



Dairy farming in India goes from cows to cloud with technology

Chitale Dairy improves milk yields by automating its production line on a Dell virtualized platform featuring Dell Networking switches



"We get 100 percent availability from Dell Networking, eliminating delays that impede our daily delivery schedule for fresh milk products. Network virtualization on Dell means complete protection on an open platform, while delivering 10-gigabit network speeds."

Vishvas Chitale, Director, Chitale Dairy

Customer profile



Company	Chitale Dairy
Industry	Agriculture & Farming
Country	India
Employees	800
Website	www.chitaledairy.com

Business need

Chitale Dairy wanted a high-speed, highly available network that could support a massive growth in operations and the automation of its milk production process.

Solution

The company runs a Dell virtualized platform and upgraded its infrastructure with Dell™ Networking switches to deliver high performance and redundancy across its production plant.

Benefits

- Innovative research and development driven by data captured at every level
- Milk production achieves efficiencies through network virtualization
- Animal management improves with increased access to information
- Support simplifies technology management in remote areas

Solutions at a glance

- [Data Center Virtualization](#)
- [Networking](#)
- [Support Services](#)

Chitale Dairy sells around 60 million liters (15.9 million gallons) of milk annually from its own dairy farm and the small farms located near its facilities in Bhilawadi, India. Chitale Dairy has successfully redefined dairy farming into a high-tech industry by automating its entire milk production and monitoring processes, but needed to upgrade to a high-speed, highly available network to meet the demands of ongoing innovation within the Indian dairy industry.

The dairy farming industry in India faces its own set of unique challenges. While many farmers contribute to India's milk production, each farm often has only a small number of animals. Despite India producing a large percentage of the world's milk supply, its yield per animal is lower than that of other countries.

Increasing the yield has become a task powered by information and as a result, Chitale Dairy now has a complete end-to-end 'cows to cloud' strategy in place. Vishvas Chitale, Director, Chitale Dairy, says, "We've transformed our dairy operations using technology, and the feeding and breeding of animals is now monitored by computers. By automating the collection of data from each farm, we have improved animal health, leading to increased milk yield per animal. We've also streamlined the efficiency of our distribution channels for faster delivery of our milk products to consumers."

Innovative research and development driven by data captured at every level

The company consolidated its two data centers eight years ago by implementing a Dell solution featuring Dell PowerEdge M910 blade servers with Intel® Xeon® E7-8867L series processors running VMware® vSphere™ virtualization software, along with Dell Compellent and Dell EqualLogic storage. However, the company needed to upgrade its network to support the internal cloud used for the data management needs of Chitale Dairy's research farm, the monitoring of logistical efficiency and factory energy

consumption, and the storage and delivery of unique animal data. With its pioneering efforts in research and development and use of in-house laboratories, Chitale has created a strong ecosystem of farmers and producers. Each animal is tagged with a radio-frequency identification (RFID) tag that, when scanned, transmits unique information on each cow and buffalo back to the Chitale Dairy data center. As a result, the speed and reliability of the network plays a critical role. "Our entire operations are conducted over the company network, from communications to managing our distribution channels. With technology running every aspect of our business, we wanted the flexibility to scale to a 10-gigabit Ethernet network to ensure fast communications between all stakeholders," says Chitale.

Milk production achieves efficiencies through network virtualization

To produce around 500,000 liters of milk per day, as well as cheese, paneer (cottage cheese), cream, butter, yoghurt and skimmed milk powder, the company runs operations 24/7. This requires a highly-available network within the Chitale Dairy production plant. With existing switches in place, interoperability was required. After considering several solutions the company migrated to Dell Networking M8024-K 10-Gigabit Ethernet, S4810 10-Gigabit Ethernet and S55 1-Gigabit Ethernet top-of-rack switches with redundant, hot-swappable power supplies and fans. Chitale says, "We get 100 percent availability from Dell Networking, eliminating delays that impede our daily delivery schedule for fresh milk products. Network virtualization on Dell means complete protection on an open platform, while delivering 10-gigabit network speeds."

Animal management improves with increased access to information

Farmers can use their mobile phones to access data from the company's database on each animal, and use this to track behavior such as when

vaccinations are required and expected levels of milk production. Chitale Dairy is meeting the needs of its individual stakeholders by upgrading its network to support the flow of information through the entire production line. Chitale says, "Information runs our factory and the speed of the network means we can automate our business processes and build tools to give all our stakeholders access to data that improves the value of their livestock."

Support simplifies technology management in remote areas

Being located 300 miles away from the city of Mumbai makes it more difficult to attract IT staff, so Chitale Dairy relies on an automated, easy to manage infrastructure. When support is required, the small IT team calls Dell ProSupport with Mission Critical 4-Hour Onsite Response service. "Due to our location we need systems that are easy to use, deploy and fix. We value our partnership with Dell because we can contact the call center and receive a quick solution or have replacement parts delivered. We've invested heavily in our infrastructure to ensure we have a stable environment that can scale to deliver continual innovation," says Chitale.

Products & Services

Services

Dell Support Services
– Dell ProSupport with
Mission Critical 4-Hour
Onsite Response

Hardware

Dell Networking
M8024-K switches
Dell Networking S4810 switches
Dell Networking S55 switches
Dell PowerEdge M910 blade
servers with Intel® Xeon®
E7-8867L series processors

Software

VMware® vSphere™

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