

# NAP of the Capital Region



Terremark has developed one of the most innovative datacenters in the world - the NAP of the Capital Region.

Strategically located 60 miles from Washington D.C. in Culpeper, Va., the NAP of the Capital Region (NCR) opened in June 2008 as the most secure and technologically sophisticated datacenter campus in the eastern United States. The design of the NCR's 30-acre campus, which can accommodate up to five, 50,000-square-foot independent datacenters and one 72,000-square-foot office building, was developed to exceed Federal standards for a data communications and hosting facility. This ground-breaking design resulted in a datacenter campus that meets the needs of today's power, space and bandwidth-intensive mission-critical applications and hot/warm sites for disaster recovery/COOP environments.

Each datacenter structure is a secure bunker, designed to provide clients who require it colocation space that meets standards for sensitive compartmented information facilities (SCIFs) managed by Terremark's Federal Group. Inside each datacenter, a professional security staff maintains and operates sophisticated surveillance systems, biometric scanners and secured areas for processing of staff, customers and visitors.

A complete suite of services from colocation and connectivity to managed hosting, cloud computing and comprehensive disaster recovery solutions is offered, including solutions utilizing Terremark's Infinistructure utility computing platform including Enterprise Cloud services. Built to a power capacity 160 watts per square foot, the NAP of the Capital Region will easily accommodate today's power requirements for high density computing environments. Terremark offers 100% service level agreements on power and environmental for the NAP of the Capital Region.



## GENERAL VIEW

The campus is designed to incorporate six structures:

- Five 50,000 - 100,000 sq.ft. datacenters
- One 72,000 sq.ft. secure administration building
- Two-story 72,000 sq.ft. office complex
  - 225-seat secure briefing center with additional offices and laboratory spaces meeting the most stringent Federal security standards
  - All engineering, technical and administrative staff is located within this building to minimize foot traffic
  - Centralizes all campus employee and tenant break rooms, recreation and food service facilities

## SECURITY

- 10 ft. earth berm surrounding the entire campus
- 150 ft. building set backs
- Compliant fencing, video monitoring, and electronic passage technology
- Roving perimeter security guards and operating building security guards
- DoD-trained anti-terrorism personnel on staff
- Tiered Access Control Protocols compliant and flexible to conform to all levels of established threat conditions
- Primary entrance processing point outside the protected berm
- Isolated shipping/receiving and freight inspection facility
- No vehicle traffic in the vicinity of data operating buildings
- Parking for 250 vehicles in three separate areas allows for segregation and isolation

## CONNECTIVITY

- Fiber optic cable distribution scheme provides three physically diverse entry points for carriers to the two meet-point rooms and out to the operating buildings
- NCR is connected to all Terremark facility optical peering switches
- An additional dark fiber link is designed to terminate in Terremark's Herndon Technology Center (HTC) and provides access to an additional 9 local carriers
- High capacity fiber links at HTC directly connected to the NAP of the Americas in Miami, where more than 150 other global carriers are available
- NCR is engineered for the installation of six 16-meter satellite ground stations with easy expansion to 12

## FACILITY INFRASTRUCTURE

- Designed to exceed Uptime Institute Tier III requirements.
- Federal operating buildings are constructed to provide microwave and RF shielding
- Operating buildings have extremely limited personnel presence to enhance security
- Each operating building has both interior and exterior video monitoring and UL certified intrusion detection systems

- Each operating building is designed with state-of-the-art fire detection and suppression systems using the latest advances in pre-action water
- The fiber optic cable meet-point-room is located in a secure location with cross-connects and redundant tie cables to other buildings
- All buildings designed to have a Building Management System monitored by on-campus Secure Network Operations Center (SNOC) and the SNOC in Miami

## ELECTRICAL INFRASTRUCTURE

- 100% Service Level Agreement (SLA) on power.
- The campus is engineered to provide N+2 level of power distribution
- Initial engineering provides for 120-180 watts per sq.ft. with the ability to easily configure 200 to 240 watts per sq.ft. and beyond.
- Medium voltage commercial power backed up by 55 2.25 megawatt diesel generator sets
- Diesel generator runtime in excess of seven (7) days under an 85-90 % load
- NCR is placed on the county Critical Infrastructure Restoration list to assure priority in fueling to extend the seven-day run time
- UPS units also act as line conditioners by completely isolating the critical operating building loads from the commercial power system
- Architecture designed to Level 4 Tiered Infrastructure Maintenance Standard (TIMS) allowing for performance trending, capacity analysis, alerts, automated response and reporting
- Each building's substation/power generation plant is cross-connected with the others, creating a highly robust and protected medium voltage infrastructure

## HVAC INFRASTRUCTURE

- The campus is engineered to provide an N+2 level of HVAC service. Terremark provides 100% Service Level Agreement (SLA) on HVAC
- Common chilled water loop serves all buildings and redundant chillers are located between the operating buildings
- Entire HVAC plant - chillers, compressors, heat exchangers, and distribution systems - are monitored for all environmental operating parameters by a Building Management System allowing for performance trending, capacity analysis, alerts, automated response and reporting
- The BMS is monitored by the on-campus secure network operations center (SNOC) and the SNOC in Miami

**For further information or to reserve space at the NAP of the Capital Region, visit [www.terremark.com](http://www.terremark.com).**