

Data center infrastructure – state-of-the-art equipment for highest demands

Accelerated IT Services GmbH operates highly available data center infrastructures in Frankfurt am Main at their own site. State-of-the-art premises and generators with built-in redundancy ensure the highest standards of security, availability and data protection. Our technology area provides optimal conditions for the operation of servers and telecommunications equipment.



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Construction standards



We operate an optimal property equipped with modern and high-quality industry standards throughout long-term planning and conceptual design:

- Located in the east of Frankfurt in the immediate vicinity of the DE-CIX.
- A total of 2,000 square meters.
- Approx. 5.50m usable ceiling height.
- Complete development of the windowless technology area with 800mm raised floor for cooling and laying of cables.
- Fully non-intersecting data and power lines below the ventilation units to avoid air resistance.
- Data cable laid to CAT7 standard.
- Fire doors and walls with a fire resistance time of 90 minutes.
- Optically uniform overall picture due to the use of identical server racks with 47 height units, 1000mm depths and high perforation degree for optimal air flow.

Electricity supply



The power supply is the heart of every data center. For your and our security we only use high-quality durable components:

- Supply through redundant medium-voltage ring with a total capacity of up to 3000kVA.
- Located directly next to the substation.
- Uninterruptible power supply by Socomec Green Power USV systems with 96% efficiency factor.
- Redundant power supply situation with wither n, n+1 or 2n+1.
- Low share of losses through the use of high-scale cross-sections and particularly effective power track systems with up to 40% higher efficiency factor.
- Self-starting diesel engine with 1000kVA performance and long-term fuel reserves.
- At least two separate power feeds from separate sub-distributions per rack.
- Up to 24kW power consumption per rack.
- Measurement of consumption by calibrated meter reading that can be read remotely.
- Three-stage overvoltage protection

Cooling



Heat is a major factor in the data center. We have spared no expense or effort to create optimal conditions for efficient and reliable cooling:

- Redundant concepts with a combination of direct and indirect free cooling.
- Cold water supply through energy-saving units by Emerson Networks.
- Very high-efficiency grades by means of generous buffers.
- Ventilation through extremely efficient cutting-edge appliances by Weiss Kältetechnik.
- Primary cooling by means of suction and filtration of outside air.
- Mix of fresh and indoor air for a constant temperature level.
- 90% of the annual hours cooling is achieved by adding filtered outside air; no mechanical cooling is needed.
- Only for 9% of the annual hours a small percentage of mechanical cooling is required. The cooler outside air is simply transferred to data center level and internal exhaust air does not have to be re-cooled – only for 1% a full air-conditioning is required.
- The cold aisles are enclosed with sliding doors and roofs to avoid mixing effects.



Security & Data protection



Security and data protection are our top priorities:

- Technical staff on-site 24/7 within 10 walking minutes of the technology area
- Strict process definition according to international standards
- Data center certified against ISO 27001 standards based on the IT Baseline Protection of the BSI
- Burglar alarm systems according to VdS class C including monitoring of access doors and other alarm systems
- State-of-the-art video surveillance with high-resolution infrared cameras – 14 days recording time
- Biometric access controls
- Access to technology area only through portals with 2 protected doors
- Access to technology area only through similar secure spaces
- Monitoring of all critical components through a BUS system with direct forwarding to the control panel

Network



The network is the interface to the internet and crucial for a trouble-free IT architecture:

- Use of redundant cutting-edge Juniper MX at several locations within the VRRP group
- Design of multiple different versions of network switches with active failover in the event of a malfunction
- High-quality connectivity to the internet via three independent tier 1 providers: Deutsche Telekom, Level3 Communications and Tiscali International
- Several hundred direct peerings at a total of 4 exchange points, among others, the DE-CIX
- Total capacity of up to 80 Gigabits per second with short-term scalability.

Fire Protection



An effective and sustainable fire protection is crucial for data center operations:

- High-sensitivity comprehensive early fire detection systems for instant detection of fires with two advance alarm stages and direct connection to the fire department
- Regular smoke tests to ensure fire detection
- Modern and newly-built fire alarm system with comprehensive video surveillance of the entire property
- Portable gas extinguishing systems and fire extinguishers for firefighting
- Strict avoidance of fire loads in the data center



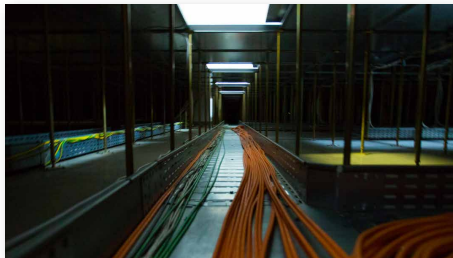
Environmental Protection



Ecological efficiency is always an important aspect of IT. In addition to issues of sustainability and vision of entrepreneurship, issues of the closely-related economic question of efficiency are essential:

- A PUE (Power Usage Effectiveness) between 1.1 and 1.15 and the world's leading energy efficiency level
- Powered by 100 % green electricity
- Immense savings through efficient direct free cooling using a secondary current share of less than 10 % during 90 % of the annual hours
- Consistent avoidance of power losses due to heat developments
- Continuous monitoring and optimization of systems for efficiency
- Use of waste heat for heat production

Service



A modern data center thrives on its technical staff:

- 24/7 staff coverage on-site by our qualified employees who, in addition to repairing servers, can also access the operating system or application level
- All staff trained in common Linux and Windows server operating systems as well as several virtualization environments
- Average response time is less than 30 minutes
- Guaranteed response time of no more than 30 minutes

Operator



In addition to other factors, gut feeling is crucial in the business world. While many of our systems are automated, we are still human:

- 10 years market experience
- Owner-managed corporation
- High level of service and customer-orientation
- Almost 100 % equity ratio
- Independently developed management software for server systems and networks
- Young and dynamic team consisting of 16 employees

