

Powering next-generation genomics analysis

Appistry builds, configures and deploys an integrated solution for analyzing next-generation sequencing data, with help from Dell EMC OEM solutions



Healthcare

United States

Business needs

Appistry wanted to create an integrated, compliant, easy-to-set-up solution for next-generation sequencing (NGS) analysis that included preconfigured software and hardware.

Solutions at a glance

- [OEM Solutions](#)
- [Servers](#)

Business results

- Delivers integrated NGS analysis solution that can be up and running in a day
- Gives clinical labs a dedicated solution to enable research
- Reduces genomic analysis from three days to 22 hours
- Speeds time-to-market for labs wanting to offer NGS-based testing

Solution

to enable research



22hrs

for genomic analysis reduced from 3 days



As a leading provider of genomic analysis software, Appistry helps clinical labs, research institutions and hospitals automate their next-generation sequencing (NGS) analysis workflows.

However, because Appistry customers did not always have the internal resources and infrastructure required to process large NGS data sets, Appistry wanted to create an integrated solution featuring hardware and software. But the company faced its own challenge — building, configuring and scaling the solution. “We are developing and accelerating genomic analysis software, so we don’t have the resources to put into building and deploying our solutions on robust hardware,” says Michael Groner, the chief architect and co-founder of Appistry.

Developing GenomePilot with Dell EMC OEM

To address its challenge, Appistry turned to Dell EMC OEM Solutions, which provides global hardware infrastructure, manufacturing, distribution, configuration and deployment solutions. Appistry worked with Dell EMC OEM and its partner Arrow OCS to develop GenomePilot, an integrated hardware/software solution that helps clinicians and researchers process and analyze large volumes of genomics data produced by NGS technology. The solution integrates Appistry software into Dell hardware.

GenomePilot comes in two configurations: a single Dell EMC PowerEdge T630 Tower server capable of processing 42 exomes per day, or a Dell EMC PowerEdge R730xd rack server with Intel® Xeon® processors, capable of processing 300 exomes per day. GenomePilot is preconfigured, validated and tested by Dell EMC OEM, Arrow OCS and Appistry for ease of purchase and quick delivery capability. Dell EMC OEM and Arrow OCS build and ship each GenomePilot appliance to a customer site.

The University of Iowa Hospitals and Clinics (UIHC) Shivanand R. Patil Cytogenetics and Molecular Laboratory is one Appistry customer that deployed a GenomePilot appliance. The lab’s director, Dr. Benjamin Darbro, is using GenomePilot in collaboration with the UIHC Connective Tissues Disorders Clinic to explore the genetics of Ehlers-Danlos Syndrome (EDS), Hypermobility Type, a form of EDS that causes severe chronic pain.

“We can leverage Dell EMC OEM to greatly accelerate our business growth and bring GenomePilot to more customers. And by relying on Dell EMC OEM, we can focus on developing the best NGS software for genomics. Working with Dell EMC OEM makes us a stronger company.”

Michael Groner
Chief Architect and Co-Founder, Appistry

Quickly delivering and deploying an NGS analysis solution

Appistry can now implement and deliver GenomePilot as an integrated solution to customers quickly. “We provided the University of Iowa with a working solution that Dr. Darbro could use immediately,” says Groner. “Dell EMC OEM had already configured the images for the installation and drop-shipped the appliance to the university.”

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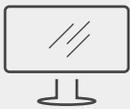
Cutting analysis time from three days to 22 hours

Researchers and clinicians using GenomePilot are seeing a significant increase in the speed of processing and analysis time for NGS data sets. Dr. Darbro and his team, for example, recently ran a set of 20 genetic samples through a targeted analysis that would have taken three days using the lab’s previous pipelines. But using GenomePilot, Dr. Darbro completed the analysis in only 22 hours.

Speeding time-to-market

Appistry is accelerating time-to-market for GenomePilot by working with Dell EMC OEM. “We can leverage Dell EMC OEM to greatly accelerate our business growth and bring GenomePilot to more customers,” says Groner. “And by relying on Dell EMC OEM, we can focus on developing the best NGS software for genomics. Working with Dell EMC OEM makes us a stronger company.”

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