



MONTGOMERY COUNTY COURT

HIGHLY AVAILABLE DATA

WITH REDUNDANCY, BACKUP, DR & SCALABILITY

EXECUTIVE BRIEF

CUSTOMER NAME

Montgomery County Common Pleas Court

INDUSTRY

Government, Legal

LOCATION

Dayton, Ohio

POTENTIAL USERS

Judicial & Administrative Staff

GOALS

Storage, network, compute, data protection and security upgrades

CHALLENGES

- System instability and slow response
- Unreliable protection from data loss
- No collocation or DR
- Perimeter defenses not Next Gen
- Systems require monitoring
- Potential for unforeseen expenses

SOLUTIONS

- Upgrade current VNX5600
- Install four UCS C220 M4 Servers
- Install two Cisco Catalyst 3850 Switches
- Install two Cisco ASA 5516 Firewalls
- Provide oversight for vMotion migration
- Professional Services

RESULTS

- Stable and reliable platform
- Access speed and agility
- Redundancy, Backup & DR
- Increased cyber security
- Automated operations
- Decreased, predictable costs

CUSTOMER BACKGROUND

The General Division of the Montgomery County Common Pleas Court is a trial court located in Dayton, OH, having jurisdiction over all civil and felony criminal cases filed in Montgomery County. The court presently has eleven elected judges, working to assure prompt, fair and just resolution to all cases.

RoundTower became engaged with Montgomery County Common Pleas Court through a recommendation by the county's data processing center, as a result of a very successful previous project. Montgomery County had been backing up data to magnetic tape but this did not provide a large enough data repository, nor did it comply with the mandatory 30-day requirement for data retention. RoundTower replaced this system with Data Domain DD2500, resulting in a 50% increase in performance and a 70% reduction in backup time. This gave the county departments strong confidence in RoundTower's capabilities.



“RoundTower's technical expertise gave us confidence that they could design an effective solution at an attractive price.”

–Edward McNachtan, Deputy Court Administrator,
Montgomery County Court of Common Pleas, General Division

BUSINESS CHALLENGES

Prior to the upgrade, the court's IT infrastructure operated from a surplus cubicle with make- shift cooling and inadequate power. This legacy equipment was under-serving the judicial staff and they were not confident in its availability, particularly under load. Although some dramatic changes were clearly in order, the court needed a solution that would meet their needs while also conforming to their budget. This meant utilizing existing equipment if possible while making essential upgrades when necessary. In addition, most of the new equipment needed to be migrated to the county's data center to improve the physical environment the court's equipment was located in.

A large-scale assessment of customary usage and requirements for all stakeholders was needed to determine typical workloads and the technical specifications required for new equipment. Since the site locations had never housed systems of the sophistication and scale proposed for this project, both buildings had to undergo significant retrofitting to accommodate appropriate power and supportive services.

ROUNDTOWER'S SOLUTION

Overall Project

The solution consisted of network, storage, compute, and intrusion protection. Implementation involved upgrades to a current EMC VNX 5600, installation of four UCS C220 M4 Servers with VMware and vSphere licensing, two Cisco Catalyst 3850's Switches, two Cisco ASA 5516's Firewalls, two Barracuda Email Security Gateways and structured cabling. Physical and virtual servers, mass storage, network configuration, and security were collocated between two sites to provide redundancy, off-site backup, and DR as well as high availability and room for future expansion.

The work had to be accomplished without disruption to court services. So, it was necessary to install the new system in parallel with the old one and then migrate the data during off-hours. RoundTower installed a new rack, cabling, additional storage, and then the servers, switches and firewalls. Overall, the project went smoothly, with a vNIC Driver fault and Cisco licensing issues easily overcome by experience and a strong relationship with manufactures.

Security Enhancements

Security deserves particular mention, with the cyber threat level at an all-time high. Round Tower installed two Cisco ASA Firewalls with FirePOWER (SFR) modules. Initially, there was an issue with the system running less than optimal, until the FirePOWER Management Center (FMC) and sensors were upgraded to the latest code. The security engineer changed the Advanced Malware Protection (AMP) policy to reflect the real-world threat landscape, assigning stringent rules to executable files. In addition, intrusion prevention rules were adjusted and discovery policies tuned to capture only RFC 1918 addresses. This type of customization alleviated much of the additional overhead from the system, and improved performance. Finally, RoundTower assisted the customer transition to new AnyConnect Aplex Plus licensing with v. 4.3. This allowed the retirement of SSL v.3 as an SSL cipher, which is known to have security vulnerabilities.



BUSINESS OUTCOME

This project made sweeping and fundamental changes in the court's infrastructure and services. It migrated applications to a computing platform that helps reduce costs and increase application agility. It also mapped out the business and technical objectives to meet business needs for resiliency, scale, and capacity. Finally, it reduced equipment and operating costs, consolidated resources, and automated data center processes.

The Cisco ASA Firewall proved to be much more active and granular than Montgomery's previous security device. It is also provided a more stable SSL VPN experience. Montgomery County is considering RoundTower's recommended two-day high-speed FirePOWER custom training course for the next fiscal year.

The positive business outcomes stemming from this project allowed it to be used as a showcase to additional state agencies, bringing confidence to other planned initiatives such as another exchange upgrade and a wireless installation.



“We are very pleased with how swiftly and reliably our new IT systems support the court business.”

—Judge Mary Wiseman,
Montgomery County Common Pleas, General Division