

Atlanta Data Center Overview

Overview of Colocation

- This 87,000 (gross) Sq. ft. facility opened in December 1999 and was built to satisfy MCI's hosting/data communications needs. The Internet Colocation portion of the Data Center is 29,800 gross sq. ft. with 21,000-sq. ft. of raised floor space for customer servers. This facility also houses MCI's local and long distance switching equipment, as well as one of MCI's Mega Hubs.
- This Data Center is one 75 worldwide that will be opened by year-end.
- This Data Center is a telco grade building, which means that it is built to withstand Natural Disasters. This facility can withstand winds of 175 MPH.

Security

- The facility is protected and monitored by a 7X24X365-guard service and the MCI operations staff. Ninety-nine closed circuit surveillance cameras have been installed on the interior and exterior of the building. Additional cameras will be added, as they are needed. There are seven monitoring the parking area, loading dock, entrances, generators, and perimeter walls of the facility. While ninety-two monitor common customer areas and the entire Data Center area. The onsite security guards monitor the cameras. The recorded video is stored on VHS tape. This data is stored for thirty days for future viewing, if necessary.
- The Atlanta Data Center uses a Biometric hand scanner for customer access into the building.
- Electronic card readers have been installed on the access points to the building and the data center floor.
- Upon gaining access to the lobby, the security guard will confirm identification comparing a Valid ID (i.e. Driver's License) and the Access List. After proper identification is presented to the security at the front desk, the customer will receive an access badge. The client must leave photo ID in exchange for an access card and key. The Customer access badge allows unescorted access in to secure colocation space, customer work area, break room, and restrooms. The access list is updated daily by an on-site MCI staff member. **Only those persons listed on a customer access list will be granted access to the colocation area of the Data Center.**
- The automatic key retrieval system (KEYTRAK) will produce the appropriate key for each cabinet registered to the customer. This system can also produce reports of key activity. Key reports include such information as the person who checked out the key, when the key was checked out, and when the key was returned.

Customer Area

- The touch down area was installed for customer convenience. Here, customers have access to **five** desks, outfitted with Ethernet lines and analog lines for dial-up access.
- There are three conference rooms available for customer use, upon prior request.

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- There are 9 crash carts available for customers to use while on site. These carts are equipped with Sun, Standard VGA and WYSE terminals available for customers to use while on site.

Network Operations Center

- The mechanical and electrical components of the facility are monitored by a building management system, remotely in **Carey NC**, and physically in the NOC. Features include under floor water detection and smoke alarms.
- There are MCI technicians available 7X24X365 to assist the customer with any questions they may have. These technicians are also available for assisted installations and often act as remote hands and eyes for clients when necessary.
- This NOC is connected to Web Customer Technical Support in Ashburn, VA, on a 7X24X365 basis. The technicians on site can handle any calls forwarded to them by WCTS and act as hands and eyes for off-site MCI engineers.
- WCTS (Web Customer Technical Support) in Ashburn, VA performs Ping, HTTP GET, plus additional monitoring on a per customer basis.
- Again, they are here for the customer's benefit and should be called upon any time if the customer has any questions or concerns.

Fire Suppression

- A pre-action (dry pipe) system has been installed above the floor throughout the data center. Early warning smoke and heat detectors are located above and below the floor to detect any potential problems. The pre-action dry pipe system that has been installed above the floor in case of a fire, will only release water once two detectors in a zone have been triggered. Once triggered the thermal fuse in each sprinkler head must reach between 120 to 190 degrees to disperse water.
- This facilities fire detection system is connected to a 24X365 monitoring service.
- There are **67** hand held CO2 Extinguishers located throughout the Data Center.

Cabinet Availability

- All cabinet offerings come with 6 pre-wired fast Ethernet ports. Each port is wired with high-grade Cat5e cable. One port is usually reserved for the hand-off you receive from the expansive Global UUNET IP Network. The others may be used for redundant hand-offs, alternate carrier connections, or to cross-connect multiple cabinets. There are also cabinets pre-wired with fiber for high-speed gigabyte transfer. Pre-wired ports ease customer installation and create an environment flexible enough to accommodate customer demands and secure enough to protect the customer systems. Each port in every cabinet is patched back to a MCI controlled network area. Only MCI staff members have access to this controlled area. All cabinets also offer redundant 20amp power strips.
- Power cables and CAT5e cables have been secured in conduit for added security
- We offer three different sizes of lockable cabinets. They are 19" by 7' (Standard Cabinet), 23" by 7' (Large Cabinet); 19" 3.5' (Half Cabinet)

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- There is shelving included in cabinet, if the customer requires it.
- The front and back of each cabinet is being monitored and recorded by our closed-circuit surveillance cameras.
- There are also cages available. The standard cage sizes are 9X16 (holds 5 standard cabinets); 9X26 (holds 10 standard cabinets); and 9X36 (holds 15 standard cabinets). Customers are allowed to arrange and put equipment in cages in a manner that works for them. However, they must adhere to the following guidelines: maintain a clean and safe working environment, maintain a 3' radius around all equipment, and follow all bracing requirements of the area.

Facility Cooling

- In this Data Center we strive for an average temperature of **68 to 72 degrees** with 40-50% humidity. This is achieved by using **four** cooling towers (N+1). Which feed to the **54 Liebert** CRAC units that supply the data center with the cool dry air pushing through the perforated floor tiles.

Network Connectivity

- This Data Center is directly connected to the award winning Global UUNET IP Network. The infrastructure of the Data Center was designed to be robust and contain a high survivability factor. Every component of the access, core and distribution layers is redundant. This network is a dedicated IP Network. This data center is directly connected to the ATL5 hub via 4xOC-12 links. A hub is a Point of Presence on the Global UUNET IP Network, where private peering may occur. Over 95% of MCI's traffic is passed through these private peering points. This allows us to by pass the congested MAE-East and MAE-west.
- Juniper M40s and M160s bring the bandwidth into the Atlanta Data Center. From there, fiber is fed to 2 Cisco 12000s, each with 4xOC-12 cards. From there, the Cisco 12000s feed 2 additional Cisco 12000s that act as the Gateway routers (these also have 4xOC-12 cards). Fiber is then fed into 2 Cisco 6509 that are the Aggregate Switches. These 6509s then feed the Customer Switches in every other row in the data center (these are 6509 as well). At this point, the fiber is broken down to copper and feeds the number one port in the customer cabinet. It is also at this point that all the rate shaping is done.
- In our data center rate shaping occurs at the customer switch level. We hand-off 100 Mbps from our backbone connection and rate-shape it at this switch level. We rate shape here so that we can scale up for our customers rapidly.
- As you can see, there are two identical networks running side by side and each component is redundant to ensure our SLA of 100% connectivity to your cabinet.

Power

- This data center has redundant power feeds coming in from **Georgia Power**. Which feed into separate **Powerware** UPS (Uninterruptible Power Supply) Systems. Each redundant UPS room contains **HOW MANY UPS** UPS (N+1) which filter out aberrations to supply clean continuous power to the customer cabinets, and our infrastructure equipment. In the event of a power failure these UPS can supply **6x 225 KVA** which will maintain operations for **at least 30 minutes**.
- These UPS systems feed to **11United Power** PDUs (Power Distribution Unit), which are located through out the data center. These PDUs provide our customers with redundant

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circuits which feed to the power strips in the customer cabinets. Each separate circuit in the PDU has spare capacity so that individual client's power requirement can be met. Should the client require higher amperage, an additional whip/circuit will be extended to the client's rack/system location.

- However, the UPS is connected to **two 2000 kW Cummins** Diesel Generators that will kick on within **30** seconds of power failure. There is 20,000 gallons of fuel on site. This is enough fuel to run both generators at 100% capacity for four to five days.
- As you can see, there are redundant power feeds into your cabinet to ensure our SLA of 100% power availability.