HP StorageWorks solution yields smooth sailing for Norwegian ASP's aggressive growth course
TeleComputing ASA

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"To absorb growth from acquisitions and increased sales each month, we needed 10 to 15 percent more storage – plus more backup capacity and performance. Our HP solution enables us to accommodate this growth for the foreseeable future."

– Roar Engen, Chief Technology Officer, TeleComputing ASA

Business needs:
Pioneering application service provider TeleComputing ASA runs huge data centers in Oslo and Stockholm, along with three satellite data centers in Norway. The company operates a complex network and server infrastructure – of more than 1,500 servers – supporting approximately 17,000 end users and a diversity of Web Services. Data backup and protection is business critical for an Application Service Provider (ASP) to provide reliable, available, easy-to-use IT-services. TeleComputing's ambitious growth strategy required consolidation and simplification of its backup and data protection in one scalable, robust, cost-effective solution.

HP solution:
Following a detailed evaluation of competitive storage alternatives, TeleComputing chose a comprehensive solution from HP. Components include the HP StorageWorks Enterprise Storage Library and HP OpenView Storage Data Protector in a Microsoft® environment, all supported by HP BladeSystems. A common GUI interface simplifies management of its different installations. An HP StorageWorks 5000

Enterprise Virtual Array storage area network (SAN) and SAN attached tape libraries provides a highly scalable environment for storage expansion.

Customer results:
TeleComputing upgraded its infrastructure with both servers and storage delivered by HP. The turnkey solution considerably shortened the data backup window and established an environment that is expected to support the company's continued growth. By consolidating on larger shared libraries, TeleComputing simplified and standardized its storage, reducing the manual handling of tapes and concomitant staffing requirements. The solution also accelerated TeleComputing's ability to deliver customer-specific solutions, yielding a much shorter time to market.

Charting bumpy waters while facilitating and accommodating growth
In 1997, TeleComputing ASA was the world's first company to offer a commercial ASP service. The firm continues to break new ground today with its rapidly growing customer base, spurred by sales and acquisitions. TeleComputing delivers on-demand, standardized services to customers from a common, shared platform, while also operating and providing sourcing services for customer-specific environments. These reside primarily in TeleComputing data centers, with some based in customer sites.

At the helm, TeleComputing's Chief Technology Officer Roar Engen helps design and implement the technical infrastructure to support the company's business strategy: grow faster than the market for sourcing and on-demand services. Engen describes the business strategy and the attendant storage-infrastructure challenges it poses:

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- **"We are growing very aggressively through direct sales, mergers, and acquisitions."** Acquisitions increase revenue on existing services by expanding the customer base, and by broadening market reach both domestically and abroad. Acquired companies also enable TeleComputing to provide new services. Rapid growth creates constant demand for more storage and more backup capacity and performance, which stressed the previous TeleComputing storage solution to its limits. Continued company ascension and success depends on uninterrupted service support even as the operating environment changes and expands.

- **"We acquired three companies in recent months and needed to navigate a variety of integration challenges."** In 2005, TeleComputing acquired Proserva (a Swedish company), along with STIM and IT Broker (both Norwegian). Engen explains that one company, TeleComputing Infostream Services, still operates as a separate entity because it offers completely different services, which makes it more difficult to gain infrastructural synergy. In other cases, acquired companies offer greater infrastructure compatibility. It's critical that the storage solution be flexible and adaptive enough to accommodate different approaches.

- **"Because the volume and complexity of data structures expands all the time it is a constant struggle against the waves of time and capacity."** More than 500 customers with approximately 17,000 end users rely on TeleComputing infrastructure operations and services to provide network management and online access to business applications. The company also hosts the private systems of large companies. Backing up each environment individually was complicated, costly, and difficult to manage. With so much data on different

segments all protected by individual firewalls, Engen and his staff wanted to consolidate backup into one robust, homogeneous, and cost-effective solution so they could access all data through a SAN.

Bridging the fjord: advanced storage supports ambitious business plan

TeleComputing aims to triple in size by 2008. Meeting such an ambitious goal requires a standardized and simplified approach to backup and storage, Engen acknowledges. The HP sales team in Norway helped Engen to design and configure an advanced turnkey storage solution based on the HP StorageWorks ESL tape library, HP OpenView Storage Data Protector, and HP StorageWorks 5000 Enterprise Virtual Arrays. Engen elaborates on some key benefits of the new solution, which currently stores approximately 30 TB:

- **"When we brought in the new library we gained a three-fold increase in performance – significantly shrinking the backup window."** TeleComputing can now perform all backups within the six-hour night-shift backup window, which was not the case before. The HP StorageWorks ESL tape library uses LTO Ultrium 960 tape cartridge technology, which offers more capacity and greater speed than super DLT or its equivalents. Engen adds that LTO also offers a better technical roadmap for future development, as well as a strong price-performance profile.

- **"We are confident that we can continue to grow with this solution."** Engen is pleased that this new platform offers a smooth path forward by simply adding cabinets with more drives and tapes. He judges that the easily expanded capacity of the library will prove to be ample for the foreseeable future.

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- **"Our main goal with HP OpenView Storage Data Protector was to standardize and simplify backup strategies – to reduce the number of application-specific environments and save some work; we've more than done that."** The solution enhances system security and adds the ability to segregate customer environments. Building a centralized common data infrastructure to support multiple customer environments that meet regulatory requirements for segregation was a key consideration.

"HP OpenView Storage Data Protector does the job we need without being too complex. In addition, its licensing model fits our type of business very well."

– System Architect Ulrik Ivers, TeleComputing ASA

- **"We expanded the environment with one more HP StorageWorks EVA5000, so we now have three."** The EVA5000 meets TeleComputing's critical data center needs for improved storage utilization and scalability – while providing consistently high transaction I/O and MB/second data rate performance. It also provides seamless capacity expansion, instantaneous replication, and simplified storage administration – key objectives for the upgraded storage solution.

- **"The HP extended tape library architecture (ETLA) was one of the things we valued when we chose the library."** Engen points out that the ability to partition inside the library and the manageability it provides may set up possibilities for additional service offerings to customers. "It may give us the business potential to sell managed backup services to individual customers, as well as enable us to partition the library to work like a dedicated backup device for specific accounts."

Concludes Engen, "Our investment in HP storage strategies gives us a technology platform to accommodate our business plan for the projected future – including the use of multiple techniques to handle rapid growth. We expect this to help us toward our goal of tripling revenues, without tripling our number of employees."

About TeleComputing ASA
In Norway and Sweden, TeleComputing ASA is a leading provider of Microsoft Windows®-based application delivery and computing services extending from the server to the desktop. Based in Billingstad, Norway, TeleComputing ASA (www.telecomputing.no) supports more than 500 customers with 17,000 end users on Windows-based applications, as well as integrated UNIX® and IBM eServer i-Series solutions. Founded in 1997 as a pioneering ASP, TeleComputing helps manage IT costs and complexity, while improving accessibility, reliability, and security.

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At a glance

Hardware:
- 3 HP StorageWorks 5000 Enterprise Virtual Array SANs
- HP StorageWorks Enterprise Storage Library ESL 722 with LTO3 technology
- 700 HP ProLiant BL20p server blades

Software:
- HP OpenView Storage Data Protector v5.5 in a Multi Cell environment
- Microsoft Exchange, versions 5.5, 2000, and 2003
- Microsoft SQL Server and Oracle databases
- Microsoft Windows 2000/2003 Server
- Linux® and UNIX operating systems

HP Services:
- Hardware maintenance
- Warranty support

Business needs

- Introduce advanced storage technology to replace end-of-life solution in the midst of active business expansion

- Accommodate storage growth of 10 to 15 percent each month

- Meet a shrinking backup window while expanding data volume

- Simplify storage management while increasing flexibility to pursue different approaches

- Achieve positive cost-benefit results

HP solution

- Upgrade infrastructure with both servers and storage

- Comprehensive, turnkey HP storage solution to standardize and simplify rapidly growing storage volume

- Create storage infrastructure to accommodate aggressive company growth strategy into the future

Customer results

- Gained simplified and standardized backup approach enabling daily backup of 6 to 8 TB in the allotted timeframe

- Reduced backup time by two-thirds

- Implemented a powerful, flexible HP storage solution, which expedites aggressive growth strategy to triple profits by 2008

- Increased ability to offer customer-specific solutions in a shorter time

- Established a platform with enhanced security capabilities offering a clear technical roadmap for the future

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