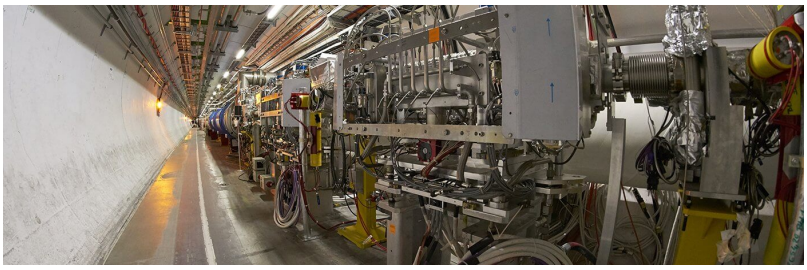
How Two Organizations Put New Autonomous Database Technology to Work



BY DOMINIC COLLARD

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Oracle Autonomous Database, which launched last year, has been gaining interest and users across the business world, as organizations see the real-world payoffs from using a “self-driving” database. Here’s what those benefits look like for two very different organizations—one that’s helping companies embrace new technology, and one that’s discovering the secrets of our universe. Both spoke at the recent Oracle OpenWorld Europe event in London.

The European Organization for Nuclear Research, better known as CERN, is home to a 17-mile long particle accelerator (pictured above) on the Franco-Swiss border that is being used to investigate the fundamental subatomic particles that make up our world. CERN has been using both flavors of Oracle’s Autonomous Database—Autonomous Data Warehouse and Autonomous Transaction Processing.

CERN’s Large Hadron Collider is considered one of the most complex machines ever built. Eric Grancher, head of CERN’s database services group, explains that the headline-grabbing, Nobel Prize-winning experiments at the laboratory are only possible because the kit that sends particles smashing into each other at nearly the speed of light works. Keeping it running requires organizing vast quantities of operational data for analysis, and CERN has started using Oracle Autonomous Data Warehouse to assist with that data management.

“We have some of the most sophisticated hardware and instruments anywhere in the world. All year long, several systems are pulling in 150,000 individual data points per second,” Grancher says. More than 1,000 specialists use this information, through hundreds of applications, to better understand and optimize the accelerators. “The reliability of this data—and the speed at which we can gain insights from it—is crucial to the science that takes place.”

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Also helping Grancher and his team in this task is Oracle’s Autonomous Transaction Processing database. It has been honed for what IT folks refer to as *event processing*—essentially the job of capturing data that shows when a change in a system has taken place, and that the necessary subsequent actions have been performed. Experts at CERN are applying that to the eye-watering task of properly connecting around two million individual signals and switches dotted all over the particle accelerator.

At peak, the system needs to cope with more than five million data requests per second. The Oracle Database logging all that is already 1.1 petabytes and growing by 2.5 terabytes every day. Though few listening to Grancher will have that scale of challenge in their business, many are working on the sort of event processing projects—like the Internet of Things, predictive maintenance, e-commerce, or document management—where the fast, secure and automated data processing and transfer capabilities of Autonomous Transaction Processing will be crucial.

Better Access to Data Insights

Another business that has been quick to reap the benefits of autonomous is Data Intensity, a global leader for independent, multi-cloud managed services. Using Oracle Autonomous Data Warehouse, it has been able to deploy new databases 10 times faster, can now generate more than 200 business reports in seconds rather than days, and expects to save $225,000 in licensing and operating costs.

Yet for June Manley, Data Intensity’s chief marketing officer, deploying Autonomous Data Warehouse has an equally important impact on the company culture. “Because we’ve been able to add 10 times more users, our company’s executives and business units are discovering the value of the new solution too, encouraging more collaboration between departments,” she says. “With a single pane of glass view into our data, we are running proactive trending reports to help us make real-time strategic decisions.’”

Scale that impact out to more users, and the implications of Autonomous Database could be profound. “When adopting new innovative technologies, we tend to put the emphasis on technology rather than people in a business,” says Manley. “But the truth is often the opposite. Technology is just an enabler. It’s the people in the business who make the connections that ultimately drive adoption and change.” It’s a view echoed by Manuel Martin Marquez, a project leader and data scientist at CERN: “Now we can focus on the things we are supposed to.”

More Time for Innovation

For data scientists like Martin Marquez, Oracle Autonomous Database frees up time by eliminating many of the manual tasks involved in managing a database. Instead of people having to configure the database, constantly tune it to maximize performance and apply security patches and upgrades, all that is done automatically, which reduces human error and means systems are patched and upgraded without having to schedule downtime.

But it is the time gained by tech and data pros—from developers to data scientists—that has businesses just as excited about Autonomous Database. Businesses can redeploy their database administration teams to work on more innovative and higher-value tasks. Developers who once waited days or weeks for a database can now get started on a new project, using a high-performing database, in as little as 15 minutes. When you analyze the ability for Autonomous Database to give businesses the tools and the time for their people to imagine new products, markets and revenue streams, it explains why Oracle Chairman and CTO Larry Ellison has called it among the “most important things we’ve ever done.”

All this adds up to a revolution in data management, with practical, real-world payoffs. Andy Mendelsohn, Oracle’s executive vice president of database server technology, ticks off the kind of day-to-day benefits companies see: rapid innovation via new database applications, processing and surfacing more data insights much faster, eliminating human labor to improve security and lower costs, reducing downtime to fewer than 2.5 minutes a month, and increasing cost efficiency through a pay-as-you-go business model. “All the key metrics that the CIO and CEO are interested in are improved,” Mendelsohn says.

And even as enticing as these practical examples are, there’s a wider commercial impact that should intrigue business leaders. “Data is now a key asset of all businesses,” Mendelsohn says. “Autonomous Database ensures you get more value out of your data, and so add value to your business.”

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Photo courtesy of CERN.

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