



▶ Exceeding Expectations

Government project experience allows Emtec to complete agency infrastructure upgrade on-time and under budget

State government agencies naturally require a robust IT infrastructure in order to share data with other agencies, conduct mission-critical projects and provide better services to the public. In fact, state agencies are under near-constant pressure to develop new programs and services that maximize the use of online resources in order to meet legislative requirements and citizen demand.

Given that track record, officials with one large New Jersey state agency were prepared for a daunting experience when they embarked upon a substantial IT infrastructure upgrade two years ago. In the end, however, a team of engineers from Emtec, Inc., brought the project in ahead of schedule and under budget. Even better, more than a year after the project's completion, the agency has experienced virtually trouble-free operations.

The Challenge

For years, the agency had operated as a subdomain in a parent network, but eventually required a greater degree of IT autonomy within the state government hierarchy. The agency needed its own network domain with a separate directory for system resources such as user desktop profiles, applications, printers and security information. However, the agency still needed to maintain a high level of interoperability with other agencies, so separate network domains had to be connected via trust relationships and permissions.

Emtec engineers helped design, configure and implement the new network domain, which involved the migration of approximately 7,000 users from a workgroup environment to a separate Windows Active Directory domain. The project included building a test lab environment, creating a data center, developing a backup solution, deploying 12 domain controllers and 63 file/print servers, and reimaging and joining to the domain approximately 6,600 desktops.

"It was a very large project," said Jay Reynolds, Emtec Project Manager. "We touched every PC they own, installed new Dell servers and racks at each of their 63 offices throughout the state, set up their Active Directory file structures, implemented WSUS (Windows Software Update Services), set up a Symantec backup solution, and implemented virus scanning and tighter log-on and authentication."

Laying Groundwork

Perhaps the key portion of the project occurred before a single piece of hardware was actually deployed in the field. Emtec set up a test lab environment at the agency's central office in Trenton. The lab included test boxes for WSUS, VPN, antivirus and VMware, as well as servers to be used to test various applications. Working through all the potential hitches in this test environment helped ensure a smooth rollout.

"This allowed us to anticipate any kinks that might arise, and we were able to quickly resolve them," said Reynolds. "It was a joint effort by Emtec and the agency staff. With the work we did up front, we were able to have basically a trouble-free rollout."

In the rollout phase, the data center was set up in the agency's central office with two domain controllers, two file servers and additional Dell servers to host the Symantec Backup Exec application, WSUS and an EMC SAN. Ten additional domain controllers were then deployed at key office locations around the state. Once the domain was up and running, Dell 2900 file/print servers and Dell 24U racks were deployed to individual offices throughout the state. To accomplish this final portion of the project, Emtec created "north" and "south" teams to conduct daily installations in separate regions of the state.

Getting Results

Agency representatives say the new network configuration provides numerous benefits that greatly improve workflow and efficiency. Administrators have much more control and independence due to a single point of access and a unified database for all system resources. The ability to manage policies or make changes to desktop and server images without having to go through a change request process has made operations more flexible and less complex. For example, large system patches or software updates can now be scheduled when end-users are less likely to be affected by network performance issues, rather than when convenient for users in a parent domain.

However, Emtec designed the new domain tree to remain a part of the parent group's Active Directory forest, which ensures a trust relationship between the two domains. This means users at both agencies can still access resources in each other's domain tree as long as their user accounts have been assigned the appropriate permissions to do so.

The project was completed in April 2009, and the agency has reported no significant issues in the year they've been operating under the new infrastructure. Emtec's extensive expertise with similar projects — particularly for government customers — is a major reason for the smooth transition.

"This agency has been a long-standing customer of ours, so we're familiar with the organization," said Reynolds. "From cabling to staff augmentation to PC and server rollouts, we've been their go-to source for hardware and services for a long time. This project was really a team effort between our team and their team, and that helped make this go very smoothly. In the year since we finished, we haven't been called back out for any issues."

Established in 1964, Emtec, Inc. is a systems integrator that provides IT services and products to the federal, state, local, education and commercial markets. Our market leading value-based management methods, coupled with best-in-class IT technology, consulting and development services, address a wide range of specific client needs, as well as support broader IT transformation initiatives. Emtec's service capabilities span the United States, Canada and countries around the globe.