



# Open Telekom Cloud

## OPEN TELEKOM CLOUD THE SECURE EUROPEAN PUBLIC-CLOUD ALTERNATIVE

The Open Telekom Cloud is a public IaaS product from Deutsche Telekom and managed by T-Systems. A cost-effective IaaS can be offered for the European market by relying on standard hardware, and standardized and automated processes.

The services are produced at the data centers in Magdeburg and Biele, located around 25 km apart from one another. The two availability zones are connected by means of a low-latency, high-speed network. Since operation is carried out exclusively at German data centers, T-Systems as a German provider fulfills all relevant security requirements and regulations for operation of secure IT services.

The Open Telekom Cloud console allows you as the user to select and configure individual components. You can choose from network services, computing services and storage services. These IaaS basic services are supplemented by additional services such as Container Engine, relational databases, a Big Data Suite and management functions.

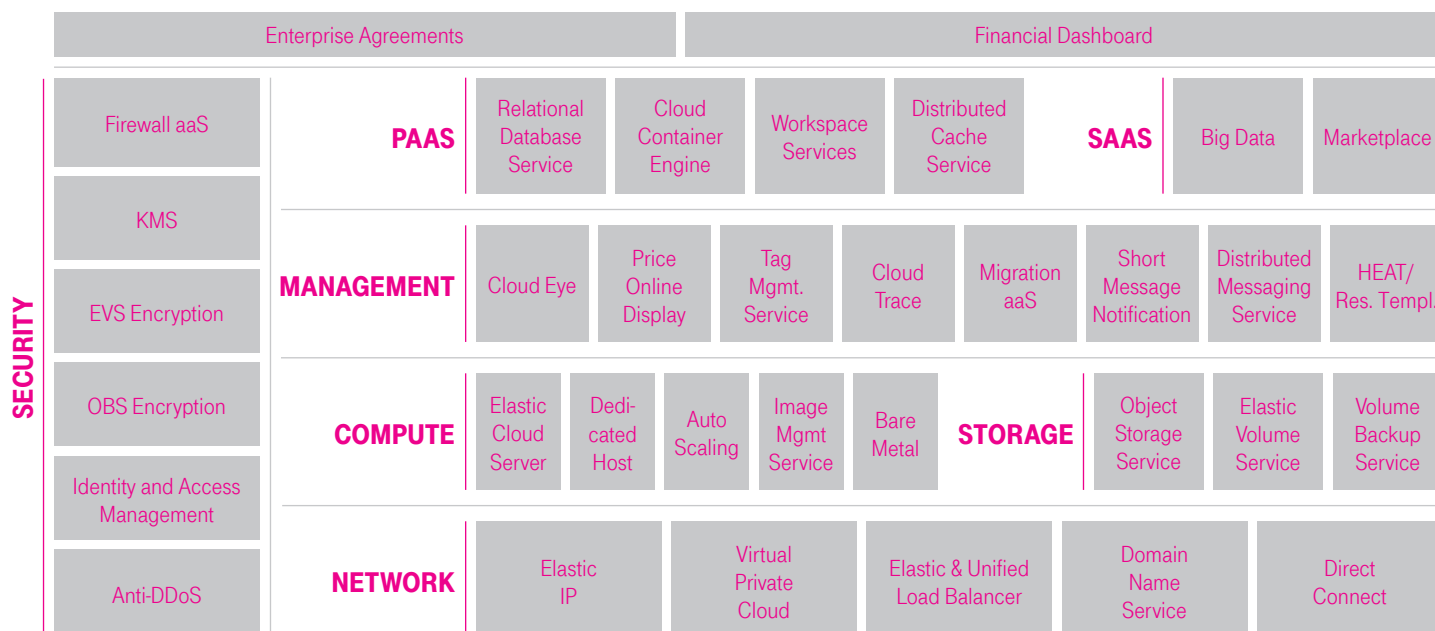
### NETWORK

Users first need to set up a virtual private cloud (VPC) in order to work with the Open Telekom Cloud. Virtual private clouds isolate networks within and/or between tenants with elastic IP address, thus ensuring that no unauthorized person has access to your resources. Network isolation also means that you receive your own IP address range. The VPCs can include one or both availability zones. You can set up additional subnets below your VPC. By means of VPC peering it is possible to give other users of the Open Telekom Cloud secure access to your VPC.

When setting up the VPC, users can assign access controls by means of firewalls and security groups. A decision is then made later as to which resources are to be made accessible via which ports for which user groups. The underlying network for the Open Telekom Cloud is software-defined, which simplifies administration. A secure tunnel connection can be set up, for example, via IP VPN (Elastic IP Service) to your own IT resources in your data center.



LIFE IS FOR SHARING.



## COMPUTING

Computing services primarily consist of three components: Virtual CPU and virtual RAM are provided from the hardware pools in the data center in accordance with the required flavor. An operating system image is then included with the virtualized hardware as a third component. The end result is a virtual machine (VM). Users can choose between 1 and 36 vCPUs as well as 1 to 940 GB RAM. These basic components result in flavors for a variety of uses, e.g. big data, in-memory computing, graphical applications or virtual workstations etc.

There are three different ways of providing and managing operating system images: First, the user has the option of a catalog of public images from the following operating system groups: Open Linux, Oracle Linux, SUSE, Debian, Red Hat, Fedora and Windows. If the images are licensed via T-Systems, then they are also managed by T-Systems. Second: If licenses have already been acquired, users can use these image licenses via a Bring Your Own License (BYOL) approach, with the systems management remaining with the user.

And third, of course, the Image Service offers the option of storing one's own images. The respective user is then also responsible for managing these images. The VMs are allocated within the VPC in appropriate subnets. Elastic resource adjustments (scale in/scale out) can be established on the basis of automatic rules using the Elastic Load Balancer and Auto Scaling Service. These rules can respond, for example, to specific times or workloads.

## STORAGE

Thanks to EVS (Elastic Volume Service), block storage can be combined with the Elastic Cloud servers. Maximum block size is 32 TB in each case. 10 of these volume service hard drives can be connected to a server. Block storage is available depending on the I/O performance requirement in the performance classes SATA, SAS, and SSD. The volume backup service, which allows incremental storage and restoration of data, is likewise based on block storage.

As an alternative to block storage, the Open Telekom Cloud also offers object storage (OBS). Files of up to 50 TB in size can be stored in this cost-effective storage. The overall size of OBS can be scaled with virtually no limits. A simple API, a web-based management console, a cloud storage web client and a software development kit are provided for object storage. The OBS can be embedded in the individual cloud landscape or can be used independently.

Thanks to the integrated Key Management System you can encrypt your data in both storage types.

## CONTINUOUS ENHANCEMENT

The Open Telekom Cloud is continuously supplemented by further services and features. With MySQL, PostgreSQL, Microsoft SQL Server and Redis various database formats are currently available, as well as a MapReduce/Hadoop Suite for big data analyses. Bitnami offers a software library. The use of Open Telekom Cloud becomes more convenient and even more secure by means of Heat Resource Templates, communication services as well as Cloud Trace as a protocol service. Tag Management Service and a financial dashboard (August 2017) make costs and resource usage transparent for customers.

### ANY QUESTIONS?

You can get more information at:

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