#CloudMTS is a fail-safe IT infrastructure created on the basis of modern software and hardware from leading global manufacturers and hosted in Viva-MTS's own data centers (Yerevan), which corresponds to the safety level 99.95%.

Computing system

The computing complex is represented by Huawei CH121v5 blade servers installed in the Huawei Fusion Server E9000 chassis.

The power supply, cooling units and network input and output fabrics are duplicated.

Virtualization segments are formed on the basis of computing systems.

Segment Name	**VC**
Site	Yerevan
Equipment Type	Huawei
Type of physical CPU	CPU: Xeon Gold 5118 2 x 24 Cores 2,3Ghz
Number of MIPS per vCPU [1]	3825

[1] The CPU performance indicators of the system are measured by the 7 ZIP/12MB software (runs from the virtual machine OS).

Data storage

Data storage systems (DSS) are used for data storage:

- **Dell EMC Unity 350F** with SSD drives (All-Flash array)
- **HP 3PAR 8400** with SSD drives (All-Flash array)
- **HPE MSA 2062** with HDD drivers (SAS 7.2K LFF HDD)

Each system has two independent controllers, which ensures operability both during routine maintenance and in case of failure of a separate controller. The power and cooling units of each controller are duplicated.

HDD drivers of virtual machines are placed in a data storage system (DSS) using HDD drivers; the reference performance is up to 395,000 IOPS.

SSD disks of virtual machines are placed in a data storage system (DSS) using SSD drives; the reference performance is 500 IOPS per 500 GB.

Performance is guaranteed for the following load profile:

- 32KB I/O operation size
- read/write 70/30, response time less than 3 ms

The maximum number of I/O operations per second per virtual machine is 40,000. The minimum number of I/O operations per second per virtual disk is 150.

Network infrastructure

The network part of the infrastructure is based on a VPN VLAN factory, which allows you to flexibly develop and scale network services. Physically, the network equipment is built on two-tier switches of the Cisco Nexus 5600 series

Virtualization

VMware vSphere 7.0.3 is used as a virtualization platform. To manage the virtual infrastructure, customers are provided with a personal self-service web portal based on the **VMware vCloud Director 10 .4 solution.**

VMware NSX 6.4.8 is used as a network virtualization and security platform for the virtual infrastructure. The management interface is integrated with vCloud Director, which allows you to independently manage the solution from a single web interface.

Backup

Veeam Backup & Replication 12.1 is used as a backup system. The solution offers the following features:

- Data backup and recovery;
- Monitoring, reporting, and resource planning for storing copies.

The personal self-service portal allows you to independently:

- create and run tasks;
- configure various policies by selecting the type of copy to be created (full/incremental/ differentiated), the frequency of its creation and the planned retention period.

To create a backup, snapshot technology is used: creating a snapshot of the state of virtual machines at a specific time.