Cisco Unified Computing Systems Case Study

Energia Communications, Inc.

EXECUTIVE SUMMARY

Installation Solution

- Cisco UCS B200 Blade Server
- UCS 5100 Blade Server Chassis
- Cisco Nexus 7000 Series Switch
- FlexPod for VMware
- Cisco ASR 9000 Series Router

Issues and cases for review prior to installation

- Starting a new cloud service required a server with great expandability.
- We want to efficiently manage increases in blade servers.
- Thinking in terms of disaster response, we want to enable interconnection with other data centers.

Benefits of Installation

- Centralized control of blade servers with Cisco UCS Manager. Control points do not increase even when the number of chassis do, offering both expandability and management efficiency.
- Server settings for each customer are managed as a profile using the Cisco UCS Manager "service profile" function. The automatic application of settings aids efficiency.

Cisco UCS supports "EneWing Cloud," Energia Communications' cloud service for corporate customers. The decisive factors for its use were the ease of operations, allowing centralized management even after system expansion, and its great physical maintainability.

Details of installation

"Cisco UCS" was chosen as it was the priority for server expandability and manageability.

The ability to perform centralized management of servers at the same time as network devices is highly rated.

Hiroshima-based Energia Communications (Energia Com) provides communications services, such as Internet connection and broadband WAN, to individual users throughout the Chugoku region and to corporate users throughout Japan. In recent years, the company has also been focusing efforts on sale and rental of data systems architecture and IT devices, and information services such as data center services; these services for corporate customers are provided under the "EneWings" brand.

"EneWings Cloud," a new cloud service, was added to the EneWings service menu at the end of 2011. Cloud services were initially offered in response to strong demand from existing EneWings users. Yuzuru Harada, Sub-manager of the Energia Com Sales Division Planning Control Team, explains as follows.

"We used to mainly provide communications services. Not stopping there, we moved on to providing customers with in-house network equipment and server devices, but in recent years we have started receiving inquiries about cloud services. We started with the 'EneWings Cloud'."

YUZURU HARADA

Energia Com Sales Division
Planning Control Team Sub-manager

HIROYUKI TAKEDA

Energia Com Communications Technology Division
Communications Equipment Department, Systems Technology Team Manager

EneWings Cloud takes the form of an "IaaS" and provides IT resources for virtual servers and storage via a network. Hiroyuki Takeda, Manager of the Systems Technology Team in the Communications Equipment Department of Energia Com's Communications Technology Division, had the following comments.

"We already provide secure broadband network services such as V-LAN and dedicated lines to corporate customers. With EneWings Cloud, we are aiming to construct an IaaS service based on such a closed network with a server environment that customers will use securely and efficiently."

The support package for this EneWings Cloud's systems platform includes a range of products, such as Cisco network devices and "Cisco UCS (Unified Computing System)."

"EneWings Cloud is constructed at the optimum system size and has been planned for successive expansions of system size depending on business conditions, so we needed a server that had flexible and efficient expandability. We looked at blade server products from various manufacturers, but all of them carried out management in enclosure units and we expected management to become more complicated as the number of chassis increased and the system grew in size. However, UCS places the management functions away from the enclosure, above the switch, so control points do not increase in number regardless of how many chassis are present. Specifically, centralized control is possible just as with network devices." (Mr. Takeda)

Mr. Harada also rates the physical maintainability of Cisco UCS highly.

"The network interface is virtualized and centralized and the number of physical wires is very small. I feel this is a great advantage for maintaining the space behind the server racks." (Mr. Harada)

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Furthermore, when constructing the present network platform for cloud services, the data center switch "Cisco Nexus 7000" was newly installed using Cisco aggregation router "ASR9000" technology. As with the choice of Cisco USC, this choice was based on the absolute priority placed on expandability of the system.

"Nexus 7000 functions are available for the envisaged provision of solutions such as network scalability and DR (disaster response) by interconnection to data centers." (Mr. Takeda)

The company therefore decided to use network devices and NetApp storage products in Cisco server products. Furthermore, the company used VMware vSphere as a virtual hypervisor, but as "FlexPod for VMware," these form a previously validated solution provided jointly by three companies: Cisco, NetApp and VMware.

Mr. Takeda says that there was much to be gained from installing a combination of products with a performance guarantee from the vendors already in place.

"When we discussed installing Cisco UCS, the only sticking point was the lack of an operational track record compared to other products. However, we felt that if interconnection and interoperability among the product manufacturers were ensured as with FlexPod, the product could be installed with the same confidence provided by an operational track record."

Benefits of Installation

"Cisco UCS Manager" brings great manageability and expandability

Dealing with a growth in users, beyond expected numbers, six months after starting the service

EneWings Cloud started small, on a relatively subdued system scale, but just six months after the company started to offer the service, a number of users, much greater than initially expected, have built up and expanding the system is now a pressing concern.

"Even if we increase the number of chassis, all of them can be managed centrally with the Cisco UCS management tool 'Cisco UCS Manager,' so we think that we can maintain the great expandability we initially planned." (Mr. Takeda)

At the site of operational management, the "service profile" function of Cisco UCS Manager is apparently greatly appreciated. This allows server settings to be managed as a profile for each user and applied automatically. A structure in which server hardware information is managed centrally as a profile and that can be applied by itself via a network is characteristic of a Cisco product.

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Furthermore, along with expansion of the EneWings Cloud, Energia com is thinking about its next business plan on the basis of the cloud platform constructed this time.

"At the moment, we only provide an IaaS type service, but in future, we are thinking of providing PaaS and SaaS services too. We have also received inquiries from customers about whether it is possible to construct an in-house private cloud environment using the same structure as the EneWings cloud." (Mr. Harada)

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