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A Need to Know- The Basic Why's and How's of Critical Systems Management

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Today's fast paced business environment is a far cry from the pen and ledger days of old. The introduction of computers has changed the face of business and the financial services industry creating a vehicle where information flows at the speed of light. What once took hours now takes only seconds. With technology in the forefront of business inner workings at financial institutions, the need for reliable systems is paramount to insure the security of the institution and its future.

To maximize system reliability, the creation of Critical Systems Management came into existence. Monitoring of key component layers is a standard practice in proactively managing information systems. These layers consist of hardware, operating system, application, transit protocols and peripheral network devices, and critical data backup. Each layer requires a unique monitoring method tailored around the layer's key fail points.

Hardware Management

The base foundational layer of Critical Systems Management is the hardware level where processor load, memory usage and hard drive performance are monitored. This level of monitoring is crucial to the total health of the system. At this layer we are able to determine when hardware upgrades or software migration should take place to balance the work load across all devices on the network and achieve the highest performance possible.

Operating System Management

Riding on top of the hardware layer is the operating system which creates the environment in which all applications function. The communication that occurs between the operating system and the supported applications requires constant attention. In addition, this layer is constantly evolving through security patch updates and service packs making it an ever changing variable in the equation of Critical Systems Management.

Application Management

The application level is comprised of several services running on the operating system providing information for local and remote users. These processes constitute the nucleus of client server information relationship and present a high impact fail point in the business environment. Because these services vary in function, an extensive monitoring rule set is required. These rule sets should encompass all the aspects of the application from hardware usage (processor and memory), to response time from client stations, and a defined log of possible system event errors.

Transit Protocols and Peripheral Network Device Management

The webbing that brings all the system devices together is comprised of two layers: transit protocols and peripheral network devices. This layer is the transport hub of information sharing among all devices in the network. The devices are monitored using the Simple Network Management Protocol (SNMP) through which device response, processor and memory usage is recorded and measured to determine current device performance. Monitoring of this layer allows for a network pulse check on the overall information traffic for the network.

Data Retention Management

A recent study discovered that, of companies experiencing a "major loss" of computer records, 43 percent never reopened, 51 percent closed within two years of the loss, and a mere 6 percent survived over the long-term. The final layer of Critical Systems

Management is data retention, which can be the straw that breaks the camel's back if not leveraged to its fullest potential. Not only backing up data but also insuring that every backup is successful and complete is imperative to the survivability of business in today's technology driven environment. Additionally, a secure and reliable off-site storage is paramount to a fast recovery in the event of a major disaster.

In conclusion, Critical Systems Management has come into existence by necessity. Without a comprehensive monitoring plan in place, the sheer magnitude of variables involved would make it impossible to proactively administer a modern day technological business environment. Focusing on the key layers of the equation will insure all aspects are adequately represented in your institution's monitoring scheme.