



December 2005

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The Importance of Network Documentation

This month I want to take a look at the importance of maintaining accurate network documentation to reduce associated support costs and minimize downtime.

When I speak of network documentation I am referring to *all* of the system information that is critical to the proper function and maintenance of your school's network – servers, routers, hubs or switches, workstations, even wiring – nothing should be excluded or assumed. There are many components to your system, but for the purposes of our discussion, I have grouped them into three categories: Hardware, Software and Network Schematic.

Hardware

There are several network hardware components that should be included in your network documentation:

- Workstations
- Servers
- Routers
- Printers
- Switches
- Hubs

You need to gather certain information on these components:

- Manufacturer
- Model
- Serial Number
- Operating System
- Service Packs
- Warranty Period

Special attention should be paid to your server(s). Servers often contain additional devices attached to them such as tape backup units, additional storage subsystems and uninterruptible power supplies (UPS) – all these devices should be accurately documented.

In the event that a device on your network has a hardware failure this information, if readily available, speeds up the troubleshooting process and alerts you to hardware that can be repaired under warranty.

Software

Once all of your network hardware has been documented, your next step is to list each software package that is running on your network.

Here is the software package information that you need:

- Software Version
- Licensing
- Serial Number
- Service Packs that have been installed.

For example, a server may be running Windows NT 4 with Service Pack 4; a workstation may have Windows 2000 Professional with Service Pack 2 as its operating system with Microsoft Office 97 Standard with Service Release 1 as its principal application suite.

A record of the installation key should also be kept in the event that the case housing on the installation CD is misplaced.

Software license agreement numbers for legal, multiple installations should also be available; these often help keep costs down when additional licenses or upgrades are needed.

Furthermore, you should maintain a record of vendors' account numbers and contact information for each specialized software package—such as accounting or database management—used by your school. You will also need license agreements and version numbers for these packages. In the event that you add users to your network, require technical support, or desire to upgrade a version of software, the required information to do so is now at your fingertips.

Once you have gathered all of your network's software information you should set aside a secure area to store your software media and licensing documentation. Keep your software and documentation in a secure place where it can easily be retrieved. Software tends to "disappear." When the need arises for re-installation or updates, that software should be readily available and not misplaced or "borrowed."

Network Schematic

Once you have gathered all of the relevant hardware and software information for your network, the next step is to provide a clear visual representation of your network.

Microsoft's Visio and Excel software packages are excellent tools for the generation and ongoing maintenance of your network documentation. The network schematic should include the following:

Cabling Layout

This should be a separate document that outlines each cable that is run in the office, including the number and type of each cable (fiber, copper, etc.) and the associated termination point.

In the event that a network hardware component fails to connect to the network, long hours tracking down the offending cable can be avoided with clearly marked cable runs and accurate documentation.

Network Layout

This document will provide a clear picture of your network including servers, switches, hubs, firewalls, routers, protocol addressing (TCP/IP), workstations and network printers.

By simply viewing this document your support lifeline can get an accurate overview of the network configuration, thus providing faster and less costly issue resolution.

Please remember that the documentation outlined above is always changing with each adjustment to the network system and must be updated to ensure that it is always current and relevant.

Happy New Year,



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