

“With the help of HDS, we have slashed our backup times by over 30%, helping to significantly increase staff productivity.”

Yosef Yakovich
Director of IT Technologies
Israel Aerospace Industries



CASE STUDY

Israel Aerospace Industries Ensures Every Minute Counts With Hitachi Flash Solutions

Challenge: Storage performance slowed when users added more and more applications.

Solution: IAI consolidated part of its storage environment onto Hitachi storage with active-active functionality.

Outcome: Boosted storage performance lifts systems availability and enhances business productivity.

The Challenge

Israel Aerospace Industries (IAI) is a global leader in the development and manufacture of aerospace and defense solutions. Owned by the Israeli government, IAI designs systems for naval vessels, civil and military aircraft, homeland defense, satellites and command centers. With revenue of US\$3.83 billion, IAI employs some 16,000 people and is listed on the Tel Aviv Stock Exchange.

Operating at the cutting edge of research means that every minute counts for IAI's production teams. IAI's core IT environment consists of VMware, Microsoft® Exchange and SQL Server®, and Oracle database. The existing and new applications produce a torrent of data, and managing the growth while maintaining storage performance caused a constant IT headache.

IAI Director of IT Technologies Yosef Yakovich explains: “Our production and engineering processes generate new data continuously, leading to annual

growth rates of more than 30%. To analyze and understand the data, users are constantly innovating with new programs, and need access – even during the night and at weekends. Over the last two years, the performance of our storage setup has slowed significantly, and backups of our critical SQL landscape and scheduled jobs were taking longer and longer, sometimes running over into production time.”

He continues: “With our existing storage machines, we felt we were chasing our own tail. We were papering over the cracks, rather than getting to the heart of the problem. We realized we needed to transform our storage environment.”

The Solution

HDS suggested that by using advanced automated data tiering, IAI could combine spinning disks with Hitachi's flash module drives (FMDs), to gain the appropriate price-performance benefits of both storage types.



Israel Aerospace Industries (IAI)

INDUSTRY

Aerospace and Defense

SOLUTIONS

Enterprise Storage, Hybrid Flash

HARDWARE

Hitachi Virtual Storage Platform (VSP) G800 and VSP G600 with flash module drives

SOFTWARE

Hitachi: Storage Virtualization Operating System with global-active device, Command Suite Analytics, Command Suite Data Mobility, Local Replication

SERVICES

Data migration managed by Hitachi Data Systems Global Services Solutions

Outcomes

- Cuts backup times by 33%.
- Cuts database export times from 4 to just 1 hour, a 75% improvement.
- Reduces IT administration workload by 15%.
- Enables flexible scalability of either compute or storage, whenever required.

Following an extensive selection process, IAI consolidated part of its storage environment onto HDS solutions. At its primary manufacturing location, IAI implemented two Hitachi Virtual Storage Platform (VSP) G800 arrays, providing a combined total of 1PB capacity. At its secondary facility, IAI selected two VSP G600 arrays, each with 250TB capacity.

Yakovich elaborates: “First and foremost, we looked for a best-in-breed solution to deliver the boosted performance we needed. With the HDS solutions we calculated that the long-term total cost of ownership would be lower.”

He adds: “The active-active configuration, provided by global-active device software on the VSPs, is easy to use. Even as users add data, global-active device ensures optimum operating efficiency by sharing the workload between the sites, and we experience no negative impact on services.”

The HDS solutions provide a highly effective hybrid storage model, and even with only 10% of the raw capacity provided by FMDs, IAI is reaching all its technical performance objectives.

Working with IT staff at IAI, the HDS team completed the consolidation process within two months, migrating data from a range of third-party storage arrays, physical servers and multiple VMware machines. “The migration process was very smooth,” says Yakovich. “HDS ran the migration of both our physical and virtual servers in the background, and we were able to continue, business as usual, without interruption, which is a huge business advantage.”

The Outcome

The flexible expansion options of the Hitachi hybrid storage design combined with the active-active configuration gives IAI confidence that it can handle data growth without the risk of reduced performance.



Yakovich explains: “With our previous infrastructure we devoted hours to firefighting, just to keep our services online. Now we can rest safe in the knowledge that each time our users embed new functions in the application layer, it won’t cause a bottleneck in the storage environment. The ease of management of the HDS solutions has cut our IT administration workload by 15%, considerably increasing our productivity.”

He recalls: “Previously, at some points, our critical backups would take so long that our production and engineering teams would be unable to start work in the morning as the backup wasn’t complete. For our primary SQL landscape backup, with the help of HDS, we have slashed our backup times by over 30%, helping to significantly increase staff productivity.”

As data volumes continue to grow, the HDS platform provides IAI with the flexibility to scale out either compute power or storage capacity, independently. Yakovich comments: “Scalability is a strength of HDS. We can add extra storage whenever we need to, without being required to purchase compute capacity. Similarly, we can add compute nodes as needed, without

additional storage. This independence ensures we operate exactly what we need, in the most cost-efficient manner.”

He concludes: “There are many layers of complexity within IT environment. With this project, we addressed one of them to remedy storage issues. The impact of our HDS solution, however, ripples out across our IT landscape, lifting availability and ensuring users are free to focus on developing the new applications to drive our business forward.”

About HDS

Digital transformation improves enterprises’ cost-efficiency, time to market, customer experience, and revenue through better data management. Hitachi Data Systems uses data to power the digital enterprise. [HDS.com](https://www.hds.com).

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