

News Release

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Hitachi Launches “Highly Reliable Platform Solution” in Collaboration with VMware, for Social Infrastructure Fields

Hitachi’s original reliability enhancement function and long-term support are added to VMware vSphere

Hitachi helps IT system investment optimization and digital business expansion



Hitachi highly reliable server RV3000 providing rock-solid foundation for the new solution

Tokyo, September 4, 2018 --- Hitachi, Ltd. (TSE: 6501, President & CEO: Toshiaki Higashihara, hereinafter “Hitachi”) today announced that it will, as a result of a collaboration with VMware, Inc. (CEO: Pat Gelsinger, hereinafter “VMware”), offer a “Highly Reliable Platform Solution” for social infrastructure requirements of financial, public and transportation services, beginning September 5. The solution is designed to enable the stable operation of mission critical systems on a long-term basis and in an open and modern system environment.

The solution involves using Hitachi’s original function to enhance the reliability of the industry-leading VMware vSphere (hereinafter “vSphere”), and offering it in combination with RV3000, Hitachi’s server. Based on the strong collaboration between the two companies, the long-term support for vSphere is planned to last for up to 10 years, so customers will be able to apply the support required to quickly solve problems to their mission-critical systems.

These will allow the mission critical systems to continue to reliably operate and be easily connected with other open systems, which will make it possible to streamline system operation and optimize investments in IT. Meanwhile, the availability of data coordination with other open systems, for example, will support the expansion of digital businesses.

In recent years, IT teams have faced a need to enhance mission-critical systems, while also streamlining their operations and proactively introducing global standard technologies that are easily connectable to open systems -- in an effort to adapt to rapid changes resulting from progress in digitalization. Under these new dynamics,

- more -

Hitachi and VMware expanded their collaboration in October 2017⁽¹⁾ and have worked together on new solution developments to provide an open, modern and highly reliable virtualization platform for mission-critical systems.

(1) News release dated October 19, 2017. "Hitachi and VMware expand their collaboration to provide platform solution for social infrastructure fields" (<http://www.hitachi.co.jp/New/cnews/month/2017/10/1019a.html>)

The Highly Reliable Platform Solution is planned to be launched as a result of the collaboration. Incorporating Hitachi's original reliability enhancement technology with vSphere is designed to facilitate connections with open systems. Moreover, both companies' vSphere special support system will be able to swiftly solve problems and provide long-term support.

Hitachi provides this solution to platforms for open and accounting solutions for financial institutions and to mission-critical systems for social infrastructure fields, including public and transportation services in Japan. Going forward, Hitachi will make mission-critical systems more open and highly reliable with a view to expanding them worldwide, and will help customers optimize their IT system investment and expand their digital businesses.

Features of the Highly Reliable Platform Solution for social infrastructure fields include:

1. Provides advanced functions to enhance reliability in an open system environment
Hitachi obtained the certification of VMware vSphere DirectPath I/O, which allows for dedicated assignment of a PCI card⁽²⁾ to a virtual machine that plays important functions. This would enable a highly reliable system which makes it possible to, in the event of a problem in the PCI card, detach the problem PCI card by means of Hitachi's unique function and switch to a stand-by PCI card to prevent system failure. Also, by reducing overhead of I/O virtualization⁽³⁾, Hitachi's Highly Reliable Platform Solution achieves the system stabilization that is required in a mission critical system in an open and modern system environment.

(2) PCI card: An expansion card that plugs into a computer's motherboard and adds specific functions.

VMware vSphere DirectPath I/O is supported on Hitachi's fiber channel adaptor.

(3) I/O virtualization: The technology for virtually showing a PCI card as two or more PCI cards

2. The special support system for vSphere quickly solves problems and provides long-term support

In cooperation with VMware, Hitachi has developed a special system for providing vSphere users with support. Specifically, VMware provides special technical support

for Hitachi, and Hitachi engineers will work alongside VMware engineers at VMware, so Hitachi is able to investigate the cause of any problem more deeply, enabling them to resolve a customer's problem quickly. In cooperation with VMware, Hitachi can also provide customers with long-term support⁽⁴⁾. Even after the vSphere standard lifecycle is over, Hitachi can cooperate with VMware in providing debugged vSphere to customers whenever a problem occurs. The support will be provided as Hitachi Support 360.

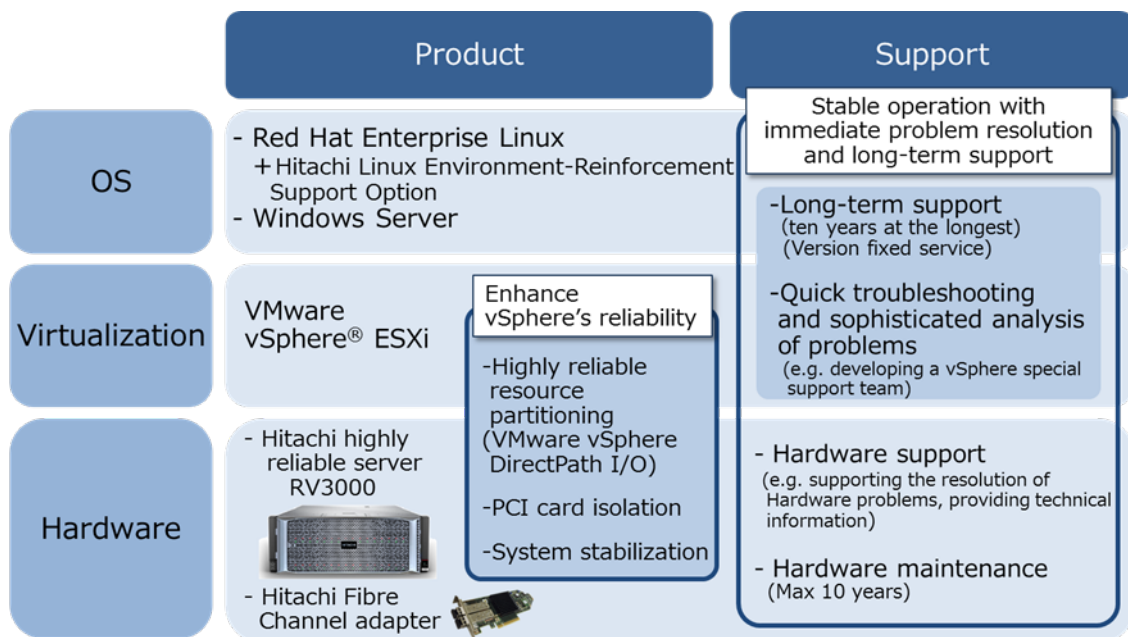
(4) Support may be provided for up to ten years. The period depends on the customer's agreement.

3. A reliable server RV3000 functions as the foundation of solutions and assists the stable operation of IT systems

Hitachi RV3000 can be loaded with up to four units of the latest Intel® Xeon® processor scalable family and up to 3 TiB of high-speed memory, and is compatible with large databases and real-time analysis, which typically require high performance and high-speed processing. Also, hardware maintenance service may be provided for up to ten years, supporting stable operation of mission-critical systems.

In addition, a system failure may be addressed with fast switching of the shared disc and with fast switching to a standby system⁽⁵⁾. Also, in a vSphere-based environment, system downtime can be minimized by supporting fast switching for each virtual machine.

(5) This applies when Hitachi high-availability software, HA Monitor and Hitachi HA Booster Pack for Linux, are in use.



Outline of Highly Reliable Platform Solution

Pat Gelsinger, CEO, VMware, Inc.

“VMware and Hitachi enable global organizations to support new workloads while keeping pace with the growing needs and complexity of their infrastructure. VMware is thrilled to collaborate with Hitachi on a powerful, flexible, and secure foundation to help mutual customers accelerate their digital transformations.”

Content and price of the solution

Name	Content	Price (excluding tax)
Highly Reliable Platform Solution	<ul style="list-style-type: none"> •Hitachi highly reliable server RV3000 •VMware vSphere •Hitachi Support 360 	Individual estimates

Hitachi’s highly reliable server, RV3000: Main specifications, price and time of its launch

Name	Outline of specifications	Price ⁽⁶⁾ (excluding tax)	Available from
RV3000	CPU: Intel® Xeon® Processors Scalable Family(Intel Xeon Platinum Processors 8100 Series, Intel Xeon Gold Processors 6100 Series, Intel Xeon Gold Processors 5100 Series), up to 4(up to 96 cores) Memory: Up to 3TiB	4,914,000 yen	September 28

(6) This is the price of the minimum configuration with 2 Intel® Xeon® Gold 5115 Processors(10 cores per processor). Additional options are required for configuration of Highly Reliable Platform Solution.

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About Hitachi, Ltd.

Hitachi, Ltd. (TSE: 6501), headquartered in Tokyo, Japan, delivers innovations that answer society’s challenges, combining its operational technology, information technology, and products/systems. The company’s consolidated revenues for fiscal 2017 (ended March 31, 2018) totaled 9,368.6 billion yen (\$88.4 billion). The Hitachi

Group is an innovation partner for the IoT era, and it has approximately 307,000 employees worldwide. Through collaborative creation with customers, Hitachi is deploying Social Innovation Business using digital technologies in a broad range of sectors, including Power/Energy, Industry/Distribution/Water, Urban Development, and Finance/Social Infrastructure/Healthcare. For more information on Hitachi, please visit the company's website at <http://www.hitachi.com>.

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