

Wall Street & Technology

Photo Gallery: Savvis Data Center Offers Connectivity to Exchanges Worldwide

With reducing data latency a priority for financial services firms, one option is to colocate servers that run trading applications close to exchanges. One New York area data center specializes in just that. Savvis, a provider of utility-hosted data center services, has a data center close to Manhattan that offers connectivity to market data from more than 100 exchanges worldwide and OPERA data; access to two SIAC Secure Financial Transaction Infrastructure nodes; and colocation proximity hosting for five exchanges, including the AMEX, BATS and PHLX (the other two exchanges declined to allow their names to be printed).



Telecommunications "Node" Room

The telecommunications 'node' room is where feeds from 10 telecom carriers come into the Savvis data center. The node room has its own power supply, back up power supply and A/C. The room is partitioned from the rest of the data center physically (behind the glass) as well as electrically. Once the carriers' feeds leave the node room and enter the data center, Savvis takes over the wiring and maintenance to make sure security protocols are maintained. NOTE: the cooling in the node room comes through vents in the floor, a more efficient method than other forms of A/C cooling.



Proximity Hosting

This room houses part of Savvis' Exchange Express service which offers proximity hosting to five major exchanges — including the PHLX, BATS and AMEX — for low-latency connectivity for latency-sensitive trading applications. Note: The air-conditioning pumps cool air through vents in the floor and pull hot air out through return vents in the ceiling, which is more efficient than pumping air into the sides of the racks. The newest floor of the data center (currently being completed) requires 150 watts per square foot as it is designed for more-concentrated and faster processors. Existing floors run at 90 watts per square foot.



Varghese Thomas, VP & GM, Financial Markets for SAVVIS

Varghese Thomas, Vice President and General Manager of Financial Markets for SAVVIS, in the Proximity Hosting room at the Savvis Data Center. "Savvis Proximity Hosting expands and enhances our portfolio of low latency connectivity options for the financial markets," said Thomas. "Savvis Proximity Hosting is a significant step in our global expansion plan to offer high availability application hosting and low latency network access for the world's leading trading venues and liquidity pools." Thomas adds that Savvis has access to 97% of the market's financial data and has 125 data feeds coming into the data center. Globally, Savvis has 27 data centers (23 in the U.S.)



Dual Authentication Hand Scanner

The ultrasecure data center located near Manhattan (we can't even tell you in which state) boasts some pretty fancy security technology. The Recognition Systems HandKey CR biometric hand scanner coupled with a proximity card reader offers dual-factor authentication. The scan of the hand must match the information that is on the proximity card. So if someone finds a lost proximity card, he or she still couldn't gain access to the data center since the hand scan wouldn't match the scan on file. These hand scanners are located throughout the facility at virtually every entrance to a different data center room.



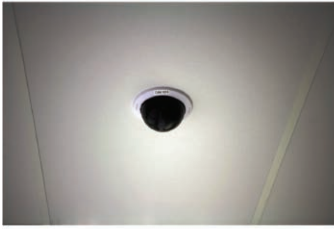
Security Portal

In addition to the guard post outside the data center, the downstairs security desk, the upstairs security desk, the hand scanners, proximity cards and the 300-plus cameras that are monitored locally and remotely at Savvis' headquarters, this ultrasecure data center also sports numerous security portals from Security Technologies Georal that work in conjunction with the biometric hand scanners. In order to gain access, the user must use a proximity card and hand scanner to open the near door of the portal. Once inside the portal, the door closes (think of standing in a phone booth). The portal then weighs the user, and the proximity card and scanner must be used again to open the door on the other side of the portal. The portal weighs the user for two reasons: First, it won't let two people enter the booth at once, and second, if a user tries to carry out a server or a drive, the portal will recognize a change in weight and will prevent the user from leaving the facility.



Glass Security Portal

There are two glass doors on the security portal. One on each side. Only one door will open at a time (unless the security desk overrides the controls). And only one person can enter the booth at once because of the biometrics.



Eye In The Sky

Over 300 cameras monitor the data center, day and night. The cameras are monitored on site by a security team and are also monitored remotely at Savvis' remote monitoring facility.



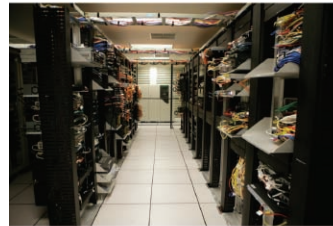
Hosted Utility Service

Savvis' virtualized utility service offers financial firms fully managed hosting for colocation, proximity hosting, processing and low-latency data access, among other capabilities. The virtualized service automatically optimizes resource allocation for clients and allows for rapid deployment and scaling of applications. The service runs on Egenera Bladeframes (the blue lights in the racks above) that virtualize the data center's resources and securely distribute processing power to clients. 3Par Inverv is utilized for attached storage. Each row of Bladeframes has its own 3Par attached storage (yellow boxes, far left).



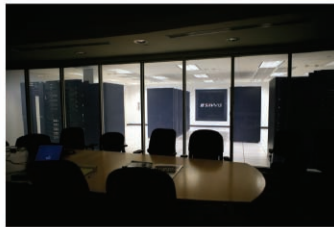
Hosted Utility Service

Like many secure areas in the data center, the hosted utility service is located behind a cage. Only Savvis employees have access to this area. Other cages, where financial firms are locating their own equipment, are maintained by that firm's employees.



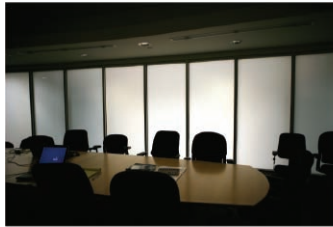
Fully Hosted Utility

Another view of racks in the fully hosted utility computing service cage. At the far end of the row are the power distribution units (PDUs).



Conference Room

This high-tech conference room at the data center views a room (through glass that can be 'fogged' with a flick of a switch...see the next photo) that hosts SAVVIS Exchange Express, which allows clients to directly connect to exchanges to receive market data feeds and execute trades via low latency Ethernet access and the vendor's global private financial network. The service provides access to direct feeds from the PHLX, BATS and AMEX, along with two other exchanges that preferred to remain anonymous, and to the SFTI (Secure Financial Transaction Infrastructure).



Conference Room with Fogged Glass

The conference room with fogged glass.



Varghese Thomas, VP & GM, Financial Markets for SAVVIS

Varghese Thomas, VP & GM, Financial Markets for SAVVIS, in the proximity hosting room.



Power Distribution Units

MGE Systems PDU in the Savvis Data Center.



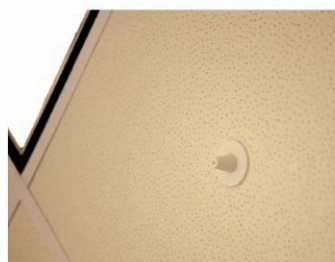
A/C Floor Vents

These floor vents are highly efficient for cooling server racks. The cool air is pumped through these vents in the floor. The air cools the servers and the hot air is pulled out of the room through returns on the ceiling.



Smoke and Heat Detectors

Smoke and heat detectors are located every 12 feet in the data center. The ultrasensitive devices can pick up small increases in heat and smoke.



Very Early Smoke Detection Apparatus (VESDA)

The Very Early Smoke Detection Apparatus (VESDA) continually draws in air past a laser. The laser can detect smoke even before other smoke detectors and will sound an alarm.

Images: Greg Ivor Morris
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