

Hi3G Sweden

Providing Optimal Network Services



Fourth biggest telecom carrier in Sweden;

Established in 2001, Hutchison Telecom Sweden's (Hi3G Sweden) network covers 99% of the country. In 2014, its market share reached 12.1%;

No. 1 in 3G network quality years running;

Hi3G Sweden is a home-grown mobile digital services provider committed to delivering a superior user experience as evidenced by its top ranking in mobile network quality for several years in a row.

Business benefits



300%

Better application performance



50%

Lower storage device O&M costs



24/7

Critical business continuity assurance

Business Challenges

Data services are vital to Hi3G Sweden. To enable subscribers to smoothly communicate with one another via mobile networks, Hi3G Sweden required solid reliability and robust security for system deployment and operations.



Elisabeth Andersson
IT delivery manager

Transformation

Hi3G Sweden has seen a more than 20% increase in data each year. Huawei's flash acceleration solution delivers a 300% improvement to system running speeds, lowers TCO by over 50%, and ensures that core businesses run continuously.





Always-On Critical Services

As an aggressive competitor, Hi3G Sweden is actively engaged in digital service transformation to strengthen its presence in the Swedish telecom market. The transformation involves cutting-edge technologies and solutions that revamp existing IT and CT infrastructures. Computing-as-a-platform, storage-as-a-platform, cloud-based data centers, and hybrid cloud deployment are major pillars in the streamlining of Hi3G Sweden's IT infrastructures.

As an important part of IT infrastructures, a storage platform must satisfy converged storage requirements for multiple services and ensure 24/7 business continuity with zero service interruption, data loss, and downtime assurances for top levels of availability. Due to problems in their storage devices and legacy solution, the carrier faced the following serious challenges:

▲ Out-of-warranty storage with compromised reliability:

Over ten sets of EMC storage devices had been in place for several years and were nearing the end of the warranty period. This caused a whopping increase in device and disk faults as well as reliability risks. The old storage systems were incapable of ensuring business continuity.

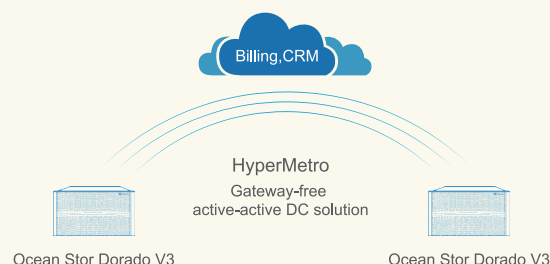
▲ Serious performance bottlenecks in gateways

System latency between the production site and DR site where VPLEX storage gateways were deployed rose from a value between 1 ms and 1.6 ms to 10 ms (or even as high as 15 ms) due to gateway aging and performance deterioration, severely lowering efficiency in handling billing, reports, and other services.

▲ Complex O&M and expansion leading to high TCO

The VPLEX gateway active-active storage solution complicated system networking and storage network deployment, tuning, and O&M. The system also incurred soaring OPEX, procurement, and expansion costs.

"When we first ordered the Huawei OceanStor 6800 V3, we could see how much easier it is to use than our previous platform. The advantages of having an active-active solution are security and easy maintenance. This means we no longer have to worry about downtime. We can have everything up and running even if an entire room breaks down," said Mikael Vinberg, an IT infrastructure manager.



Huawei's active-active architecture diagram

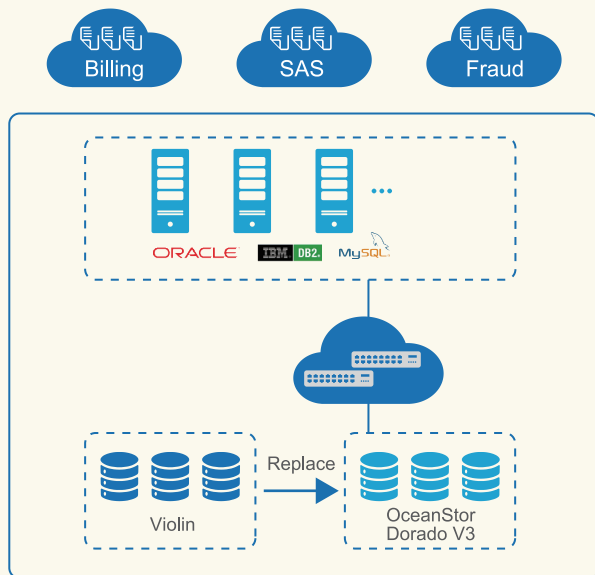
Huawei's active-active solution with HyperMetro engaged provides 99.9999% availability and 24/7 continuity assurance for critical services. Its gateway-free design simplifies networking and maintenance, shortens latency, and reduces storage expansion costs.

Ground-Breaking High Performance

As a leading telecom carrier, Hi3G Sweden actively promotes digital transformation. However, as more and more services went online, performance bottlenecks occurred in traditional storage systems.

Mr. Vinberg continued to say, "We placed many IT systems online over the past several years to handle our rapid business growth. However, we started to realize that with the fast expansions, the Violin all flash arrays were proving unable to satisfy performance requirements. To make matters even worse, we suffered a 30% performance decrease twice a week or so when using snapshots to reduce the risk of data loss our systems."

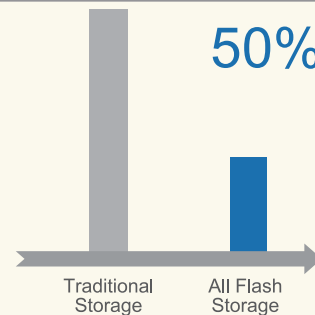
"After deploying the OceanStor Dorado V3 all flash arrays, we more than tripled system performance and shortened latency from 1.5 ms to 0.5 ms. Good performance is maintained even when snapshot is enabled. We no longer have to cringe over performance degradation during backup operations."



Huawei FlashLink-enabled acceleration engines allow storage controllers to intelligently perceive the data layout to keep the hottest data on the fastest drives while making economical use of other media for cold data. The OceanStor Dorado V3 offers a maximum of 4 million IOPS, provides 0.5 ms consistent latency, and allows ease of expansion up to 16 controllers, meeting the current and future needs of Hi3G Sweden.

Economic and Efficient

Huawei OceanStor Dorado V3's inline deduplication and compression provides at least a 3:1 data reduction ratio without affecting performance. This enables the carrier to handle the growing volumes of data with ease while lowering TCO by more nearly 50%.



- Existing available capacity: 100 TB
- Traditional storage configuration: 120 x 1.2 TB 10K rpm SAS disks
- All flash storage configuration: 25 x 1.8 TB SSDs + 3:1 data reduction

		Traditional Storage	All Flash Storage	Reduction
CAPEX	Device (\$ 1000)	238.5K	249.8K	-1%
	Space (U)	18	5	72.2%
OPEX	Power (KW)	3.29	1.18	64.2%
	Cooling (BTU/h)	4.93	1.76	64.2%
5-year TCO (\$ 1000)		812.5K	429.2K	47.2%

*Source: Comparison between Huawei OceanStor 6800 V3 and Dorado6000 V3

50% Lower TCO than Traditional Storage With The Same Capacity

Mr. Vinberg concluded, "Huawei's OceanStor storage delivers leading stability and reliability, which is exactly what we were looking for."

Key Solution Components

1. Storage arrays: OceanStor Dorado6000 V3, OceanStor 6800 V3
2. Storage software: HyperMetro (active-active), SmartDedupe (deduplication), SmartCompression (data compression)