Managed Server

General Information

Virtual servers can be used to operate specialized services that the LRZ does not offer directly. These are offered in the "Managed Hosting" operating model. This means that the LRZ installs a supported version of Linux or Windows and provides updates. Before end of support, whole installation will be upgraded or replaced by a new version. The customer receives full administrative access. These "managed servers" are housed on LRZ's own hardware in air-conditioned security areas of the data center with uninterruptible power supply, access protection systems, fire detection and extinguishing systems as well as 24-hour surveillance.

Description of services

- Setup of the virtual server in the LRZ infrastructure within the defined service parameters according to the customer's requirements
- Operational provision of the desired operating system
- Network connection with its own IP address
  - By default, virtual servers are operated either in one of two subnets
    - MWN-wide: private IP address that is available within the Munich Science Network
    - Worldwide: public IP address
  - For configurations with several servers, it is optionally possible (at an additional cost) to provide a separate VLAN with its own subnet and firewall
- Operation and troubleshooting of the virtual server
  - Faults are rectified according to the "best effort" principle, i.e. The aim is to resolve the problem quickly, but a fixed solution time cannot be guaranteed.
  - Automatic security updates for operating system components
  - Daily snapshot data backup of the entire storage of the virtual machine (VM) for a period of 14 days
  - Additional snapshot data backup every 4 hours for a period of 24 hours
- Administrative access for customers
  - The customer receives an ID with administrator rights on the virtual server
  - The customer receives access to a management platform for the following administrative activities
    - Remote maintenance of the installed operating system via the VM console
    - (Re) start and stop the VMs
  - Update of operating system before end of support, i.e. upgrade of version or, if not possible, replace operating system by a new virtual server

Further details can be found in our Dienstleistungskatalog (DLK), Section 6.1 Managed Server

Answers to frequently asked questions about our server services are listed here: FAQs

Administrative requirements

The use of virtual servers requires knowledge of how to regularly install, update and configure the desired services or service software. If software from the so-called standard installation sources is used, the regular automatic update is done by the LRZ. If this is not possible or desired, the customer is responsible for regular software updates. Security updates must be applied within 7 days.

An upgrade to the next higher version will be done before the operating system support period expires. If this is no longer supported, the LRZ provides a new virtual server with an up-to-date operating system. After an appropriate migration phase, the obsolete server is shut down. The customer must plan for sufficient experience to reactivate the desired services when the operating system is renewed.
Available operating systems

<table>
<thead>
<tr>
<th></th>
<th>Linux</th>
<th>Windows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debian</td>
<td>10</td>
<td>en</td>
</tr>
<tr>
<td>SUSE Linux Enterprise Server</td>
<td>12 SP5</td>
<td>en</td>
</tr>
<tr>
<td></td>
<td>(15 SP1) 15 SP2</td>
<td></td>
</tr>
<tr>
<td>Ubuntu</td>
<td>16.04 LTS</td>
<td>en</td>
</tr>
<tr>
<td></td>
<td>18.04 LTS</td>
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</tbody>
</table>

Configuration limits

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number vCPUs</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>RAM size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linux</td>
<td>1 GiB</td>
<td>64 GiB</td>
</tr>
<tr>
<td>Windows</td>
<td>4 GiB</td>
<td></td>
</tr>
<tr>
<td>Linux / Windows</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of virtual hard disks</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Hard disk size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linux</td>
<td>20 GiB Systempartition</td>
<td>1.024 GiB SSD total</td>
</tr>
<tr>
<td>Windows</td>
<td>100 GiB Systempartition</td>
<td>2.048 GiB SAS/SATA total</td>
</tr>
</tbody>
</table>

Prices

The cost rates differ according to user class. Class 1 includes TUM, LMU and BAdW, class 2 includes all other state Bavarian universities. Class 3 is made up of all state institutions with a scientific mandate in the StMWFK division – see also DLK, chap. 14 user classes and service matrix.

You can request specific price information from the LRZ service desk.

Project binding

To manage and bill the fee-based service, you need to be bound by a so-called LRZ project. The activation of a new LRZ project is described as option 1. If you already have an LRZ project, for example to use the LRZ service "TSM Archive / Backup", you can use this for your purpose; see option 2.

- **Option 1**: If you do not yet have a (suitable) LRZ project, a corresponding application must be made by the chair holder or the institute management. The LRZ service "Managed Server" must be checked in the project application. The completed project application will be sent to the LRZ supervisor responsible for your facility.

- **Option 2**: With an existing project, the master user must apply for a so-called quota for the "VM-Management-Portal". This is done in the IDM portal by opening the heading "Permissions/Quotas" in the respective project. In the list of LRZ services, the number of the required contingents is entered in the "requested" field. Alternatively, the free text field at the bottom of the page can be used to enter an individual application text for the LRZ supervisor responsible for the project. The application is submitted by clicking on the "Send E-mail ..." button.
Result: As soon as the responsible LRZ supervisor initiates the project with option 1 and has set up the so-called quota for the "VM-Management-Portal" [https://vm.lrz.de](https://vm.lrz.de) with access authorization for the master user for both options the master user is authorized to order and manage VMs.

In addition, the master user can expand the access authorization for the "VM-Management-Portal" within the scope of the allocated quota by entering additional accounts. The "ADS" authorization for registration / validation for the "VM-Management-Portal" must also be granted for the respective account.

Note: The master user himself requires "ADS" authorization for authentication, but automatically has access authorization for the "VM-Management-Portal". In the event of access problems, the master user should take a look at the IDM portal: in the list of accounts, the "ADS" column must be crossed for the account of the master user, but not the "VM-Management-Portal" column. In the case of accounts for which the master user grants access authorization, both the "ADS" and the "VM-Management-Portal" column must be checked.

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Service inquiries

Use the following link to the LRZ Service Desk for service inquiries relating to "Managed Server". This will take you to the "Selfservice area". Please log in there with your master user account and password and define your request in the "Details" field. By clicking on the blue "Save" button, your request will be sent.

VM order

If the above-mentioned project binding exists, the master user can order the desired VMs using the VM order forms listed below - each for Linux or Windows.

Please fill in all marked mandatory fields and, if applicable, the optional fields.

Comment: So-called "Unattended VMs" are not supported.

**VM order forms**

- [Linux order form](#)
- [Windows order form](#)

VM change / deletion

A master user is authorized to make changes - i.e. more or less resources - or to request the deletion of an existing VM. First of all, it is important to mention the respective VM host name. It is then sufficient to provide the required information.