



MTN Group Reduces Backup Window by 79% Using Quantum Technology

MTN Group Limited is a leading provider of communications services, offering cellular network access and business solutions. They are listed on the JSE Securities Exchange South Africa (JSE) with a reported 31.5 million subscribers across 21 African and Middle East countries.

MTN South Africa (MTNSA) operates through MTN Network Operator, MTN Service Provider and MTN Network Solutions. MTNSA has approximately 10.4-million subscribers. The company's national GSM network is one of the largest of its type in the world with more than 4,500 base station sites covering 19,200km of road and 900,000km of land. The network provides GSM access to 96 percent of South Africa's population.

THE CHALLENGE

Explosive growth in the communications services industry since MTN's entry into the market in 1994 has seen the group invest more than R24-billion in information and telecommunications infrastructure.

Towards the end of 2005, Mike Styer, of Infrastructure Planning and Design initiated a project aimed at upgrading data backup and restore systems for the MTNSA data centres in Johannesburg.

"MTN's highly successful operations in the country, particularly over the past five years, pushed our tape-based backup requirements to service an environment that has grown from 50 TB of data to more than 1,000TB," he said.

"While the group had never suffered a loss and faced no material risk in terms of data backup and disaster recovery planning, compound growth rates up to 50 percent per year and the need to meet stringent corporate governance standards, made it imperative that we address our data backup and recovery requirements for at least the next 10 years," said Styer.

THE SITUATION

Styer said that an in-depth review of the existing backup infrastructure showed that while the incumbent supplier was possibly capable of keeping up with increasing capacity demands, there were clear indications that the underlying technology was reaching its limitations.

"Our analysis showed that if we continued to invest in the current installed technology, the relationship between meeting capacity growth demands and cost, even in the short term, was prohibitive. It was also established that even if these capacity to cost ratios were acceptable, it was unlikely to have significant benefits in productivity improvements because of the limitations of the older technology," he said.

THE WAY FORWARD

Styer, with the support of the IS delivery team at MTN set out to define the criteria that would decide the group's backup and data storage strategy for the future.

"We decided from the outset that the technology platform would dictate our strategic planning and play a major role in deciding immediate and future investments.

"After exhaustive investigations, it was decided to standardise on LTO-3 as this technology offers by far the best roadmap for the next 10 years or more. Although other technologies were considered, investigations into the local market also confirmed that LTO-3 has a strong and growing base of users," he said.



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Infrastructure Planning and Design,
MTN SA

KEY BENEFITS

- ☑ Reduced backup window by 79%
- ☑ Improved reliability
- ☑ Intelligent library to assist with quick resolution times
- ☑ Scalability for future projects
- ☑ Exceed performance benchmarks
- ☑ Cost-effectiveness of overall solution
- ☑ Achieved backup and DR objectives

SOLUTION OVERVIEW

- ☑ Quantum Scalar i2000 enterprise tape library (x2)
- ☑ Tape technology: LTO-3 (x 80)
- ☑ Symantec NetBackup data management software
- ☑ OS: HP-UX, AIX, Windows 2000, Windows NT, Open VMS
- ☑ Primary storage: Hitachi Data Systems

After selecting the tape technology, Styer and the MTN team began to assess the capabilities of all vendors offering LTO-3.

“We evaluated vendors based on wide-ranging criteria using independent industry research and reports produced by industry analysts. We paid particular attention to proven market leadership and the worldwide installed base of satisfied customers and comparable reference sites.”

SELECTING A SUPPLIER

Based on a well-defined strategy and a clear brief of how MTN should go about addressing immediate and future data backup requirements, MTNSA issued a tender towards the middle 2005. The tender was made available to all vendors and potential integrators based on MTN’s technology of choice.

“We specifically invited participation by suppliers identified in our research as major players in the LTO-3 environment, including StorageTek, Hewlett-Packard, IBM, Shoden Data System and Quantum,” said Styer.

Besides listing criteria used in the group’s preliminary research, such as the worldwide installed base and proven market leadership in LTO-3, the tender also called for the successful supplier to meet, among others, the following:

- The ability to meet or exceed specified performance benchmarks.
- Cost-effectiveness of the overall solution.
- Proven track record in “best-practice” methodologies associated with issues such project management, systems integration, installation and commissioning services etc.
- The ability to support the roll-out of the solution.
- The ability to work with and support Symantec (VERITAS NetBackup) as the primary software backup management solution used by MTN.
- High level of skills, certification and experience in the data storage market.

In addition to the technical specifications, tender respondents were also required to conform to the MTN Group’s preferential procurement policy through proof of commitment to genuine Black Economic Empowerment (BEE).

AND THE WINNER WAS...

Styer said an obvious and very clear winner emerged after the tender had closed and all proposals had been subjected to the group’s comprehensive procurement process. Of the local suppliers who integrate the LTO-3 technology into their tape libraries, Quantum Africa emerged as the vendor of choice.

“Quantum Africa, the black-owned company that represents Quantum on an exclusive basis in South Africa as a market-leading multinational vendor, teamed up with local certified business partners to put forward a proposal that made it exceptionally easy to award the contract,” he said.

“Not only did Quantum meet or exceed all requirements set in our tender, but the local company demonstrated an outstanding level of willingness to help MTN achieve its backup and DR objectives.”

THE SOLUTION

The award of the tender marked the start of one of the most comprehensive infrastructure projects of its type yet undertaken by MTNSA’s IS department in association with a supplier.

The hardware platforms supplied by Quantum included two Quantum Scalar i2000 enterprise-class tape libraries with 2000 slots and 40 LTO-3 drives in each.

INSTALLATION AND COMMISSIONING

One Quantum Scalar i2000 library was installed at each of the MTN data centres. Nine partitions were set up with each partition being allocated drives connected to various servers over a storage area network fabric.

The project called for the total replacement of existing backup hardware while at the same time handling the migration of all backup data and ensuring minimal disruptions to established backup and restore routines.

“Installation went exceptionally well, despite several requests made by us for last-minute, unplanned changes,” said Styer.

“Our disaster recovery window has been dramatically reduced. Backups that were taking up to 14 hours to complete are now being carried out and verified in less than three hours. The ease of manageability of all back up processes has improved beyond our expectations to provide significant productivity gains in a number of other areas and operations in the data centre.”

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Infrastructure Planning and Design,
MTN SA

"The professionalism and skills of the Quantum Africa engineering team, not only related to their own product but also a heterogeneous operating system environment that incorporates Unix and Microsoft, helped ensure that the project was carried out on schedule and within budget," he added.

The Quantum solution was installed and commissioned before the year drew to a close.

BUSINESS BENEFIT

Styer said he has no doubt whatsoever that the decision to award the supplier contract to Quantum Africa is already paying off in terms of achieving significant and measurable benefits.

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"The ease of manageability of all back up processes has improved beyond our expectations to provide significant productivity gains in a number of other areas and operations in the data centre," he said.

Styer added that Quantum's performance associated with the provision of after-sales support in areas such as warranty and technical support proved to be outstanding.

"This commitment to service, backed by a 24x7 maintenance contract provides us with further proof that we made the right choice," he said.

THE FUTURE

Styer is confident that MTN's new Quantum backup infrastructure is ideally positioned to address group requirement for at least the next 10 years.

"Part of our current planning is the move away from a totally shared backup environment to an architecture based on dedicated systems. This move will enable us to address issues that are specific to the cellular telephony industry as well as the management of data associated with any business enterprise," he said.

"More than 80 percent of the capacity demand, that is growing at between 25 and 50 percent a year, can be attributed to legislation that compels us to store and secure all subscriber call data records (CDRs). We have a statutory obligation to store CDRs in their raw format and then make them available to appropriate authorities in an ASCII format that facilitates transcription.

"Our new data backup and management infrastructure is also ideally suited to meeting the demands of what many other organisations outside of the cellular telephony industry would describe as their total requirement – the ability to backup and restore data generated by business policy growth and the more routine business applications such as billing systems.

"At MTN, routine business applications account for no more than 15 to 20 percent of our capacity and growth, which are now comfortably accommodated in the new Quantum systems," he said.

Styer is confident that the relationship with Quantum will develop into a long and successful partnership.


ABOUT MTN GROUP

As a major communications company, MTN is focused on the African continent. As a company we believe that through access to communication comes economic empowerment. The MTN Group operates three business divisions: MTN-SA (South Africa), MTN International, and Strategic Investments.

ABOUT QUANTUM AFRICA

Quantum Africa is a black-owned South African company that represents the entire business interests of Quantum on an exclusive basis throughout Africa.

Quantum is a recognised leader in data storage for the open systems market with technical, product development, and support expertise in the areas of policy-based data management, systems automation, connectivity, and storage management software. By integrating these technologies, Quantum delivers Intelligent Storage™ solutions that operate efficiently, reliably, and flexibly within today's complex and evolving storage environments.

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About Quantum

Quantum Corp. (NYSE:QTM) is the leading global storage company specialising in backup, recovery and archive. Combining focused expertise, customer-driven innovation, and platform independence, Quantum provides a comprehensive range of disk, tape, media and software solutions supported by a world-class sales and service organisation. As a long-standing and trusted partner, the company works closely with a broad network of resellers, OEMs and other suppliers to meet customers' evolving data protection needs.