

# Performance Characteristics of Data Center Operation

Fabasoft Cloud

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[www.fabasoft.com](http://www.fabasoft.com)

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For reasons of clarity, we have avoided using gender-specific pronouns, e.g., he/she. In the interests of equal treatment, corresponding terms apply to both genders.

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## 1 Fabasoft Cloud Locations

A Fabasoft Cloud location is an autonomous system operated in a particular country or at the location of a particular Fabasoft customer. Fabasoft Cloud locations are currently implemented in Germany, Austria, and Switzerland.

At each location, Fabasoft Cloud services operate in two data centers located at a geographical distance of several kilometers from one another as the crow flies. This enables concepts promoting disaster-resistant operation, i.e., high protection against natural disasters, to be implemented. The data centers are designed based on the Tier III specifications of the Uptime Institute.

The data centers provide Fabasoft with the necessary storage space, power, and air-conditioning. In addition, they establish the connection between the data centers and provide for Internet routing. Fabasoft orders those services from the following subcontractors:

- Austria: T-Systems Austria GmbH, Rennweg 97, 1030 Wien
- Germany: noris Network AG, Thomas-Mann-Straße 16 – 20, 90471 Nürnberg
- Switzerland: Deltalis SA, Eielen Fort DKII, Postfach 65, 6468 Attinghausen

Fabasoft Cloud Services are operated exclusively by Fabasoft.

### 1.1 Security

The data centers rely upon the following minimum security requirements:

- Electromagnetic access system
- Separation system or personnel airlock
- Video monitoring system
- Around-the-clock (24x7) monitoring of data center areas

### 1.2 Fire Protection

The data centers rely upon the following minimum fire protection requirements:

- Comprehensive fire alarm system
- Very early smoke detection
- Automatic gas extinguishing system

### 1.3 Power Supply

The data centers rely upon the following minimum requirements for power supply:

- Redundant UPS systems
- Redundant diesel aggregates
- Redundant supply
- Redundant transformers

### 1.4 Air-Conditioning

The data centers provide at least the following minimum requirements for air-conditioning:

- Redundant cooling systems

## 1.5 Connection Between Data Centers

The connection between the data centers at each location is established via Ethernet point-to-point networks. The network hardware is designed to be redundant. The connection provides for redundant paths, which are fed into each building at two different locations.

The connection between the data centers is ensured by the individual data center operators. Fabasoft is provided with dedicated Layer 2 transparent connections.

## 1.6 Implemented Hardware and Software Environment

Fabasoft protects its independence. Software products from third parties used to operate Fabasoft software products in the data center are open source products. This means that Fabasoft is not dependent on third-party providers.

Fabasoft Cloud Services are operated based on a highly available hardware environment. The hardware components used in the system are divided into primary and secondary components.

The Fabasoft Cloud Services are made available on the primary hardware components. The data centers at the German and Austrian locations house the primary hardware components and the necessary redundant components. At the Swiss location, the primary hardware components are located in a high-security data center that is designed based on the Tier IV specifications of the Uptime Institute.

Data is backed up on the secondary hardware components. At the German and Austrian locations, the data centers house the secondary hardware locations in separate fire protection areas. At the Swiss location, the secondary hardware components are located in a geographically separate data center.

## 2 Service Levels

### 2.1 High Availability

The data centers generally operate 24 hours per day, 7 days per week, 52 weeks per year. With regard to availability, the following parameters are guaranteed for each Fabasoft Cloud location and service:

- Availability of 99.9 percent for each observation period (quarter)

The availability is measured by two dedicated external measuring locations connected to the Internet via independent Internet lines. A service is considered available when at least one measurement location is able to gain access.

The calculation is made using the following formula:

$$\text{Uptime} = \text{Possible Available Time} - \text{Maintenance Downtime} - \text{Unexpected Downtime}$$

$$\text{Availability} = \frac{\text{Uptime}}{(\text{Possible Available Time} - \text{Maintenance Downtime})}$$

The calculation process excludes the availability during planned maintenance (Maintenance Downtime).

The following times are reserved for maintenance windows:

- Saturday from 12 a.m. to Monday at 7 a.m. CET/CEST.
- In urgent cases and with prior notice

These reserved windows will only be used for maintenance work as needed. Should maintenance work be required, prior notice and documentation will be provided at <https://www.fabasoft.com/en/cloudservices/system-status>.

Fabasoft shall provide a report on the availability of Fabasoft Cloud Services for each calendar month and following one month of service for the customer. This report is provided electronically and is available at <https://www.fabasoft.com/en/cloudservices/system-status>.

### 2.2 Response Time Behavior

The response time behavior for all incoming requests is measured directly at the load distributor for the Fabasoft Cloud Service using Fabasoft app.telemetry. Requests include all incoming HTTP, CalDAV, and WebDAV requests received by the load balancer.

With regard to response time behavior, the following parameters are guaranteed for each Fabasoft Cloud location and service:

- Average response time of under one second for all requests during the observation period (quarter)

Fabasoft provides a report on the response time behavior for each calendar month and following one month of service for the customer. This report is provided electronically and is available at <https://www.fabasoft.com/en/cloudservices/system-status>.

A request sent using a web browser can initiate multiple requests from the load distributor. For reasons of transparency, this report also includes response time behavior from web browsers.

## 2.3 Data Security

### 2.3.1 Fabasoft Cloud

Metadata, structured data and content/documents are saved within the framework of Fabasoft Cloud operation. Metadata, structured data and content/documents are stored on the primary hardware components at the given Fabasoft Cloud location.

Metadata and structured data are stored in a relational database system and mirrored synchronously between distributed database servers on the primary hardware components. At least once a day a full backup (database backup) of metadata and structured data is performed to dedicated backup systems on the secondary hardware components. In addition transaction logs are backed up continuously to those backup systems.

Content/documents are stored in a file system on at least three file servers in parallel (two file servers on the primary hardware components, one file server on the secondary hardware components). A complete synchronization of all content/documents to an additional backup system on the secondary hardware components is carried out once per day.

With regard to data security, the following parameters are guaranteed:

- Recovery point objective (RPO): The maximum period for which data may be lost in the case of an emergency recovery is 30 minutes.
- Recovery time objective (RTO): In the case of an emergency recovery, the time required to recover the services once the network, hardware, and software infrastructure are available is 48 hours.
- Retention time: Each backup is retained for a minimum of four months and a maximum of six months.
- Audit logs: Audit log data is stored for a minimum of 12 months.

### 2.3.2 Mindbreeze InSite

As part of the operation of Mindbreeze InSite, the generated indexes are stored in both data centers for each Fabasoft Cloud location.

In the case of an emergency recovery, the indexes shall be restored by re-downloading and indexing the necessary public website content.

## 2.4 Support

Fabasoft offers 1<sup>st</sup> Level Support for Fabasoft Cloud users. Users can create a support request at any time using the "Support" button in the Fabasoft Cloud web interface or the Fabasoft Cloud Client. Users can also contact Fabasoft Support via phone and e-mail during the specified business times:

Phone:

- Austria: +43 732 606162 300
- Germany: +49 69 6435515 92
- Switzerland: +41 31 310 06 43

E-mail:

- [support@fabasoft.com](mailto:support@fabasoft.com)

Within the framework of the support services, Fabasoft guarantees the following response times when responding to support requests:

- Response time

The response time refers to the number of hours within the specified business times allowed between the time at which the support request is received by Fabasoft Cloud Support and the first response by Fabasoft.

- Solution time

The solution time refers to the number of hours within the specified business times allowed before Fabasoft provides the user with a concrete suggestion based on the concrete problem described by the user and in line with state-of-the-art technology. The measurement of the solution time begins with the technical clarification and precise description of the problem, particularly the reproduction of the concrete problem by Fabasoft. The time required for customer participation (for example, the time needed for the customer to provide any additional information requested) is not counted as part of the solution time. If, for technical and/or organizational reasons, it is not possible to provide a solution within the specified time (e.g., if it is not possible to reproduce the problem or if it is necessary to create a hotfix), Fabasoft and the customer shall agree upon an appointment and resume contact at that time.

With regard to Service Support Levels, the following parameters are guaranteed:

Fabasoft Cloud Edition	Business hours (CET/CEST)	Response time per request	Solution time per request
Professional	Monday-Friday from 8 a.m. to 6 p.m. (weekdays)	< 2 hours	< 8 hours
Enterprise	Monday-Friday from 7 a.m. to 7 p.m. (weekdays)	< 1 hour	< 6 hours



Superior	Monday-Friday from 7 a.m. to 7 p.m. (weekdays)	< 1 hour	< 6 hours
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Fabasoft is willing to offer an extension to the above business hours on the express request of the customer and to a separately agreed remuneration. For example from Monday to Sunday, 7 a.m. to 7 p.m. or Monday to Sunday, 24x7. Please contact us under [support@fabasoft.com](mailto:support@fabasoft.com).

## 2.5 Auditing and Security Inspections

The Fabasoft Cloud is inspected by independent auditors in line with international standards. This process includes the following standards:

- ISO 9001:2008
- ISO/IEC 20000-1:2011
- ISO/IEC 27001:2013
- ISO/IEC 27018:2014
- ISAE 3402 Type 2
- Certified Cloud Service (TÜV Rheinland)
- EuroCloud Star Audit (5 Star)

Fabasoft is willing to arrange a separate appointment in the data center with the customer on the express request of the customer and to a separately agreed remuneration. The customer must comply with the disclosure required by the data center operator's safety requirements. Please contact us under [support@fabasoft.com](mailto:support@fabasoft.com).