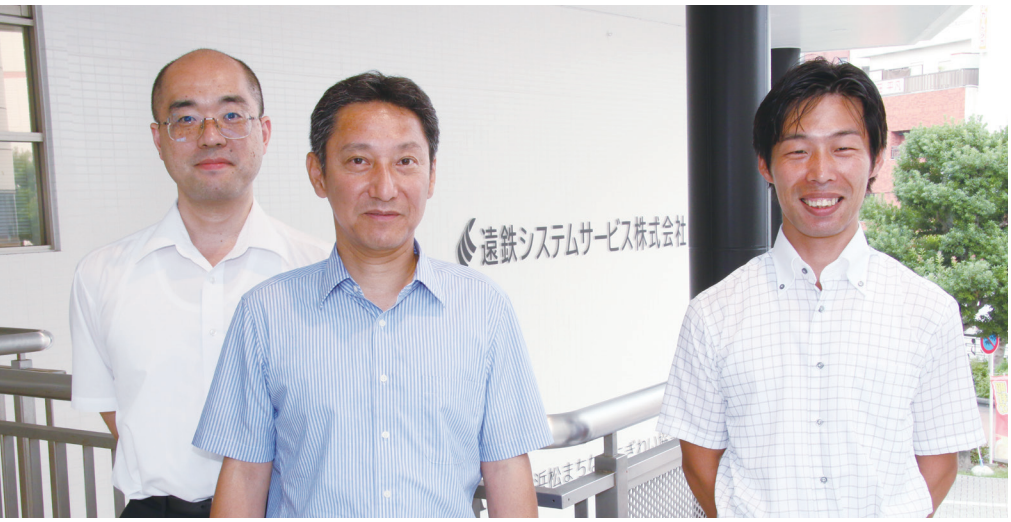
CUSTOMER SUCCESS

Entetsu System Service Co. Ltd.

Introducing NetBackup to a large-scale virtual infrastructure supporting the core business of a corporate group

Veritas NetBackup™ and VADP[1] Accelerator drive a simple operation that automates a high-speed, full backup of large amounts of data

Entetsu Group is a large organization that provides essential services to communities in the western part of Shizuoka Prefecture in Japan. It encompasses railway, bus, department store, shop, taxi, real estate, insurance, and long-term care businesses. The Entetsu System Service Co. Ltd. (ESS) is responsible for the group's information system. In 2015, ESS upgraded the large-scale virtual infrastructure that supports the core operations of the Entetsu Group. It took that opportunity to begin reconsidering its backup system. It has since adopted NetBackup and the VADP Accelerator to eliminate manual and tape backups to achieve a fully automated, high-speed, and simple data protection operation.



Entetsu System Service Co. Ltd.
Mr. Tomofumi Sano, Office System Deputy Manager and Network Development™ Section Chief, ESS
Mr. Takuro Suzuki, Subsection Manager, Network Development Section, ESS
Mr. Satoru Maruichi, Manager, Network Development Section, ESS

遠鉄システムサービス株式会社

ORGANIZATION PROFILE

Site: www.ess.co.jp/index.html

Industry: Information Services

Employees: 154 (as of June 1, 2016)

Type of Business:

- Office/Public System Business
- Information System Business
- Network System Business

KEY CHALLENGES

- Due to a complicated manual data protection process, daily backups were not feasible; sometimes the recovery point objective (RPO) was several months.
- The company wished to do away with cumbersome operations that involved tape backups.
- Backup work by assigned staff would continue late into the night; this needed to change.

SOLUTION

A simple and high-speed backup system using NetBackup and the VADP Accelerator.

BENEFITS

- Improved data protection through a large reduction in the RPO for the large-scale virtual infrastructure.
- Implemented contingency measures and eliminated operational costs, such as physical transportation, by automatically conducting remote backup transfers.
- Eliminated the graveyard shift for staff through automated backup operations.

The legacy infrastructure required manual backups that lasted throughout the night

ESS develops software and services for the Entetsu Group as well as for the public and private sectors. It also acts as the IT department for each Entetsu affiliate, playing an important role in the development and operation of the organization's core business systems.

In 2010, ESS virtualized the core corporate servers for companies in the Entetsu group using VMware® virtualization technology. Mr. Tomofumi Sano, Office System Deputy Manager and Network Development Section Chief, explained, "It was to start providing IaaS [infrastructure as a service] to each Entetsu company."

Following this project, the company had 40 virtual machines. About 90 percent of them were configured so that the D drive and other data areas were on RDM.[2] The virtual machines were backed up once a month, on a day when running backups would have little impact on the business. Two members of the Network Development Section would continue working on backups late into the night.

The number of virtual machines that could be backed up on a particular day was limited. Sometimes when ESS needed to restore information, it had no choice but to restore backup data from a few months earlier.

Mr. Takuro Suzuki, Subsection Manager of the Network Development Section, reflects on that time. "Nighttime operations took a toll on employees, and because they took compensatory leave the next day, fewer people were in the Section. For that reason, whenever extraordinary work occurred, it became difficult to respond to problems."

In addition, for purposes of business continuity, ESS stored the backup tapes offsite. Every month, the tapes would be taken to a warehouse. Whenever data recovery was necessary, the tape media would have to be obtained from the warehouse, creating additional work.

The deciding factor: A proposal to achieve high-speed, simple, automated backups using NetBackup and VADP Accelerator

The server for the company's virtual infrastructure was due for an upgrade in 2015. In autumn 2014, ESS asked multiple software vendors to propose improvements to the company's backup operation. According to Mr. Satoru Maruichi, Manager of ESS's Network Development Section, the aim was to "do away with manual and tape backups and realize complete automation."

The amount of data handled on the IaaS systems was expected to reach about 100 TB in the next five years. ESS was looking for a new data protection system that would automatically complete a daily backup of the virtual machines before the railway business's first train of the day departed (5 a.m. the next morning). Another requirement was that the system must restore data by file transfers between sites, rather than the physical movement of tapes.

The NEC Group proposed that ESS adopt a system infrastructure using NetBackup as the data protection software and utilizing VADP Accelerator[3] to shorten the length of backups. The NEC Group explained that by switching the virtual machines away from a conventional configuration and storing the data in the same VMFS[4] area as the OS, ESS would be able to perform a daily, high-speed, full backup of the virtual machines through a simple operation. Another proposal, designed to ensure business continuity without using tape media, was to transfer backup data over the network using NetBackup's Auto Image Replication (AIR).

Regarding these proposals, Mr. Maruichi said, "I was confident that monthly nighttime operations could be completely abolished. I also determined that their proposals on business-continuity measures and future scalability were excellent, so I decided to go with the NEC Group recommendation of NetBackup." Mr. Suzuki says that he also evaluated "NetBackup's achievements and credibility in Japan."

Daily full backups and improved operational efficiency, eliminating late-night work

The new virtualization infrastructure, with data protection from NetBackup, launched in November 2015. The daily full backup is completely automated. The first backup initiates shortly after midnight each day, and as per ESS's requirement, it completes by 5 a.m. Replication of backup data by AIR to another site completes by 5:30 a.m.

SOLUTIONS

- Veritas NetBackup™

VERITAS

"With the VADP Accelerator, most of the virtual machines are backed up in one to five minutes each. It was so incredible that initially I thought to myself, 'Is it really backed up?'" Mr. Suzuki said.

Mr. Maruichi also notes the striking effect of the NetBackup data deduplication function used by VADP Accelerator. "For example, in a server that handles asset management data, the deduplication rate is as high as 99.8 percent, and full backups that would have taken up 19 TB with our legacy system are now contained within 9 TB. It's not just the shorter backup time; we are also benefiting from an efficient use of storage."

The new data protection process eliminated the monthly late-night work and also solved the problem of declining employee productivity in the Section the day after backups. "Now, as soon as I come into the office every morning, I check my email to see if the backup and data transfer to another site have been completed successfully. I check it on the console, too, just in case. Compared with our former process, this is so much easier," marveled Mr. Maruichi.

ESS is now looking into strengthening its business continuity planning to prepare for a potential network disaster. Mr. Sano said, "In addition to the replication to another site that we currently do, we also envision the preservation of core data to a cloud environment or another non-traditional venue." Mr. Maruichi added, "Since AIR in NetBackup 7.7 can handle backups to multiple sites, we have even higher expectations for this feature."

For more information

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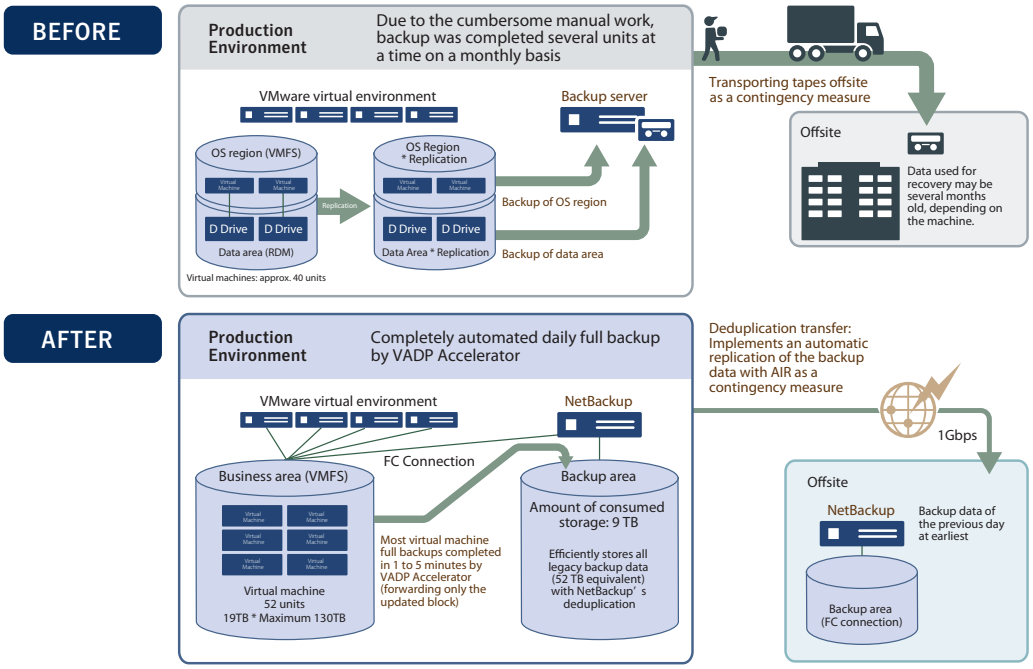
[1] VADP: data protection framework provided by VMware
[2] RDM (Raw Device Mapping): A technology that allows direct access from a virtual machine to LUN (number for identifying multiple logical units) on the storage device.
[3] VADP: Data protection framework provided by VMware.
[4] Virtual Machine File System, provided by VMware.

Entetsu System Service Co. Ltd.'s new Infrastructure as a Service (IaaS), and simple, high-speed data protection with NetBackup



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