Web hosting

FeM e.V. operates the web hosting for many student projects as well as university-related associations and institutions.

Administration

The technical support is provided by the Webserver-Team of the Technical Department is responsible for the technical support. If you are interested in using the services, you should present your request in person at the regular club meetings, for a first contact by email you can contact info_fem.tu-ilmenau.de contact.

Services

For the realisation of the web hosting, several technical web server platforms are available, which have the following basic services:

- Use of the platforms is via central, redundant load balancers.
- Web server Apache 2.4
- Database MariaDB 10 (redundant, master-master (Galera))
- Database Postgresql 12 (redundant, hot standby)
- **personal** access to the storage space via SSH
- phpMyAdmin/CloudBeaver

In addition, the technical platform used differs depending on the requirement, problem or application.

Multi-web server platform

The multi-web server platform combines several web servers that are addressed in a round-robin process (rotating, load-dependent distribution) for the delivery of content/applications.

Suitable for websites/applications with:

- exclusively static websites
- dynamic websites with PHP 7.4, 8.0, 8.1 and 8.2
- database access

Single web server platform

The single web server platform consists of a web server with a special configuration.

Suitable for websites/applications with:

- Perl
- Python WSGI
- NodeJS
- PHP 7.4, 8.0, 8.1 and 8.2
- Database access

Information on PHP

The configuration of the PHP versions is identical, provided the options are available in both versions.

The following PHP extensions are available:

- BCMath
- Curl
- Exif
- FTP
- GD
- IMAP
- JSON
- LDAP/LDAP-SASL
- MySQL(i)
- PDO
- PostgreSQL
- SOAP
- SimpleXML
- SQ-Lite 3
- TrueType
- XML, XML Reader, XML Writer
- XML-RPC
- ZIP
- Pecl-HTTP
- Pecl-Geo-IP
- Redis
- ImageMagick

If you need other extensions or modules, please feel free to contact us. We will then check their technical feasibility.

Technical Information

Storage space

The storage space (web space) of all systems is provided centrally via NFS (currently not yet redundant), so that all web servers access the same database. The storage space is accessed via SSH on the same server, regardless of the platform used.

SSL/TLS support

We support SSL/TLS by means of Server Name Indication (SNI). The visitor's SSL/TLS connection is terminated at the load balancer for technical reasons (embedding the source IP address in the HTTP header X-Forward-For). The connection between the load balancer and the actual web servers is then made via HTTPS with a fixed certificate defined for each web server. This allows the web application to detect the connection via SSL/TLS at the same time. In addition, we support ACME certificates via Lets Encrypt.

Backup

Backups of all data and databases are regularly created and stored in separate locations.

- MySQL: 365 daily backups (dump per DB individually).
- PostgreSQL: 365 daily backups (dump per DB individually)
- Data: 365 daily backups

Even though the backup is primarily intended for complete failures, it is possible to restore individual databases/directories on request.

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