

# STORAGE OFFERING

Disk offering	Price EUR GB/h	Approximate price EUR GB/month	Performance		Average latency, ms	Hardware acceleration	Expected VM performance, IOPS	Recommended use	Notes and limitations	Disk offering availability in Telia Latvija data centers		
			Read	Write						A2	L8a	DK
All-Flash	0.0007	0.50	Outstanding	Outstanding	< 0.1	N/A	greater than 2000 <sup>2)</sup>	Primary disk storage for high-availability and outstanding-performance servers	Telia Latvija creates storage infrastructure copies with retention up to 3 days <sup>3)4)</sup>	X		X
NL SSD	0.00035	0.25	Excellent	Excellent	< 0.5	N/A	greater than 1000 <sup>2)</sup>	Primary disk storage for high-availability and excellent-performance servers	Storage infrastructure copies are not available, technological limitations.  Possibility to create special availability and persistence scenarios by replication between data centers (asynchronous or synchronous( <i>Remote Copy</i> )) <sup>4)</sup>	X	X	
NL SAS	0.0002	0.14	Good <sup>1)</sup>	Very good	< 13	Enabled ( <i>NetApp FlashPool un NetApp FlashCache</i> )	up to 500 <sup>2)</sup>	Primary disk storage for general use high-availability servers	The lower performance limit of the service provided by Telia Latvija for this disk offering is set on average 300 IOPS during period of one hour (guaranteed minimum with taking into account the average latency; data source - virtualization management reports)  Telia Latvija creates storage infrastructure copies with retention up to 2 weeks <sup>3)4)</sup>	X	X	X
SATA	0.0001	0.07	Average	Good	< 20	N/A	up to 300	Backup copies, online archives in VM level for data tiering from primary storage to hardware-independent data storage solutions.  Not recommended as the primary storage for VMs.	Storage infrastructure copies are not available, technological limitations.		X	
Object storage (S3-type)	0.00004	0.03	Excellent	Excellent	N/A	N/A	N/A	Object storage for files of different types and sizes (archives, backup copies, video files, etc.). Fully compatible with Amazon S3 API.	Available from API; it is not technologically possible to bind as an active VM volume.	X		

<sup>1)</sup> Expected performance for "cold" data areas. When serving data from accelerated areas of the disk subsystem, the performance is assessed as "Excellent".

<sup>2)</sup> Performance at the disk Input/Output level is NOT limited, but is constantly monitored to ensure quality of the service and for the monitoring of fair-use of these disk system offerings.

<sup>3)</sup> The enhanced security purpose of the Telia Latvija service consists of regular copies of disk arrays (volume level hardware snapshots). Even they are considered as OS/App not-aware inconsistent copies, they can play a crucial role in recovery, both in the event of customer problem cases and in the event of technological failures. These copies are made for the purpose of providing the Telia Latvija service and are not directly available to customers, however, if necessary, we provide customers with assistance in resolving an emergency situation (hourly rates applies)

<sup>4)</sup> **NB!** Any kind of local or remote copies of the infrastructure made by Telia Latvija does not exempt the customer of the requirement to make regular and consistent backup copies to other disk systems in the service and/or to make remote backup copies in their local infrastructures or third party locations.