

DC MAG

MAGAZINE OF THE DC-DATACENTER-GROUP



Digital World of Future Data Center



General Data Protection Regulation
Impact on companies



schauinsland
reisen

Safe Data - Safe Trip

DC-ITSafes guarantee the availability of your travel data



A Glimpse into the Future

The core market for IT infrastructures is moving at an unprecedented speed

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DATA CENTER MARKET IS BOOMING!

■ After 2006, 2017 was the second-best year for the unbroken, highly dynamic IT infrastructure market. For the second year in a row, the 100-megawatt threshold of required performance was exceeded at the main European data center locations - Frankfurt, London, Amsterdam and Paris. The IT-based demand for energy in data centers amounted to more than 275 megawatt in the past two years, which is twice as much as in 2015. Market analysts expect this trend to continue in 2018 with a real demand of more than 100 megawatt. And that solely in the already mentioned main locations. The main growth areas were London and Frankfurt. After the implementation of the Brexit, the latter could become the most important IT location during the coming years.

Currently, the rapid growth is mainly driven by the high demand for cloud computing services. Based on our discussions with private companies and public institutions, however, these market participants will also systematically tackle a redesign of their IT infrastructures in line with requirements. IT is the central key technology for most industries and without it, effective operations would not be possible. This makes secure and highly available IT one of the most decisive success factors for maintaining competitiveness in an increasingly global market environment.

However, this also creates a high optimization and consolidation pressure on the maintenance of data centers. For this reason, an increasing demand for professional IT infrastructure in both private and public sectors is expected in the years ahead.

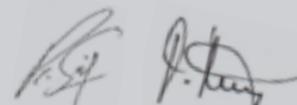
Basically, these market expectations are good news for the DATA CENTER GROUP. With our extensive service portfolio for IT infrastructure design, construction and operation, we have created the best conditions at the right time to participate in this boom. However, it is also due to our commitment and the quality of our services to use this pre-equipped basis effectively. The chance to sustainably expand our already good market position was never better. With last year's merger of our proven and long-standing brands proRZ, RZingcom, RZservices and SECURisk we set the right organizational

The first quarter of 2018 fully met our expectations. The rapid growth of incoming orders in the project business was underpinned by the continuous growth in the service business. In addition, we have worked out some promising opportunities for the second quarter. The DATA CENTER GROUP is on a very good path and it is already becoming apparent that we will be able to achieve a record result again in 2018. After many months of hard and intensive work, we were able to successfully complete the major projects Berliner Wasserbetriebe and Haribo in the first quarter of the year, among others, and



course and formed the powerful and all-round provider DATA CENTER GROUP. The integration of our new partner MVV perfectly rounds off this structural realignment to meet the requirements and conditions of the market developments. With this bundling and our joint know-how in the fields of energy management and IT infrastructures, we are the perfect partner for all market participants who want to equip their IT infrastructures for the challenges of the coming years and operate their data centers efficiently.

handed over our modern and efficient high-performance to satisfied customers. The entire process, in particular the professional handling of hurdles and problems that are customary for such large projects, has once again perfectly underlined the performance of the DATA CENTER GROUP and consolidated our position as the market leader in the premium segment of high availability data centers. Many thanks to all employees involved at this point. You will find further interesting success stories on the following pages.


 Ralf Siefen and Thomas Sting
 Managing Directors and shareholders DC-Datacenter-Group GmbH



Gerhard Sundt
 Age: 60, married
 CV: Senior position Deutsche Telekom & DeTESystems, CEO of D. Logistics AG, Member of the Supervisory Board of a number of Hi-tech and logistics companies
 Position: advisory council DATA CENTER GROUP
 Hobbies: Sailing, Skiing, Swimming

Photo: © 3drombina/fotolia.com

DIGITAL WORLD OF FUTURE DATA CENTER

■ The term “data center” actually comes from a time long ago when people were only supposed to access their employer’s central programs via screens. At that time, computer rooms were usually located in corporate headquarters. I still remember the 1970s, when data centers, as an expression of the progress of many companies, were placed right next to the main entrance of the company, with large panes of glass so that everyone could get an impression of how modern those companies were as they passed by.

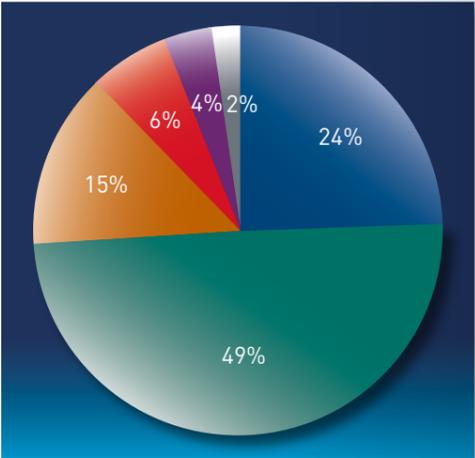
Those days are over. That is not just because of the increased security requirements in companies. Today’s potential attackers should not be shown right at the gate where the company’s sensitive databases are located and filled racks are also not a suitable sign of innovative strength. In addition, everything is getting more and more mobile. Employees do not just sit in front of screens at their permanent workplace anymore but can easily work from anywhere else, on computers, laptops, tablets or smartphones. They do not only access the employer’s central database but also use the internet as a source of information. However, with the progress in technology, we have become much more impatient, as we expect quick access to the most up-to-date data and information possible. By now, online data determines our daily lives and no longer batch data.

Data centers had to adapt to these changed conditions. Because of the increased security requirements, they were placed in better protected locations and, with the emergence of SaaS applications, many programs were uploaded from the corporate data center to the cloud. The virtualization of data center resources, along with much higher compute and storage densities, not only halted the strong growth of central computer rooms. In fact, many of them still have free storage space today. Because in spite of the vacant space in the central computer rooms, more and more applications are located in decentralized data centers.

These edge data centers, which are located “on the border” of the companies in terms of resource management, are specially as close as possible to the users in order to accelerate access time to information. They generally contain redundant applications that optimize resilience and are often used as points of contact to the IT-environment or programs in the cloud. The trend towards edge data centers is driving the market of new data centers considerably forward. Surveys among 1,000 medium-sized companies in Europe, 247 of them located in Germany, have shown that an average medium-sized company already operates four data centers and that 75 % of those companies plan to expand their own data centers.

The trend towards edge data centers therefore also influences the budgets of data center expansion. For example, half of the SMEs surveyed said that they wanted to increase their spending on data centers by more than 5 % this year. These expenses include the construction of new space, including facility management and electricity consumption. The main drivers behind these rising costs are not only the increase in space, but also measures for the improvement of energy costs. If the requirements regarding infrastructure management and access speed allow it, the location and equipment of the new data centers are increasingly determined by the expected energy efficiency. Not only the external climatic conditions and the efficiency of the air conditioning system play an essential role - modern data centers already reach a PUE (Power Usage Effectiveness) value of 1.2 to 1.3 - but also the energy costs in general.

Are you planning an expansion of your data center within the next four years?



- Already in planning
- Most likely
- Probably
- Unclear
- Unlikely
- Certainly not

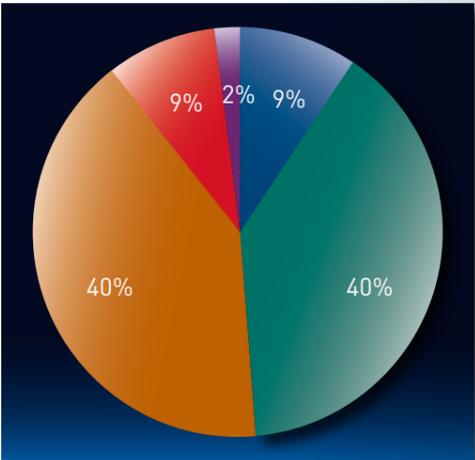
To lower energy costs in general, several strategies are pursued:

1. Purchase of cheaper electricity

Compared to other countries, Germany has relatively high and, due to the promotion of alternative energies, quickly rising electricity costs. One way of saving costs is to switch to low-cost countries. However, this idea is often opposed by higher management costs and longer access times for end users.

Another strategy is getting cheaper electricity prices by trying to buy unused electricity. This electricity mainly comes from peak load power plants such as wind power. New power storage technologies are about to make a breakthrough and do not only allow the intermediate storage of cheap electricity, but also provide increased reliability in supply. Consequently, there is less effort in emergency power supply.

Are you planning lower or higher DC-expenditures in 2018?



- Increase by more than 10 %
- 5 % to 10 %
- No change
- 5 % to 10 %
- Reduction by more than 10 %

2. Raising temperatures in data center = lower demand for climate performance

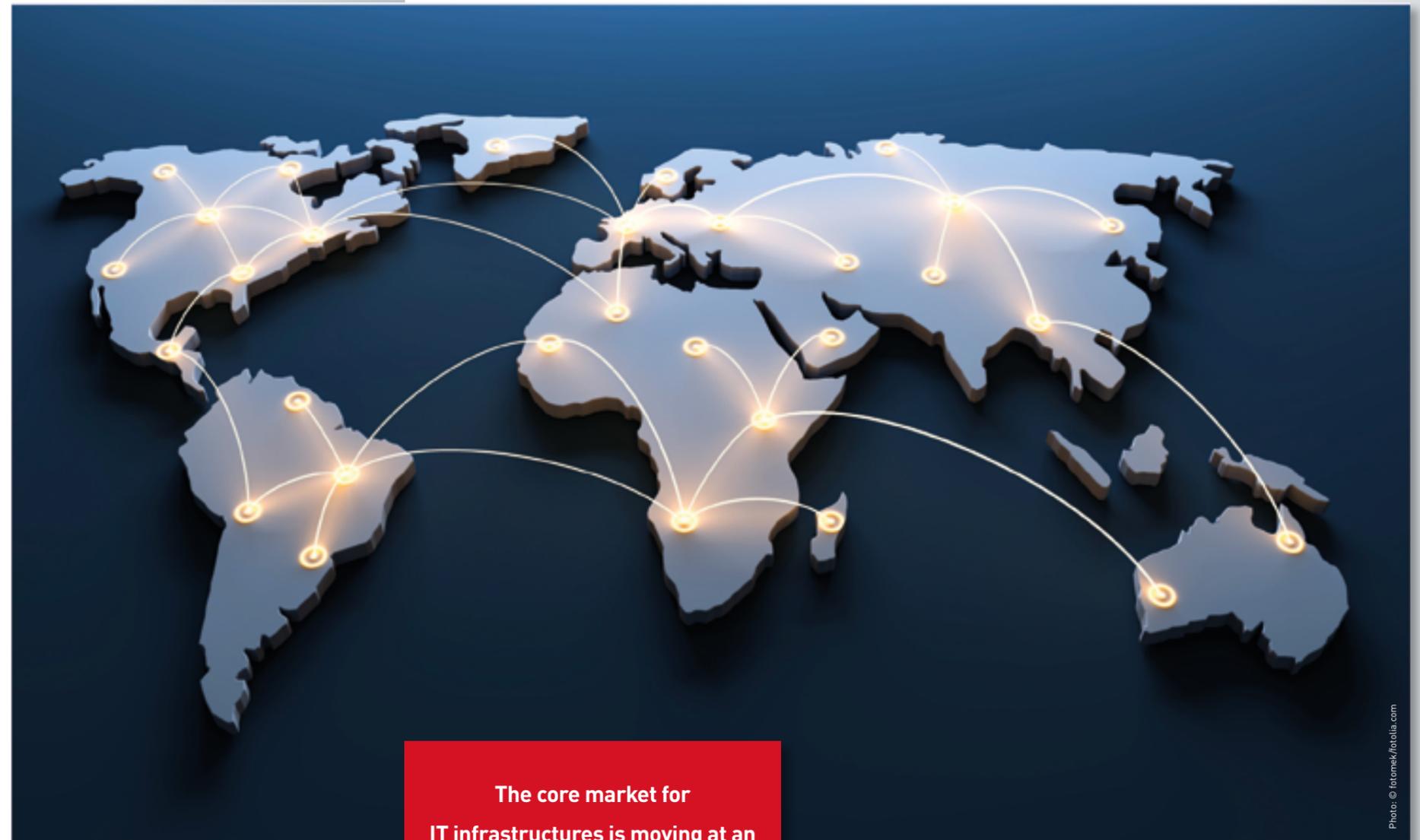
This strategy requires a careful selection of IT-resources used in data center. Many new devices still work very well today, even at an ambient temperature of 30 °C, provided that warranty conditions are met. As a result, they significantly reduce the need for air conditioning compared to the formerly common temperature of 18 °C in the data center. In addition, this strategy has the advantage that it leads to higher waste heat from air conditioning systems. Today, waste heat temperatures from 30 °C can be sold well.

3. Waste-heat-sale of a data center

Nowadays, waste heat temperatures from 30 °C on can be used to heat buildings, glasshouses, swimming pools, etc. While it is quite common in Switzerland to feed this waste heat into district heating grids, the expansion level of such grids is still very low in Germany and the choice of a suitable location is still very limited.

However, the complexity that results from the right combination of the above strategies also leads to a new form of service, called energy contracting. Electricity companies in particular are trying to penetrate this market with new offers and offer the optimization of energy costs as a continuous service. The DATA CENTER GROUP in cooperation with its partner MVV offers particularly innovative services. These range from energy contracting and the integration of energy facades into the building design to light contracting in the data center. Although energy costs are by far the most important factor in data center operations. Data center expansion is, of course, also based on a number of other parameters, such as the access speed of data centers resources or the organization of data centers that will increase significantly in importance. The reason for this is mainly an unstoppable megatrend in the IT: the spread of the so-called "Internet of Things".

IoT, short for "Internet of Things", links everyday items directly to the internet and therefore to programs in data centers or clouds. Refrigerators therefore report unsolicitedly whether the expiry date of yogurt has been reached, heaters receive information about where the occupants are at the moment and lower the temperature when they are not in the room and cars tell other road users where they are driving to avoid collisions. Many of these IoT applications require real-time communication so that they can do their task properly. For example, it is important for vehicles to react within a few milliseconds to the reported collision risk of another road user. Conversely, this means that data must be transmitted and processed within milliseconds. At this point, a new problem for data centers comes in: IoT data centers must basically be able to trace cars.



**The core market for
IT infrastructures is moving at an
unprecedented speed!**

This "descending" of data center resources will be enabled by new software technologies called software containers. They contain program parts that can be moved from one computer to the next through the internet and then run on the new computer within a very short period of time. This technology is supported by the new 5G mobile radio standard, which will offer 1 Gbit/s bandwidth with a maximum signal runtime of 1 millisecond to the next router. But how does information get from the router to the next data center? Even between Darmstadt and Frankfurt, the transport of an internet package still takes 30 milliseconds through a fibre-optic cable.

In the future, we will need a lot more and a lot smaller, more distributed data centers that are able to control the software containers. But how do you manage all these small data centers? And how do you ensure the security of these data center?

This is precisely where the new services of the DATA CENTER GROUP come in: In addition to the planning and construction of data centers, the company also offers the financing and operation. The services range from facility management and access security to the operation of a dedicated network operation center for data center monitoring, making it perfectly equipped for future requirements.



SAFE DATA – SAFE TRIP

DC-ITSafes guarantee the availability of your travel data

■ **Tour operator schauinsland-reisen looks back on an exciting 100-year corporate history. It started in 1918 with the founding of a transport company in Duisburg-Marxloh. Over the past 100 years, the company has developed into one of the largest air travel operators in Germany, first through bus and later through air travel. Today, around 1,000 employees belong to the group of companies in numerous travel agencies, hotels and the airline “Sundair” that was founded in 2016. Since 2006, the headquarters of schauinsland-reisen has been at Duisburg’s inner harbor, which currently employs 420 people in modern office buildings.**

Today’s managing director Gerald Kassner took over the responsibility for the company in 1997 and since then has achieved double-digit sales increases each year. It was not surprising that the premises at Duisburg’s inner harbor had to be expanded already five years after moving. In the course of this reconstruction in 2011, a new solution for the IT was necessary. “We needed something more modern, which is also certified. Since we are always subject to new standards,

we had to react accordingly”, says Michael Mrugowski (Team Manager Administration and Support at schauinsland-reisen). In the search for a competent service provider, proRZ was found and the specialist for data center planning and construction was commissioned with the realization of the new IT-environment. “Despite our own well-positioned IT-department, we also consult experts on a number of issues. From the initial consultation to the planning of the finished data center - a housing with physical separation of the UPS and fire alarm/fire extinguishing systems - everything was just right with proRZ. The data center was planned by proRZ according to our requirements. Concerning the choice of IT-infrastructures, such as cooling, UPS, etc., we trusted their expertise. It all worked out very well”, says Michael Mrugowski. ➤

Since 2011 the company has grown steadily. Meanwhile, a second new building was built which was occupied in early 2018. This growth required further adjustments in the IT and a solution was searched for a backup scenario. In addition to the primary data center built in 2011, a smaller solution was installed, which that does not demand too much on-site, is flexible, cost-efficient and allows for spatial changes. "We were searching for an out-of-the-box solution. And because everything was just right with proRZ in 2010, it was clear who to refer to for the backup scenario. We told proRZ what we wanted to do and the planning process started almost immediately", explains Mrugowski.

That is why we are constantly striving to improve in order to meet the ever new challenges. IT has become indispensable. Nothing works without it. And that is why we are happy to have found a secure backup solution that can grow smoothly over the years", says Mrugowski.

“ From the first consultation over planning to the finished data center everything just went great with proRZ. “

Michael Mrugowski,
Team-Leader IT-administration and IT-support



In the end, schauinsland-reisen opted for a DC-ITSafe as a 3-way linking system. This includes a 100 % redundant air conditioning, an automatic rack fire alarm and fire extinguishing system as well as DC-Monitoring solution for alarm and energy monitoring. The DC-ITSafe has double-leaf doors and offers maximum IT-security on less than 2 m². Above all, it is modularly expandable. If the IT continues to grow, Mini-Data-Centers can be expanded with little effort. Hence, it was so attractive to schauinsland-reisen.

Michael Mrugowski has been with the company for 15 years and has contributed to its growth. "When I started, I was one of less than 100 employees. In the last 15 years, a lot has happened and the rapid growth is amazing. But I am looking forward to the future. We are a very IT-oriented company and implement many steps straight away. With our two data centers, we are well prepared for the future."

"IT is constantly changing. It is the foundation of our company. We have a lot of data, for example customer data and payment transactions. Security is a key aspect. Although digitalization makes things much easier for customers, it is becoming more and more complex for providers.



» SALES:
Marco Hoffmann
Michael Kavermann

PROJECT MANAGEMENT:
Frank Knoll



Marc O'Polo

CHILL OVER WATER

DATA CENTER GROUP implements highly modern and energy-efficient DC airconditioning in cooperation with MARC O'POLO

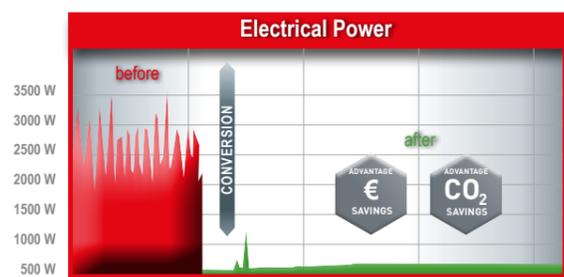
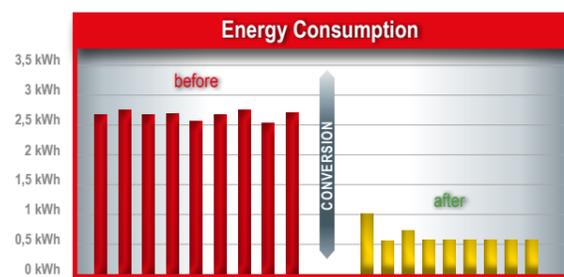


■ **What trends are in fashion, technology and not especially legal framework conditions are for the IT. What both have in common is that they are keeping up with time. To cope with ever-changing requirements, the DATA CENTER GROUP, in cooperation with fashion manufacturer MARC O'POLO, has put a data center into operation whose climate control system in this form is unique in Germany.**

Trimmed for efficiency

A special feature of the system is the free cooling, that is integrated into the chiller. This allows to cool freely as well as operate in pure compression or mixed operation - even in two stages, as a result of two turbo compressors which can compress the water vapour one after the other. These turbo compressors were specifically developed, inspected and tested for the plant. In addition, the entire plant was designed for energy efficiency. Not only pressure losses, piping or heat exchanger terminations, for example, are included. Recoolers, cold water and cooling water pumps are also very efficient. Side-coolers were installed inside the data center. Adjustable fans also made it possible to integrate a setpoint value shift. Accordingly, the sidecoolers regulate the desired value of the chiller in the outer area at low output inside, making it even more effective.

This is how the first air conditioning system with water chiller was implemented, which uses water (R718) as coolant. The aim was to use natural, resource-saving cooling agents. An innovation for data centers with a cooling capacity of 15 to 35 kW. Up to now, water has only been used as a cooling agent in large megawatt ranges. Such turbines operate in the power range of 2,000 kW. The MARC O'POLO system is compact and highly effective at the same time. Above all, however, it is ecological and sustainable. With the prospect of the F-Gas Regulation, which will prohibit certain cooling agents for new air conditioning systems from 2030 on, alternative cooling agents are already being used here and will also be permitted in the future.



To avoid a complicated conversion of the extinguishing system, a cold aisle lake was built. In contrast to a cold aisle containment, this is an area which is opened upwards. The system is regulated by cold air in the server area and only flows slightly beyond it. As with cold air in a lake, an air volume flow is generated this way. A special water treatment regulates the water filtration of the cold water and cooling water circuit by adding pure monoethylene glycol to the cooling and cold water so that the pH-value can be ideally regulated via the filter. As cold water sweats, the complete piping is made of stainless steel to prevent corrosion. No need for priming and painting.

Futuristic and promoted

Three air conditioning specialists of the DATA CENTER GROUP have installed the system continuously during four weeks of operation. Air conditioning was started as a field test. A cooperation from which both partners benefit. "MARC O'POLO can use the air conditioning system free of charge for two years. However, we can continue to expand our market leadership and test this highly efficient air conditioning in the field", explains Ulrich Mickler, technical director at RZservices, the business unit of DATA CENTER GROUP, which specializes in data center air conditioning. Due to the degree of innovation, the project is also funded by BAFA (Federal Office for Economic Affairs and Export Control). The complete power consumption of the air conditioning components is monitored, recorded and documented with a special measuring device. The data will be stored for five years and made available to BAFA.

“ The DATA CENTER GROUP has convinced us with the professional conceptual design and implementation of a back-up solution for one of our data centers. We value them as partners for the care, maintenance, repair and service of our three data centers. “

Ingo Kessler
Leader IT Service & Network Engineering, MARC O'POLO



SALES AND PROJECT MANAGEMENT:
Ulrich Mickler





ON THE ROAD WITH JOST – SECURE IT WITH BACKUP DATA CENTER

■ JOST-Werke Deutschland GmbH is one of the world's leading manufacturers and suppliers of safety-related systems for tractors, semi-trailers and trailers.

Founded in Neu-Isenburg in 1952, JOST has more than 2,700 employees nowadays and a global sales network and production facilities in eighteen countries on five continents. As a partner for the commercial vehicle industry, today almost all major manufacturers of trucks and trailers are among the customers who value the company for its quality and continuous innovations.

From Neu-Isenburg, the team of specialists of the Hessian company controls and manages the IT applications and server structures. The complete production control, but also the classic office environment must be available 24 hours, 7 days a week. To meet this high requirement, the JOST IT-team relied on a room-in-room solution from former provider Lampertz.

But at the beginning of 2016, the team headed by Stefan Endres and Martin Frischkorn faced a new challenge in terms of IT-security. With the knowledge of future growing IT-infrastructures and increasing demands on security, availability and, above all, flexibility, JOST decided to build a second data center at Neu-Isenburg which on the one hand offers new space capacity and on the other serves as a backup data center. ➤



Photosw: © János Péter Páthy Sr./fofolla.com, DATA CENTER GROUP



“ We searched for a place where our IT is secure on the long run . ”

Martin Frischkorn
Team Manager IT Administration & Operations

“We were looking for a partner with experience in data center design and implementation. On the Internet, we came across DATA CENTER GROUP. After initial discussions it was clear we had found the right service provider for professional data center construction,” said Martin Frischkorn (Team Manager IT Administration & Operations).

In the middle of the year, the search for the right location for the new data center began. Together with a consultant of SECURISK, the business unit of DATA CENTER GROUP specializing in analysis and site sorting, a variety of facilities were tested at the company headquarters in Neu-Isenburg. The requirements and dependencies of the company itself, but also those of the city of Frankfurt, for example, had to be considered. “We took time to find the best location for the new data center, because despite all flexibility that the security solutions of the DATA CENTER GROUP offered, we wanted a place where our IT is in good hands on the long run”, says Frischkorn.

At the beginning of 2017, the time had come: In the basement of a production hall, the backup data center found its new home. But how can the danger be dispelled by the adjacent paper archive and the nearby wells? What to do if the new location is set in the immediate vicinity of two of the biggest physical threats to the sensitive servers and switches? “This is where our partner’s many years of experience and know-how came to the fore. By combining compact data centers and the F90 room-in-room solution, the DATA CENTER GROUP has implemented the safest and most economical solution for us,” says Martin Frischkorn.

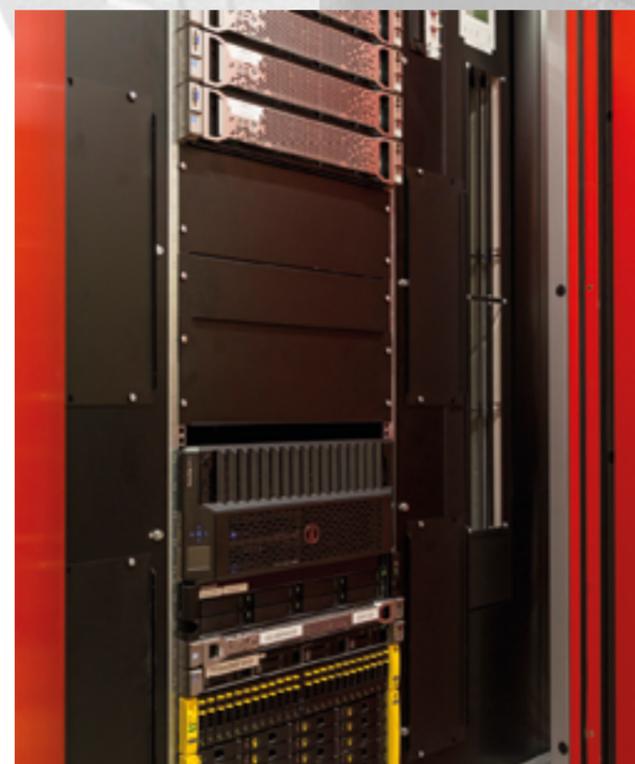
This is because of the IT components which are secured in DC-ITSafes of the DATA CENTER GROUP subsidiary RZproducts. Three of these Mini Data Centers are “chained” together. This means that the 19” racks can be wired to each other and the redundantly designed air conditioning system can be optimally adapted to current and future power levels. By means of IT-monitoring by the DCM agent, IT managers always receive all relevant up-to-date information on the status of IT-components. Should one of the defined limit values ever be exceeded, the alarm management of the DC-MonIToring immediately alerts the IT-responsible via SMS.



from left to right: S. Kattler, M. Frischkorn, H.-J. Grabe, M. Hoffmann

“We have implemented a security concept that fits our current and future IT-requirements”, says Sven Kattler (IT Administration & Operations). “In order to additionally secure the permanent availability, the DC-ITSafes are regularly serviced by the specialists of the RZservices”.

One of the JOST team’s next projects is the purchase of IT-Safes for the secure and energy-efficient storage of the decentralized hardware components of the worldwide production sites. For this purpose, the use of the “little brother” of the DC-ITSafe, the DC-ITSafe Office Edition, is currently being tested.



SALES:
Marco Hoffmann

CONSULTING:
Han-Jürgen Grabe

PROJECT MANAGEMENT:
Tim Klein



DC-ITCONTAINER AS BACKUP-DATA CENTER

Corrugated card board specialist Carl Eichhorn relies on security made in Germany

Currently, the site in Limburg is being rebuilt. Among other items, a brick room will be converted into a server room. Marco Hoffmann, Head of Project Sales North of DATA CENTER GROUP, points out that, just like it is at Carl Eichhorn KG, most of the customers still have structures from many years ago that need to be adjusted. Zeitz: "At the moment, we really only have a temporary solution and it was about time for some changes. Since the first project with proRZ was so successful, we asked them again.."



SALES:
Marco Hoffmann

PROJECT MANAGEMENT:
Björn Wäschenbach



■ Corrugated card board as a packaging material is indispensable in industry and in transport. The corrugated cardboard company Carl Eichhorn KG, with headquarters in Jülich, was founded in 1855 and is now owner-managed at the fifth generation. The administration is located in a beautiful old villa, which was renovated and restored in 1999. On the other side of the street, near the old paper factory where everything started in 1855, flows the re-exposed mill pond. The production site is located there. Here and at the second location in Limburg, about 250 people are employed, who produce about 180 million m² of corrugated card board per year. The company's goal is to expand this number to more than 200 million m² over the next few years.

would also quickly shut down production, because not a single pallet could be identified and one would not know, what belongs where."

To ensure reliability, an outdoor data center was built in Jülich as a backup in 2017, which is located in one of the large warehouses. "We researched online who can offer finished server rooms and, in the end, decided to go with the proRZ offer. Concept and price simply convinced us", says Zeitz.

“ Because the first project with proRZ was so successful, we asked them again. “

The outdoor data center is a flexible solution that can be moved easily if required and can also stand outdoors. "When it comes to flexibility, this solution is unbeatable. Simply disconnect the cables, move the container and re-attach the cables. Besides, we do not know if we might still need the space in the hall and we are glad that we could simply put the data center outside," says Zeitz. The outdoor data center of the QuartzITe-Outdoor 9.0 model was set up as an IT server room. The container has three 19" rack systems with 43 HU, cooling on cold base 1 + 1 with 100 % redundancy as well as a DC Monitoring DCM agent, fire extinguishing system and early fire detection. Outside the hall there is emergency standby power system (ESPS) for emergency power supply.

The corrugated card board is mainly used by transport companies, in the manufacturing industry, but also in the food and beverage industry. From an ecological point of view, Carl Eichhorn KG is a pioneer: 80 % of the corrugated card board produced is made from waste paper and its own photovoltaic plants generate part of the electricity required for this purpose.

According to Achim Zeitz, Head of Organization and Data Processing at Carl Eichhorn KG, a lot will happen in the next years. Above all, a new logistics area is to be created in Jülich. "Because of the growing structures, and in order not to endanger our operations, we urgently needed a backup solution. Because if our IT fails, it can lead to a production shutdown within 10 minutes, leading to huge losses," says Zeitz. "Moreover, a problem within the IT-infrastructure, even if it is just the internet access,

In the course of the year, a DC-IT safety panel system, type QuartzITe-SPS 9.0, will be built in Limburg. It is equipped with two 19" rack systems of an air conditioning and refrigeration split system with 100 % redundancy and an emergency power supply system. It also includes a NOVEC 1230 extinguishing system, a fire detection system and the DCM Agent Monitoring system DCM Agent.

"The Conditions for both projects were ideal, in Jülich only a few lines had to be laid and in Limburg it is even easier. The flexible container solution could be implemented easily and we are very satisfied with the final result. The cooperation with proRZ went really well from start to finish", says Zeitz about the handling of the projects.

“ The concept and the price simply convinced us. “

Achim Zeitz
Head of Organization and Data Processing





NIEDERÖSTERREICHISCHE KULTURWIRTSCHAFT GESMBH, ST. PÖLTEN

IT-Safes with artistic content



from left to right: Josef Bandion and Thomas Karner, IT Manager of NÖKU

■ The "Niederösterreichische Kultur Gruppe" (NÖKU), superior authority of more than 30 artistic and scientific institutions of Lower Austria, relies on the compact data center solution of the DATA CENTER GROUP.

In the protected basement of the central, largest as well as most modern State Museum in St. Pölten, Austria, a new data center area, namely a DC-ITSafe solution with a high level of technical equipment, was installed. This solutions fulfils the requirements with regard to fire protection, burglary protection and secure operation of central IT according to the latest standards of technology.

Sensitive data from research, science and administration of the cultural locations nationwide can now be found in this regulated safe place. The operator is pleased after the intensive and internal pre-planning phase about the fast, efficient and smooth implementation of the overall arrangement.

The proRZ Rechenzentrumsbau Austria GmbH has already been allowed in the preparation of a planning assignment for the evaluation of requirements of the operator as well as advising on the technical requirement with location selection.

"Many thanks to the team of proRZ Austria for the ongoing cooperation and technical consultations in the pre-planning phase and the organization of the smooth project implementation in a very tight timeframe."

Thomas Karner, IT Manager and Internal Project Manager



SALES:
Helmut Hermann

PROJECT MANAGEMENT:
Johann Pflüger

SCOPE OF SERVICES:
- DC-ITSafe Mini Data Center Duo / 2 x 56 U

- automatic rack fire alarm and fire-extinguishing system

- DCM monitoring system Detection with GSM

- Rack inverter cooling system IST-DX-R 2 x 3.3-8.1 kW (1:1/100 % redundancy)

CONSTRUCTION TIME:
1 week



background pictures: © NÖKU



INTERNATIONAL NETWORKING PERFORMED BY COMPETENT PARTNERS

Swiss customer relies on security made in Germany

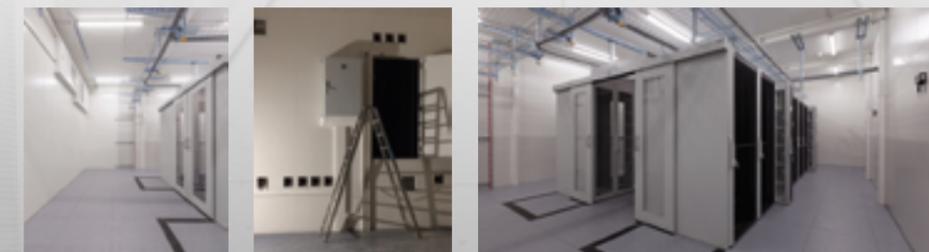
■ The DATA CENTER GROUP has been working with the Lescom AG for several years. The competent partner for solutions in the fields of electrical engineering, security technology and computer centers is headquartered in Ueberstorf near Bern. The Swiss company was founded in 1978 and currently employs about 40 people.

Based on the partnership, a project was realized for a Swiss customer who does not want to be named for safety reasons. In the newly constructed building of an international biopharmaceutical company, a certified room-in-room solution had to be integrated.

From the first offer in April to the final offer in September, various meetings and arrangements were held in order to find an efficient solution that meets the customers requirements. Finally, the customer chose RZproducts, modular room-in-room DC-ITRoom QuartzITe 9.3 system for protection against essential physical dangers. As early as December, the room-in-room solution was delivered and at the beginning of March, the entire system was installed and ready for use.

The DC-ITRoom QuartzITe 9.3 protects against fire, explosion, debris, burglary, vandalism, water, dust, eavesdropping, noise and corrosive gases. The quickly demountable system consists of wall, ceiling and floor elements as well as a service-friendly and innovative cable and tube entry system. Pneumatic overpressure valves for pressure relief during the use of the extinguishing system are integrated as well as electrical climate control valves for aeration and ventilation. Structural IT protection is provided according to Bitkom data center category B, BSI and EN 50600. The room-in-room solution has a size of approx. 65 m² and accommodates a total of 16 IT-racks, which are cooled by using InRow-cooling systems.

"Working with RZproducts went smoothly and efficiently as usual. We found a partner whose expertise we can rely on and with whom we can completely satisfy the end customer. Sometimes you just have to band together to get an even better result," says Jürgen Kromer, CEO of Lescom AG.



SALES:
Peter Wäsch

PROJECT MANAGEMENT:
Markus Böhrer

STERLING AND WILSON

DATA CENTER GROUP starts German-Indian cooperation



■ **The Indian IT-market has been growing continuously for years. That is one reason why the Indian CeBIT regularly takes place in Bangalore. Bangalore is not only the capital of the state of Karnataka, but also the capital of India's IT-business.**

In 2015, RZproducts was present with its own booth for the first time and first contacts with potential partners and interested parties were made. Also, RZproducts laid the foundations for a cooperation with Sterling and Wilson, which at that time had expanded its portfolio towards data centers and founded their own business division.

Sterling and Wilson's current annual revenue is over \$ 1 billion, the group's total revenue is over \$ 30 billion. In addition to Southeast Asia, the group is also active in the Middle East and Africa. The company, located north of Mumbai, has a modern factory in which three own product lines are developed, produced and tested. These include, on the one hand, electrically control

cabinets with complete cabling in all sizes, including large-scale projects like airports. On the other hand, emergency power plants or generators from 250 kVA to 3 MVA are produced there. Sterling and Wilson is the largest generator manufacturer in Asia for this size class.

In addition, Sterling and Wilson offers container solutions for the containment of own and third-party infrastructures. Apart from its own product lines, the range of solutions includes the manufacture of solar parks - as one of the world's largest manufacturer - as well as the planning and execution of complete building electrification. In addition, Sterling and Wilson acquired an Italian company last year that manufactures, sells and installs CO-generation solutions based on gas turbines.

In the course of getting to know each other and visiting reference customers in both countries, it was obvious to both companies that the clearly existing synergies should be meaningfully combined based on a cooperation.

Both companies were represented at the MEE, the Middle East Electric Exhibition, in Dubai, where the cooperation of both companies was sealed by Managing Director Ralf Siefen and General Manager Kurshed Daruvala.

The product portfolio of the RZ-Products GmbH perfectly combines the range of services offered by Sterling and Wilson and helps the company to become even more successful as a full-service provider for infrastructures in the Asian region.

The key factor for an intensive and long-term cooperation was, in addition to the security solutions by RZproducts made in Germany the know-how and many years of experience of the DCG's employees, who can train and support the Sterling and Wilson team in all aspects of data center sales via video conference or on site. On the other hand, the DATA CENTER GROUP benefits from Sterling and Wilson's strong presence in the Asian market and the availability of cost-effective NEA solutions for data centers outside Germany and Europe. There are already initial approaches for projects in India, Egypt, Bangladesh, Indonesia and Bhutan. And shortly, the DATA CENTER GROUP expects the assignment of a first project with an approx. 160 m² DC-ITRoom QuartzITe in Bangladesh.

Impressions of the first joint fair of both partners in March 2018 in Dubai with a joint exhibition stand



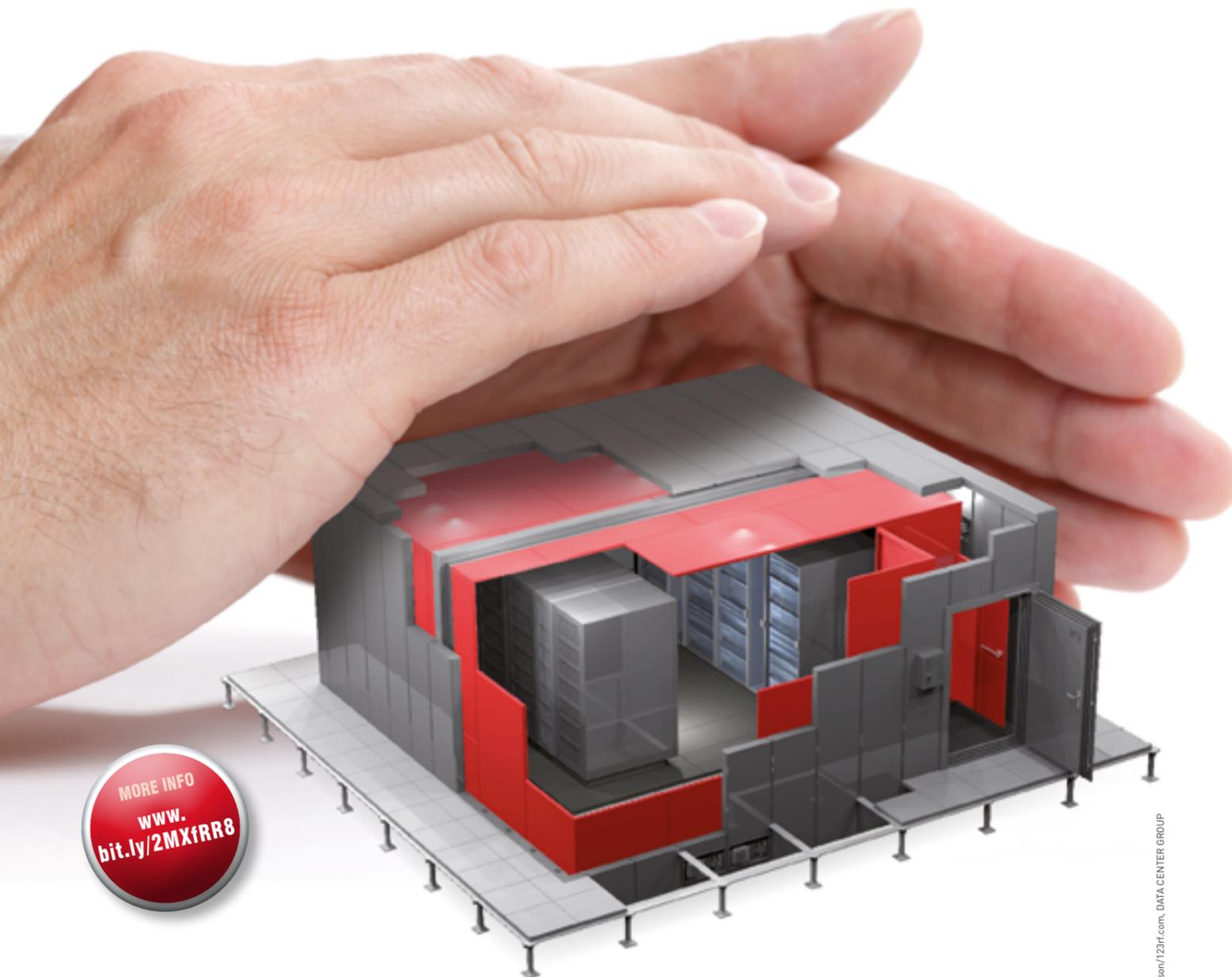


ENELPS

MAXIMUM SHIELDING

■ At the end of 2017, EnelPS d.o.o., partner of the DATA CENTER GROUP in Serbia, was commissioned by a public sector institute to set up a high-availability data center with electromagnetic shielding.

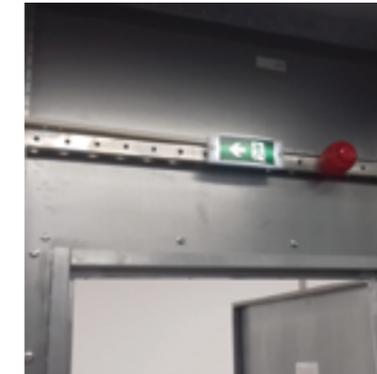
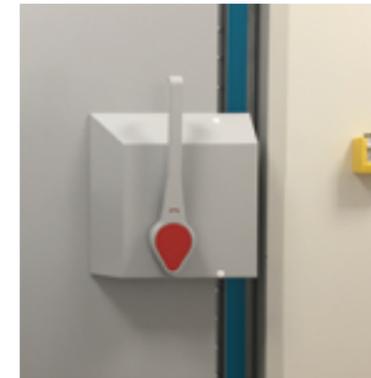
The customer demanded an EM shielding of at least 120 dB in the 400 MHz to 6 GHz range according to IEEE 299 for its new data center. Together with its partner EMSHield, a subsidiary of Albatross Projects GmbH, which focuses on architectural shielding technology, an effective solution was designed.



Photos: © Brian Jackson/123rf.com, DATA CENTER GROUP

The high-frequency shell protects the IT against electrical and magnetic interferences from the outside as well as from the inside.

The Project processing went on without any problems. First, a fire protection cabin was built, which can be extended and remounted. After that, EMSHield installed the DC-ITShielding solution within just three days.



This high-frequency shell protects the IT against electrical and magnetic interferences from outside as well as radiation from the inside. It offers a guaranteed shielding attenuation value up to 40 GHz and a modular design with 2 mm thick sheet steel modules.

In addition, it is BSI compliant and system tested to EN 50147, NSA 65-6, IEEE-STD 299. To enable cables and tube entry for cooling, power and data into the room, suitable filters were integrated and guarantee almost 100% (99.99%) shielding.

After final measurements, it was found that the shielding efficiency was even greater than expected. It reached 131 dB in the 400 MHz-6 GHz range according to IEEE 299. The Serbian customer is now certain that potential attackers cannot gain access to the sensitive data and that the data is safe against electromagnetic hazards.

SALES:
Pablo Garcia



MORE FEATURES FOR YOUR SECURITY!

DC-ITSafes offer new equipment options for even more security, flexibility and order in the world's safest Mini Data Center



■ In addition to the already widely available accessories catalog for DC-ITSafes, RZproducts now offers a selection of new functions and equipment components. This allows customers to set up their Mini Data Center even more flexibly and application-specifically.



1

More access security

Mobile TeachIn offers App-controlled access security control

- electronic code card fitting
- Access management via smartphone and free Android app
- comfortable, safe and easy
- Communication only via NFC interface



2

More availability

Unique, autarchic UPS-solution within the safe

- Integration of 19"-UPS, including batteries in the safe
- Special batteries with degassing function and gas discharge via hose system to the outside
- Space requirement 3/4 HU (depending on performance)
- 5 power levels
- Autonomy times from 60 to 120 minutes



More flexibility

Fire protection sleeve for customer wiring

- Opening and closing the sleeve without installation/cost
- constant security with maximum flexibility
- Max. Cable bundle diameter of 86 mm
- 2 fire protection sleeves are now included in the standard scope of delivery

3



More cooling power

Air conditioning offers even more power

- additional power levels 4.9-11.5 kW, 5.5-14 kW and 6.2-15 kW
- redundant and non-redundant design
- optionally available with environmentally friendly cooling agent R32

4



More monitoring

New DCM Detection

- Sends fault messages via e-mail and SMS
- 12 digital inputs
- 4 sensor connections
- GSM/redundant power supply (optional)

5



More Order

No tangled mess of cables

- Cable Management Systems
- Cable Routing Solutions
- LED lights
- Camera Systems
- etc.

6





ISO CERTIFICATION: WHO STANDS STILL FALLS BEHIND

■ There are a number of multiple reasons for companies to seek an ISO 50001 certification. Essentially, it is about increasing energy efficiency: in order to achieve our own sustainability goals and to reduce CO2 emissions and ongoing energy costs. Certification may also be attractive in terms of funding opportunities.

Is your company already ISO 50001 certified or is it aspiring? In principle, every company can be certified, because an energy management system according to ISO 50001 is independent of company size and branch. There are two ways in which a company can integrate the energy management system:

- As a stand-alone management system, independent of other certifications.
- As an addition to an existing management system, such as an environmental management system in accordance with ISO 14001 or a quality management system in accordance with ISO 9001.

Clear legal requirements

Since October 2017, companies with a certified energy management system have been required to demonstrate that they are continually improving their energy-related performance. If this cannot be verified, the certificate may be retreat. This innovation is not based on the ISO 50001 itself, but on the DIN EN ISO 50003. It is essentially a help for auditors and certifiers. But it also regulates that auditors will have to monitor and confirm the improvement of energy efficiency in the future.

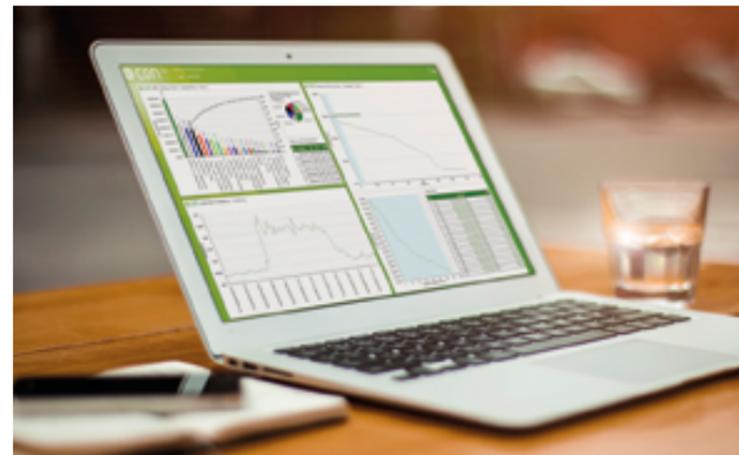
Sustainable improvements

Therefore, companies must demonstrate through measurable results in both initial and re-certification that they are continuously improving their energy efficiency. They can decide for themselves how to provide the required proof of efficiency.

The standards ISO 50006 (guidelines on energy performance indicators) and ISO 50015 (guidelines for measuring and checking energy-related performance) provide assistance in this regard.

The right software makes it easier to get started

In practice, the proof will not only have to be provided with calculation approaches. Meaningful parameters can be achieved more easily with continuous and, in some cases, even with temporary measurements. In essence, companies should select a suitable measurement technology that collects all relevant energy data. A Software for the creation of suitable key figures is also a good solution.



A system that conforms to the DIN EN ISO 50001 standard, such as the one provided by MVV subsidiary Econ Solutions, gives companies the decisive edge and makes it easier to get started quickly with effective energy monitoring. An ISO 50001 assistant supports all necessary steps and preparations for initial and re-certification. It is integrated in the "econ sens3" energy and power meter.

MVV is one of the leading energy companies in Germany that is consistently pushing ahead with the expansion of renewable energies and the strengthening of energy efficiency. MVV has been a shareholder of the DATA CENTER GROUP since 2018. The bundling of competencies offers customers tailor made solutions for energy-efficient data centers.



Seven reasons for energy management:

- Those who consume less energy reduce costs and increase the competitiveness of their company.
- Sustainability is increasingly changing from an "image factor" to a decisive factor for securing the future. Many customers pay attention to whether their company operates in an environmentally friendly and resource-conserving manner.
- The recording and analysis of energy consumption with an intelligent energy management system provides the necessary transparency.
- Clear display, graphics and key figures show you everything you need to know in order to optimize energy consumption: your company's normal energy consumption, target/actual deviations, cost drivers such as large consumers, peak loads, etc.
- You can identify potential savings, quantify the success of your measures and ensure the necessary energy awareness in your company.
- The state rewards your commitment to energy efficiency: The purchase of an energy management system is supported by BAFA. Companies in the manufacturing industry also benefit from tax relief if they comply with ISO 50001.
- Energy management systems such as Econ's refinance themselves in a very short time thanks to the energy savings achieved. The systems can be easily integrated into the existing infrastructure and work producer-independent thanks to open interfaces. First results are obtained in the blink of an eye.

GENERAL DATA PROTECTION REGULATION



■ On May 25th, 2018, the General Data Protection Regulation came into force, which affects all companies that work with personal customer data. The existing data regulations have been tightened up and bring many innovations with them. This article informs about technical organisational measures for data protection as well as legal consequences.

Whoever collects, processes or uses personal data must take technical and organisational measures (TOMs) to protect this data. This is stipulated in paragraph 9 of the Federal Data Protection Act, which requires measures that are proportionate to the intended protection purpose, from access control to availability control.

Access control includes measures that regulate access to computers and systems by means of authentication, e. g. user identification by password or fingerprint. Certificate-based access authorizations are just as effective. Access and availability controls ensure that only authorized users are allowed to use the facilities and various content. Furthermore, attention must be paid to availability, as personal data must be protected against accidental disturbances or losses. These include fire protection measures, overvoltage protection, UPS, virus protection concepts and a well-planned backup concept.

„At least since its entry came into force, IT-managers and data center operators must implement the technical guidelines of the European Data Protection Regulation (EU-DSGVO). However, the market already offers plug-and-play security solutions in the form of Mini Data Centers or compact data centers that securely protect one to four racks. Those who fall back on certified solutions tested by independent testing institutes are well prepared for the future“, says Daniel Schumacher.

According to the law firm Watson Farley & Williams, the company's internal data processing processes must have been adapted to the new regulations by May 25th, 2018. Failure to do so could result in fines up to 20 million euros or 4 % of the annual sales worldwide. The changes concern information duties and strengthening of the rights of the persons concerned, order data processing (ADV) as well as documentation and accountability duties.

Firstly, subjects, whose data is processed (e. g. customers, employees and business partners) must be informed in much more detail about the data processing procedures and the data subjects rights in the future. In addition, order data processing (ODP), meaning that a company commissions another company to process personal data in accordance with instructions, is an everyday constellation, especially in the digital environment. These include, for example, the hosting of websites and applications or the maintenance of IT-systems. Unlike in the past, under the GDPR several companies may also be jointly responsible for data processing (so-called "Joint Controllership") now. Furthermore, companies must not only ensure compliance with data protection regulations (data protection compliance), but must also be in a position at all times to document this to the responsible supervisory authorities. From now on, a processing directory must be kept of all data processing operations with information specified by law (Art. 30 GDPR).

For further information regarding the new General Data Protection Regulation and questions about the concrete effects on your company, the competent advisors of SECURisk are at your disposal.

“ Access control primarily includes building security, which is divided like an onion. The outer part can be secured by fences, walls or video surveillance and the inner ring refers to the security of the individual rooms. Possibilities for safety equipment are safety and code keys, chip card readers or alarm systems. “

Daniel Schumacher
Member of Berufsverband der Datenschutzbeauftragten Deutschlands (BvD) e.V.,
Data Protection Officer of the DATA CENTER GROUP



CURTAIN UP!

Making-of: The new corporate film of the DATA CENTER GROUP



■ Pictures say more than 1,000 words. Moving images, such as short videos and films, are becoming more and more part of our everyday lives. These days, we take pictures and videos with our smartphones just like that and share them on the social media, which have become part of our everyday life. The world is becoming increasingly digital and we are supplied with the latest information via the Internet and television everywhere and all the time.

From this thought, the idea for an image film developed last year. Actions followed quickly and so the first image film in the more than 12-year history of the DATA CENTER GROUP was produced. It is made for all interested parties, customers and partners, both in Germany and abroad.

In the first step, the storyboard, the script of the film, was created. Since the success of the DATA CENTER GROUP is primarily based on the know-how, experience and commitment of the employees, they definitely had to be part of the film. After several attempts, which literally fell into the water, the shooting started in spring at the company headquarters in Wallmenroth. In the finished film you can see our experts planning and consulting. For the "DCG film stars" it was mostly their first encounter with a professional film team. But with the support of director, camera operator, sound engineer and assistant director many gigabytes of good material were created.



Photo film roll: © pbombaert/fotolia.com

But what would a film about a specialist for planning, realization and operation of data centers be without pictures from a modern data center? Hence, we had to select a data center, which we could present in the film. Thanks to the friendly support of one of our customers from Saarland, many "live" pictures were created, which are now an important part of the film and give a good impression of what a finished data center, with all its components, can look like.

Shortly afterwards, the image film premiered and was presented to a large audience. In the meantime we have received a lot of positive feedback on various channels, for which we are very grateful.

We would like to thank all employees and the HDW team for their passion for the concept, the delight in the project and the commitment during the shooting on the weekend. A big thank you goes also to our managing directors, Ralf Siefen and Thomas Sting, for their support of the film project. We now know that it is not as easy as it always looks on TV.

Have you become curious? Then take a look at our 4-minute image film and experience the DATA CENTER GROUP, with all its know-how and the entire solution portfolio, in sound and vision. We present our five business units and give you an insight into our day-to-day business.



YOUR SECURITY IS OUR JOB

In order to meet the requirements of IT-managers even faster and more competently, the DATA CENTER GROUP has expanded its sales team with extensive, technical and market-specific experience from further experts.



Richard Pimper

International Sales Director
Middle East and Africa

Richard Pimper originally qualified as a chartered surveyor. Richard has specialised in data center, real estate and business services outsourcing. He has a lot of experience in the IT-sector, property and in facilities management worldwide.



Markus Schmidt

Consultant International Sales

Markus Schmidt has been a member of the DATA CENTER GROUP team for many years. He has a lot of experience in design, product development and construction and know-how about international sales of data center infrastructure solutions, high-security rooms, etc.



Pablo Garcia

Sales Director Eastern Europe

Pablo Garcia is a professional with more than 15 years of experience in the IT-industry as an International Sales and Division Director, with in-depth knowledge of the Data Center Industry and experience in Europe, Middle East, Africa and India.



Madlen Schwehr

Sales assistant

Madlen Schwehr came from the Baltic sea to the Westerwald. She has been the "soul" of the sales team since March. Madlen Schwehr is the central contact person for customers and interested buyers from all over Germany.

Photo: © jannoon028/freepik.com

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Security Newsletter

Always up-to-date about the security for your data center. Subscribe to our newsletter now!

CALENDAR

October 9th-11th
trade fair itsa,
hall 9, booth 511
it-sa – Europe's leading trade fair for IT security
Nuremberg, Germany

November 7th-8th
Messe DATA CENTRE WORLD,
Stand 585
Frankfurt, Germany

We offer free tickets for some events. More information on our website in the section Fairs/Events

IMPRINT

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WE PROTECT IT!

DC MAG – A MAGAZINE OF THE DC-DATACENTER-GROUP GMBH

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