Windows Azure
Partner Solution Case Study

Solution Developer Expects to Boost Efficiency with Software-plus-Services Strategy

Overview

Country or Region: United States
Industry: Oil and gas

Partner Profile
Since 1994, Houston, Texas–based software company The Information Store® (iStore) has specialized in helping petroleum companies access exploration and production data, improve asset performance, and reduce cycle time.

Business Situation
The iStore sought a solution to increase operational efficiency, speed deployment, reduce upfront capital costs, and lower ongoing operating expenses.

Solution
The company adopted the Windows Azure™ platform as the foundation for its online Digital Oilfield solution, which also incorporates Microsoft® SQL Azure, the Silverlight™ browser plug-in, and Bing™ maps.

Benefits
- Speeds deployment
- Reduced upfront capital cost
- Lowers ongoing operational expenses

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Thinh Pham, Senior Architect, The Information Store

The Information Store® helps global petroleum companies access exploration and production data irrespective of where the data resides and presents it in a useful and familiar form. To maintain its competitive advantage, the company was eager to find a cost-effective way to extend its industry-leading PetroTrek® solutions to independent oil producers. The company evaluated two "software as a service" offerings and selected the Windows Azure™ platform—an Internet-scale "cloud services" platform that is hosted in Microsoft® data centers—as the foundation for its online Digital Oilfield solution, along with Microsoft SQL Azure, the Silverlight™ browser plug-in, and Bing™ maps for enterprise. The company expects to increase the operational efficiency of its customers by reducing upfront capital costs, reducing deployment cycles from months to days, and lowering ongoing operating expenses.

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Ben Parker, Director of Marketing, The Information Store

Situation

For nearly 15 years, The Information Store® (iStore) has operated under the simple premise that having the right information at the right time is the key to good decision making, especially when it comes to petroleum exploration and production data. In fact, the Houston, Texas–based company was founded by a group of geologists, geophysicists, engineers, and computer scientists following an industry-wide effort in the late 1980s to improve data management practices.

From the beginning, iStore—a Microsoft® Gold Certified Partner—has pioneered the use of advanced technologies to solve data access problems for its customers. Using Microsoft Office SharePoint® Server 2007, the company developed the PetroTrek® Asset Management and Digital Oilfield solution suites. These business solutions offer efficient and cost-effective management of vast amounts of remote data stored across multiple disparate and incompatible databases. By organizing and presenting information in an intuitive way—and eliminating the need for extracting and storing data before use—PetroTrek solutions help customers reduce complexity, time, cost, and errors.

By incorporating sophisticated Web-based technologies, such as Microsoft Silverlight™ browser plug-in and Bing™ maps for enterprise into the solution, iStore provides its customers with a robust framework for accessing, analyzing, reporting, and distributing business-critical exploration and production data. Many of the industry's top-tier oil companies have adopted PetroTrek Digital Oilfield solutions and incorporated them into their on-premises IT infrastructures.

However, iStore is keenly aware that the independent operators in the United States (not the top-tier companies) produce the majority of the country's oil and natural gas—68 percent oil and 85 percent gas—and drill nearly 90 percent of the nation's wells on an annual basis.

"There are approximately 5,000 independent operators in the United States, and the majority of them are small businesses with one to 20 employees," explains Ben Parker, Director of Marketing at The Information Store. "If we could give independent operators access to Digital Oilfield solutions with the same functionality as the ones we've developed for the supermajors and national oil companies, we could revolutionize exploration and production in the United States. With the right technology, smaller independents could potentially transform the way they operate and collaborate, helping to maximize production in the United States. The problem is that Digital Oilfield technology solutions often require infrastructure purchases—hardware, software licenses, IT support, etc.—that become cost prohibitive for small-business owners. The good news is that we can equip these exploration and production professionals with tools that have, until now, simply been out of reach."

iStore was looking for a Digital Oilfield solution delivery model that levels the playing field for independent oil producers that would increase operational efficiency, speed deployment, reduce upfront capital costs, and lower ongoing operating expenses.

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Tod Magstadt, Strategic Planning and Project Manager, The Information Store

Solution

To offer a Digital Oilfield solution that would help businesses reduce their IT infrastructure costs, iStore—with the assistance of CSC, an iStore and Microsoft Gold Certified Partner—investigated the possibility of adopting a software-plus-services approach. The company evaluated two solutions: the Windows Azure™ technology platform and Amazon Elastic Compute Cloud (EC2). The company selected the Windows Azure platform—an internet-scale "cloud computing" services platform hosted in Microsoft data centers. The Windows Azure platform, which provides a range of functionality to build applications that span from consumer Web to enterprise scenarios, includes a cloud services operating system and a set of developer services. Windows Azure, Microsoft SQL Azure, and Microsoft .NET Services are the key components of the Windows Azure platform.

"We felt that the Windows Azure platform had more to offer than Amazon EC2 because it is a total platform," says Thinh Pham, Senior Architect at The Information Store. "In addition to the operating system, the platform includes Microsoft SQL Azure for extending storage to the cloud. With Windows Azure, we also have peace of mind knowing that Microsoft is maintaining the image. All we have to do is deploy the software and run it. It's basically foolproof."

iStore also chose Windows Azure because of its subscription cost model, which makes it possible for small and midsize businesses to access Digital Oilfield technology at a fraction of the cost of an on-premises deployment. "We're also excited that with Windows Azure we can deploy very rapidly and cost-effectively and scale easily," says Oscar Teoh, Vice President of Operations at The Information Store. "Our customers don't have to spend money on hardware and software, and we don't have to spend time on administrative tasks related to infrastructure. We can put all of our effort into our core competencies."

In September 2009, iStore initiated the first step toward developing PetroTrek Online™—the hosted version of its flagship technology offering—and began migrating the existing technology code to the Windows Azure platform. "We're used to working in the Microsoft environment," Pham says. "All of the components of Windows Azure are very familiar to us, so deploying to Windows Azure is not much different than deploying to a local data center."

In addition to using internal resources, iStore is taking advantage of the expertise that CSC brings to the project as a result of its participation in the Windows Azure Technology Adoption Program. CSC is ensuring that the application architecture is optimized for deployment on Windows Azure, and it is also assisting iStore in performance engineering, development, and commercialization of its product.

The company plans to begin offering PetroTrek Online in 2010.

Benefits

Using the Windows Azure platform, iStore is in the process of developing a cost-effective, scalable model for its PetroTrek technology. The company expects to speed deployment, reduce

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upfront capital costs, and lower ongoing operating expenses.

Web-based solution speeds deployment. The elastic resource model of Windows Azure removes hurdles for cloud-based PetroTrek deployment as compute and storage resources are provisioned on-demand. In the past, iStore would spend one to two months getting on-site infrastructure in place for its on-premises deployments. "With Windows Azure, we're going to cut that down to a matter of days instead of months," says Tod Magstadt, Strategic Planning and Project Manager at The Information Store. "We'll be able to provide value to our customers right away because Windows Azure helps us eliminate a lot of operational hurdles."

Hosted delivery model reduces upfront costs and ongoing operating expenses. Using Windows Azure dramatically improves IT and business alignment by allowing the business to move at the speeds dictated by market forces. Because the data, applications, and services are hosted in the Microsoft data centers, customers no longer have to invest time, money, and effort in procuring, configuring, and maintaining infrastructure.

"If we compare the upfront cost of the two deployment models, I would estimate that using Windows Azure could save customers as much as 90 percent in some cases, such as new deployments with brand new hardware," says Pham. "It's the difference between a few hundred dollars for Azure, versus a few hundred thousand dollars for on-premises."

Also, because Microsoft manages the infrastructure and iStore manages the solution, customers can dramatically reduce the IT footprint in the context of this solution. This translates into substantial IT overhead cost reduction. "With Windows Azure, we know the data is in good hands because it's being hosted by Microsoft," Teoh concludes. "Microsoft is our IT department—it doesn't get much better than that."

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For more information about The Information Store products and services, call (713) 787-6798 or visit the Web site at:
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Additional Resources:
View: Download: Windows Azure Platform Training Kit
View: Architecting and Developing for Windows Azure

Windows Azure Platform

The Windows Azure platform provides an excellent foundation for expanding online product and service offerings. The main components include:

- **Windows Azure.** Windows Azure is the development, service hosting, and service management environment for the Windows Azure platform. Windows Azure provides developers with on-demand compute and storage to host, scale, and manage Web applications on the Internet through Microsoft data centers. In addition, Windows Azure serves developers' connectivity needs through the following services.
  - The **Service Bus** connects services and applications across network boundaries to help developers build distributed applications.
  - The **Access Control Service** provides federated, claims-based access control for REST Web services.
- **Microsoft SQL Azure.** Microsoft SQL Azure offers the first cloud-based relational and self-managed database service built on Microsoft SQL Server® 2008 technologies.

To learn more about the Windows Azure platform, visit:
www.windowsazure.com

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