# Pelephone Communication, Ltd., Makes the Call to Standardize on NetApp

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## KEY HIGHLIGHTS

**Industry**
Telecommunications

**The challenge**
Keep up with constantly expanding data volumes, enable next-day turn-on of services. Replace complex mix of storage systems with single, unified solution for cellular services and enterprise business systems.

**The solution**
Standardized on NetApp® FAS series and NearStore® systems with NetApp SnapMirror®, SnapManager®, SnapVault®, Operations Manager, and Protection Manager software.

**Benefits**
- 2x performance, with lowest TCO
- 100MB+ recovery in seconds
- Seamless growth, fast DR
- Next-day turn-on for new services

## CUSTOMER PROFILE

Established in 1986 by Motorola and Tadiran, Ltd., Pelephone pioneered cellular communication services in Israel. Pelephone strives to lead the industry with brands that provide a unique and exciting experience and a better quality of life through creativity, innovation, and product quality. Headquartered in Tel Aviv, Pelephone maintains 200 points of sale and 27 service and sales centers. Pelephone employs 4,700 people and supports 2 million subscribers, an active base recently valued at more than US$1 billion. (Source: www.pelephone.co.il)

## THE CHALLENGE

**Improve storage performance, availability, and manageability with a single platform across business and client services**
Unreliable, slow, difficult to scale, and costly to manage—the outdated storage infrastructure at Israel's most successful cellular services company clearly needed work. "The rapid growth of our added-value services over the past few years had caused our information volumes to grow massively," explains Itsik Milstein, Engineering IT Infrastructure manager at Pelephone. "As just one example, billing users according to usage requires ever larger volumes and databases. Originally we allocated 1 megabyte (MB) per user mailbox. Today, we are required to supply 5MB, which soon will grow to 50MB."

Milstein notes that industry regulations were also driving the need for capacity. "The communication ministry's requirement to secure a single, fixed cellular number per customer that can be migrated from one cellular operator to another requires us to have a huge storage infrastructure in place at all times. And we need the ability to share information with other cellular operators," he says.

The company's existing storage infrastructure was falling short in nearly every dimension. "We were in an endless race to catch up with the explosion of data," Milstein says. "Also, at the time, each of our application vendors provided proprietary storage solutions. As you can imagine, the result was a distributed, complex mix of storage servers.

"We needed a comprehensive solution that could store hundreds of terabytes and yet enable us to scale storage volumes independently. With the existing infrastructure, any change in a storage volume required a complicated, lengthy planning process that prevented us from responding quickly enough for our competitive environment. Furthermore, backup processes were so inefficient that we could only perform backups once a day, and then only of our SAN servers. As for a disaster recovery plan, it was a nearly impossible mission in view of our diversified storage servers.

# "Our review process was meticulous and thorough. We measured performance, compared capacities, and ranked TCO. One company was consistently far ahead of all the others: NetApp. Today, NetApp storage is behind every service transaction at Pelephone."

**Isaac Milstein**
Technical Support Manager, Pelephone

"We needed a dynamic solution that would support all protocol types—NAS, SAN, and iSCSI—to simplify management and data sharing. Clustering capabilities were also essential to ensure the system's survivability and stability."

Complicating the search for a storage solution was the company's objective to standardize on a single architecture enterprise-wide. Oren Chayimi, manager of the System and Storage team for the Pelephone Infrastructure and Communication Department, describes the business issues. "We were trying to get work done with an outdated Compaq storage system supporting a cluster of Novell servers. There were serious problems with the CIFS protocol, the network drives often disconnected during work, availability was never guaranteed, and applications often failed to load.

"Disconnections interfered with the ability of Pelephone service centers to sell handsets or give information to waiting customers," he goes on. "Poor availability also prevented users from accessing important files on the network, from business-critical Excel files to correspondence stored in Microsoft® Outlook Personal Folders files (.pst). It was imperative to find a better CIFS solution for both the Novell system and for our planned transition to a Microsoft-based file system."

## THE SOLUTION

### Standardize on NetApp unified architecture for enterprise storage

After evaluating competitive offerings, Pelephone standardized on NetApp storage. The unique flexibility and breadth of the NetApp solution enabled Pelephone to address all of its storage requirements with a single, unified architecture.

"Our requirements were for a heterogeneous solution that would support all communication protocols with a single management system for all technologies," Milstein says. "We wanted the system to be vendor independent, easy to maintain and use, and to have excellent technical capabilities. We measured performance, compared capacities, and ranked the total cost of ownership (TCO). NetApp was consistently far ahead of all the others as the solution to simply, quickly, and efficiently address all of our storage challenges."

Today, NetApp storage solutions in the Pelephone engineering organization support hundreds of servers (HP-UX, Solaris™, Linux®, True64, Windows®, and more) that supply services such as Internet surfing with wireless application protocol (WAP), photo albums, video, music, and more. The storage landscape is centered around a clustered

NetApp FAS960 system with simultaneous support for NAS, IP SAN (iSCSI), and FC SAN (which Pelephone utilizes specifically for its database applications). A NetApp R200 system provides economical storage of media, video, and MPEG-4 files, and a NetApp FAS3020 system provides storage for Pelephone voice-recognition systems.

NetApp solutions also serve the needs of Pelephone's Infrastructure and Communication Department, which is responsible for the Windows-based IT infrastructure (Web, firewalls, storage, and more) of the company's business units. The systems adopted include a clustered NetApp FAS900 series system and multiple NetApp FAS200 series systems that provide space-saving storage at remote Pelephone sites. NetApp Snapshot™ technology combined with NetApp SnapMirror software enables highly efficient backup of remote office data to a NetApp R200 system at headquarters.

Pelephone also uses NetApp NearStore systems with NetApp Protection Manager backup and replication management software. Instead of running time-consuming daily tape backups of servers, Pelephone utilizes the NetApp NearStore system for high-speed disk-to-disk backups.

## BUSINESS BENEFITS

**Responsive client service, cost savings, availability, and management simplicity enhanced performance with low TCO**

"Today, NetApp storage is behind every service transaction at Pelephone," says Milstein. "NetApp's flexibility allows us to add new servers or applications with no wasted time or lengthy preparations, enabling us to respond immediately to every change request. We can easily introduce new subscriber services from one day to the next. This allows Pelephone to be first to market and to protect our market leadership. In addition, the enhanced performance of the NetApp storage systems contributes to faster video, Web page, music, and ring-tone downloads."

Isaac Milstein, Pelephone Technical Support manager, adds, "The ability to connect to all communication protocols via one machine is a distinct advantage of the NetApp solution. Performance is another—we found that NetApp servers read data from and write data to the disks at twice the pace of other solutions.

"We have also concluded that NetApp's TCO is significantly lower than any other solution on the market. NetApp's approach to RAID, snapshots, and mirroring is far more economical and efficient. As someone who has used other storage environments, I have to

emphasize my enthusiasm for NetApp's technological superiority."

**Scalability plus data protection**

The NetApp solution gives Pelephone a simplified and flexible storage system capable of scaling easily and independently while providing maximum information protection without complex, expensive procedures. "The NetApp Data ONTAP operating system revolutionized storage management at Pelephone by allowing us to move to a single management system based on a single operating system," Isaac Milstein explains.

He adds, "Another key benefit of the NetApp solution is support for flexible volumes, which allows us to size volumes instantly and precisely to optimize storage utilization. NetApp FlexVol™ technology has been very beneficial both in streamlining the initial upgrade to NetApp (our team completed the transition overnight) and in ongoing capacity management. Compared with previous solutions, the flexibility, ease, and simplicity of scaling storage capacity with NetApp are unprecedented.

"The NetApp Quality of Service feature permits us to prioritize business services, and the unified storage platform has allowed us to connect more than 30 servers via iSCSI, improving reliability and simplifying administration.

"In addition, consolidating our enterprise data on the NetApp solution has enabled us to build an impressive disaster recovery program without prohibitive investments. NetApp SnapVault software is a real time-saver in terms of recovery. Because we only need to point to backup data instead of actually restoring it, the process is much faster."

**Fast data restoration: hundreds of megabytes in just seconds**

"Our data restoration capability has been tremendously enhanced," says Isaac Milstein. "Instead of spending hours restoring information from tapes, we can restore data from any point of time throughout the day in a few seconds without the intervention of dedicated personnel. Our previous storage systems would have required two additional staff for such administrative tasks. In a recent example, we had an operator-error incident during the downloading of an animation and film-strip system. We simply restored the last Snapshot copy available (from 4 hours earlier), and within 30 minutes we had all 160GB of data back."

Pelephone's Infrastructure and Communication Department is also enthusiastic about the comprehensive NetApp solution. Chayimi elaborates, "The NetApp solution has enabled us to eradicate CIFS system

# "The NetApp solution enabled us to eradicate the crashes of the CIFS system and to supply maximum business availability to our information consumers."

**Oren Chayimi**
Manager, System and Storage, Infrastructure and Communication Department, Pelephone

crashes and provide maximum business availability to our information consumers. In addition, the ability to perform hot backup from external sites allows us to provide business continuity without excessively loading the communication lines.

"The advanced backup technology provided by NetApp enables us to maintain a low traffic level in the lines and have the best of all worlds: high availability, excellent response times, and hot backup. We complete backup tasks at night, freeing up bandwidth during the busy daytime. Consequently, we can respond to customers faster and deliver higher service levels. In our competitive climate, this is critical to protecting Pelephone's edge. Overall, I'd have to say that NetApp provided us with the best cost/benefit ratio, far ahead of competing solutions."

## Enterprise-class support

"It is important to note the excellent service level we received from NetApp," extols Isaac Milstein. "They fulfilled all the promises they made and more. The team assigned to us by NetApp showed extraordinary professional ability in their understanding of databases, communications, diversified operating systems, and competing storage systems. As a result, we decided to expand our relations with NetApp to additional areas."

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