Moving to the Cloud:
Critical Considerations for Fund Managers

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About Eze Castle Integration

Eze Castle Integration is the leading provider of IT solutions and private cloud services to more than 600 alternative investment firms worldwide, including more than 80 firms with $1 billion or more in assets under management. The company's products and services include Private Cloud Services, Technology Consulting, Outsourced IT Support, Project & Technology Management, Professional Services, Telecommunications, Business Continuity Planning and Disaster Recovery, Archiving, Storage, Colocation and Internet Service. Eze Castle Integration is headquartered in Boston and has offices in Chicago, Dallas, Geneva, Hong Kong, London, Los Angeles, Minneapolis, New York, San Francisco, Singapore and Stamford.

There is little doubt that the movement to the cloud within the hedge fund industry is significant. For startup firms, especially, cloud adoption is becoming nearly universal. In addition to cloud adoption, the general trend toward outsourcing continues to grow, as investment firms realize that multiple aspects of their business can be outsourced (accounting, staffing, etc.)

What's Driving Increased Cloud Adoption?

There are a number of factors responsible for driving the cloud computing trend, including investor acceptance, the increased need for disaster recovery, staffing considerations, and, of course, cost.

Years ago, hedge funds and investment firms had to spend a lot of capital building their own technology infrastructure. Post 2008 economic crisis, however, there is wide-scale acceptance of cloud computing, even from investors. Many investors actually prefer cloud technology and its inherent ability to easily and quickly deploy additional resources, memory, CPU, etc.

Accordingly, the quality of cloud offerings by service providers has increased to meet the growing demand. The added benefit of third-party expertise and experience often eases the minds of investors who may find discomfort in funds managing their own technology in-house. Unless you are a large firm that can support a capable IT staff, investors are more than satisfied with you relying on an outsourced technology provider to meet your needs and maintain your infrastructure — assuming that the service provider follows best practices, has a long track-record and delivers a rock solid technology infrastructure (See: Questions for Cloud Service Providers).

Both investors and new regulations are also driving the need for robust and redundant disaster recovery and business continuity plans, which are easily deployable via the cloud.

Staffing is also a consideration for firms thinking about moving to the cloud. Especially for smaller startup funds who may have limited means and resources, the reality of hiring and training an internal IT staff is often impossible. Expertise in-house can be hard to find as well as costly.

Speaking of cost, it is also a significant driver in the move to the cloud. Again, for startup funds, in particular, who have limited capital to allocate to technology, the cloud offers an alternative that requires minimal to no upfront capital expenditures on day one.

Technology Drivers

In the past, the term "hedge fund technology" literally meant having an IT footprint and personnel in-house at a fund's primary location. Funds often had limited space and limited power, heating, and cooling resources, primarily due to expensive real estate costs. With technology systems on a refresh cycle of about three years, also, on-premise hardware costs continued to elevate.

In the last five years, there has been a major shift in the investment industry toward new and evolving technologies. This transition can be attributed to three primary factors:

Cost

Virtualization and storage technology has evolved and can now be deployed at much lower costs. Private cloud solutions are based at redundant data centers, and the cost of dedicated connectivity to these facilities has also decreased.

Risks

The investor due diligence process is more extensive than ever, and investors want to understand the associated risks that come with managing your own technology infrastructure in-house. Investors are learning to assess single points of failure not only within physical infrastructures, but also within technology staffs. If only one employee is qualified and capable of a given technology task and that person becomes unexpectedly unavailable, it creates a risky situation for the firm and the investor. The market has embraced outsourcing for this reason, as it can reduce risks significantly by utilizing third-party organizations that can monitor production and disaster recovery infrastructure 24x7x365.

Redundancy

Investment firms (and their investors) want to see that their data exists in an environment that has physical redundancies, including multiple power grids, cooling units, access to many lines of connectivity, as well as an easy path to switch to disaster recovery. One of the greatest benefits to cloud computing is that with the right provider, a hedge fund can have their data and applications reside in a redundant environment and easily deploy their disaster recovery at another physical location in the event of a disruption.

Differences for Start-up and Existing Funds

As previously mentioned, there has been a large-scale adoption of cloud computing and hosted technology solutions among new hedge fund start-up firms, and primarily for one reason. New launches are looking to obtain enterprise-level technology services at a small business cost. With cloud services, start-up firms gain easy and affordable access to email, BlackBerry, file services, compliance and disaster recovery all in a standard solution package. The real beauty of utilizing the cloud for these services is the ability to easily and quickly scale in accordance with your organization's growth, as well as the ability to easily deploy new applications as your firm's needs increase and evolve.

For existing hedge funds and investments firms, there is noticeably a shift in the industry towards adopting outsourced solutions and cloud services to support all aspects of their business and increase efficiencies from both a process and organizational level. For existing firms, the largest benefit to outsourcing comes with allowing fund managers to streamline their businesses and focus on their core objective – investment management – rather than tedious and sometimes time-consuming technology initiatives.

What to Look for in a Cloud and Its Provider

While there is a significant adoption taking place relative to the cloud, it may not be an ideal fit for each and every investment firm. There are several considerations to take into account to help you decide when and if it is time to move to the cloud and what type of service will best fit your firm's unique needs.

Following are several things to think about:

- Start out by identifying and defining your firm's key applications and data requirements.
- As you evaluate cloud services providers, determine if you would receive dedicated or shared resources within their cloud. You'll want to ensure your data and applications remain isolated from those of other firms.
- An easily deployable disaster recovery solution that can be offered through cloud services is a significant benefit. This becomes increasingly important during the investor due diligence process and is also something to keep in mind for registered investment advisors subject to Dodd-Frank requirements.
- Be sure to verify that your intended cloud services provider owns their own equipment and isn't outsourcing key functions, such as email.
- Security and monitoring practices associated with a cloud solution are essential to investigate. Be sure the provider has both virtualization security in place and physical security at the data center(s).
- A cloud infrastructure should also be backed by a Service Level Agreement (SLA) that ensures top performance and uptime for your firm.

Questions for Cloud Service Providers

Following is a list of questions to ask cloud service providers as you evaluate their offerings:

- How do you guarantee computing, network and storage resources are available for customers?
- Does the cloud environment use a multi-tenant architecture?
- Does the cloud infrastructure feature an N+1 configuration to tolerate any single equipment failure and ensure high availability?

- What security standards are used to ensure data and application integrity?
- What is the process to ensure strong authentication and access control?
- Does the cloud services provider maintain a log that captures a record of system access?
- How do you prevent a security breach and/or prohibit sharing of account credentials between users and services?
- What are your backup and retention procedures? How long is data retained?
- What is the disaster recovery strategy, and how frequently is it tested?
- How is support handled? What is the response commitment time on service issues?
- Are your cloud data centers SAS70 certified?

For more information on cloud computing, please visit ***www.eci.com*** *or email us at* ***sales@eci.com****.*