

pluscloud open

Service description

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Preliminary remark

The main services that plusserver makes available to its customers as part of the so-called "pluscloud open" are described below. Special conditions, rights and/or restrictions apply to certain services. These are also presented in the following description or reference is made to such special conditions, rights and/or restrictions. In addition, there are various options, configuration options and combination options for the individual pluscloud open services with other services offered by plusserver within the framework of pluscloud open, for which separate or supplementary service descriptions apply. The specific services to be provided to the customer are based on the scope of services contractually agreed between plusserver and the customer in each individual case.

Plusserver continuously updates the services offered and adapts them in particular to the state of the art. Accordingly, plusserver will update this service and product description from time to time. Changes to this service description during the term of an existing contract will take effect in accordance with the agreements made with the client.

1. General description

With "pluscloud open", plusserver provides so-called "Infrastructure-as-a-Service" services based on open source virtualization technologies (e.g. KVM). As part of these services, the customer can use redundant public cloud infrastructure components, in particular processor performance, storage, network and security resources (hereinafter referred to as "resources") in the form of virtual server instances. Virtual servers consist of the resources processor power ("vCPU"), memory ("RAM"), virtual network cards ("ports") and at least one hard disk ("volume") on the datastore (a storage system of pluscloud open) and are also referred to collectively as a virtual machine ("VM") or instance. If a project is connected to the Internet, a gateway ("router") is used and the data traffic is controlled via "load balancers" and "security groups". Addressing from the Internet takes place via public IP addresses of the plusservers ("floating IP"). Flexible and scalable deployment and usage options allow the customer to operate according to their respective requirements.

The pluscloud open can be combined with other services from plusserver, e.g. in hybrid deployment scenarios or as part of multi-cloud scenarios with the connection of other cloud service providers.

The resources on which the pluscloud open is based are managed via a management platform (e.g. OpenStack). This can be operated either via a web browser on a graphical interface or directly via API calls. This gives the customer administrative access to their virtual data centers, also known as a project. The project combines all the above-mentioned resources into a logical unit. Access to the resources in a project is possible via a corresponding network or Internet connection. The customer can operate several projects in parallel. Unless otherwise agreed, the customer is responsible for configuring, using and returning the resources.

2. Essential performance features

- Operation on the cloud platform administered by plusserver
- Redundant structure of the cloud platform
- Use of ready-made instance types and software templates
- Administrative access at the project level
- Self-service provision of extended resources and virtual machines
- Use and access to resources via a management platform (e.g. OpenStack Web UI)
- Full API support through cloud native tools (e.g. Terraform, Ansible, OpenStack SDK)

3. Technical details / performance features

a. Processor, working memory

A virtual server consists of the resources listed here with the respective minimum and maximum values.

Ressource	Minimum	Maximum
Processor	1 vCPU	16 vCPU*
Working memory	0,5 GByte	64 GByte*

*further resources on request

Processor performance and RAM are considered to be used if they are assigned to an instance. A vCPU has a clock frequency of at least 2 gigahertz.

b. Datastore

Hard disks are provided with the following scope of services:

Value	Performance
IOPS	Max. 4000*
Latency	< 3 ms

* further resources on request

The duration of storage in the size of all configured hard disks applies to the use of the hard disks, regardless of the operating status of the associated virtual machine.

c. Object Storage

It is possible to use the integrated object storage of the pluscloud open. This is compatible with OpenStack Swift and Amazon S3 and can be operated via a graphical interface or directly via API.

Ressource	Size	Objects
Object Storage	Max. 20 GB	Max. 20.000

The integrated object storage is included and does not have to be paid for separately by the customer.

d. Networks

The private network is part of the Software Defined Network (SDN) and refers to the internal traffic. The public network describes the traffic that leaves the OpenStack public cloud infrastructure.

Ressource	Minimum	Maximum
Private network	500 Mbit/s	10.000 Mbit/s*
Open network	250 Mbit/s	4.000 Mbit/s*

* further resources on request

Data traffic of private networks, i.e. within the customer's project, is included and does not have to be paid for separately by the customer.

A customer project can be connected to the public network via the router. For this purpose, a connection is established between the router and plusserver's central uplink switches via the

pluscloud open infrastructure. This connection can be used via the floating IP addresses assigned to the router. The traffic routed via the routers to the public network is measured over the course of the month as "traffic outgoing", but is not billed separately as part of the plusserver fair usage policy.

e. Router

Projects can be connected to the Internet for both incoming and outgoing data traffic. A router is used to connect floating IPs and private networks of a project to the Internet and to provide network services. The routers offer functions for basic networking (DHCP server, static routing) as well as the starting point for security groups to define permitted communication between IP addresses of different networks.

Customers can consume additional public IPv4 addresses for a fee or reserve fixed subnets. The number of IP addresses ordered by the customer is provided by plusserver on the router in the customer's project and billed according to consumption.

The configuration of the private network behind the router is carried out by the customer, unless otherwise agreed. This applies both to the segmentation of the internal networks and to addressing. The configuration of further private networks is free until the quota is reached. When the quota limit is reached, this can be extended by means of service requests.

f. Loadbalancer

Load balancers can optionally be used within a project for load distribution of network connections. The configuration of the load balancers provided is carried out by the customer, unless otherwise agreed. This applies to the creation of members of a distribution group, monitoring and addressing. Load balancer resources are billed according to consumption

g. Location

The technical provision of the pluscloud open environments takes place exclusively in the German regions and the underlying locations of plusserver. The selection of the respective German region for the initial provision is made by plusserver at its own discretion, taking into account the most advantageous technological conditions for the customer. The client is not entitled to a specific German region unless plusserver and the client have expressly agreed specific data processing locations by contract.

A region consists of several isolated and physically separate and thus redundant AZs within a geographical area. The distance between the regions is more than 300km.

An Availability Zone (AZ) is located within a region and consists of one or more data centers with at least one common power and network connection as well as air conditioning. An AZ is independent of another AZ.

Currently, plusserver operates the following regions, availability zones and locations:

Standort	Availability Zone	Region
CGN3 (Cologne)	DE-WEST-1	DE-WEST
DUS6 (Düsseldorf)	DE-WEST-2	
HAM5 (Hamburg)	DE-NORTH-1	DE-NORTH
HAM6 (Hamburg)	DE-NORTH-2	

Plusserver is entitled to change regions, availability zones and data processing locations at a site or add new ones at any time. The technical provision of pluscloud open environments takes place at all times exclusively in German regions and the underlying locations of plusserver. plusserver will be happy to provide customers with the current status of regions, availability zones and data center locations at any time upon request.

4. Required cooperation of the customer

In order to use "pluscloud", the customer must provide the following cooperation services:

- Unless otherwise agreed, the customer is responsible for the configuration, use and return of the resources. (For export of data before termination of the contract, see Special Terms and Conditions)
- The configuration of the internal network behind the router is carried out by the customer, unless otherwise agreed.
- In the event of an end-of-life (EOL) scenario for the current pluscloud open environment, the active cooperation of the customer is required in order to enable an orderly transition to an active pluscloud open environment provided by plusserver.

5. Remuneration model / tariffs / billing method

a. On demand

Resources are generally billed according to actual use (on demand) and monthly in arrears. The contractually agreed fees are charged per resource. These are recorded every 5 minutes and billed to the full hour.

vCPU and vRAM are charged according to instance allocation, regardless of the state of the instance.

b. Commitments

If a minimum purchase (commitment) has been agreed for individual services, the customer is obliged to pay for these services in the amount of this minimum purchase quantity, even if the actual use of the respective agreed period was less. Any parts of the commitment not used in a given month shall expire. If the customer has used services in excess of an agreed commitment in a billing period, this additional use shall be billed at the agreed rates (see a. On Demand).

c. Other plusserver services

Separate remuneration models, tariffs and/or billing types may apply for other plusserver services. Details are contained in the relevant service descriptions or in the relevant service overview for the customer.

d. Contract end

At the end of the contract, the VMs within the pluscloud open environment are shut down, the data is deleted and access is blocked accordingly.