



# TECHNICAL BRIEF

## Enterprise support services offerings

Achieving higher value through consolidated  
support for mainframe environments

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## 1 SUMMARY

Alternative providers of maintenance and support services can offer distinct financial, technical and operational advantages for enterprise data environments. Along with substantial cost savings, the benefits of alternative maintenance can include faster restore times, a single point-of-contact for all maintenance activities, simplified service contacts and reduced staff workloads. But for an organization to realize these benefits, the alternative service provider must have the people and processes in place to meet a demanding range of requirements. These requirements include remote support and diagnostic capabilities, access to certified and trained technicians, access to microcode updates and engineering changes, high-caliber technical support specialists, and the ability to escalate problems to OEMs (Original Equipment Manufacturers). These are all elements of StorageTek® Enterprise Support Services offerings for mainframe environments.

## 2 THE PROBLEM

Mainframe computing systems remain prevalent in today's enterprise IT (Information Technology) environments. While Open Systems have made dramatic strides in recent years, most enterprises still have major portions of their operations based in mainframe systems. Furthermore, because of the high reliability of today's mainframe equipment, customers are tending to keep their mainframe hardware for longer periods of time. As part of these longer product lifecycles, customers are not only getting extended production use from their equipment, but also an increased ability to maintain better simulation test environments. Each of these dynamics requires a unique service and maintenance strategy, which matches the cost of maintenance to the utility of the equipment within the customer site.

All the while, new mainframe users continue to come online. In 2002, for example, IBM added more than 100 new mainframe customers, according to Gartner Research.<sup>1</sup>

This continuing acceptance is a sign of the distinct advantages of mainframe architectures. Mainframe systems have several unique characteristics that provide added value for the enterprise. These characteristics include:

- > High reliability
- > Proven technology
- > Raw computing power
- > Large numbers of available business-critical applications
- > Large storage infrastructures.

But with these advantages comes a corresponding set of IT challenges. Because mainframe systems often hold mission-critical applications in their entirety, downtime can't be tolerated. Even brief periods of downtime can disrupt ongoing business operations and the work of hundreds, if not thousands, of employees.

<sup>1</sup> "IBM Mainframe Futures: Better Than Many Believe." Gartner, Inc. Research Note, February 25, 2003.

This puts added stress on IT organizations. An organization must have advanced support resources in place so that proactive maintenance takes place as it should and reactive maintenance takes place quickly and efficiently. The pool of available maintenance resources spans from technical experts to a spare-parts pipeline that can deliver replacement components in a matter of hours.

While OEM vendor support and maintenance is the traditional route that many organizations take, a significant number of enterprise IT organizations are increasingly looking to alternative service providers to meet their mainframe support needs.

### **3 THE SOLUTION**

As the StorageTek experience has shown, a single service provider can meet—and even exceed—the full range of an organization's mainframe support requirements. But to fill this need, the service provider must have the required people, processes, product components and OEM escalation paths in place.

Based on years of experience in maintaining enterprise systems, StorageTek has identified the essential components of a comprehensive maintenance program for mainframe systems. These components, listed below, must be in place to properly maintain systems on an ongoing basis and bring them back online quickly in times of system outages.

#### **3.1 OEM-COMPATIBLE PHONE-HOME CAPABILITY OR PROACTIVE SUPPORT OPTIONS**

Remote monitoring support offers added security. This type of support uses a mainframe-based application that works in tandem with the self-monitoring capabilities of mainframe systems, which continually monitor themselves for errors. When a predetermined threshold is reached, the remote support application dials home to the service provider, transmitting the error information and, if necessary, providing immediate notification to technical support personnel.

For optimum performance, the remote support application provided by the alternative service provider should duplicate the exact functions and capabilities of the OEM support device. This is the case with StorageTek's maintenance program. StorageTek has the industry's only fully OEM-compatible phone-home capabilities for alternative maintenance and support.

Unlike applications that simply send an e-mail message noting that a system is down, the StorageTek phone-home solution does preliminary troubleshooting and highlights potential parts that may need to be replaced. This information allows support teams to respond faster and more effectively to system problems, accelerating time-to-resolution.

In an added safeguard, StorageTek tests call-home capabilities on a weekly basis. This provides the assurance that the phone-home system is up and running.

### **3.2 24X7 SUPPORT + 2 HOUR RESPONSE**

In order to address systems issues quickly, onsite services must be available 24 hours a day, every day of the year. StorageTek recommends a 2-hour target response time for onsite service in cases that can't be resolved remotely. This response time is twice as fast as IBM's 4-hour target.

While slower response times might be acceptable for more minor systems issues, faster response times are imperative in cases when mission-critical systems are down. For some enterprises, a single minute of mainframe downtime can cost tens of thousands of dollars in lost revenue.

### **3.3 MICROCODE UPDATES AND ENGINEERING CHANGES**

To keep systems operating at optimal performance levels, recommended software updates and engineering changes must be made in a timely manner.

To accomplish this goal, the mainframe support program must closely monitor information that OEMs such as IBM release via the Web, hardcopy publications and subscription-based "Hardware Early Warnings" service and similar fee-based services. This gives the alternative service vendor access to the pool of technical information used by OEM support specialists.

StorageTek's Enterprise Support Services program invests in these subscription-based services. This enables StorageTek to facilitate the ordering of recommended software updates in a timely manner.

### **3.4 SPARES AND LOGISTICS MANAGEMENT**

All replacement parts required to correct a hardware problem must be immediately accessible. Enterprise Support Services from StorageTek keeps spare parts strategically located near every major metropolitan area. This allows StorageTek to respond to equipment failures at a customer site in a timely manner.

Along with a state-of-the-art logistics management system for spare parts, StorageTek maintains alliances with key parts providers to provide just-in-time delivery of product components. This even includes CMOS processors that can cost in excess of \$1 million. With its global reach, StorageTek is a large enough company to absorb the acquisition costs of such high-end replacement components.

### **3.5 ABILITY TO ESCALATE TO OEM IF REQUIRED**

Some problems with mainframe systems go beyond the scope of standard maintenance activities and extend to the heart of the mainframe technology. For cases such as these, it is important for the service provider to have a close relationship with the OEM's engineering team.

This is the case with StorageTek's Enterprise Support Services program. To reduce problem resolution times, StorageTek has well-established escalation paths for cases that require involvement by high-level engineers at IBM and other mainframe manufacturers.

### 3.6 OTHER SUCCESS FACTORS

Ideally, an alternative maintenance provider should also be able to offer the following enhancements to the services offering for its customers:

- > Site files that categorize all the equipment that is on the data center floor. This includes attached storage devices and other equipment connected to the mainframe system. The use of site files enables quicker communication with support specialists, who can see at a glance the equipment that is in the environment.
- > An assigned customer service representative. Communication is enhanced and maintenance issues can be resolved in less time when IT staff members can interact with a single known and trusted service representative.
- > Account coordination, including the ability to support multivendor elements.
- > Well-defined service levels that are detailed in service level agreements (SLAs). These documents should cover response times for onsite support, the availability of certified engineers and other elements of the service program. StorageTek offers three levels of SLAs, which can be customized as necessary.
- > Documented escalation processes. These documents should provide a clear view of how support calls are tracked and how technical issues are escalated to provide timely problem resolution.

### 4 THE STORAGETEK ADVANTAGE

The StorageTek Enterprise Support Services program for mainframe environments encompasses all of the components listed above. Through this program, StorageTek assumes ownership of maintenance issues in enterprise environments and delivers high quality, reliable service to customers.

At the heart of Enterprise Support Services are the men and women of the StorageTek service delivery force, encompassing more than 2,000 highly trained customer service engineers with an average of over 15 years experience solving customer issues in the data center. These engineers are actual StorageTek employees, not outside contractors, who receive hands-on training in supporting mainframe processors and the systems to which they attach.

Years of experience have given StorageTek's field engineering force a firm grasp on the issues involved in delivering best-of-class services to mainframe customers. This experience stems from StorageTek's legacy of providing and supporting tape-based backup products for mainframe systems in the high end of the enterprise. Due to this heritage, StorageTek's support program has a strong emphasis on keeping enterprise-class data available.

#### **4.1 STORAGETEK'S ENTERPRISE SUPPORT SERVICES**

Today, StorageTek's services encompass the full scope of data center maintenance, including support for hardware and software products from EMC, HP, IBM, Sun and other vendors. This broad range of capabilities has allowed many organizations to outsource all of their data center support needs to StorageTek, eliminating the administrative headaches that come with maintaining multiple contracts with service providers.

StorageTek is a leader in supporting multivendor, data-intensive processing and storage environments. The company's global services organization supports thousands of customers and their IT environments, including many representatives of the Fortune 100 in such industries as telecommunications, transportation, retail, high-technology, financial services and utilities.

Customers know firsthand the value of StorageTek's Enterprise Support Services. In short, StorageTek's Global Services team has the right people and processes in place to help enterprises keep their mainframe systems stay up and running at peak performance. And StorageTek is typically able to deliver these comprehensive services for significantly less than the cost of comparable services from OEM providers.

#### **4.2 FOR MORE INFORMATION**

To learn more about StorageTek's Enterprise Support Services and other Global Services solutions, contact your StorageTek representative. Or visit: [www.storagetek.com](http://www.storagetek.com).







#### ABOUT STORAGETEK®

Storage Technology Corporation (NYSE: STK), a \$2 billion worldwide company with headquarters in Louisville, CO, has been delivering a broad range of storage management solutions designed for IT professionals for over 30 years. StorageTek offers solutions that are easy to manage, integrate well with existing infrastructures and allow universal access to data across servers, media types and storage networks. StorageTek's practical and safe storage solutions for tape automation, disk storage systems and storage integration, coupled with a global services network, provide IT professionals with confidence and know-how to manage their entire storage management ecosystem today and in the future.

StorageTek products are available through a worldwide network. For more information, visit [www.storagetek.com](http://www.storagetek.com), or call 1.800.275.4785 or 01.303.673.2800.

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