

POWER PROFILE

Customer: Secure-24, Inc.

Location:

Plymouth, Michigan

Customer Business Issue:

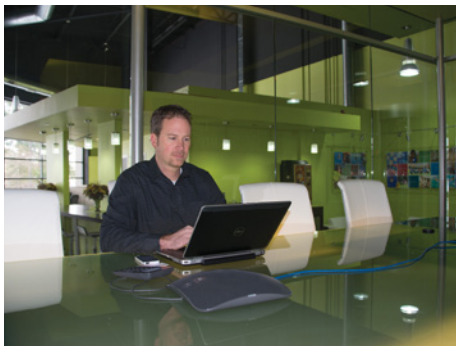
Standby Power

Solution:

C32 diesel generator sets (3)

Cat® Dealer:

Michigan Cat



Secure-24, Inc. has 19 years of experience delivering managed IT operations, application hosting, and highly compliant managed cloud services to enterprises worldwide.

POWER NEED

In today's cost-sensitive IT environment, enterprises are increasingly turning to third-party vendors to manage their mission-critical applications. Using the cloud can save as much as 80 percent of a company's IT costs by eliminating the need to build a data center or purchase equipment.

Based in Southfield, Michigan, Secure-24, Inc. has 19 years of experience delivering managed IT operations, application hosting, and highly compliant managed cloud services to enterprises worldwide.

Secure-24's Plymouth, Michigan data center is considered a Tier 4 facility, which places it in the top tier of data centers across the U.S.

"When you compare our data center to others in the U.S., it's a very measurable, low-risk option and delivers support for compliance for our existing and potential clients going through the selection process," says Clark Massey, who manages the Plymouth facility. "More and more companies are realizing the innovation and value we deliver with high availability hosting and enterprise-class solutions."

The Plymouth Data Center opened in 2009 and hosts mission-critical, highly compliant applications—such as SAP, Oracle E-Business Suite, PeopleSoft, JD Edwards, Hyperion, and other critical enterprise applications—across all industries for businesses of every size.

Secure-24 targets its managed hosting, disaster recovery, and managed application services to organizations that require a superior service experience in hosting highly compliant systems, including many large-scale government projects.

By outsourcing those services, organizations avoid the need to build their own data centers and can focus their IT efforts on improving their products or services. Secure-24 also helps clients with compliance issues that arise with regulatory requirements, such as Sarbanes-Oxley, ISO, PCI, and the Health Information Portability and Accounting Act (HIPAA).

Secure-24 is dedicated to serving clients to

ensure that the data center meets their specific requirements through a detailed Service Level Agreement (SLA) that backs the performance of the entire IT experience from the application, to backup and recovery, to overall service responsiveness.

For security purposes, government and financial institutions require that their equipment be separated from the rest of the general population within the data center, so their cabinets are set up in a different way. This includes where they are positioned, maintaining a higher degree of physical security, and how the data is logically separated.

When it comes to rack space at the Plymouth site, Secure-24 has roughly 250 cabinets at 43 percent utilization. In simple terms, the goal is to maintain plenty of room for growth without overtaxing the systems and to provide backup to all systems in case of failure.

As the technology industry evolves, Secure-24 is achieving greater levels of density with the hardware that occupies the data center. With the influx of virtualization technologies, smaller amounts of space are required to host hundreds of virtual servers, resulting in increased square footage capacity and the ability to drive more revenue.

SOLUTION

For a data center, maintaining high availability is critical. Throughout Secure-24's 20,000-square-foot Plymouth facility, all systems are redundant. This goes beyond ensuring that the generators and UPS units are backed up, extending down to a device level.

"We know that in the unlikely event of a mechanical failure of one of the components of the power path supporting each device, there will occur a seamless failover to a redundant N+1 source," Massey explains.

This failover protocol is demonstrated in no stronger fashion than with the Cat® generator sets deployed on-site at the Secure-24 data center.

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Currently, the data center power infrastructure utilizes a symmetrical approach, whereby two Cat C32 diesel generator sets back up both sides of the data center's electrical system in case of a power failure. A third Cat C32 was commissioned in 2015, providing full N+1 coverage to the primary generator sets yielding a sustainable 2N+1 generator solution.

The switchgear methodology at the Plymouth data center is open transition, providing single utility support with a single generator backing each side of the system, says Steve Talbot, President of The Talbot Corporation, whose electrical contracting firm serves as the design-build consultant for Secure-24. In the unlikely event that either of those two generators fail, the third generator is available to support both sides.

"When we began our engagement here with Secure-24, we were pleased to see an existing Cat generator," Talbot said. "We have a long history in our company with Cat equipment. We've done a number of partnership projects with them in wonderful reciprocal agreements. We have a very high comfort level with Cat equipment and especially with Michigan Cat, locally."

Providing a steady source of cooling to the servers and other electronic components is critical, and the Plymouth data center has a custom-designed cooling management system with both glycol and DX-based cooling systems—either one is capable of handling the data center on its own.

"Consistent and reliable power is imperative as powering the critical IT systems and cooling of the full data center must remain constant throughout a loss of utility power. The Cat generators help fill this role and ensure uninterrupted service," Massey says.

RESULTS

The third generator will guarantee full 2N+1 backup, especially during periods when one of the other two generator sets is down for preventive maintenance. With the integration of the third generator, losing grid power while generator maintenance is performed is no longer a concern, as two of the units are still available.

Anytime Secure-24 data center vendors perform preventive maintenance on the core physical infrastructure, the generators are engaged as a proactive, precautionary measure.

Every week, each of the C32 generators starts and runs for 15 minutes. During that time, the Secure-24 data center team checks to ensure there is sufficient battery voltage, along with visually monitoring critical aspects of the engine's operation.

As part of a Customer Support Agreement that Secure-24 has with its Cat dealer, technicians from Michigan Cat visit the facility twice a year to perform oil changes and to conduct an inspection of the units. Michigan Cat also conducts a full load bank test at least once a year. A complete record of the load bank test is saved and made available for facility audits.

"We have a longstanding relationship with Michigan Cat, and there's peace of mind knowing that they are located within our immediate vicinity," Massey says. "They are extremely responsive, and we have a great relationship with their technicians."

"When our clients tour the data center, they are reassured to see the Caterpillar generator sets standing at the ready," he adds. "It's a highly recognizable brand with a great reputation, and that resonates with our clients and strengthens their overall perception of our data center."



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