SEP sesam Hybrid Backup - the Hero of your Data

Successful companies and organizations trust in SEP Hybrid Backup

SAP University Competence Center (SAP UCC) Magdeburg

The SAP UCC in Magdeburg relies on SEP sesam data backup

Only through education innovation and social development can be effectively shaped. That is why SAP has been supporting educational projects for many years and leveraging its expertise in science and technology. Through the University Alliances (UA) program, SAP promotes practical and future-oriented education by giving teachers and students worldwide access to the latest SAP technologies. SAP University Competence Centers (SAP UCC) are responsible for providing services related to SAP solutions. At the UCC in Magdeburg, the old HPE StoreOnce solution with DataProtector, where all data was backed up, was due to be replaced. A new and flexible software solution for data backup had to be found. This had to support HPE Catalyst, which was envisaged on the storage side and, in doing so, be able to backup the different and virtual solutions around the most diverse SAP applications and databases

in a certified manner. At HPE Discover 2018 in Madrid, the UCC was able to convince itself of SEP's capabilities. Since SEP sesam is both SAP and HPE certified, the decision was made in favor of the backup solution "Made in Germany" after several evaluation phases.

André Faustmann, Technology lead, SAP University Competence Center (SAP UCC) Magdeburg

> *"With SEP sesam, we can quickly back up even the latest versions of SAP solutions and databases."*
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> *André Faustmann, Technology lead, SAP University Competence Center (SAP UCC) Magdeburg*

Since 1999, SAP has provided educational services through independent competence centers established at universities, where SAP software is hosted centrally in a data center. Teachers and students should be able to practice the theoretical principles practically on the system. This is possible for educational institutions such as universities, technical colleges, vocational academies or vocational schools. For operations, SAP initiated the University Competence Centers (UCC). The UCCs demonstrate SAP's solutions using exemplary installations. These include data sets that represent fictitious companies. The largest is an imaginary manufacturer of bicycles called "Global Bike". There, all application possibilities of the SAP environment can be exemplarily represented and it thus depicts a realistic use case of an internationally operating manufacturer. In addition, the UCC provides suitable teaching materials, such as presentations, exercises and simulations, which the lecturers can make available to the students.

SAP training environments for universities all around the world

In total, there are five centers worldwide that support educational institutions. The SAP UCC at Otto von Guericke University Magdeburg is the largest and has a sister UCC at the Technical University of Munich. Both are responsible for supporting teaching institutions internationally. Together with the UCCs in the USA (University of Wisconsin-Milwaukee and California State University in Chico), which are responsible for North and South America, and in China from the UCC at Beijing Jiatong University, a worldwide network has been created that provides universities with up-to-date SAP software and curricula. This network supports 2,000 schools and universities worldwide, where more than 10,000 lecturers pass on their knowledge to more than 300,000 students each semester.

In Magdeburg, 32 employees take cate over 71 countries with 629 institutions. As technical manager, André Faustmann and his colleagues are responsible for around 300 SAP systems with 1,000 clients, which are used by more than 4,000 lecturers.

More than 130,000 students receive their education on it every semester. Due to the constant growth, the systems have to be expanded on a regular basis. The data center consists entirely of solutions from HPE, as a long-standing partnership exists here.

About SAP UCC

SAP UCC promotes practical and future-oriented education by giving teachers and students worldwide access to the latest SAP technologies. The SAP University Competence Centers (SAP UCC) are responsible for providing services related to SAP solutions. In Magdeburg, 32 employees take care over 71 countries with 629 institutions. As technical manager, André Faustmann and his colleagues are responsible for approximately 300 SAP systems with 1,000 clients, which are used by more than 4,000 lecturers. More than 130,000 students receive their education on it every semester. https://portal.ucc.ovgu.de

Situation

At the UCC in Magdeburg, the old HPE StoreOnce solution with DataProtector, on which the backup of all data took place, was due to be replaced. A new and flexible software solution for data backup had to be found. This had to support HPE Catalyst, which was intended on the storage side, and at the same time be able to backup the different and virtual solutions around the most diverse SAP applications and databases in a certified manner.

Solution

The previously used backup solution was replaced and extended by SEP sesam in the course of the new acquisition of an HPE StoreOnce 5200. The complex backup processes could be created by individual scripts. New installations of virtual machines or databases can now be automatically integrated into the backup process via script. All database and operating system combinations can be backed up with SEP sesam in just one solution, both physically and virtually.

Benefits

The SAP-certified backup and restore of data in the data center of UCC Magdeburg could be flexibly migrated to SEP sesam. A future expansion of the SAP-focused IT environment to S/4HANA is possible individually and for the latest software versions.

Employee's Image, SAP University Competence Center

Almost 600 VMware virtual machines are running on 3 server racks based on HPE Proliant with 792 CPU cores and HPE 3PAR All-Flash Array with 172 terabytes. Backup is done on an HPE Store Once B5200 with 108 TB capacity, of which nearly 42 TB of deduplicated backup data is retained as of 2020, which equates to about 335 TB of backup volume in real terms.

Backup for heterogeneous IT landscape with SAP in focus

The SAP UCC Magdeburg runs a large number of SAP systems on virtual machines. The DB2 databases are between 100 gigabytes and 1.5 terabytes in size. Some MaxDB installations are between 50 and 300 GB. For SAP HANA installations, the installation sizes range from 32 to 600 GB, which is sufficient for the example use case of "Global Bike". The SAP HANA systems are operated physically. In turn, the application servers with the SAP systems are all virtualized. The desktop environments of

the employees also run virtually, and more than 50 VMs are available for this purpose. File servers, mail servers, Github and special applications are also running. The data retention cycle is regularly about four weeks. This is the period for which the data is retained in the backup. A long-term backup is not necessary, since the majority of the systems are training systems. In figures, this means almost 10,100 data sets in four weeks for the full backups. Archive changes, which are logged and secured from the database, are in the order of half a million per month.

SEP sesam grows along ideally

The previously used backup solution HP DataProtector was no longer the ideal solution in view of the adaptation and expansion of the data center. "We needed a backup software that could quickly protect even the latest versions of the SAP solutions and databases, and that

could also be used in a certified manner for this purpose," says André Faustmann. Contact was made with SEP at HPE Discover 2018 in Madrid, as SEP, as an HPE partner, was presenting its SEP sesam solution there. In an evaluation phase that began in 2019, extensive testing was carried out and the various configurations were analyzed. "We were able to successfully complete all of our tests in our test environment," André Faustmann is pleased to report. After the HPE StoreOnce 5200 was procured, the deployment project started. Starting in January 2020, the backup servers were deployed and configured with SEP sesam. André Faustmann particularly emphasizes the flexible support from SEP: "During the implementation, we could rely on the experts from SEP throughout. If something needed to be optimized, it was taken care of and solved in the shortest possible time. We are very happy about that." It was important for the UCC that most processes could be created by individual scripts. This is completely possible with SEP sesam. During the first Corona lockdown at the beginning of 2020 André Faustmann and his colleagues worked intensively on that. Among other things, almost all backup objects were transferred from the previous solution, which was an important prerequisite.

> „During the transformation of our backup system in a complex environment, we can emphasize the extensive assistance provided by the SEP team."
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> André Faustmann, Technology lead, SAP University Competence Center (SAP UCC) Magdeburg

Customer environment
3 Server Racks based on HPE Proliant and HPE 3PAR

Hardware capacity:

+ CPU-cores: 792 320 (ESXi) + 344 (HANA TDI) + 104 (Backup) + 24 (test environment)

+ RAM: 17 TB 5TB (ESXi) + 11 TB (HANA TDI) + 1 TB (Backup + test environment)

+ 3PAR: 172 TB (all-flash)

+ Number of virtual machines (VMware): 590

Data Backup:

+ HPE StoreOnce 5200 with 108 TB

+ Usage at the Moment 41,9 TB deduplicated (334,6 TB real)

SEP AG

SEP has been developing and selling enterprise-wide data protection solutions since 1992 and is headquartered in Holzkirchen near Munich. A branch office with support and sales team is also located in the USA. SEP has a strong partner network and relies 100 percent on resellers for sales. Customers in more than 50 countries include top-tier enterprises, market leaders in the healthcare and financial sectors, and leading universities.

New installations of virtual machines or databases can now be automatically integrated into the backup process via script without the need for manual intervention. After the important basics for the backup infrastructure with SEP sesam were created, the training of the colleagues who work with the data on a daily basis took place at the end of April 2020.

Parallel operation and progressive implementation

The conversion of all backup processes to the new system took place within two months. First, all DB2-based SAP systems were converted to the new backup with SEP sesam on one day. In the following three days, all SAP HANA systems and the path backups followed. For the MaxDB-based systems, two weeks were taken. In another four weeks, all VDI environments had been moved. Data backup in the old system ran in parallel. "We had a fast transition, in terms of scope. In a total of just over 35 days, we were able to migrate all the hardware and software to a future-proof solution," says a pleased André Faustmann.

Conclusion: Complex SAP environment converted for the future

"As we transitioned our backup system in the complex environment, we can highlight the extensive assistance we received from the team at SEP," said André Faustmann. "This allowed us to be sure that we would get immediate support in case of special challenges." The desired settings via an API and through scripting functions is very important and SEP sesam can also fulfill this requirement optimally. The fact that SEP's backup solution is very well suited for heterogeneous environments also benefited the UCC's diverse IT landscape. All database and operating system combinations can be backed up with just one solution, both physically and virtually. "The simple installation and also updating of the software round off our good image of SEP sesam," André Faustmann concludes. For 2021, the renewal of the computing hardware is on the agenda to enable a broad presentation of SAP S/4HANA for the universities. With SEP sesam, the UCC Magdeburg is also well equipped for this on the data protection side for the coming years.

Headquarters (EMEA):
SEP AG
Konrad-Zuse-Street 5
83607 Holzkirchen, Germany
Tel: +49 8024 46331 0
Fax: +49 8024 46331 666
E-Mail: info@sep.de

SEP USA:
1630 30th Street
Suite A #265
Boulder, CO 80301, USA
Tel: +1 303.647.3915
Fax: +1 877.611.1211
E-Mail: usa@sepsoftware.com

> „The easy installation and also upgradeability of the software completes our good picture of SEP sesam."
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> André Faustmann, Technology lead, SAP University Competence Center (SAP UCC) Magdeburg