

# THE TURRET

EZE CASTLE INTEGRATION'S  
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Keeping the investment professional current on  
emerging technology

## EVALUATING & SELECTING A STORAGE AREA NETWORK (SAN)

BY BILL TAN

**Evaluating & Selecting a SAN**

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In the last Turret, we discussed the three most common technologies that allow you to keep copies of your important data off-site: remote-backups, host-based replication, and Storage Area Networks (SANs). Remote-backup and host-based replication technologies are established technologies that are fairly inexpensive to implement on a small scale. SANs on the other hand offer far more recovery functionality, but the implementation costs for a medium-sized hedge fund can easily exceed \$500K.

**Maximizing the Information Pipeline: Research Management Software**

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For a business with many production servers, a SAN model is a sophisticated alternative that compares favorably to the host-based replication method. With a SAN, data is stored in a high-speed network designed specifically for data storage. SANs are pertinent to the discussion of business continuity planning because most models are capable of very efficient and reliable data replication between units.

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Hedge funds and investment firms are increasingly considering SANs, so in this article we'll provide considerations and recommendations on evaluating and working with SAN vendors.

### Assessing Your Storage Requirements

Doing your homework before meeting with a SAN vendor is critical. The first step is listing and prioritizing your reasons for seeking a SAN. Common reasons include:

- Keeping archival point-in-time copies of your data, which are also known as snapshots
- Incorporating a SAN as part of your plan for local disaster recovery
- Adding a SAN as part of your plan for remote disaster recovery (replication). You will need two SANs for this.
- Reducing deployment times for new applications (cloning)
- Improving application performance

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Once you've prioritized your needs, be sure to review your business processes. Without this knowledge it is difficult to anticipate how your storage needs may change or evolve. Increased regulatory oversight, for example, has caused many firms to modify retention policies, thus increasing storage requirements.

The next step is to inventory your current applications and storage usage. In order to size your SAN correctly, you need to know how much storage you are currently using. You must also know the types of applications you run and their storage requirements because they can affect the configuration of the SAN. The inventory process or

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documentation doesn't need to be elaborate - a simple spreadsheet with the information will do. For perspective, most hedge funds will fall into the 1-8 terabyte range when purchasing a SAN.

Establishing your Recovery Point Objective (RPO) and Recovery Time Objective (RTO) for each system is also a vital step. In simple terms, RPO represents the amount of data loss you can tolerate, and RTO represents the amount of downtime you can tolerate. Note that these can range from minutes for critical applications to days or weeks for less important applications.

Finally, anticipate growth. There are many factors that may cause your storage needs to grow. It may be in your business plan to increase staff or to open new funds. Adding new applications, such as research tools, unified messaging, CRM, or OMS, can all increase storage requirements. Additionally, existing applications like email will continue to consume storage.

Armed with this information, you can put together a good RFP, which should lead to comparable proposals from vendors.

### **Tips on Evaluating SAN Vendors**

Once you have the proposals in hand, here are five considerations to help ensure you select a solution that is right for your business.

1. Be aware of the other components and costs of a SAN deployment. The total project costs can be significantly higher than the cost of the SAN. Here are some examples with typical costs in parentheses:

- SAN maintenance (10-20% of the purchase price annually)
- SAN fabric (\$10K to >\$100K plus maintenance)
- Additional bandwidth for remote replication (\$20K to >\$100K annually)
- Network hardware improvements (varies greatly)
- Data and application migration (varies greatly)

2. Understand that there are long-term costs associated with any SAN you deploy. After the initial purchase there are additional expenditures, as with most technology, including:

- Hardware maintenance costs
- Software maintenance costs
- Storage expansion costs
- Additional software licensing costs

3. Never assume that the sales representatives of the SAN vendors are knowledgeable. On several occasions, we have caught salespeople misrepresenting their products -- sometimes not intentionally, but sometimes intentionally. This can happen with the smallest and the largest vendors. Make sure that every expectation is in writing and in your contract.

4. Never assume anything about the feature set of a SAN, no matter who the vendor, and how much the cost. In some cases, we have found that there is no correlation between what you spend on a SAN, and the performance and features it offers. This holds true across the board, and products from the largest vendors can still have gaping holes in the feature set.

5. Make your SAN vendor accountable. Storage is a competitive marketplace. If the vendor really believes in their product, then they will give you a money back guarantee. We have been able to secure 30 day "right of returns" for our clients investing in storage. If the storage system does not meet the expectations as laid out in the purchase contract, then the system can be returned. This gives you the leverage you need to make their service organization deliver on their promises.

Eze Castle Integration has written several storage RFPs for clients, and can assist you with this process. ECI has also spent a significant amount of time evaluating storage solutions from a variety of vendors including: EMC/Dell, Network Appliance/IBM, HP, EqualLogic, Compellent, Xiotech, Stonefly, Intransa, LeftHand, and Sun/StorageTek. We can help you through the process of tailoring a solution for your firm's needs. Your ECI account manager can put you in touch with a storage specialist knowledgeable about these products.

- Bill Tan  
Managing Director of Technology  
Eze Castle Integration

## MAXIMIZING THE INFORMATION PIPELINE: RESEARCH MANAGEMENT SOFTWARE

By JEFFREY WOODRUFF

Investment firms from mutual funds to pension funds to institutional investors have successfully moved from paper to nearly electronic everything. However, electronic data is only as good as the methods of its upkeep and organization. The significant influx of information flooding today's firms has created the need for more mature tools to receive, manage, and mine that information.

The research market, for example, has become more complex with the growth of independent research providers, blogging and expertise networks, and with brokers continuing to innovate new ways to provide research, between low touch and high touch data.

Adding to this complexity, regulators are causing the unbundling of research and trading services, which have new disclosure requirements for investment managers. The Financial Services Authority (FSA) is restricting what services can be paid for with commissions. Under the new FSA policy, services are unbundled and commissions can be used for trading, execution, or research; and commissions must be disclosed in a standard format on a quarterly basis. The SEC and FSA have agreed to cooperate and coordinate on market oversight and supervision, and as a result, investment firms are now faced with a crucial problem – showing the value of research and ideas from brokers.

This changing landscape is driving organizations to implement new technology solutions aimed at increasing idea throughput, reducing operational risk, and meeting compliance measures of regulatory bodies. Research Management Software (RMS) is one such technology. RMS benefits include allowing investment analysts to reach new levels of efficiency in distilling information and generating ideas; and enabling workgroups to collaborate more quickly on ideas.

### A Look at Research Management Software

Research Management Software is specifically geared for the needs of portfolio managers and analysts who manage large amounts of research from numerous sources. RMS lets investors quantify and qualify all data within the system to help analyze the effectiveness and value of the research sources, and share that information within the firm. Software, such as Code:Red's Red Alerts RMS, helps investment firms quickly and easily store all materials, and interfaces with third party providers to streamline information gathering.

Typically, firms with more than 10 employees benefit from RMS. Buy side investment managers usually find value in RMS systems when they are determined to:

- Mine existing information that their employees generate and capture in their current process
- Find cost effective measures to ensure continuity of corporate best practices and compliance policies to reduce risk and facilitate growth
- Implement standard practices for their proprietary investment decision process
- Evaluate their analysts, their brokers and their content providers on a periodic basis to equate cost with value
- Market the rigor of their investment process, and demonstrate the competitive advantage gained from methodical best practices, and the evaluation of internal and external sources
- Increase throughput of analysts in distilling information and generating ideas, both in the office and on the road
- Reduce TCO of supported products maintained by their IT staff, either in-house applications or off the shelf products, and focus on a single analyst workstation
- Comply with FSA consultation papers pertaining to communications with brokers and for the unbundling of research and trading

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### Key Considerations for Selecting an RMS Solution

Once you determine your investment firm can benefit from an RMS solution, there are some important considerations to keep in mind as you evaluate vendor offerings. Specifically:

- **Configuration:** Can the product be easily configured and customized to fit your workflow? Is it flexible?
- **Integration:** How does the product integrate with your existing platforms (OMS, accounting system, broker voting tool, other data providers)? Firms should look for RMS systems that have interfaces to premiere external data providers such as Thomson Financial, Acquire Media and Capital IQ.
- **Usability:** Can end users easily understand how to use the product? How easy is it to get information in and out of the system?
- **Technology:** Is the product's architecture standard and can IT staff easily support it?
- **Safety:** Is your information stored alongside that of other firms? You want to make sure you choose a product where your research is kept locally and private.
- **Company Viability:** What relationships does your software provider have with your other software and service providers?

In summary, Research Management Software can deliver significant value to investment firms by increasing throughput for investment professionals and enabling more informed decisions.

About Code:Red, Inc.

Code:Red, Inc. is a software firm catering to the investment management industry and focused on the challenges of managing data in a new technology environment. Code:Red's industry experience allows them to handle the unique and complex software and vendor integration needs of hedge funds, mutual funds, institutional money managers, and sell side brokers. The company's flagship research management software product is Red Alerts RMS™.

- Jeffrey Woodruff

MD of Marketing & Sales Code:Red, Inc.

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## SECURITY TIPS

By CHRIS KENT

In today's world, every company must have a well thought-out security posture to protect it from internal and external threats. From perimeter security to desktop anti-virus software, most investment firms have technology in place to protect their critical information from intrusion. Significant vulnerabilities exist in many companies today from simple physical security, not necessarily technology related. Since we all can use a refresher from time-to-time, below is a top five list of basic security best practices.

1. *Passwords are essential, and simply having one isn't enough.* Remind users not to leave passwords on sticky notes or under their keyboards. One way to remember a new password is to use it immediately and often. Also, don't change a password before leaving on vacation or on a Friday, as you're likely to forget it when you return to work.
2. *Create strong passwords.* A good password is easy for a user to remember but hard for someone to guess, which may sound easier said than done. Think about substituting letters for numbers and vice versa. Also, be sure to change your password often. We recommend changing a password every 30-90 days. Many of our clients already have automated procedures in place to enforce this policy.
3. *Remember to lock the doors.* Propping open a door to expedite FedEx deliveries or get fresh air is fine, but keep an eye on who uses the door and be sure to make sure it is locked before leaving for the day and when the front desk is not staffed.

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4. *Laptops are easy prey while traveling.* A recent survey by market researcher Enterprise Strategy Group found that 68 percent of computer administrators believe laptops represent the biggest risk for the loss of confidential information. About 97 percent of stolen computers are never recovered, according to the FBI. The latest designer bag is the first tip-off to a would-be thief. Also, do not leave your laptop unattended while in an airport, hotel or conference. Further security measures can be taken with laptops through the use of encryption, portable physical locking mechanisms, and biometrics (on many newer models).
5. *PDA's needs protection too.* Just as laptops require passwords, so do PDAs. Not only do BlackBerrys and other personal devices carry company confidential information, they also provide access into a company's corporate network. It only takes a few minutes for an intruder to disrupt a company's operations or steal sensitive information. Eze Castle Integration can create automated policies to enforce passwords on these devices similar to workstation based enforcement.

Eze Castle Integration strives to create both technologically and physically secure environments for our clients. Security policy and procedure review is an important part of ongoing maintenance for any IT environment. For a more comprehensive security review of your site, please contact your ECI representative.

- Chris Kent is Eze Castle Integration's Boston Technology Manager

## THE PROMISE OF IP TELEPHONY: PRODUCT REVIEW

BY MATT REILLY

Imagine having customized applications delivered to a Graphical User Interface (GUI) display on your desk phone, allowing you to easily navigate routine tasks. These applications can be specific to your business needs and include stock updates, important event updates from a web service, email notifications, meeting reminders, and voice mail notifications. Now imagine that your desk phone with these customized applications can be accessed from anywhere in the world through a PDA, a PC, or a "smart" cell phone. The Avaya AG250 application gateway is designed to make all that possible. This converged device is another example of how IP telephony is changing the way businesses operate.

The Wynn Hotel in Las Vegas, for example, has developed a specialized collection of tailored applications that can be displayed on a guest's room phone. There are 12 customized menu choices on the display that allow push button access to all of the hotel's services. The backlit, color screen displays the guest's name, phone number and room number at the top of the display.

In the Hedge Fund vertical, applications have been developed to give hedge fund managers immediate display access to information relevant to the investment and business strategies of the fund. This can be accomplished using the AG250's visual development tool "Design Studio." This tool allows developers to transform relevant information into an appropriate style and layout, and publish the information on the screen. Here is an example of a stock trading application:



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In addition to delivering tailored applications, the AG250 has a built in Phone Application Suite of packaged telephony applications that do not require development work. The Phone Application Suite includes Visual Modular Messaging, which enables users to see a visual list of their voice messages and select which to review first – a nice feature for busy investment professionals. The AG250 also has a built-in broadcast service able to deliver graphics, audio messages and alerts to a user's IP device. The third standard feature is Short Message Service (SMS), which enables text messaging between capable IP phones and IP mobile devices.

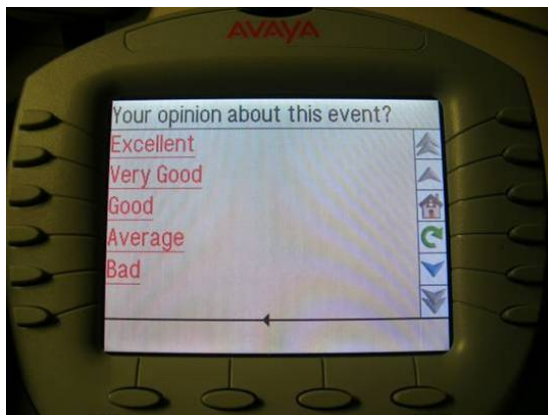
Businesses can tailor which applications are displayed on IP phones, from simple text messages to customized displays of information such as key customer data or specific stocks of interest.

The AG250 is an appliance designed for flexible network deployment. The only requirements that must be met to ensure correct operation are:

- Client devices (IP telephones; wireless devices) must be able to contact the AG250 on the network
- The AG250 must be able to contact the servers that have the requested content. Content may be generated by servers on the local network and the Web

The Avaya AG250 delivers the functionality of IP telephony to desktop phones and PDAs, allowing users to access targeted information anytime and anywhere.

Sample of Survey Application



Sample of Web Cam Application



- Matt Reilly  
Voice Solution Engineer  
Eze Castle Integration