



SWITCH, Werdstrasse 2, P.O. Box, CH-8021 Zürich  
[www.switch.ch](http://www.switch.ch)

# **Service Description**

# **SWITCHengines**

**Version 01.01.2016**

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## 1 Definitions

<p><b>User</b></p>	<p>“Users” shall be deemed to be:</p> <ul style="list-style-type: none"> <li>• All members of an organisation within the SWITCH Community or the Extended SWITCH Community who use the service (in particular staff, researchers, lecturers and students)</li> <li>• All other users (in particular employees of a third party who has concluded an agreement with SWITCH to purchase the service)</li> </ul>
<p><b>Service</b></p>	<p>SWITCHengines, a service which allows the Users to run their own virtual machines and store data.</p>
<p><b>Extended SWITCH Community</b></p>	<p>Organisations which have a close association with the SWITCH Community, in particular university policy bodies, academies, funding bodies, libraries and hospitals as well as private research institutions and schools in the tertiary sector which are not part of the SWITCH Community.</p>
<p><b>Customer</b></p>	<p>Third party who has concluded an agreement with SWITCH to purchase the service. Organisations shall not be deemed to be customers in this document.</p>
<p><b>Organisation</b></p>	<p>An Organisation within the SWITCH Community or the Extended SWITCH Community.</p>
<p><b>SWITCH Community</b></p>	<p>The Organisations from the education and research field which are connected with SWITCH (in accordance with the Annex to the Service Regulations for Services by SWITCH, Version 1.1 dated 19 November 2009 or any later version as amended).</p>
<p><b>Virtual Machine</b></p>	<p>A virtualised computer running on the same hardware as other virtual machines.</p>

## 2 Summary

SWITCHengines enables Users to run Virtual Machines and store data. SWITCH provides specially prepared templates for Virtual Machines (images) on which an operating system is already installed.

Using its servers which are based exclusively in Switzerland the purpose of the service is to expand and supplement a university's own infrastructures. It also serves as an alternative to certain foreign providers.

SWITCHengines is described on the website under <https://www.switch.ch/engines/>. The service can be found at <https://engines.switch.ch>.

## 3 Operation

The service enables the User to create, use and manage a virtual infrastructure (Server, Storage).

Virtual Machines may be selected in predefined sizes on the web interface. The sizes can be differentiated in the number of virtual CPUs, RAM and disk storage space. Preassembled images of selected operating systems for ready-made virtual machine are also available, e.g. in the form of Linux distributions.

Users have various options available to them for storing data:

- a) Storage connected directly to the Virtual Machine, the size of which can be selected by the Customer;
- b) Object storage: storage usable without Virtual Machines and which can be reached via the Internet (with a S3 protocol-compatible interface).

The service is based inter alia on OpenStack, Ceph, further Open Source software, proprietary developments and licensed software. Instructions for users are available online on the website at <https://help.switch.ch/engines/>.

Direct access to the servers on which the service runs can be obtained from the networks of the Organisations which are connected to the SWITCHlan fibre optic network. In the other cases access to the service is via the public Internet.

## 4 Registration and User administration

The service shall be activated for the User of an Organisation/Customer who has subscribed to the service. When ordering the Service the Organisation/Customer shall provide SWITCH with the name of a billing contact if no such contact is previously known to SWITCH. In order to register, the User first of all needs his SWITCHaai user account or a Swiss edu-ID with corresponding authorisation and then the User generates a specific user account for the service. When registering the email address of the User shall be used as the user name. After this point in time the User may use his access data in this specific user account to access the service.



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If a User leaves the Organisation, the Organisation shall delete the SWITCHaai User account from its user list. As a result the User loses the right to use the Service as a registered User. SWITCH shall periodically delete the specific User accounts of individuals who have lost their authorisation as registered Users.

If several Users are to be able to access the same resources SWITCH shall create a project account. The owner of the project shall specify a representative as well as all individuals who are authorised to access this project. Changes in the access rights can only be requested by the owner or its representative. If both the owner and representative leave the Organisation, SWITCH shall contact the Organisation to clarify the person to whom the project is to be allocated.

## **5 Recording of usage and fee**

SWITCH shall periodically record the use of the service by the Users. In concrete terms, SWITCH measures the virtualised elements listed below (in particular the number and size of the virtual machines running and of the provisioned storage space). Where possible the measurement is performed for each Organisation/Customer.

The data recorded shall be imputed to the individual Organisations/Customers and provided to them. In addition, SWITCH shall deliver statistics to the Organisations/Customers concerning the use of SWITCHengines by their Users.

The individual virtualised elements (such as CPU, RAM, disk storage, public IP addresses) and additional services shall be rated with a number of so-called cloud credits. Which element is rated with how many cloud credits and how high the costs for a cloud credit are each year is specified for the SWITCH Community in the Rate and for both the Extended SWITCH Community and the Customers in the individual Service Agreement.

The costs shall be calculated per element per day, totalled for each Organisation/Customer and invoiced to the Organisations/Customers on a quarterly basis. For use of less than a year the time of the element that is actually used is counted. Any volume discounts shall be deducted in the invoice for the 4th quarter.

## **6 Capacity and backups**

The maximum capacity available to a User is indicated in the User interface. The data are stored redundantly on the infrastructure in order to prevent the risk of data loss due to hardware defects. However, data losses cannot be completely excluded. In particular, the data is not additionally backed up by SWITCH besides the redundant storage (no backup).

Users themselves shall be responsible for creating backups of the files used by them.

## **7 Support**

On the website of the service (<https://help.switch.ch/engines/>) Users can find a FAQ section and online documentation together with an option for contacting the SWITCH support team. The questions asked

shall be answered by SWITCH. The support hours are Monday to Friday, 8 am to 5 pm, except for public holidays.

SWITCHengines has a defined service target of 99.7% availability for a Virtual Machine. This does not exclude notified business interruptions (maintenance windows), errors or malfunctions of software and technical installations of the User. The availability of the SWITCHengines infrastructure shall be measured using monitoring systems and tools of SWITCH. The monitoring of specific machines is the responsibility of the User.

The contact details of the IT services of the Organisation/Customer for institution-specific questions are listed on the support website of the service.

SWITCH shall support the User as follows:

- Setting up of a running Virtual Machine based on the templates designated accordingly by SWITCH (Images)
- Administration of the Virtual Machine (start, stop, delete etc.)
- Setting up of network connections and administration of Firewall settings for the Virtual Machines
- Setting up of data storage for the Virtual Machines
- Administration of the data storage (deletion, increase, etc.)
- Guaranteed access to S3 Object Storage

Additional services which require e.g. operating system or application-specific know-how shall not be an integral part of this service. For these issues SWITCH shall provide online information sharing options for Users.

Individual advisory services may be utilised by agreement (e.g. project-specific support). These shall be charged on a time basis.

## 8 Security

The images provided by SWITCH for Virtual Machines are configured in such a way that they automatically install security updates of the operating system, to the extent that this option exists. It is the User's responsibility to regularly update the operating system and other software on the Virtual Machine.

The network setting of the images provided by SWITCH for Virtual Machines are selected in such a way that only the ports which are necessary for the foreseen use are opened (e.g. for the administrative internet access). For the administrative access to the Virtual Machines encrypted access is provided where possible (i.e. SSH access with Public Key Authentication in the case of Linux systems).

## 9 Legal terms of use

### 9.1 Applicable terms and conditions

The following provisions as amended from time to time shall apply to the use of the service for the Organisations/Customers and the Users:

- For Organisations of the SWITCH Community and for Users who belong to an Organisation of the SWITCH Community: [Service Regulations for Services by SWITCH](#);
- For Organisations of the Extended SWITCH Community and for Users who belong to an Organisation of the Extended SWITCH Community and for the Customers and their Users: General Terms and Conditions for Services by SWITCH.

For Organisations of the SWITCH Community the relevant applicable rate shall additionally apply (with the performance characteristics of the individual services).

For Users who use Microsoft products, the provisions of the End User License Terms of Microsoft, which can be downloaded at <https://help.switch.ch/engines/> shall also apply.

Where there are inconsistencies the documents shall apply in the following sequence:

1. This Service Description
2. Rate or Service Agreement with third party
3. Service Regulations for the services of SWITCH/General Terms and Conditions of SWITCH

### 9.2 Admissible and inadmissible use

With regard to the admissible and inadmissible use of the service, Clause 3.1. of the Service Regulations of 19 November 2009 or section 3.1 of the General Terms and Conditions for Services of SWITCH shall apply.

The Organisations/Customer and the Users shall be responsible in particular for ensuring that by using SWITCHEngines they do not infringe any copyrights and other intellectual property rights. In particular the licensing provisions of preinstalled and self-installed software must be complied with (see Cl. 3). The license provisions of preinstalled commercial software can be downloaded from the documentation page of the service (<https://help.switch.ch/engines/>).

Where this is necessary, the User must obtain the rights and consents of third parties before it stores data on the service, installs software or otherwise uses it.

### 9.3 Measures in the case of inadmissible use

With regard to the measures in the case of inadmissible use of the service, Clause 6.2. of the Service Regulations of 19 November 2009 and section 6.2 of the General Terms and Conditions for Services of SWITCH shall apply.

If there is well-founded suspicion that the service is being used unlawfully or not as contractually agreed, SWITCH reserves the right to delete the Virtual Machines in question immediately and without prior notification of the Users or Organisations/Customers affected, suspend the service and/or the cut off access of the affected User/Users or the connectivity to the affected Organisation(s)/Customer(s) without the affected Users or Organisations/Customers being entitled to any compensation in respect thereof. This explicitly includes the stopping or deletion of virtual machines which generate unusual network traffic or show other indications of being “hacked”.

## 9.4 Data protection

### 9.4.1. Obligations of SWITCH and the Organisation/Customer

As part of the performance of this Agreement, SWITCH shall receive from the Organisation/Customer or otherwise access to data which relates to a specified or identifiable natural person or legal entity (personal data). SWITCH agrees and warrants:

- a) that it will process personal data only for the purpose of contractual performance;
- b) that it will store personal data only in Switzerland;
- c) that it will take and maintain the technical and organisational measures which are reasonable according to the state of the art in order to prevent unauthorised processing, loss or distortion of information and that it will restrict access rights of employees to a minimum;
- d) that it will outsource the processing of personal data only after prior approval of the Organisation/Customer and only if the contractor has imposed on the Organisation/Customer obligations which are at least equivalent to the provisions in this Clause,
- e) that it will only export personal data including in the context of data processing which is admissible under this Clause if (a) the prior approval of the Organisation/Customer has been obtained for this purpose or (b) the data is exported to the Organisation/Customer itself or to a recipient in Switzerland, in a country of the EU or the EEA or to a recipient in the USA with which contractual arrangements have been made throughout the whole data processing which guarantee reasonable protection of the data,
- f) that it will notify the Organisation/Customer without delay of any data protection breach or suspected data protection breach (including infringements of this Clause) and government accesses and requests to hand over data;
- g) that it will, as far as it is feasible and in the manner required, assist the Organisation/Customers when a corresponding request is first made in complying with the applicable data protection laws (e.g. fulfilment of the rights of the affected persons),
- h) that if as a result of the checks it proves necessary for the performance of the Agreement, it will agree on additional data protection measures with the Organisation/Customer, in which case a breach of those measures shall be deemed to be a breach of this Clause, and
- i) that it will arrange for compliance with this Clause by the Organisation/Customers to be checked on site, either by the Organisation/Customer itself or a third party on behalf of the Organisation/Customer; and



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- j) that subject to any statutory retention obligations after the dissolution of the Agreement or after a corresponding request by the Customer it will return the personal data or delete it without retaining a copy thereof and will confirm such deletion.

The Organisation/Customer agrees and warrants that

- a) the data processing and the associated orders to SWITCH are lawful,
- b) the Organisation/Customer has provided or obtained the reports, registrations, regulatory endorsements and approvals required for lawful processing of the personal data by SWITCH (including notification to same) as well as notifications to and consents of the affected parties, and
- c) the Organisation/Customer shall respond in accordance with the applicable statutory provisions to any requests for information from affected persons.

#### **9.4.2. Other**

Log data may be recorded and analysed for the purposes of providing the service (in particular account settlement, investigation of infringements, improvement of the security and functionality of the service generally) and for evidentiary purposes. An analysis shall be carried out but only where there is a well-founded suspicion of an infringement or if there is a dispute.

In addition, SWITCH shall prepare for the Organisations/Customers statistics on the use of the virtual machines used (see Cl. 5).

### **9.5 Access to data**

The Organisation/Customer shall have absolutely no access to the data which the Users store and process through the service. In exceptional cases, however, SWITCH may grant the Organisation/Customer access to individual data if the Organisation/Customer can demonstrate an overriding interest. Evidence is additionally required that the User cannot be reached or that the User is refusing to grant the necessary consent. The Organisation/Customer must for this purpose request the relevant form from SWITCH (<https://portal.switch.ch> / Services / SWITCHengines) and complete and submit it to SWITCH. SWITCH does not, however, undertake to surrender the corresponding information.

### **9.6 Warranty**

SWITCH shall provide the services within the limits of its financial and personnel resources with all due care and in accordance with the state of the art. The scope and characteristics of the service offered are, however, governed by the relevant Service Description, and where there is no such Service Description, by the performance characteristics. The same shall apply to concrete obligations of the Organisation/Customer, or User, such as for example the creation of backup copies (back-ups).

Unless otherwise provided in the Service Description/the performance characteristics, the Organisation/Customer shall, where there is a proven defect, have a right to a reduced price. The



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Parties undertake in the event of a proven defect to endeavour to jointly define the amount by which the compensation is to be reduced. What is relevant in each case is the duration of the outage of the service, or the proportionate detriment caused to the use of the service which is attributable to the defect. There shall be no entitlement to further damages. The Organisation/Customer may in addition call on SWITCH to remedy the defect within a reasonable period. If SWITCH fails to do this or it is not possible to remedy a serious defect the Organisation/Customer shall be authorised to suspend purchase of the corresponding service subject to giving at least two months' notice to take effect at the end of the following quarter.

The Organisation/Customer shall where there is a defect notify SWITCH immediately after it is discovered but within no later than ten business days. If the Organisation/Customer fails to do this the defect shall be deemed to be approved.

## **9.7 Liability**

SWITCH shall be liable to the Organisations/Customers for loss or damage caused intentionally or due to gross negligence and which arise from provision of the services. Liability for slight and medium negligence and liability for auxiliary persons shall be excluded.

SWITCH shall not be directly liable to the Users.

## **9.8 Validity and amendments**

This Service Description shall apply with effect from 1 January 2016 and shall completely supersede the previous versions.

SWITCH may adapt the Service Description at any time. The Organisations/Customers and the Users shall be appropriately notified of the amendment to the Service Description. In the event of an amendment the Organisation/Customer shall be authorised to suspend purchase of the corresponding service subject to giving at least two months' notice to take effect at the end of the following quarter.