



Investment Firm Embraces Cloud Computing to Achieve Growth Goals, Reduce Costs

Overview

Country or Region: United States
Industry: Financial services—Capital markets and securities

Customer Profile

Munder Capital Management is an asset management company that manages more than US\$16 billion for corporations, retirement plans, insurance companies, and others. The firm employs 168 people.

Business Situation

Munder Capital had already virtualized its data center but needed even greater agility to meet organic and strategic growth goals.

Solution

The company used Windows Server 2008 R2 with Hyper-V technology and Microsoft System Center 2012 to create a hybrid private and public cloud infrastructure.

Benefits

- Help business meet strategic goals
- Avoid US\$315,000 annually in software fees
- Increase insight into service performance and availability
- Transition to public cloud computing

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Munder Capital Management understands clearly that being a world-class investment firm requires a world-class IT infrastructure. That’s why it virtualized its data center in 2008 and is now transitioning to cloud computing. Munder Capital created a private cloud environment using Windows Server 2008 R2 with Hyper-V and Microsoft System Center 2012. By running its business in a cloud environment, Munder Capital is more agile and better equipped to meet its goals and respond to client demands. By using System Center 2012 as its single IT management tool, the company has avoided US\$315,000 annually in software fees. It has also realized soft savings in higher IT staff productivity and fewer incidents. Munder Capital has also improved IT service performance and availability and can easily distribute and manage workloads across both private and public cloud environments.



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Situation

Munder Capital Management is a financial services firm that clearly understands that technology is a business enabler and delivers competitive advantage. Munder Capital provides investment advisory services to corporations, retirement plans, insurance companies, municipalities, and Taft-Hartley and mutual fund investors. Headquartered in Birmingham, MI, with offices in Boston, MA, and Rocky River, OH, Munder Capital and its Integrity Asset Management affiliate manage over US\$16 billion as of March 31, 2012.

To make wise investment decisions and provide excellent client service, Munder Capital investment professionals need constant access to financial data and business applications. To improve the availability of approximately 150 specialized financial applications, and to reduce the number of servers required to run these applications, Munder Capital virtualized its data center in 2008 and 2009 using the Windows Server 2008 R2 operating system with Hyper-V technology. It deployed Microsoft System Center data center solutions to manage its new streamlined infrastructure. The company also used Windows Remote Desktop Services to give traders easier remote access to the company's financial applications and to simplify application management.

By virtualizing its data center, Munder Capital reduced its server holdings by 40 percent, its operating system licensing costs by \$136,000 over three years, and its IT maintenance and electrical costs by \$1,000 a month. Virtualization also helped the business be more nimble, as the IT staff could deliver servers in hours rather than weeks, which lowered the risk of trying new ideas.

In 2011, Munder Capital President and Chief Executive Officer Jim FitzGerald announced a strategy focused on both organic and strategic growth—looking to partner with and attract talented professionals regardless of their locale. This multi-boutique investment model required the ability to synchronize offices around the country and react even faster. To do that, the firm needed to roll out new services for internal and external clients quickly, which meant having an even more responsive technology infrastructure.

"When we virtualized our data center, we realized a whole slew of management efficiencies, we decoupled our applications from physical hardware, and we significantly consolidated our server holdings," says Wolfgang Goerlich, Information Systems and Security Manager for Munder Capital Management. "All of this was really exciting to those of us on the IT staff and to company management. However, there's no standing still in the investment business. After virtualizing, we could see even more opportunities for helping the business react faster."

Specifically, Goerlich says that his team needed to better integrate the software development team into the IT service lifecycle and completely refocus the IT staff's energies around the business. "We were getting there, but it's a gradual progression from caring about blinking boxes to caring about the service fabric and the business processes flowing over it," Goerlich says. "Virtualization got us started, but we still had gaps in our solution portfolio, we still had too many management solutions, and software development was still taking longer than we'd like."

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Solution

Transitioning its virtualized infrastructure to a cloud computing infrastructure was the logical next step. Cloud computing refers to the pooling of virtualized compute and storage resources into a single computing fabric that is dynamically reconfigurable on demand in a highly automated fashion.

Start with Private Cloud Computing

Munder Capital first looked at moving its data center workloads into a public cloud environment, where workloads from many organizations run on the same physical infrastructure. However, Munder Capital was not ready to put its mission-critical workloads in a multitenant public cloud infrastructure.

“We felt that public clouds in 2011 were where virtualization was five years ago—not yet able to meet our particular business needs,” Goerlich says. “As a financial firm, we have regulatory and security concerns that we didn’t feel we could meet in a public cloud. We wanted the scale, flexibility, and automation of cloud computing, but the control and security of on-premises computing. The answer was a private cloud running in our own data center.”

A private cloud environment provides the same dynamically reconfigurable computing fabric but is dedicated to a single organization’s use. “We definitely plan to move more workloads into the public cloud down the road, and we have projects running in Windows Azure today so that we can make the shift to public cloud when the time is right,” Goerlich says. Windows Azure provides organizations with on-demand compute, storage, bandwidth, content delivery, middleware, and marketplace capabilities to build, host, and scale web applications through Microsoft data centers.

With its eye on multiple cloud computing strategies, Munder Capital decided to build its initial private cloud environment using Microsoft software—specifically, Windows Server 2008 R2 and Microsoft System Center 2012. System Center 2012 is an integrated solution for monitoring, managing, and backing up cloud environments. Goerlich liked the fact that as Munder Capital gradually moved to public cloud computing, it could use the same tool set for managing public, private, and hybrid cloud environments.

Move Data Center to Colocation Facility

Munder Capital engaged Sogeti, a member of the Microsoft Partner Network, to provide architectural advice on building the cloud environment. “As an in-house IT manager, I don’t have the advantage of seeing best practices from other companies and industries, and Sogeti brings that to me,” Goerlich says. “Sogeti brings that high-value architecture perspective and helps us focus our time and efforts.”

Munder Capital decided to create its private cloud environment in a colocation facility, whereby Munder Capital owns and manages the servers but a hosting facility provides the server racks, power and cooling, network connectivity, and physical security. Moving servers off Munder Capital premises was one more way that Goerlich could relieve his staff of “caring about blinking boxes” and focus them on supporting the investment business.

After upgrading to System Center 2012, the Munder Capital IT staff used the Virtual Machine Manager component in that software to automatically move applications from the old data center to the new—with no downtime or staff augmentation. Once all the workloads were running in the new data center, Munder Capital cut over all production workloads to

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the new environment and unplugged the old servers. The whole process took just three months.

The staff used the Configuration Manager component of System Center 2012 to automate the deployment of all operating systems and applications in the new environment and the Service Manager component to manage incident and change management tickets.

When it virtualized in 2008, Munder Capital consolidated from 140 to 86 servers and reduced the number of custom applications from 317 to 272. When it built its private cloud environment, Munder Capital further shrunk its server count, to just 43 servers, 15 of which are Hyper-V hosts. Thirteen are in the new data center and two are in branch offices. Goerlich calls the branch office servers “branch offices in a box” because they contain multiple virtual machines for running file, print, and other IT services, yet can be managed by Birmingham IT staff using System Center.

Munder Capital uses Dell PowerEdge R810 servers in its private cloud, Dell PowerEdge R710 servers in branch offices, and a Dell Compellent Storage Center storage area network (SAN). Munder Capital has created about 110 virtual machines in its cloud but has capacity to more than double the number of virtual machines.

Unify Network Management with One Tool

Munder Capital has used System Center to unify its network management portfolio and eliminate multiple single-function solutions. System Center includes a vast range of capabilities accessible through a single management console, giving IT staff the ability to perform myriad cloud management tasks using a single skill set and tool.

“Our software analysts and systems engineers have a single-pane view into our information systems,” says Jeff Lass, Network Operations and Virtualization Engineer at Munder Capital Management. “With it we have been able to radically automate processes, and this decreases time-to-delivery and refocuses our staff on adding business value by eliminating routine and mundane tasks.”

The staff uses the Operations Manager component in System Center 2012 to monitor the health of the entire cloud fabric—servers, applications, and network connections. “We’re quite excited about the ability to do network monitoring—take a deeper look at switches and routers and tie them to individual servers and services,” Lass says. “This level of insight will help us provide even more prompt service.”

The team uses AVIcode, a Microsoft application monitoring tool inside Operations Manager, to gain a new level of detail about cloud fabric health. The IT team can now analyze the code behind specific tasks to pinpoint performance problems.

The Virtual Machine Manager component of System Center 2012 provides automated wizards and templates for creating and tearing down virtual machines and provisioning and deprovisioning storage and network assets. Munder Capital developers can use the software to self-service their own virtual machine needs; this offloads work from the IT staff.

The Munder Capital team uses the Service Manager component of System Center 2012 to automate the management of all service tickets. If there’s a problem with the cloud hardware or software, the IT team creates a service ticket in Service Manager, which automatically routes the request to

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the right person, tracks ticket status, and records results in a configuration management database.

Munder Capital will deploy the System Center 2012 Orchestrator component in June 2012. “Our current orchestration tool does maybe one-tenth of what Orchestrator does,” Lass says. “Plus, we can use it to make sure that there are enough memory and CPU resources in our cloud before executing jobs. Our systems are running around the clock, and if we don’t have sufficient compute or storage resources, jobs fail halfway through and cause a great deal of rework.”

Munder Capital appreciates that Microsoft has simplified licensing for cloud computing. “Having to manage licensing for a number of point solutions that charge by the processor, the virtual machine, and other measures is a nightmare,” Goerlich says. “Microsoft’s licensing model is so much easier. We have a three-year Enterprise Agreement that provides unlimited licensing for all the Microsoft software we use, so we don’t have to constantly worry whether all our virtual machines are covered. Microsoft licensing saves us a huge amount of time and headache.”

Benefits

By building a Microsoft-based private cloud environment, Munder Capital is better able to meet its strategic business goals and has been able to save hundreds of thousands of dollars annually in software fees by using System Center 2012 as its central management console. The company has better insight into IT service performance and availability and is poised to begin moving more critical applications to Windows Azure.

Help Business Meet Strategic Goals

By embracing cloud computing, Munder Capital is better positioned to achieve its business goals. “Our business model focuses on assembling a collection of best-in-class boutique investment managers and aligning our partners’ interests with our clients’ interests—while carefully preserving the independent investment culture that distinguishes the most successful investment professionals,” says Munder Capital President FitzGerald. “This strategy, which must be supported by a world-class platform and infrastructure, allows our organization to focus solely on delivering investment and client service excellence.”

Goerlich adds an IT perspective to FitzGerald’s comment. “The investment business is in a state of constant change, and Munder is pursuing a very aggressive growth strategy,” he says. “The IT organization has to be able to move as fast as the business needs to move. As an example, we used to have a quarterly change process in IT. Then we moved to a monthly change process. Today, we’re averaging 46 infrastructure changes a month, and we wouldn’t be able to adapt and respond to this level of business dynamism without cloud computing and System Center. With System Center automating the low-level infrastructure changes, we can focus on top-level business objectives.”

A list of examples of how Goerlich’s staff has increased its agility to support business needs includes:

- Integrated the IT infrastructure of a new business acquisition in just four months
- Cut upgrade time for a key line-of-business application from eight months to three months

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- Moved all applications from old data center to a new colocation data center in three months without staff augmentation
- Enabled daily (versus monthly or quarterly) feature updates to production applications

As the Munder Capital IT infrastructure has progressed, the IT staff has become an even more vital component of the organization. "Our accomplishments have made us part of higher-level discussions about strategic direction for the firm," Goerlich says. "Our efforts are critical to achieving investment goals and bringing on top investment talent."

Avoid \$315,000 Annually in Software Fees

Munder Capital realized significant server-related savings when it virtualized with Hyper-V. By moving to cloud computing and upgrading to System Center 2012, Munder Capital is pocketing even more savings.

"We have avoided \$315,000 in annual licensing costs for third-party monitoring, orchestration, and backup products that we replaced with System Center," Goerlich says. "We've also realized soft savings from higher staff productivity and reduced training. Because we're now using just one tool, it makes it easier for a lean organization like ours to work together as a team. It gets people out of a silo mentality that says, 'This is the one tool I maintain.' Everyone can be more useful."

Specific examples of improved IT productivity due to System Center:

- Reduced server deployment time from 8 hours to 30 minutes
- Reduced failed change requests from 17 percent to 4 percent due to automation

- Reduced trouble tickets from 172 to 101 a month
- Improved regulatory compliance with zero IT exceptions

"Our staff is better able to focus on delivering business value rather than staring at blinking lights on servers," Goerlich says. "No one wants to get up at 3:00 A.M. to restart an application. Private cloud computing and System Center enable us to reduce the friction of daily IT tasks."

Increase Insight into Service Performance and Availability

Cloud computing further bolsters service availability and performance, because the cloud infrastructure intelligently and automatically moves workloads around the cloud fabric and requisitions additional resources as needed.

"Statistically speaking, we've had fantastic uptime since virtualizing with Hyper-V," Goerlich says. "But objective statistics don't get to the heart of what matters to employees. People may say, 'My application just felt slow yesterday.' Responding with 'five nines' is not the answer. Using AVIcode and other System Center capabilities, we're able to gain very precise visibility into application performance so that we provide outstanding service that's more than mere statistics."

Transition to Public Cloud Computing

Today, Munder Capital is a shining example of using a mix of cloud computing models to achieve business goals. It runs its core line-of-business applications in the Munder Capital private cloud, it runs some development and test environments in Windows Azure, and it consumes many third-party applications over the web using a software-as-a-service model. But the company is shifting more and more work

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www.munder.com

into public cloud environments to further reduce the time and money spent on IT. Goerlich's philosophy today regarding cloud division of labor is to, "own the base, rent the burst," which means to have a base computing capability in-house and reach out to public cloud for burst workloads.

"I couldn't have dreamed up a better product than System Center 2012 to help me manage the transition from private to public cloud computing," Goerlich says. "With System Center 2012, we can manage public, private, and hybrid clouds from the same 'pane of glass.' Without this tool set, we would not be able to manage this mixed environment without massive staff retraining. Because of regulatory and security concerns, now is not the time for us to move our tier-one applications to public cloud computing. But when that moment comes, I want us to be ready, and with System Center we are."

Windows Server 2008 R2

Windows Server 2008 R2 is a multipurpose operating system designed to increase the reliability and flexibility of your server and private cloud infrastructure, helping you to save time and reduce costs. It provides you with powerful tools to react to business needs faster than ever before with greater control and confidence. For more information, visit:

www.microsoft.com/en-us/server-cloud/windows-server

Software and Services

- Microsoft Server Product Portfolio
 - Windows Server 2008 R2 Enterprise
 - Microsoft System Center 2012
- Technologies
 - Hyper-V

Hardware

- Dell PowerEdge R810 and R710 servers
- Dell Compellent Storage Center storage area networks

Partners

- Sogeti