



CASE STUDY

How XUP by Xopero helped the CEZ Group to build a data protection strategy against any cyber-sabotage

CEZ Skawina S.A. Power Plant

Infrastructure

A complex, restricted environment where a DMZ network is secured and very few hosts have any connection with each other.

Challenge

Securing technological processes from cyber attacks and ensuring business continuity.

Solution

An *all-in-one* product that combines backup software, management console, disk array, deduplicator and archiver.

CEZ is one of the largest businesses in the Czech Republic and one of the leading European Energy Groups that operate in Western, Central, and Southeastern Europe and Turkey. The company is focused on the production and distribution of electricity, thermal energy, as well as coal mining within the principles of sustainable development and a pure clean energy strategy, which assumes decarbonization, the development of nuclear energy, and the increase in the use of renewable energy sources.

CEZ Skawina Power Station is one of the largest industrial companies in Southeastern Poland and the second-largest heat supplier for Krakow, as it covers about 25% of the heating demand in the mentioned region. What's more, the company's shares are listed on the Prague and Warsaw Stock Exchanges, which only confirms the significance and stability of CEZ Skawina Power Station on the market.

The challenge

To be able to protect its technological processes against damage and data loss as a consequence of intentional sabotage attacks, the company needed automated backup software.

CEZ Skawina Power Station is an energy company, which belongs to the sector of critical infrastructure that is responsible for the functioning of cities, regions, and countries, so to say, the sector that makes people depend on its operation. With this strategic importance for the economy and geopolitical situation, energy companies are highly appealing targets for cybercriminals. Only during the last year, we can see an increase of over 10% in the number of attacks on critical infrastructure. According to CERT research, about 14% of all attacks in Poland are targeted at the energy sector. For years, it has been the most targeted industry among threat actors.

Solution

Considering how important its services are for the economy, the CEZ Group regularly invests in new technologies, processes, science, and research, including cybersecurity tools. Thus, to protect its critical infrastructure against potential attacks and data loss, and to ensure the business continuity of its operations, CEZ Skawina chose Xopero Unified Protection, a backup & restore solution.

Xopero Unified Protection



The choice of solution was determined by Xopero's flexible approach to the possibility of modifying the solution to adapt to our needs and efficiently implementing the test version.

Paweł Kozieł, ICT Specialist

Automation and Asset Management Department of TMA

All-in-one solution:

- backup software,
- management console,
- disk array,
- deduplikator,
- archiver in one.

Xopero Unified Protection is one of few solutions on the market that **combines a reliable disk array, archiver, and deduplication opportunities with a hermetic backup system accessible within single central management.** Such a comprehensive solution permitted the company to avoid the need to continue looking for several suppliers which will be able to fully protect the company's critical infrastructure.

CEZ Skawina Power Station uses Xopero Unified Protection hardware backup to protect its OT industrial network, including processing stations, operator stations, and servers that control the electricity and heat generation process.

Environments we secure



Endpoints



Servers



Data bases



VM



Implementation

CEZ, as one of the leading energy groups, has a very restrictive infrastructure: the DMZ network is secured, and few hosts have any connection with each other. In order to meet such a complex and dispersed infrastructure, Xopero had to both provide backup equipment and carry out a custom implementation, as the entire device configuration was done from scratch. That's why, the Xopero team was present at every stage of the implementation, both on-site and at the plant's headquarters.

Taking into account the limitations of the infrastructure, the implementation was smooth yet required time. As a result, **thanks to the atypical and individual approach the Xopero engineering team offered, they managed to extend Xopero Unified Protection with an additional SFP + fiber optic module and adapted the device to operate in a specific and demanding power plant environment.** Moreover, to meet the requirements of the CEZ Skawina Power Station, the Xopero team carried out a complete setup, e.g. setup of network interfaces and their adaptation to functioning in a limited DMZ network.

At the test implementation stage, every functionality was thoroughly examined. This procedure served the dual purposes of verifying the solution's effectiveness and dependability

Xopero Unified Protection



Security

The company needed a solution that would not only ensure an effective backup of its data but also protect its data against potential breaches. Thus, immutable storage was a game-changer here, as it prevents data from being modified or deleted from the storage, making the company's storage resistant to encryption attacks.

Disaster Recovery

Xopero Bare Metal Restore is significant convenience for a company with such a dispersed infrastructure as CEZ to have the possibility to restore the data in remote locations.

Xopero-exclusive Flexible Drive Restore technology permits you instantly restore a disk image in the VHD, HDX, VMDK, and RAW formats and create a virtual machine.

Thanks to Instant Disaster Recovery, now CEZ's team has confidence that in the event of a failure or data loss, they would be able to quickly and efficiently restore the system, minimizing RTO and RPO times and ensuring process continuity.

and customizing it to the unique specifications of the power plant's processes and infrastructure. Before the final implementation, the CEZ Group was able to confirm the functionality and effectiveness of Xopero Unified Protection thanks to the PoC procedure. The Xopero engineering team's support was crucial at this stage. It enabled the customer to understand and use the full potential of the solution in the most effective way.

Thus, the backup provider proved Xopero Unified Protection is an all-in-one solution that combines backup software, a management console, and a disk array and gives the possibility of deduplication and archiving. So, the customer had no need to carry out several implementation processes, search for hardware and adapt the software to it. Considering the complex and dispersed nature of the IT infrastructure, it saved countless hours of the Xopero team's work.

Guaranteeing Disaster Recovery and Business Continuity

The security management team's priority was both to automate processes of backup and restore and to reduce the time they need to spend on performing those procedures. Therefore, the team carefully verified the possibility of immediate data recovery for the uninterrupted operation of the power plant.

Another important technology was Bare Metal Restore, so to say, the ability to remotely restore a disk image from a bootable medium without the need for any physical action at the damaged station. It turned out to be a significant convenience for a company with such a dispersed infrastructure as CEZ to have the possibility to restore the data in remote locations.

Xopero-exclusive Flexible Drive Restore technology permits you instantly restore a disk image in the VHD, HDX, VMDK, and RAW formats and create a virtual machine. Later, if the need arises, it will be easier for you to transfer control to a virtual environment and will greatly reduce the time it takes to restore the environment to its full functionality for Disaster Recovery. What's more, this functionality allows you to avoid spending any extra costs on purchasing additional servers or workstations, which would be redundant and unused most of the time.

Thanks to Instant Disaster Recovery, now CEZ's team has confidence that in the event of a failure or data loss, they would be able to quickly and efficiently restore the system, minimizing RTO and RPO times and ensuring process continuity.

Security first

The CEZ team considered the supplier's approach to data security to be a crucial factor in their decision-making process in favor of Xopero backups. The company needed a solution that would not only ensure an effective backup of its data but also protect its data against potential breaches.

Thus, immutable storage was a game-changer here, as it prevents data from being modified

1

Complex
infrastructure?

2

Customized
implementation?

3

Specific
security requirements?

We will help you
choose a solution
that perfectly fits
your needs



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or deleted from the storage, making the company's storage resistant to encryption attacks. It means, that if the company adds files to its storage in non-executable form, the possibility of spreading the ransomware in the storage is eliminated.

The organization also values the encryption options Xopero Unified Protection provides. So, thanks to the possibility to use the AES algorithm, the option to choose an appropriate level of encryption, the ability to set its own encryption key, in-flight and at rest encryption, and zero-knowledge encryption, CEZ has got full control over the confidentiality and its data security.

Another priority is the ability to manage credentials, add more users and control their permissions and ongoing monitoring. Specialists from CEZ emphasize that thanks to the security functions mentioned above, they have gained confidence that their critical data has been effectively protected and any attempt to compromise them is technologically impossible.

The results of implementation

Before implementing XUP, system backups had been performed in an unsystematic manner - sporadically, without a specific schedule.

With Xopero Unified Protection, backups are performed automatically in accordance with a set schedule and policy that have been completely tailored to the capabilities and requirements of the CEZ infrastructure. The central control panel ensures that the backup process is fully monitored and keeps track of every action taken in the system. Daily reports consequently facilitated security audits and significantly cut down on the time necessary to manage the backup solution.



Simple, intuitive management panel, numerous options for customizing plans, user groups, backup types, and an appealing system for displaying statistics of backup copies - it's just a quick glance; we can be sure that everything is protected.

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Furthermore, Xopero Unified Protection offers easy scalability, allowing you to add more devices as replication arrays. Thus, the CEZ group can adapt the solution to the changing needs of their infrastructure.