

SAMPLE

Management IT Infrastructure Assessment

Generic Investment Advisors

Executive Summary:

The following is a technical summary of network infrastructure at *Generic Investment Advisors*. This report is a snapshot of the IT infrastructure at a point in time. It does not incorporate important environmental aspects, such as IT guiding principles, IT operations, and the business value of IT. *Consulting Company* sees managed services as a collaboration with *Advisors* in which we can create an operational framework for IT, including technology roadmap, policies and procedures, documentation, gap analysis, and root cause analysis.

Analysis:

Generic Investment Advisors is a fast-growing investment services company. There are currently 33 employees with a *Advisors* portfolio which is growing exponentially. On <Date>, Roger Bruist, met with John Doe of Random Investments and performed a brief site survey of the current infrastructure to map the current services, applications and servers. Generally, the infrastructure is in good condition but adjustments can be made. The following areas are of concern, and merit further discussion: Documentation, monitored support, backups, optimization of the server infrastructure, business continuity, and planning for future growth.

Business Continuity issues:

Remote monitoring of workstations, servers and network devices are critical to the financial services environment. It appears that monitoring is not up to standard. Hardware alerts and critical system notices must be sent to concerned parties both at the managed services monitoring station and to designated contacts at *Generic Investment Advisors*. While we were on site, a cooling fan failed on the Moxie server, the primary trading platform for Random Investments. Critical parties were not notified of the outage.

Security was in very good condition with users operating in a controlled environment with security set correctly. The only security area of concern is share permissions. Shares are left relatively open with user read and write permissions. This is a two-fold problem. First, an infiltrator can create a folder and insert a monitoring program/mole to attempt to access classified data. Second, a user can inadvertently copy a mass of data to the drive causing data loss, system lockups, and disk corruption.

Backups are not adequate for the current infrastructure and may not be compliant with current financial services compliance requirements. The backup system utilizes a manual-load DAT tape drive with Backup Exec 12.5 software. Tapes are brought offsite for storage. It is recommended that an offsite data center backup be implemented for both critical data and exchange stores. On site, a disk-based backup system is needed. A disk-based system will create images of the current array and take less than half the time to restore. Also, since tapes are dependent on tape drives, as tape drives are replaced, media must be sent offsite for data recovery. *Consulting Company* of Boston recommends Acronis for this purpose.

Finally, to ensure business continuity, Random Investments needs to architect their server infrastructure for current and future needs.

Three areas need to be addressed:

- SQL servers are essential to the operations and informational base. These servers should be clustered in order to ensure maximum availability.
- Critical systems such as Moxie and Exchange should be virtualized with failover capabilities. This will ensure that in the event of hardware failure systems will continue with only seconds of downtime rather than hours. With the current configuration, hardware failure will result in hours or days of downtime.
- In addition, an offsite data center should be considered as a hot site. This entails working with a third party to ensure servers are available in a remote location of adequate size and configuration to restore virtual server images.

Each of these aspects needs to be addressed during future server replacements. The current SQL2 server is running on a Dell server capable of acting as a virtual host and can be incorporated into a virtual server configuration.

Infrastructure recommendations:

Exchange is the e-mail application with spam filtering provided by Postini. *Consulting Company* does have some clients on Postini, but the great majority use Appraver. In contrast to the Postini interface, the Appraver interface is well-designed and intuitive. Appraver includes SmartHost outgoing mail filtering as well as available full archival and encryption services. Another alternative is Microsoft Exchange hosting. This also offers the full encryption and archival services at a very competitive price; however the outgoing mail filtering is less robust.

For connectivity to internal resources GoToMyPC is currently in use. This is a “good enough” solution. We do recommend examining an alternative Citrix XenApp implementation in conjunction with the SonicWall firewall VPN connection. This would allow for two-tier authentication; and in the event of external infection would not compromise current internal infrastructure. There is an additional element of risk from allowing multiple clients in the environment set to accept external connections. Because data resides in server repositories, a single point of access is preferred.

Workstations are older Dell Optiplexes for the most part, and the ages are 3 to 4 years. The overall condition is very good and workstations are correctly locked down. Workstations are not

data repositories and therefore do not need to be proactively replaced at this time. It is recommended that replacement be considered within 24 months.

Application Recommendation:

Random recognizes that it has outgrown the Quickbooks application. It is advised that *Generic Investment Advisors* consider replacing it with Microsoft Great Plains or an ERP solution such as Sound or other small-medium bank/financial institution integrated G/L programs.

Documentation:

Onsite maintenance documentation is complete; however, network diagrams, infrastructure documentation, lifecycle analysis and critical password files were not available. In the event of an emergency, the documentation is not adequate for recovery. Passwords and critical accounts, along with network and infrastructure documentation, must be stored both in hard copy onsite in a secured area and on a remote connection for rapid access.

Active Directory:

Active Directory appears to be well organized and up-to-date but needs to be reviewed to be better optimized and aligned with business strategy and security. Accounts and groups need to be more segregated to ensure more granular control for roles and responsibilities.

Summary:

Overall the infrastructure is in good condition, but is ready for some upgrades, renewal and architectural improvements.

Future architecture should address the growth, complexity and increased need for operational continuation as Random Investments continues to expand.

Addendum:

Supporting information for infrastructure and applications:

Server Configurations:

| Server | Model | Function | Status |
|---------|-------|------------------|--|
| SQL2 | R900 | Data Warehouse | Good, can create a virtual head |
| SQL | 2950 | External feeds | OK, 2 years before replacement |
| CRM | 2850 | MS CRM | Over 3 years, should virtualize |
| Trading | R710 | Trading platform | Good condition 3 years before replacement, need to replace exhaust fan |

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| Mail | 2950 | Exchange with Postini front end | OK, 2 years before replacement |
| File Server | 2850 | File Sever | Over 3 years old, should virtualize |
| Utility2 | 2950 | Utilities | OK, 2 years before replacement |

Some server drives are becoming full but can be cleaned. The overall server health is good.

Applications:

Applications

| | |
|-----------------------|---------------------------------|
| Fidelity Net Assets | current |
| Portfolio Center | Behind one version |
| AV EndPoint 11.04 | current |
| Backup Exec 12.5 | current |
| GoToMyPC | current |
| Quickbooks Multi-User | Not available at time of review |
| Office 2007 | current |

The SonicWall firewall (SW3500), switches and network infrastructure including external connectivity are excellent.

There are two UPS units; both are APC, one a 1500 and the other a 3000XL. Both look to be in good condition and are running at 50% load or less.