DELLTechnologies

Innovating the future of fresh produce

Nature Fresh Farms accelerates sustainable growing with faster, scalable access to high-resolution video and evolution toward AI, robotics and automation

NatureFresh Farms

Agriculture | Canada

Business needs

As greenhouse acreage doubled in two years at Nature Fresh Farms, IT was running out of space to store video generated by greenhouse cameras and automation. The company consolidated video storage and file shares onto Dell EMC Isilon to provide fast, streamlined access to data vital to better decision-making about creating optimal growing conditions.

Solutions at a glance

- Dell EMC Isilon Scale-Out Network-Attached Storage
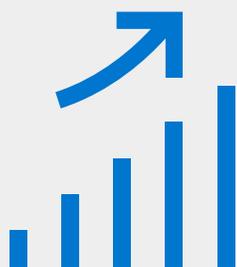- VMware

Business results

- Greenhouse innovation for fresher produce accelerated with AI, robotics and automation

- Robots inspect plants for pests and recommends "good bugs" for control

- Better greenhouse growing conditions with easy access to high-resolution video

- Transformation from growers to data scientists

Business
doubles
in size without adding IT staff

Faster
access to vital video files, drives better business decisions

Have you ever watched a tomato plant grow? Probably not, but the employees at Nature Fresh Farms, one of Canada's largest independent greenhouse produce growers, certainly have. Nature Fresh Farms knows that analyzing time-lapsed video of the lifecycle of vegetables is key to delivering exceptional quality in their state-of-the-art greenhouses.

As Nature Fresh Farms grew from 64 to 128 greenhouse acres and added new greenhouses in only two growing seasons, IT was struggling to find space to store all the video captured, which was spread across multiple video servers. They also developed issues with reliable, fast access to video.

Eventually, Nature Fresh Farms upgraded their existing Dell Technologies environment to Isilon scale-out storage running the Milestone VMS video surveillance solution. Nature Fresh Farms also uses VMware SD-WAN by VeloCloud to provide a unified view of data and video across the greenhouses.

Accelerating AI and robotics in the greenhouse

With this solution, Nature Fresh Farms have the ability to analyze data collected from automation in the greenhouse to analyze diseases and pests within the greenhouse. "The data is collected, analyzed by AI and checked by our data scientists, allowing them to make real-time changes to growing conditions and release 'Good Bugs' needed to stop the 'Bad Bugs'. This data is all organized inside the Isilon," explains Keith Bradley. The data not only helps to forecast Labour Management and Packing Line Volumes, but the volume that will be available to Nature Fresh Farms Sales company.

Keith Bradley, Director of Information Technology, Nature Fresh Farms, comments, "At Nature Fresh Farms, stepping over the edge of technology to reach a new threshold in producing quality, is ingrained in our culture. Isilon provides the extreme scalability and performance to accelerate our evolution toward automation, robotics and innovation in our greenhouse and packing lines."

Bradley continues, "Looking ahead, Nature Fresh Farms envisions automation in inspecting the plants for health and disease control, analyzing the video in real time and allowing AI to respond in real time to assist the data scientist or growers. This speed allows us to achieve results with the All-Flash offering, which has opened up the performance that makes this possible."

> **"***Isilon provides the extreme scalability and performance to accelerate our evolution toward robotics and AI and increase innovation in our greenhouses.***"**
>
> Keith Bradley
> Director of Information Technology
> Nature Fresh Farms

Growing data scientists in the greenhouse

Nature Fresh Farms found it was easier to train growers to become data scientists than teaching computer science–trained data scientists how to analyze seeds, perform taste tests, evaluate shelf life and gain other growing skills.

Already, Nature Fresh Farms data scientists use AI to analyze the plants—how they look and how they are growing. This data is now stored on Isilon, increasing the speed of access, yet allowing IT to expand seamlessly.

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Higher-resolution video drives better quality control

With Isilon's scalability and performance, new use cases for video footage pop up regularly.

"Because we can store extremely high-quality video for longer time periods, Isilon has opened our eyes to new things we can do," explains Bradley. "We can zoom in from a camera 10 feet in the air to look inside a box of peppers for signs of decay and look around the greenhouse for potential causes. The ramifications for quality control are huge."
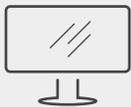
Less TLC required, more joy

Even as Nature Fresh Farms has doubled in size over the last two seasons, IT has maintained just a four-person team. Bradley recalls, "Before Isilon, there was a lot of work involved in moving files across the servers so a single server wouldn't explode. The joy of Isilon is that we simply define the files in smart pools and Isilon does all the work for us. We're now able to make sure everyone can get their files as fast as possible with confidence and ease."

A partnership for growth

Nature Fresh Farms views Dell Technologies as a long-term partner as they evolve to incorporate more AI, robotics and automation into their state-of-the-art greenhouses.

Bradley reflects, "We have great faith in Dell Technologies solutions since they have worked so well for us over the years. The people at Dell Technologies make us feel we are part of the family and show us they are invested in helping us succeed and grow."

Learn more about Dell Technologies Storage solutions

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