

## **Case Study: Eisenhower & Carlson, PLLC**

### Maximizing IT Value in a Growing Law Firm

#### **Introduction to Eisenhower & Carlson, PLLC**

Eisenhower & Carlson is a growing business and litigation law firm of 28 attorneys and over 30 administrative staff headquartered in Tacoma, Washington. The firm was established in 1960 with the merger of two local law firms; one founded by Ed Eisenhower, the older brother of President Dwight D. Eisenhower, and the other founded by Tacoma native Reuben Carlson. The firm now has an additional full service office in Seattle. The law firm is a general practice that helps businesses and individuals resolve a wide range of legal issues in areas that include business law, estate/probate, commercial litigation, and real estate, just to name a few.

As with any law firm, information flow and availability are vital to E&C's success. According to E&C's IT manager Bob Williamson, "The law firm expects, and depends on significant uptime. Redundancy is paramount." The burden of providing robust, enterprise level IT capabilities falls entirely on Bob. The attorneys at the law firm are highly trained legal experts. For them, productivity is measured in six minute increments. They neither know, nor want to know how one person can reliably provide terabytes of data storage, high performance processing, or robust back office applications that make the firm go. They just want IT to work; the success of their firm depends on it.

#### **IT and Business Challenges**

Like many prominent regionally-focused law firms, the E&C law firm operates in a highly competitive space where electronic data sharing is essential. E&C attorneys share documents with the courts through information networks such as the State of Washington's Judicial Information System (JIS), and Pierce County, Washington's Legal Information Network Exchange (LINX). They also rely on ubiquitous online legal research tools such as LexisNexis and WestLaw that are essential to effectively managing client cases with the most relevant information. With a firm-wide move toward the use of online documentation over paper, E&C needs to be able to separate document access from e-mail, accounting, and other functions to keep network performance high. They also needed a means of improving data archiving capabilities and data availability.

To meet these critical IT needs, the firm needed the flexibility to be able to add new servers according on demand, while connecting every installed server to an external iSCSI SAN. Unfortunately, the firm already used all of the available server space and cooling capacity within its Tacoma headquarters. Budget constraints precluded expanding server room or cooling capacity to accommodate new equipment. Despite these constraints, Bob Williamson, E&C's IT manager and server administrator hoped to add all of this functionality while reducing his power and cooling costs, controlling cabling and wire management, and maximizing the value of available IT dollars.

#### **Intel® Modular Server & Microsoft Windows Essential Business Server**

Bob described the firm's IT infrastructure when they reached the limit of their capacity to grow: "Our network has two locations – a primary office in Tacoma and a satellite office in Seattle. In our Tacoma office we had 3 rack mount servers and 2 stand alone servers. All of these servers were then connected to our iSCSI SAN via two switches. To say the wires were a bit much is an understatement. We had 8 network cables going to two switches and 4 network cables going from the switches to an iSCSI SAN. Servers, switches, and SAN was barely contained within what little dedicated server space we had available. If we wanted to expand that little server closet, we discovered we would have had to make a pretty big investment, since the building was kind of old, and there was asbestos in the ceiling." But early in May 2008, Bob found a powerful server hardware/OS combination that provided him with all of the tools he needed to effectively grow and manage his IT infrastructure without adding space or hiring new staff.

With the help of Microsoft and Intel, Bob implemented the Intel Modular Server running Windows Essential Business Server (EBS) 2008. Both products are specifically designed to address the needs of small and medium business (SMB) customers. Together, EBS & the Intel Modular Server provide a complete enterprise-class infrastructure that is affordable and easy to manage. Simplified setup and ongoing management enable SMB customers to gain greater efficiencies and save on costs.

Windows Essential Business Server 2008 provides a unified Administration Console to manage an integrated IT infrastructure with the latest versions of management, messaging, and security server technologies. The Intel Modular Server provided Bob with a single, 6U sized unit that actually reduced his physical server hardware footprint, fully eliminating the need for additional power and cooling capacity. By incorporating diskless, stateless compute modules, integrated SAS-based SAN storage, and up to 2, managed Gigabit Ethernet switches into one unit, the system also eliminated the need for time-consuming cable management work. Perhaps most importantly, the Intel Modular Server introduced the E&C law firm to levels of redundancy not available on any rack-optimized or pedestal server.

Every modular component either comes with built in-redundancy or can be expanded to provide redundancy, including disks, switches, and storage controllers. Diskless compute modules eliminate a single point of failure on OS drives. Virtualized shared SAN storage enables servers to failover between available compute modules. N+1 power supplies protect processing, storage, and networking functions without the need for any manual configuration. And one person can configure and manage all of these redundant components without the cost and complexity of a traditional "server plus SAN" or blade architecture. Bob notes that "if we had the Intel Modular Server from the start, we would not have needed to add external iSCSI storage." Currently the firm is using only 2 compute modules, but they have capacity for up to 6, and will be able to grow internal SAN storage up to 4.2TB using high performance 300GB SAS drives. "Now whenever I need to add servers or storage, the system will easily grow as the firm grows," he says.

To complement the flexibility and redundancy of the Intel Modular Server hardware, Bob added Windows EBS 2008. "Initially we had Windows EBS with our rack and pedestal servers, which worked well," muses Bob, "but with EBS and the Intel Modular Server installed together, we were able to add all the capabilities we were looking for." EBS simplified Bob's administration of the OS, and third party apps with a Centralized Administration Console. EBS also allowed him to automate routine tasks, reduce third-party application installation steps from days to hours, and simplify licensing with a single server license and Client Access License for all included products, including Microsoft Exchange 2007, Standard Edition. EBS includes Microsoft System Center Essentials which gives Bob the ability to discover and address virtually any kind of server related problem with the click of a mouse. For someone like Bob, who has to handle every aspect of IT operations with as little administrative overhead as possible, the Intel Modular Server with EBS offers a uniquely robust, flexible, and affordable infrastructure solution.

### **Intel Modular Server & EBS: Doing More With Less**

With the Intel Modular Server/EBS "installation taking only a week to plan and one weekend to complete," Bob is now looking forward to other high impact changes that he can make to improve server performance that he did not have time for previously. Says Bob: "After becoming comfortable with the stability and the numerous redundancies built into the Intel Modular Server, I have begun to retire all our other servers. Instead of a stack of servers we now have a single system with multiple compute modules. The local storage is being utilized for those servers which have higher disk I/O. As the switches in the Intel Modular Server are quiet advanced, my next step is to take advantage of the trunking feature to make a bigger pipe to our network!" I Bob Williamson's success with the Intel Modular Server and EBS at Eisenhower and Carlson is just one example of how small and medium businesses have been able to grow their IT capabilities and simplify server management, even as they are compelled to do more with their existing budgets, staff, and space.

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