SOLUTION BRIEF
Intel® Xeon® Processors X5650 and X5690
Cloud Computing

Unique Private Cloud Harnesses Intel® Xeon® Processors for Maximum Power

CloudPod* systems powered by Intel® Xeon® processors deliver secure, flexible virtual clouds

AVNET technology solutions

"Intel Xeon processors are able to provide more horsepower per core than anything else available. They outperform the competition so we can take on more workload, which is the key to real virtualization."

—Dave Rollo
Infrastructure as a Service Director, Avnet Remarketing Solutions

CHALLENGES

- Managed services provider (MSP) needed all-new infrastructure to enter the commercial business
- Secure solution needed to be delivered within weeks
- Customer required scalability and flexibility to add hardware or update technology as needed

SOLUTIONS

- Avnet delivered its turnkey virtual private cloud solution in less than four weeks
- Included Dell PowerEdge* R710 rack servers based on Intel Xeon processors X5650 and X5690
- Saved nearly USD 1 million in hardware and software costs by implementing a customized solution

Flexible IT to adapt with changing needs

Infrastructure must be flexible for organizations to get the greatest returns on their IT investments. Avnet Remarketing Solutions, formerly Canvas Systems, offers a unique, virtual private cloud that it describes as hardware as a service (HaaS). Customers pay a monthly charge for Avnet CloudPod systems, which roll servers, storage, switching, and maintenance into one single package.

"CloudPods really suit our customers' business models because they can grow their infrastructures along with their revenues," said Dave Rollo, infrastructure as a service (IaaS) director at Avnet. Customers might start with a beta application and add more capacity, or switch out equipment for newer technology. "Information technology is such an accelerated industry. CloudPods offer more flexibility than a traditional purchase of hardware."

In 2012, one of Avnet's customers, an MSP that worked with government clients, started a new group that would serve commercial customers. To maintain security compliance with its government contracts, the MSP would need all-new equipment for its commercial business. Because the new group would manage multi-tenant hosted solutions with a wide spectrum of performance needs, flexibility would be critical. A private CloudPod offered the perfect solution, relieving the MSP of development and daily management, and allowing the team to focus instead on the core management of the environment.

Intel Xeon processors deliver more power per core

After working with the customer to pinpoint specific needs, Avnet built a customized CloudPod solution that includes nine Dell PowerEdge R710 rack servers based on the Intel Xeon processor X5690, and two additional R710 servers based on the Intel Xeon processor X5650. The servers included 10 gigabit dual port Intel® Ethernet X520-DA Server Adapters for flexible and scalable networking.

Built-in Intel technology delivers more power and security with each processor

To meet unique customer specifications, Avnet chooses the best components from leading manufacturers to build each solution. However, CloudPod engineers always insist on using Intel Xeon processors at the system's core.

"We only deliver CloudPods on an Intel Xeon processor-based platform. The processors are centralized on virtualization, which allows us to optimize the technology, even if we use multiple OEM brands," said Rollo.

Customers appreciate getting the Intel® technology they're familiar with and confident in. However, processing power is the Intel Xeon processor's biggest advantage. "Intel Xeon processors are able to provide more horsepower per core than anything else available," said Rollo. "They outperform the competition so we can take on more workload, which is the key to real virtualization. That's why whenever we get a request to use processors from other manufacturers, we turn it down."

Extra technology built into the processor

Intel Xeon processors help Avnet get more technology into the small footprint of every CloudPod. Processors with Intel® Trusted Execution Technology (Intel® TXT) and Intel® Virtualization Technology (Intel® VT) built in give customers added protection against malware and rootkits in both virtual and physical envrionments.[1,2]

"With VMware and Intel virtualization tools, we get the optimization, we get the security, we get all the things that the industry is pushing for in a single package," said Rollo. "The Intel Xeon processor platform is developed with the future in mind, which is what we need."

Power consumption is also a major concern when building CloudPods, since engineers are limited in the amount of power that can be delivered to each cabinet. The Intel Xeon processor 5600 series features Intel® Intelligent Power Technology, which automatically regulates power consumption to combine industry-leading energy efficiency with intelligent performance that adapts to the workload.

"That technology can help minimize the power draw, so we can maximize compute power into a six- or seven-foot cabinet. We can put more servers in and draw the same amount of power," said Bret Bortner, strategic account manager at Avnet.

Savings of nearly USD 1 million

Avnet prides itself on its speed of delivery. Its CloudPods are mostly plug-and-play, compared with similar solutions. For the MSP launching into the private sector, Avnet was able to deliver a customized CloudPod in less than three weeks.

The CloudPod saved Avnet's customer close to USD 1 million in hardware configuration and monthly licensing costs. Because the MSP was starting from scratch, it would have had to purchase virtualization software and likely more hardware than it initially needed, according to Bret Bortner, the lead client executive on the engagement. Instead, Avnet was able to build and configure a CloudPod to spec, while making the solution scalable and adaptable for future growth.

As more advanced technology becomes available, Avnet is moving its customers toward the Intel Xeon processor E5 family.

"We want our customers to optimize their CloudPods on the latest chips so they can take advantage of the security technology built into Intel Xeon processors," said Rollo. "The Intel® platform is always the core of what we do."

A customized CloudPod from Avnet can deliver the advantages of a private, virtualized cloud at an affordable cost. To learn more, visit **www.canvassystems.com**.

ABOUT AVNET REMARKETING SOLUTIONS

Avnet Remarketing Solutions, formerly Canvas Systems, offers data center hardware, IT hardware maintenance, financing and rentals, infrastructure services, and remarketing or recycling. Its unique CloudPods are complete hardware solutions, designed to create virtual application environments in a private, "like new" cloud that's easily expandable.

1. No computer system can provide absolute security under all conditions. Intel® Trusted Execution Technology (Intel® TXT) requires a computer with Intel® Virtualization Technology, an Intel TXT-enabled processor, chipset, BIOS, Authenticated Code Modules, and an Intel TXT-compatible measured launched environment (MLE). Intel TXT also requires the system to contain a TPM v1.s. For more information, visit www.intel.com/go/inteltxt.

2. Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, and virtual machine monitor (VMM). Functionality, performance, or other benefits will vary depending on hardware and software configurations. Software applications may not be compatible with all operating systems. Consult your PC manufacturer. For more information, visit http://www.intel.com/content/www/us/en/virtualization/virtualization-technology/hardware-assist-virtualization-technology.html.

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