

Solution: **Cloud** Industry: **Computer Services**

Leveraging Technology

Leveraging Technology creates new revenue streams with an innovative integration monitoring solution

To give clients new insight into system interactions and data-flows, Leveraging Technology developed Interaction Aware, a cloud-based event monitoring solution, to help streamline business processes.

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Business challenge

Systems integration is vital to make business processes efficient – but tight integration often means less visibility of how systems and data are interacting, which makes troubleshooting difficult.

Transformation

To give clients new insight into system interactions and data-flows, Leveraging Technology developed Interaction Aware, a cloud-based event monitoring solution, to help streamline

business processes.

Results

500,000

transactions monitored daily to help clients streamline their processes

Accelerates

onboarding of new clients from weeks to minutes with IBM cloud platform

Opens

up new opportunities for Leveraging Technology to deliver added value

Business challenge story

Spotting a gap in the market

For years, companies have focused on creating close integration between the various components of their IT architectures. By doing so, they can automate data transfer between systems – saving time and eliminating the risk of human error.

However, tight integration can cause its own set of difficulties, as Jim Cantin, President of Leveraging Technology, explains: “We have been in the integration business for over 18 years. Time and time again, we saw companies facing the same problems.

“Most organizations have now integrated their own systems to some extent, and many have also built interfaces with their customers’ and suppliers’ systems too. But the more systems you’ve integrated, the less visibility you have of how those systems are actually interacting,

and whether your transactions are flowing correctly between them. When something goes wrong, there's often a lot of finger-pointing as people try to work out where the problem originated."

He continues: "To defuse the tension, companies want a clear set of data that shows exactly what happened. It's usually possible to detect the root cause of the problem by collating log files and studying the data in spreadsheets – but that's a very time-consuming process that provides limited insight. It might take you a week to find out why something is going wrong today – and increasingly, that's the kind of delay that businesses can't afford."

"We realized there was a gap in the market for a solution that could provide true, real-time visibility of interactions between integrated applications, platforms and even global enterprises – so we set out to build one ourselves."

“IBM Cloud Data Services are helping us evolve from a systems integrator into a true value generator.”

— Jim Cantin, President, Leveraging Technology

Transformation story

Pioneering a new solution

Leveraging Technology has developed a sophisticated visibility solution called Interaction Aware, which monitors events and interactions between integrated systems. The data is captured and stored in a highly flexible and scalable IBM® Cloudant® database, running on the IBM Bluemix® cloud platform.

Ron Jamerson, Enterprise Solutions Architect at Leveraging Technology, begins: "At the beginning, we had a lot of discussions about where and how to store the data we were gathering. We had a lot of experience using traditional relational databases, but for this project we wanted something more flexible: we knew that the potential use cases would evolve and multiply over time, so we didn't want to be stuck with a rigid database schema from day one.

"When we came across Cloudant, we were struck by how well it suited our business. First of all, because it's a NoSQL database, we can easily change the attributes and metadata of the data we are capturing. And because the data is stored in a flat, JSON structure, we can interact with it via a simple REST API, instead of writing complex SQL queries."

He continues: “Secondly, because Cloudant is offered as a managed cloud service, IBM handles all of the maintenance and support. That’s enormously helpful, because although we employ lots of people with brilliant technical expertise, we don’t want to tie them up in database administration. With Bluemix, we can set up new Cloudant repositories in just a few seconds, which means our team can focus on helping our clients, bringing in new business and developing new features.”

The Interaction Aware solution monitors transactions as they flow between different systems. Each time a system interacts with the data, the solution creates an “event” – a snapshot of the interactions which is recorded in the Cloudant database together with relevant metadata such as timestamps.

By correlating these events, Interaction Aware can trace the course of an entire transaction from end to end – showing exactly which systems the data is passing through, whether it reaches its destination successfully, and where any failures, timeouts or bottlenecks are occurring. And thanks to the easy scalability of Cloudant, the solution can deliver the same degree of detailed, real-time insight regardless of the number of transactions that are being processed.

Devin Richards, Senior Technical Consultant at Leveraging Technology, elaborates: “When we first started designing the Interaction Aware solution, we were looking to analyze around 10,000 interactions per day. In our first customer pilot, we are already handling 500,000 interactions per day, and we are talking to prospective customers that hope to monitor volumes that are ten times larger. With a relational database, achieving that kind of scale would be a big headache; with Cloudant, it’s no problem at all.”

While Cloudant itself is massively scalable, a possible challenge for larger implementations of Interaction Aware will be to find a way to ingest the data from millions of events at the speed that they are generated. To solve this challenge, Leveraging Technology plans to harness Apache Spark.

“We want the solution to be completely plug-and-play for our clients, even when it’s operating on the largest possible scale,” says Ron Jamerson. “That means we don’t want to have to install software at the client’s site to preprocess the data before we move it into Cloudant – we want the entire solution to live in the cloud. Apache Spark has huge potential as an ingestion engine for large streams of real-time data – and further along the roadmap, we’re interested in its capabilities for real-time analytics too.”

Results story

Delivering valuable insight to customers

With Interaction Aware, Leveraging Technology can provide a whole array of new services to its clients.

For example, the company has completed its first successful project using the new solution

with CoreLink Administrative Solutions LLC, a company that provides claims and payment processing services for several large health insurance plans. Many of these plans offer shared deductibles across pharmacy and medical services, and CoreLink's systems were responsible for synchronizing the deductible data between its clients' pharmacy and medical claims systems.

CoreLink had already worked with Leveraging Technology to replace some of its legacy systems with a new integration solution based on IBM Integration Bus and IBM MQ, but the data-flows still interacted with a number of other legacy components. CoreLink wanted to be confident that all the interfaces were behaving correctly, and that the data was flowing as efficiently as possible.

Leveraging Technology was able to deploy Interaction Aware in a completely non-invasive way – giving CoreLink clear, real-time visibility of traffic between its systems for the very first time without having to change any of the data-flows themselves.

As a result, CoreLink discovered that thousands of transactions were getting stuck at one particular interaction point, creating a cycle of timeouts and retries that caused a bottleneck in the process. With this insight, CoreLink was able to investigate and address the root cause – by simply increasing the timeout duration for that one interaction, it was able to resolve the issue.

Insight from Interaction Aware also gave CoreLink new insight into the best time to schedule system maintenance. With a more accurate view of the times of day when the company's partners send their data to be processed, CoreLink was able to move its scheduled maintenance window to a new time-slot, where it would cause the least disruption for clients.

As a next step, Leveraging Technology plans to help CoreLink identify other high value metrics that could be tracked within the solution.

Finally, in a project with another client, Leveraging Technology has been helping a retailer gain greater visibility of customer interactions, such as whether a particular customer has contacted its call center before.

Transforming the business

By harnessing IBM Cloudant and Bluemix to develop the Interaction Aware solution, Leveraging Technology has accelerated its transformation from an IT architecture and integration specialist to a company that can offer its clients' line-of-business teams real business value in record time.

Jim Cantin remarks: "We have a whole new business model to explore. The opportunity to expand into real-time operational reporting is ripe for the taking. We think that our Interaction Aware solution could offer priceless visibility to clients across all industries – for example, helping banks spot fraudulent activity.

"Whenever we win a new client, we can onboard them seamlessly and get a test environment up and running in just 15 minutes. Using a traditional relational database and

on-premise application servers, that would take weeks! Thanks to Bluemix, our time-to-market is faster than ever.”

Jim Cantin concludes: “IBM cloud data services are helping us evolve from a systems integrator into a true value generator. The possibilities for developing new use cases and winning new clients are endless.”



Leveraging Technology

Headquartered in Rochester, NY, [Leveraging Technology](#) has been one of the nation’s foremost systems integration, enterprise architecture and IT consulting specialists since 1998. The company is now broadening its service portfolio by developing solutions that help clients gain greater visibility of their applications and data-flows, helping them achieve better business performance.

Solution components

- 6950-05D IBM Bluemix Private Cloud (Cloud BU) Withdrawn
- Cloudbant NoSQLDB
- Integration
- MQ

Take the next step

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