

Statement of work

WITCOM DATACENTER 1

1. GENERAL

WITCOM, Wiesbadener Informations- und Telekommunikations GmbH (hereinafter referred to as WITCOM) offers its "WITCOM DATACENTER 1" service to business customers based on the "General Terms and Conditions of WITCOM GmbH".

2. STANDARD SERVICES

2.1 General

The WITCOM DATACENTER 1 is located at Konrad-Adenauer-Ring 60 in Wiesbaden. It consists of a complex of buildings to accommodate information technology as well as utility rooms.

The premises are conveniently situated and easily accessible via the motorways A3, A66 and A643. Parking is available on site. The property is delimited by a fence system to the neighbouring property including a wall with a roller shutter. The circulation areas within the building are monitored by video. The building provides an intrusion detection system.

The building houses the customer rental areas. They are separated into two fire compartments. WITCOM provides here the rental of space and network cabinets as well as a great spectrum of computer centre services. The rooms for the emergency work stations are located in an area separated from WITCOM DATACENTER 1.

The reception area, WITCOM internal utilities, the rooms for the central, redundantly designed air conditioning system, the uninterruptible power supply (UPS), as well as the fire extinguishing system are accommodated here, too. Outside the building there is a diesel generator providing emergency power supply.

The spaces in DATACENTER 1 have a height of 2.90 m (maximum usable cabinet height is 2.30 m). A raised floor is available throughout the spaces with a height of 0.70 m and a load bearing capacity of 750 kg per m².

2.2 Power Supply

WITCOM DATACENTER 1 has an own transformer station located on the premises. It is connected to the public electricity grid on two sides and uses two transformers. This connection with a downstream UPS system secures the power supply and bridges failures in the public electricity supply, in particular in case of excess voltage, undervoltage as well as loss of voltage.

In case of a failure in the public electricity supply, the diesel generator will begin to operate. It will maintain net voltage for the period of power failure.

In addition to the customer equipment, the power supply security concept includes cooling machines, auxiliary aggregates as well as other technically relevant security systems. By using two UPS systems in n+1 order it is possible to provide a continuously redundant power supply upon demand.

Power supply within the network cabinets and cages is provided by CE approved multiple outlet strips with grounded or IEC sockets. One main potential equalization according to DIN VDE 0100, part 419/540 and one lightning protection potential equalization according to

DIN EN 62305-3 (VDE 0185-305-3) will be provided. Redundant power supply is optionally available for network cabinets. The mains consumption values are recorded by calibrated WITCOM energy meters and billed individually per customer.

WITCOM exclusively purchases green electricity from ESWE Versorgungs AG to provide the amount of electricity required for the general operation of the computer centre (air conditioning, light, WITCOM server cabinets for in-house requirements, etc.). The purchased green electricity comes from systems using renewable sources for the generation of electricity and is certified by TUEV SÜED in accordance with "CMS standard Generation EE".

2.3 Air conditioning

The spaces of the computer centre are actively supplied with cooling capacity which is provided by two completely redundant air conditioning systems: a cold water system and a cooling agent system. As the cold water system runs very effectively in winter time due to its free cooling, and as the cooling agent system is more efficient in summer time, system control, apart from the higher level of redundancy, serves to optimise the exploitation of the more efficient system depending on the outside temperature. The systems work with speed-controlled EC ventilators, this again ensures high energy efficiency within the air conditioning system.

The air conditioning system blows the generated cooling capacity under the raised floor. Through perforated floor plates it penetrates into the cold aisle. The cooling stream flows around the heat generators and dissipates the generated heat towards the back to the ambient air. The average air supply temperature control in the cold aisle is set to 22°C (+4°C / -2°C). The air conditioning devices have a modular structure and meet the n+1 principle with regard to operational reliability.

Following the international TIER III standard, cooling capacity of the computer centre's usable surfaces is set at about 1,600 watts / m².

Direct cooling is available as an option for individual network cabinets producing extremely high temperatures (hot spot racks).

2.4 Fire protection

The building is equipped with very early fire detection and extinguishing systems. All components comply with VdS Schadenverhuetungs GmbH requirements, fire protection authorities and appurtenant VDE and DIN guidelines.

The aspirating smoke system (RAS) serves to detect fire at a very early stage. Every area of WITCOM DATACENTER 1 is equipped with sensors detecting ultrafine particles which indicate fire at an early stage. The system automatically reports a triggering event to WITCOM Network Operation Center (NOC).

In addition, WITCOM DATACENTER 1 holds a fire alarm and extinguishing system. When two fire detectors signal alarm, the extinguishing system will automatically start and the Wiesbaden professional fire brigade will be alerted.

The non-poisonous extinguishing agent NOVEC 1230 will then be used. It has no colour and does not show any electroconductive characteristics.

The central fire alarm system (BMZ), the core system,

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receives all reports sent by the installed sensors and prompts pre-programmed actions. BMZ unites a control unit and the so-called fire brigade panel. BMZ takes EMC protection actions according to EN 50082-2. The centre of Wiesbaden professional fire brigade is in the immediate vicinity of WITCOM DATACENTER 1.

2.5 Building control system

WITCOM DATACENTER 1 runs a building control system (GLT system). It permanently monitors the state of power supply, air conditioning, very early fire detection as well as extinguishing system. The system automatically notifies WITCOM NOC of any defect in one of the monitored components. Same applies for a complete failure of the GLT system.

2.6 Other building protection (internal and external)

The building is secured by a lightning protection system meeting state-of-the-art standards. It provides an intrusion protection system and has video surveillance.

The use of RITTAL IT safe rooms ensures that the equipment stored in the rental areas is protected against break-in, vandalism, dust and humidity (the results of the system tests are referred to below).

RITTAL IT safe room is a system-tested steel box room construction for walls and ceilings.

The steel box elements include an outside and inside lacquered steel plate unit. They hold a flame and heat retardant core consisting of a thermal insulating substance. The elements are firmly connected applying galvanised profile technology; permanent modularity is provided.

The system test of the complete cellular construction including its module parts such as doors, cable fire stop and ventilation units delivered the following results.

- Fire protection system test:

F90 system test pursuant to EN1363 (DIN4102). In addition, F120 wall system test pursuant to EN1363, EN1364-1 (DIN4102-2) including approval by building inspection. Protection against heat, fire and flames

- Intrusion protection system test:

Resistance class RC2 pursuant to EN1627, protection against sabotage and vandalism as a system test

- Extinguishing water tightness system test:

IP 56 pursuant to EN60529, protection against water jets as a system test

- Dust protection system test:

IP 5x pursuant to EN60529, protection against dust in industrial areas as a system test

2.7 Access

Access to the WITCOM DATACENTER 1 building is provided by an electronic locking system with two-way dependency (transponder and code lock).

Inside the building, camera systems control the circulation areas under security aspects.

An external security service as well as own personnel cyclically inspect the premises.

Access details are laid down in the WITCOM DATACENTER organisational guidelines.

2.8 Telecommunications infrastructure

The building is equipped with a structured pre-wired copper and fibre optics infrastructure. High bit rate connections can be realised over the redundant optical fibre connections to the WITCOM backbone.

2.9 Availability

"Availability" means here the percentage share of a calendar year in which the infrastructure components described in this document and required for the operation of WITCOM DATACENTER will not be affected by failures impeding operation.

The availability is calculated according to the following formula:

$$\text{availability} = 100\% - \frac{\text{accumulated fault clearance times per calendar year in hours} \times 100\%}{\text{calendar year in hours}}$$

The availability (% p.a.) of the above infrastructure components is 99.95 % in the annual average in combination with WITCOM DATACENTER 2.

The service levels for the services offered at this location are separately defined in the service specifications.

For relevant details please refer also to the notification of readiness.

3. MISCELLANEOUS

To ensure smooth operation WITCOM DATACENTER 1 applies stipulated organisational guidelines. These guidelines are mandatory. They include details on access control, accident and fire prevention rules as well as rules of conduct in case of emergency.