers and OEMs to be somewhat longer than the company might find going direct (although it would certainly not turn away end-user customers) – this is reflected in Glassbeam having about 10 paying customers to date.

Opportunities

While there might be a lot of hype and skepticism around the Internet of Things, 451 Research believes it is already placing demands on data-storage and -processing technologies, and is only likely to become more important in the future.

Threats

While there aren't many vendors we note assembling a relatively lightweight IoT platform from scratch, there are plenty that claim to be able to solve the same challenges by taking a different approach: streaming providers, as well as the erstwhile log management and complex event processing firms, for example.

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