



Weehawken Data Center



>> Weehawken – NJ2 Datacenter



- 280,000 sqft building with ~160,000 sqft built out
- No advertising of Savvis name (plain wrapper)
- IDC- Interior and exterior security managed 24x7 by Savvis
- Building and outside premises security is managed by the Building management.



>> Security Cameras

- » (7) 360 degree cameras with 10x zoom
- » (167) fixed cameras
- » 8 **H**igh **S**peed **R**ecorders with DV cassette tapes
- » 60 gig hard drives to eliminate down time for tape swaps and over recording
- » Minimum 30 Day tape storage.



>> Zoned Access throughout Datacenter



Captures 3D
measurements of hand

- » Biometric hand scanner requires ID card access and hand geometry measurements
- » Customer IDC access and contacts managed via Siebel
- » Current government-issued picture ID **required** (Governor Bush in Austin signed NDA and surrendered drivers license)
- » ID Badge and Biometric Hand Scan to Man-Trap with Badge reader and 2nd Hand Scan to gain access to raised floor



- » Staffed 24x7 365 days a year
- » Monitoring Analysts - only function is to watch the monitoring tools and take predetermined actions upon receiving alert
- » Call Analysts – First tier support
- » ISE (Internet Systems Engineers) – Second and third tier remote troubleshooting and resolution



Local NOC



- » Staff require at least one industry standard certification
- » Staffed 24x7
- » Local hands on tier 2 support
- » NOC staff are typically the first responders to any local issues
- » Primarily operate in a 'triage' capacity, but have the skill sets to operate in depth in common environments



>> Smoke and Heat Detection



Heat

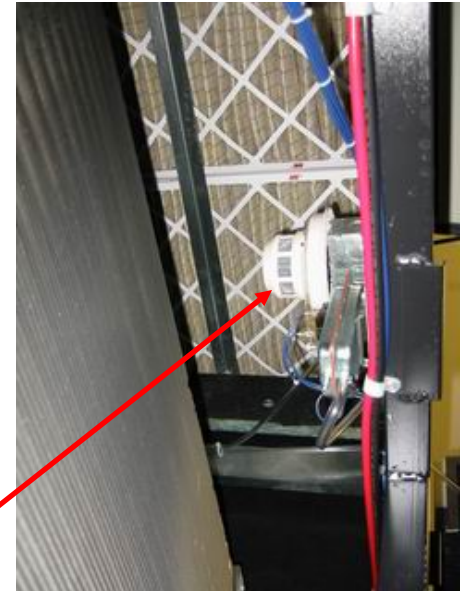
Ceiling



Sub-Floor



HVAC

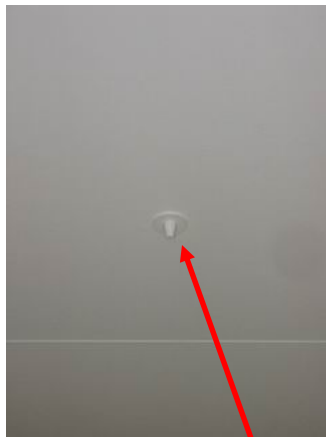
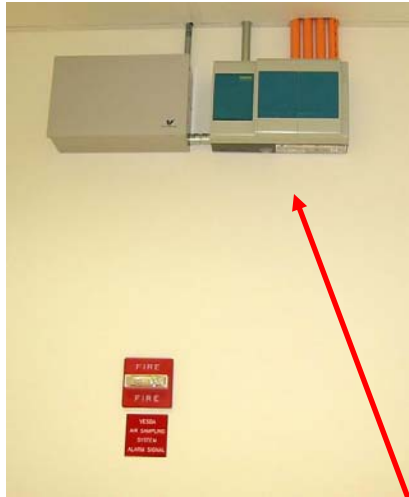


VESDA

Smoke

- Monitored by Local NOC, Facilities, and Security

>> Very Early Smoke Detection Annunciation



VESDA air
sampling unit

Ceiling Nozzle
(sniffer nose)



VESDA above
ceiling

>> Zoned Sprinkler System



NJ2 - No FM200 or Halon

- » Dangerous to Personnel (**depletes oxygen**)
- » Only one chance to put fire out
- » Expensive. It costs \$100,000 for 10,000 ft² of gas.
- » Halon depletes the Ozone
- » 90 – 95% of FM-200 discharges are accidents. Due to local ordinances, when FM-200 is discharged, the A/C must be cutoff along with the electrical power.

>> Fire Annunciation and Suppression



Annunciation

Very Early Smoke Detection Annunciation (VESDA)

- » Laser based sniffer that counts particulate matter in the air to the parts per million (PPM)
- » Four levels of warning based on particulate matter count in the air
 - Level 1 Flashing LED on board (NOC respond with Fire Extinguisher)
 - Level 2 Horns sound in the area of alarm
 - Level 3 Horns and strobes
 - Level 4 Fire broken out. HVAC shutdown.



Suppression

Each Datacenter is divided into multiple zones

Preaction Double Interlock (Dry pipe system)

- » Heat must reach 140 degrees at any two heat detectors to initiate first interlock
- » Sprinkler filament will melt at 165 degrees releasing air pressure and initiating water flow



Savvis Backbone and Peering Connections

Current connections

- OC-48c From Weehawken to Oak Brook, IL
- OC-48c From Weehawken to Sterling, VA
- OC-48c From Weehawken to Jersey City, NJ
- OC-48c From Weehawken to New York, NY

Main network aggregation point for building

>> NJ2 Main Node Room – Telco Providers



Telco Providers: AT&T, Verizon, Worldcom, ConEd

- **Multiple Fiber Providers for Diversity – provides diversity and redundancy.**
- **Currently less than 50% of available fiber is in use**
- **Each vendor can deliver additional bandwidth capacity with minimal turn-around time**
- **Can be delivered using existing 'lit' fiber**
- **Fiber pathways into the Data Center are truly diverse**
- **Fiber enters building in steel conduit from multiple points in the building**
- **The diversity continues from the data center to the central office of the provider**



>> Dual Fed Power Management Modules



Metering
Cabinet

PDU (Power
Distribution Unit)

Static Transfer
Switch

- » Each one is fed by two independent building power sources
- » Utilizes a static transfer switch for unattended fail-over to secondary power source
- » Monitored by building automation system
- » Power fully conditioned to eliminate fluctuations. Surge suppression, voltage regulation, and redundancy lead to clean, continuous power.

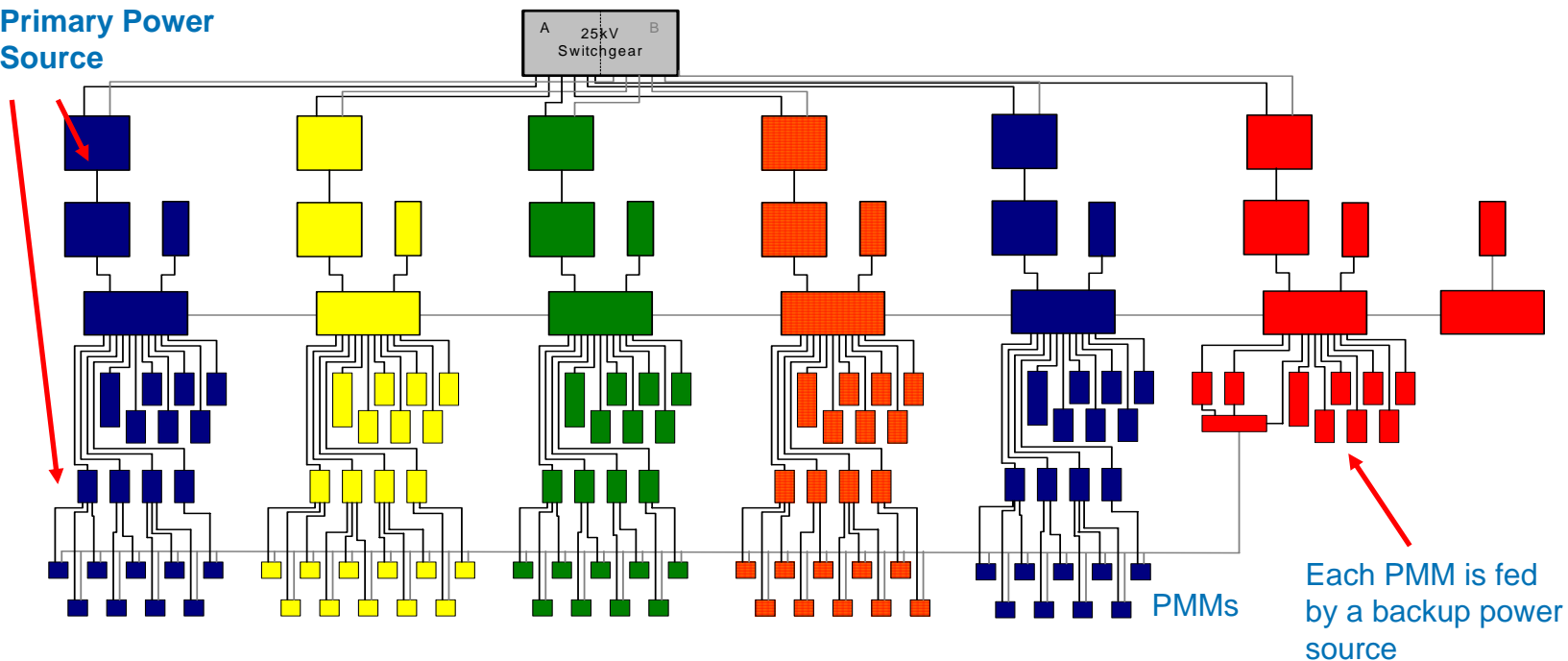
Utility → raw power	UPS → AC → DC → AC	PMM → on floor	Customer Cage
------------------------	-----------------------	-------------------	---------------



Redundant Power



Primary Power Source



If any point in the primary power source fails, the PMM will switch to the backup power source

Backup Power

- » 2 agreements with major carriers to provide additional diesel fuel
- » 10 CAT Diesel 2.0 Megawatt Generators
- » Minimum 24 Hour Fuel Storage
- » Generators assumes building load within 20 seconds
- » Generators are tested on weekly basis under load.
- » Tanks are kept at least 80% full at all times



Two Utility Feeds from Independent Substations

- » Diverse paths to the building
- » Feeds to building are encased in concrete
- » Fed from two independent substations
- » Ten (10) separate 2500 kva transformers fed from both utility sources for redundancy.

>> HVAC Chiller Systems

- » System on a closed loop – does not need fresh water
- » (80) 40 ton air handlers in isolated mechanical rooms
- » Fed by (10) 310 ton chillers. 20% System capacity redundancy
- » Temperature maintained at 74 ± 2 degrees



>> Air Handling Unit Rooms

(1) 40 Ton Air
Handler



Temperature is kept at
74 degrees or lower



Relative Humidity
maintained @ 50%

>> Leak Detection Cable



- Leak Detection System
- Identifies leak (moisture) at precise location (within one foot)
- Under raised floor and in Air Conditioning Unit rooms
- Monitored 24x7 by NOC

>> Savvis is a National Infrastructure Asset



Under Presidential Executive Order (EO) 13010 the United States identified telecommunications, banking and finance, transportation, electric power, gas and oil storage and delivery, water supply systems, emergency services, and government operations as elements or sectors of the nation's critical infrastructures. Savvis data centers were identified as a Tier One asset under the Key Asset Initiative (KAI). This gives Savvis:

- » Access to Government Agency/Military Protection in the event of an Emergency/Eminent Threat
- » Guaranteed Tier 1 Diesel Fuel Deliveries
- » Several Other Non-Disclosed Services

>> The SAVVIS Difference



One Stop Shop

- » One Single Provider
- » Deep Solution Expertise
- » Program Management as Single Point of Contact

Industry Expertise

- » Solutions geared towards Media
- » Media and Entertainment Vertical
- » Expertise in working in Media

Scalable Solutions

- » Improved time-to-implementation
- » Solutions scale quickly as business demands

