One way IT is helping fight cancer

NetCam Systems drives diagnosis and treatment of breast cancer through scanning technology based on high-performance workstations

NetCam   Manufacturing | Japan

Business needs

NetCam Systems looked for a workstation with the performance to support the intensive graphics workloads of its latest software for breast cancer screening. Besides the software performance, the company wanted the workstations to be backed by an organization that fulfilled orders quickly and responded to support issues fast.

Solutions at a glance

- Client Solutions
  - Dell Precision Tower 7810 and Dell Precision Tower 5810 with AMD FirePro W5100

- Enterprise Support
  - Dell ProSupport

Business results

- More accurate diagnosis with smoother running 3D images of scans
- Highly functional workstation reduces image reading time
- Improved medical treatment with remote access to images
- Fast hardware issue resolutions as part of five-year support

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Takeshi Harano, Member of the Board, Medical Division, NetCam Systems Corporation

NetCam Systems, established in 2004, is one of the largest providers of network camera software in Japan. In 2012, the company set up its Medical Business Division, developing software aimed at the healthcare industry. The division began the development of a camera software solution to help in the diagnosis of breast cancer. What's more, the company looked to provide the software as part of a larger solution that also included workstations on which to visualize the images captured during examinations.

The company needed a high-performance workstation solution. It had to offer high levels of availability with reads and writes evenly balanced in a RAID 5 storage configuration. It was also vital the workstations could process the huge amounts of data in tomosynthesis, which delivers a 3D version of a mammography. The overall workstation platform would also need to be robust enough to support between 100 to 200 tomosynthesis readings a day, particularly in larger clinics, helping clinicians deliver a fast and effective service to patients.

Clear on what they needed from a workstation, stakeholders at NetCam Systems went to the market to find a highly functional solution to support its software product. They had discussions with multiple vendors but decided on Dell. Takeshi Harano, member of the board of the Medical Division at NetCam Systems Corporation, says, "We found Dell provided the most solid and the fastest response with its Dell Precision workstation solution."

A solution for graphics-intensive workloads

NetCam Systems chose the Dell Precision Tower 7810 with AMD FirePro™ W5100 graphics cards and the Dell Precision Tower 5810 with AMD FirePro W5100 graphics cards as the workstations for its Mammodite product. The workstations are designed to support graphics-intensive application workloads.

The company also selected AMD FirePro graphics cards as the Mammodite video card. Unlike standard X-ray images, Mammodite 3D images contain a lot more data. To display the images clearly, NetCam Systems uses EIZO Corporation's high-precision 5M pixel monitors with 2,048×2,560 resolution with Digital Imaging and

Communications in Medicine (DICOM) transmitting the information. Designers in the medical business division saw that one video card could support displays on three or more of the monitors. In addition, AMD FirePro W5100 graphics cards support 10-bit gray-scale, so they can display high-quality mammography imagery. "To display a large amount of data fast, we use the Windows 7 with 64-bit operating system, while the graphic cards maximize the power of GPU," says Mr. Harano.

To date, NetCam has installed its Mammodite solution at more than 130 medical institutions. In total, the company has deployed more than 110 Dell Precision Tower 7810s with AMD FirePro W5100 graphics cards and more than 150 Dell Precision Tower 5810s with AMD FirePro W5100 graphics cards to support its software at these institutions.

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Enhanced diagnosis through 3D imaging support for scans

Clinicians gain greater support when analyzing breast tomosynthesis video images, which in turn enables better cancer cell detection. With NetCam System's Mammodite technology, 3D versions of the tomosynthesis scans run very smoothly with the number of frames reduced per second to help clinicians perform better diagnosis.

Improved breast cancer treatment

Healthcare providers such as Kameda Kyobashi Clinic in Tokyo have installed the Dell Precision workstations

supporting Mammodite software across multiple sites. Women can choose their preferred clinician from any of the sites and know the clinician will be able to access the scans in an instant across a virtual private network connection.

Harano says, "We created Mammodite to generate the results of scans quickly, and we make those scans available to the right clinicians to deliver the best possible diagnosis and treatment. To date, many of our customers have collected important data from the Mammodite solution running on Dell Precision technology to help combat the disease."

Reduced image reading time with high-performance workstations

Healthcare professionals are finding they can analyze more scans because of the high performance of the workstations' processing power. One clinician says, "The quicker we can get the analysis, the sooner we can make a diagnosis and propose treatments. With the Mammodite solution, we can review scans very fast."

Responsive sales support drives business

NetCam Systems is fulfilling orders fast as a result of the close working relationship with Dell. Harano says, "Whenever the customer needs something urgently, Dell comes back with a quotation in the afternoon of the same day, and the goods can be delivered within two weeks. Also, the Dell team contacts us regularly, and inquires if there are any urgent orders. This has been helpful. With other IT vendors, it takes one week to provide a quotation and delivery can be one month or longer."

Maximized performance with same-day support

NetCam Systems customers are maximizing the return on their investment owing to the performance of the Dell technology. Furthermore, in the event of an issue, customers know Dell will respond quickly. Comments Harano, "Customers receive onsite maintenance within a day through Dell ProSupport. Assistance from Dell covers parts replacement and operating system reinstallation. The great thing is that Dell ProSupport always comes up with effective solutions."

Working together across other projects

Today, NetCam Systems is also using Dell technology to support its NetCam HyperServer KxView infrastructure for large-scale image recordings. The infrastructure includes Dell PowerEdge servers, Dell Networking switches and Dell storage and comes backed by Dell ProSupport with same-day onsite maintenance.
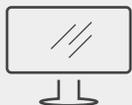
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