StorageTek

**STORAGETEK**

# Global Information Storage Solution Provider Creates Business-to-Business Portal Using Microsoft Commerce Server 2000

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*As a result of an aggressive program to increase sales through Value Added Distributors and Resellers, Louisville, Colorado-based information storage solution provider StorageTek™ recently decided to extend its Web presence. Working with Microsoft® Certified Solutions Provider marchFIRST and Microsoft Consulting Services, StorageTek developed a partner-targeted portal that provides online product information, pricing and quote-creation capabilities. The new B2B portal also provides partners with real-time access to StorageTek's internal systems, including those that run third-party solutions such as SAP, Oracle, and Netscape. Through this interface, partners can submit orders 24 hours a day, directly into StorageTek's order management system, and can access up-to-the-minute order status information from manufacturing and fulfillment systems.*

## Background

StorageTek is a preeminent provider of tape and tape automation, virtual storage, and open SANs (storage area networks). Their solutions help the world's major corporations, government agencies and new Internet companies collect, move, store, share, and protect digital content. StorageTek's products and services are available worldwide directly from StorageTek and through an extensive network of partners including value-added distributors (VADs) and value-added resellers (VARs).

## Situation

StorageTek wanted to grow product sales through its partners. To achieve this, StorageTek had to provide its strong lineup of new and existing products, and present the information and tools needed to successfully sell them. Because StorageTek's products can be configured to meet a broad range of information storage needs, selling them requires in-depth technical information and specifications.

StorageTek decided to create a Web-based solution. In order to develop the new portal strategy, define requirements, and implement these capabilities, StorageTek joined with Microsoft Certified Solution Provider marchFIRST. "We chose marchFIRST because of its proven track record in

### Solution Overview

**Customer Profile**
StorageTek (NYSE: STK) is one of the largest global information storage solution providers with 1999 revenues of $2.4 billion. It delivers tape and tape automation, virtual storage, and open SANs to meet information storage needs.

**Business Situation**
StorageTek needed a solution that would make it easier for its resellers and distributors to conduct business with the company.

**Solution**
StorageTek built a business-to-business portal using Microsoft® Commerce Server 2000 that is linked to its order management and fulfillment applications. This enabled resellers and distributors to get product information and pricing, place orders, and check on the status of orders – all in real-time.

**Software and Services**
Microsoft Windows® 2000 Advanced Server
— Microsoft Internet Information Services 5.0
Microsoft Commerce Server 2000
Microsoft SQL Server™ 7.0 Enterprise Edition
Microsoft Visual Studio®

**Partners**
MarchFIRST (Nasdaq: MRCH)
(www.marchFIRST.com)

**Scenario**
Business to Business e-commerce

**Microsoft**

building distinctive, interactive Web sites that improve the bottom line by leveraging the Internet to transform business processes," recalls Stacy Cordes, Director of eBusiness for StorageTek. "In addition, we knew their technical resources would ensure that our solution was tightly integrated with our existing systems, and that we were well-positioned to combat future competitive threats."

Prior to designing the solution, StorageTek and marchFIRST team members conducted extensive interviews and site visits to determine how to enhance the relationship between StorageTek and its partners via the new portal. A prevailing theme emerged from these meetings – make it easier for its partners to do business with StorageTek. "Many of our partners were using home-grown configuration and quoting tools that were out of sync with StorageTek's systems," explains Cordes. "As a result, faxed orders often contained pricing or configuration errors that required manual intervention. We wanted a system that would eliminate these errors and speed the delivery of product to our customers. We also wanted to provide our partners with real-time visibility of an order throughout the fulfillment process."

## Solution

StorageTek and marchFIRST decided to build the new B2B portal using the Microsoft .NET platform. They enlisted Microsoft Consulting Services to assist with design and implementation. Together, they developed a solution using Microsoft Windows® 2000 Advanced Server, Microsoft Commerce Server 2000, and Microsoft SQL Server™ 7.0. This solution provided detailed product information, and enabled user profiling and targeting. The portal functioned as a gateway to manufacturing and order management systems running on SAP/R3.

The portal was built using a 3-tier architecture supported by the Microsoft platform. Presentation and some business logic is handled by Commerce Server 2000, using Active Server Pages (ASP) that were created using the Microsoft Visual Studio® development system. Integration with the SAP system, which manages the business logic for order management, manufacturing and fulfillment, is accomplished using ASP and COM+. Database services for the portal are provided by Microsoft SQL Server 7.0 Enterprise Edition, running on Microsoft Windows 2000 Advanced Server. For maximum availability, the servers are configured as an active-active two-node cluster, using the functionality provided in the Microsoft platform.

By enabling access to the internal systems via the new B2B portal, StorageTek's partners can access up-to-date product information and generate accurate quotes. They can be aware of delivery dates and synchronize the delivery of StorageTek products with the delivery of other components. This provides the customer with a level of service that often exceeds their expectations. StorageTek's costs are reduced because manual processes are automated or eliminated, such as responding to an inquiry on the status of a delivery. In addition, partners can monitor delivery progress online, which reduces costs through better management of the StorageTek products they hold in inventory. This also helps to reduce costs for StorageTek because partners do not return this "buffer" inventory for credit.

## Out-of-the-box Functionality

One of the reasons StorageTek selected Commerce Server 2000 was to take advantage of pre-built components. This out-of-the box functionality includes B2B and B2C Solution Site templates, which are fully functional eCommerce applications. These applications contain all the resources required to build an e-commerce site, and demonstrate how to integrate the various

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eBusiness Program Manager
StorageTek

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components of Commerce Server 2000. "One reason we selected Commerce Server 2000 was the ability to use pre-built components that reduced the time-to-market for this critical application," says Jeff Armstrong, StorageTek eBusiness Program Manager. "In addition, the use of these components does not restrict customization by StorageTek to meet our specific needs."

## Authentication

Because of unique contracts between StorageTek and their partners, providing secure access to the B2B portal is critical. The login process uses the custom authentication service of the Commerce Server 2000 Profile System to access existing Netscape LDAP directory servers. The same servers are used to manage secure access to other StorageTek applications. "The authentication services of Commerce Server 2000 make it easy to implement secure authentication," emphasizes Jim West, marchFIRST eBusiness Practice Leader. "We used the Active Directory Services Interface (ADSI) to provide access to the LDAP directory. Completing this project also exposed some existing StorageTek LDAP directory and user id issues, which were corrected before the portal went live."

## Profiling and Targeting

Once a user accesses the site, the Commerce Server 2000 Profile and Targeting Systems are used to deliver the correct content for the user. This is based on StorageTek's business rules, system-driven recommendations, and user preferences. "Different StorageTek VARs and VADs are authorized to sell different sets of products," explains West. "We used the Commerce Server 2000 Profile System to determine a user's organization and the Targeting System to display the appropriate catalog and content."

Since the Profile System is data store agnostic, it was easy to integrate with existing back-end systems. In this case, existing customer data was stored in StorageTek's Oracle-based "Common People" customer database. Profile information can be stored in SQL Server or any other Open Database Connectivity (ODBC)-compliant third-party database, as well as in the Windows 2000 Active Directory™ service or any third-party LDAP-compliant directories. While a profile can span multiple data stores, it is presented to the application as a single object when it is retrieved. In StorageTek's case, user information required for authentication is stored in a Netscape LDAP-compliant directory, whereas other Profile information resides in both SQL Server and the Oracle database.

## Catalogs

Product catalogs are the primary means for users to find and view product information within the B2B portal, therefore synchronization between these catalogs and the manufacturing systems is essential. Each week, a master product catalog is built from data extracted from SAP using Data Transformation Services (DTS) provided with SQL Server. A custom catalog is then created for each partner, which includes only those products that they are authorized to sell. "The Custom Catalog feature of Commerce Server 2000 was essential because it allowed us to create partner-specific catalogs from a single master catalog," explains West.

The Product Catalog System in Commerce Server 2000 provided several pre-built components that enabled StorageTek to accelerate the development of the B2B portal. Some of these are:

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- **Catalog Designer** – allowed StorageTek to quickly define a unique product catalog and manage the creation of categories that match their products. StorageTek's product managers can operate this tool through the Commerce Server 2000 Business Desk, a simple web-based graphical user interface (GUI) allowing business users to perform common business operations, including reviewing reports, creating marketing campaigns, updating product data, and modifying profiles

- **Catalog Editor** – enabled StorageTek to easily import product data from its SAP/R3 systems via the Business Desk.

- **Custom Catalogs** – enabled StorageTek to create catalogs that are unique to each business partner. These unique catalogs are built from a master catalog using the Catalog Editor and reflect the specific products that partners can sell on behalf of StorageTek.

## Customized Quotes

From the catalog, users can configure a product and add it to a quote by clicking on a "Configure" button. Configuration is provided via ASP and COM+ integration with SAP/R3. Users are able to see accurate pricing for the base product and any additional features as they are added. Upon completing the configuration process, the newly-configured product is added to the user's open quote, which is managed by Commerce Server 2000 and stored in the SQL Server database. Users can save a quote, open it again later, and modify it as many times as needed during the sales process.

## Order Entry and Status

Order entry and order status functionality provided by the SAP system is also accessed via the B2B portal. This is also accomplished with ASP pages and COM+ objects that communicate with SAP/R3. The user experiences the same interface "look-and-feel" as the rest of the site, unaware that he or she is now accessing another system. Partners can also check the status of their orders at anytime by visiting the B2B portal.

## A Scalable, Extensible, e-commerce Foundation

StorageTek was aware of several potential roadblocks in trying to provide its partners with the best possible online experience. Some of those roadblocks included: long development time, lack of platform scalability, lack of integration with existing operational systems, and lack of available skills for continued development and maintenance. "Selecting the Commerce Server 2000 platform mitigated all these risks," says Armstrong. "Using the features provided in Commerce Server 2000, we were able to quickly develop a full-featured solution that is scalable and tightly integrated with StorageTek's existing systems. We expect the B2B portal to be used extensively by our partners, and implementing the system on the Microsoft platform enables StorageTek to support this growth."

With the B2B portal, the partners are able to review personalized product information, configure products and generate quotes, enter orders via the Internet, and track the progress of their orders. "Using Commerce Server 2000 to improve our partner relationships is resulting in improved efficiencies for StorageTek," says Cordes. "We did exactly what our partners asked us to do – we made it easier for them to do business with us. Commerce Server 2000 and the .NET platform enabled us to delight and astonish our customers, which is key to keeping them coming

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back for upgrades and additional products. Microsoft technology has proved to be stable, scalable, and most importantly, reliable."

"The project proved that business-to-business Internet commerce and targeted, personalized information could provide huge benefits," adds West. "Right from the start, StorageTek achieved real value from extending key manufacturing and order management information to the Web. This is largely due to the reliability and quality of the Microsoft products, which allowed us to deliver an online commerce system that is integrated with StorageTek's existing infrastructure."

Additional internationalization of the site is planned to take advantage of the global audience that the Internet provides and StorageTek serves. StorageTek also plans to extend content and applications to allow partners improved access to product support and maintenance services. "We're confident that Commerce Server 2000 will enable us to easily extend our functionality to meet these goals," says Cordes. "We now have the in-house skills to continue to develop our systems in line with market requirements, and benefit from the latest technologies."

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The .NET Enterprise Servers are Microsoft's comprehensive family of server applications for building, deploying and managing next generation integrated Web experiences that move beyond today's world of standalone Web sites. Designed with mission-critical performance in mind, .NET Enterprise Servers will provide fast time to market as well as scalability, reliability and manageability for the global, Web-enabled enterprise. They have been built from the ground up for interoperability using open Web standards such as XML. The .NET Enterprise Servers are a key part of Microsoft's broader .NET strategy, which will enable a distributed computing model for the Internet based on Internet protocols and standards in order to revolutionize the way computers talk to one another on our behalf.

## For More Information

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