

Reference: ADMINISTRATIVE SERVICES - INFORMATION TECHNOLOGY (IT)(MIS)
Section: ADMINISTRATIVE SERVICES
Title: COMPUTER AND NETWORK (LAN) EQUIPMENT STANDARDS
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I. PURPOSE

To establish standards for the acquisition of microcomputer hardware to be used on the computer network (Local Area Networking - (LAN)) of the Niagara Frontier Transportation Authority and the Niagara Frontier Transit Metro System, Inc. (collectively referred to as "NFTA" or "Authority"). This standard will ensure that the all computer-based business support applications will function at the optimal design level and provide the best possible service to the Authority. These standards will apply to the following acquisitions:

1. The lease, purchase, or rental of microcomputer equipment.
2. The brand of microcomputers, file servers and related equipment acquired.
3. The brand of peripheral equipment acquired.
4. Maintenance contracts.

LAN Standard Goals

These standards were developed to provide a road map for departments to purchase LAN equipment. These standards have the following goals:

- Provide a common foundation for meeting business and technology needs.
- Ensure technical system interoperability throughout the campus.
- Define requirements and technical specifications.
- Provide a technical resource for procuring and implementing LAN hardware.
- Simplify the technical decisions required to implement LAN technology.
- Allow for standardized technology implementations though out the campus
- Minimize total cost of ownership

Change in LAN Technology

LAN speeds are increasing to keep up with faster desktop computers. 100 Mbps Fast Ethernet is replacing 10 Mbps Ethernet. Our backbone speed is increasing from 1000 Mbps to 10,000 Mbps (10 Gigabit Ethernet).

Switches versus hubs: Hubs (repeaters) require each user to share access and bandwidth of the wire with other users on the LAN. A shared LAN segment operates like a party line telephone, only one person or computer can talk at a time. This can cause network congestion as well as probable HIPAA violations.

Switches provide more bandwidth per user by allowing multiple conversations to occur simultaneously ("private line") rather than the single conversation ("party line") limit of hubs. Bottom line is more bandwidth per user, with less network congestion.

Switches also can have an operating system capable of delivering Quality of Service (QoS) features. QoS prioritizes traffic to ensure that mission-critical applications get the service they require. Application and networking equipment standards for QoS are now available to make sure critical business application traffic receives priority.

Data and video may now be integrated on the same wire and may reduce the need for costly dedicated video lines.

II. **POLICY**

The proper functioning of the Authority's computer network requires that only Authority-owned or Authority-controlled file servers and related equipment that complies with technical and computer software standards established by Management Services will be allowed access the Authority's computer network (LAN).

For purposes of this policy "file servers" are defined to include file servers, mainframes, and enterprise-wide servers; "related equipment" includes switches, routers, wiring, and hubs that allow multiple users access to the Authority's computer network (LAN).

Computer Network Equipment Standards:

Minimum specifications for a PC

- Pentium IV 1.6ghz processor
- 256MB Ram
- 32mb Video card
- 40G Hard Drive
- 52x CD-ROM drive
- Intel Pro 100 Network Card
- 17" monitor
- Keyboard and mouse
- Operating System - Windows NT4.0 w/service pack 6a

File Server Hardware:

- Compaq or Dell manufacturer preferred
- At least Pentium III 1.2 GHz processor or most current

Operating Systems:

- Windows 2000 Server SP6a
- Windows 2008 Server
- Linux
- AIX

LAN Cabling and Wireless

- All cabling must be installed by an approved IT Infrastructure Service.
- Category 6 with targeted CAT 6A cabling and jacks are the current standard for twisted pair.
- All wireless deployments, i.e., Access Points, Routers, Repeaters, etc. must be installed by IT-approved Infrastructure Services.

Addressing:

- Our network consists of a class C license
- Our network is a 192.168.XXX.XXX addressing scheme (addresses are obtained from the systemadministrator)
- Accessing the World Wide Web from our addressing scheme is permitted on a project by projectbasis. WWW is controlled by a username and password.
- Any special addressing must be properly documented and defined.

Routers and Switches:

- All Routers and Switches are Cisco Systems

- Hubs can be other manufacturers as long as they will communicate with current Cisco equipment.

III. PROCEDURE

The IT Department will establish and publish a set of hardware, software, and address standards that must be met if a file server or related equipment is to be connected to the Authority's computer network (LAN). These standards will be available in the IT Department's Internal Policies and Procedures manual.

All Authority business centers will contact the IT Department and obtain authorization before attempting to purchase any equipment that will connect to the Authority's computer network (LAN).

The IT Department has the authority to disconnect from the Authority's computer network (LAN) and file server or related equipment that does not comply with this policy.

Exceptions to this policy will be granted with the written permission of the Chief Information Officer (CIO) of the Management Services Department.

USER:

1. Must involve the Manager of the IT Department in any discussions with vendors and subcontractors in all matters concerning the selection of computer equipment for Authority projects.
2. Complete an IT Request for Services (RFS) via email to help.desk@nfta.com.
 - c. Description of hardware needed.
 - d. Justification of hardware needed.
 - e. Account Number to be used for the procurement. Computer equipment will be procured using the appropriate capital or operating account as determined by the dollar value.
6. Obtain Department Manager approval.
7. Forward the RFS to Manager of the IT Department.

IT:

1. Review the RFS for need, justification and completeness. computer network (LAN).
2. Upon approval of the RFS by the IT Department Manager, the Computer Maintenance Technician will contact vendors and obtain pricing for hardware and place the Purchase Requisition.

PROCUREMENT:

1. Ensure that procurement guidelines have been followed.
2. Process the Purchase Requisition.

IT:

1. The Computer Maintenance Technician will receive the hardware and update the Hardware/Software Inventory Master
2. Notify the Asset Manager of the new equipment and obtain the Authority tag.
3. Provide the Asset Manager with Hardware/Software Inventory Master Input Sheet for his records.
4. The Computer Maintenance Technician will deploy the hardware.
5. Obtain Department Manager approval.
6. Forward the RFS to the IT Department Manager.