

Case Study

Azienda Energetica Reti – Etschwerke Netz

»The technology of Fujitsu PRIMERGY BX900 blade servers has allowed us to develop our data center, assuring scope for future growth and consolidating our resources in a considerably smaller space.«

Massimiliano Baldessarini, Network and System Administrator, Azienda Energetica Reti – Etschwerke Netz



The customer

Azienda Energetica Reti – Etschwerke Netz, also known under the trade name of AEWnet, manages and measures electric power distribution in numerous municipalities of the Alto Adige region. It is also responsible for maintaining, upgrading and extending the public lighting network for the area around the cities of Bolzano and Merano. The company is part of Azienda Energetica – Etschwerke Group, an important firm in the Alto Adige area, which formed in 1897 and operates – directly or through its subsidiaries – in the generation, transport, distribution and sale of electric power, as well as the distribution and sale of gas and heat.

The challenge

Opportunities for modernization and innovation inevitably also involve the rationalization and consolidation of the existing technological infrastructure. In 2013, Azienda Energetica Reti decided to overhaul the main components of its data center so that it could take advantage of the benefits of virtualization. “Apart from having a server room crammed full of physical machines,” recalls Massimiliano Baldessarini, Network and System Administrator, Azienda Energetica Reti, “not all of the resources were located in the data center, which made management more difficult. Furthermore, the systems had reached the end of the natural technological life cycle.”

The solution

The modernization of the Alto Adige utility's data center hinged on certain priority criteria, namely system expandability, load management and load balancing capabilities and the potential for consolidation of the resources in a significantly smaller space. “In blade configurations we had found the ideal solution to satisfy our requirements,” says Baldessarini. “We opted for the Fujitsu product because it covered all the priorities that we had identified, providing us scope for future growth, as well as offering a cutting-edge technological platform and notable ease of management, both on-site and remotely.” Specialist Advnet consultants made a significant contribution during the configuration analysis and planning phase, while the capacity for integration with storage and networking components was a further advantage.

The customer

Country: Italy
Industry: Utilities
Employees: 215
Website: www.aereti.it



The challenge

IT has provided the backbone for the majority of Azienda Energetica Reti's essential processes for some time. System efficiency and reliability is a key factor in assuring the necessary operational continuity, which in turn ensures consistent service quality. The virtualization process inspired the decision to develop the data center with a view to both rationalization and future growth.

The solution

The features of the Fujitsu PRIMERGY BX900 blade server respond in full to AEWnet's infrastructure upgrade requirements in terms of expandability, load management, and optimizing the use of space and energy. The number of physical servers present in the data centers has been cut down almost by half, whereas the additional resource availability has already enabled planning to begin on new service launches.

The benefit

- Substantial reduction in the number of physical servers in the data center
- Optimization of spaces and costs linked to maintenance and energy consumption
- Expansion capacity for integration of new services and processes

The benefit

Just one piece of information will suffice to convey the impact of the AEWnet's decision to update its data center with Fujitsu PRIMERGY BX900 blade server technology. As Baldessarini recalls: "With the preceding configuration, we had nearly forty physical servers, whereas now we have less than twenty. At the same time, we are approaching activation of 150 virtual servers, enabling us to implement new projects and services for our internal users." Essentially, technological evolution has brought improved data center performance but also ensured room for expansion, immediately translating into the potential to improve how company employees work. From an IT perspective, it was for example possible to centralize internal user management with Microsoft Active Directory. Furthermore, through the creation of virtual servers, the expansion of internal user services has already been planned, particularly as regards to remote monitoring of connections and the functioning of IT components at energy distribution plants.

The AEWnet data center modernization project began with a competitive procedure in 2013 and was completed in 2014 after a period of less than nine months, without any particular problems and ensuring complete transparency for end users. Apart from the server component, now streamlined to a single blade server working alongside four rack systems, the upgrade involved all the components of the data center, including storage, connectivity, UPS and air conditioners.

For a company that deals with electricity distribution, the issue of energy saving could seem to be of minimal concern, but that is not the case with AEWnet: "The new infrastructure also allowed us to install a new energy usage monitoring system," notes Baldessarini. "Now we know precisely how much power each component of the server room uses and this allows us to make decisions based on efficiency." The device not only ensures current and future savings opportunities, but in the same vein it is also worth noting that if the company had not gone through this consolidation process, today it would have a data center with at least sixty physical servers. Apart from continuing to expand the services provided to internal users, AEWnet is also pursuing the creation of a disaster recovery site, specifically to ensure greater protection and operations continuity for the applications considered most critical for the company. The aforementioned energy monitoring system could lead to the decision not to install an air conditioner, partly based on the typical climate of the area.

Products and services

- FUJITSU Server PRIMERGY BX900
- NetApp FAS storage systems
- VMware vSphere ESX 5.5 virtualization environment
- Warranty covering high product reliability

A further solution that has led to great benefits in terms of flexibility was the adoption of VIOM software, which can abstract the networking component from the blade server. Indeed, VIOM has enabled AEWnet to respond to various interconnectivity and security requirements for its complex and multi-faceted network infrastructure.

The AEWnet data center modernization project was physically carried out by Advnet (www.advnet.it), a Fujitsu SELECT Expert Circle Partner and IT consulting company, based in Thiene (Vicenza, Italy) and with a decade of experience behind it. The company worked side by side with AEWnet right from the start of the design phase in order to assist in identifying the best ways to meet the priority requirements through the selection of technological infrastructure. "Our approach is always based on understanding our partner's situation," explains Daniele Masi, Sales & Marketing Director at Advnet. "In this particular case, we performed very specific technical analysis in close cooperation with the client, in order to highlight the advantages of the proposed solution in terms of the potential for development, performance and energy saving." One element that contributed significantly to the success of the project was the technical experience of the Advnet staff, who showed not only a real familiarity of the solutions proposed, but also in-depth knowledge of the other architectures present in the AEWnet data center, thus making it easier to achieve the objectives and meet the project implementation times.

Conclusion

Despite being a utilities company that is limited regionally and in terms of internal resources, AEWnet had IT infrastructure streamlining and expansion requirements that are common to many public and private entities. The use of Fujitsu PRIMERGY BX900 blade servers, combined with the consulting and integration skills of the partner Advnet, allowed the company to upgrade its data center in full, with a solution that is already set up for future services growth and provides tangible results in terms of space and cost optimization.

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In collaboration with



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2015-02-17

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