

NICs NETWORK INFORMATION CONNECTION

AN ESSENTIAL SUPPORT RESOURCE FROM THE INSTITUTE FOR NETWORK PROFESSIONALS

Foundational Principles (part 1) for the 7 Habits for Highly Effective People

by Darryl Alder, *Certified 7 Habits Facilitator*

Introduction

Couldn't we all use some help achieving better results, but who do we turn to? Our industry is so young, it really is hard to know whose experience we can trust and there really hasn't been enough time yet to grow our own wisdom. But others have been finding and collecting wisdom from the past that we can borrow.

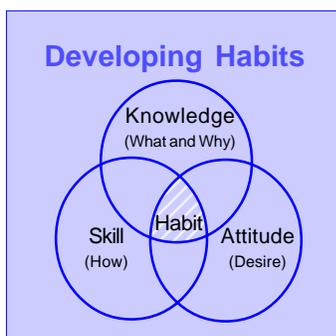
That is what Stephen R. Covey has been doing for the past 35 years. He shares his research for solving personal and professional problems in his "best-seller," *The 7 Habits of Highly Effective People*. This article is the first in a series, based on Covey's research. Following part II of this introductory article, each column will present one habit from Covey's core principles for self-governance.

Covey explains the solutions to problems we face actually lie in modifying the principles we use. It also shows that our principle-center emerges from our habits. By identifying habit sets for successful people, we ought to be able to incorporate them into our own character. In the end we should achieve better results in all we do.

As you learn and try these ideas, your effectiveness should improve and you will find ways to anchor yourself against the storms of life. The process builds character and competence in an "Inside-Out" approach—it is principle-centered behavior aimed at you, so that you can change yourself if you choose to.

Developing Habits

To begin with we need to understand what habits are and where they come from. Common sense tells us habits are patterns that grow out of repeated behavior. They include three overlapping



components: knowledge, skill and attitude. Because these three components are learned and not inherited, habits of any kind may be learned or unlearned. This means that you can make habits of effectiveness part of our style, if you choose to.

In his, *The Common Denominator of Success*, Albert E. Gray explains:

"Successful people have the habit of doing the things failures don't like to do. They don't like doing them either, necessarily, but their disliking is subordinated to the strength of their purpose."



IN THIS ISSUE

- 1
7 Habits
Foundational Principles
(part 1)
- 4
Category 5 Structured Cabling System
- 6
Teaching With Analogies
- 7
Exam Preps:
NetWare 5
- 11
Old Fashion Backup & Synchronization
- 13
Tips for Starting a Professional Organization
(part 2)
- 14
Career Tips:
The Perfect Resume
- 16
Your Member Benefits

By subordinating their dislike for certain tasks, they usually discipline their lives in accordance with fundamental principles and thus develop the habits of effective people.

sketches, then **expand** on the ideas with your own understanding, then try to **apply** each idea and finally **share** what you have learned with someone else. Choose someone with whom you will share each of the habits and new ideas you learn in this series. As you do, you will deeply reinforce each concept.

Character and Personality Ethic

The principles of conduct governing individuals or groups comprise their ethic. For the most part these can be categorized as either character or personality based ethics. For example some people do things in public for the goodwill it brings them or their business, while others do the same thing for only personal satisfaction. The first example is a personality-based ethic; the second is a character based one. Both are reasonable motives, but personality ethics are situational and change with time; with them there is always a new program to learn or buzzword to know.

Similarly, management training tends to focus on either character or personality development. For the better part of this century, trainers have focused primarily on personality development and moved away from traditional character development. They offer useful techniques to help you with the things people see first, before they know you well. These courses tend to focus on your public persona, image building and techniques that help your outward success. Development in this area includes things like training in dress and grooming, public speaking, sales, making friends and negotiating.

Covey observes that during the first 150 years of the last two centuries many people were obsessed with improving their characters. Then at the turn of this century, business consultants and researchers began to identify personality development techniques. As their ideas were popularized they gradually replaced efforts in character development. The problem with personality ethics is, they are driven by fashion. Often governed by the political correctness of the day, they become situational. General Colin Powell describes them as “the latest management fad” to chase after.

The 7 Habits...and What They II do for You

The Habit	The Results of 7 Habits Training
Be Proactive	Fosters courage to accept new challenges and venture into unfamiliar avenues
Begin with the End in Mind	Brings projects to completion and unites teams and organizations under a shared vision, mission, and purpose
Put First Things First	Promotes getting the most important things done first and encourages direct effectiveness
Think Win-Win	Encourages conflict resolution and helps individuals seek mutual benefit, increasing group momentum
Seek First to Understand, Then to Be Understood	Helps people understand problems, resulting in targeted solutions; and promotes better communications, leading to successful problem solving
Synergize	Ensures greater buy-in from team members and leverages the diversity of individuals to increase levels of success
Sharpen the Saw	Promotes continuous improvements and safeguards against burn-out and subsequent non-productivity

As listed, these habits are interconnected, dependent on each other, and sequential. The first three are habits of character; they help you achieve a daily private victory and progress from a state of dependence to independence. The next three are the outward expressions of character and lead to interdependence, mutual benefit, and public victories. The seventh habit renews and sustains the growth process.

With the promise that we can learn new habits and let go of old ones, let’s look at some foundational concepts.

Teach Others-You’ll Learn More

The best way to learn the seven habits, or anything else for that matter, is to teach what you learn to someone else. But first you will need to **capture** what you read in notes or

Though valuable in getting ahead, these techniques and practices require constant program changes and wariness to avoid being out of vogue. What's more, they do not build a real foundation to fall back on in times of need. They are showy, much like the leaves and trunk of a tree. But character is like the roots and goes deep beyond our view. Without strong roots leaves wilt and trees blow down in heavy storms. As Henry David Thoreau described it, this abandons many of us to "hacking at the leaves" and no "one striking at the root."

Character ethics goes right to the root. They are principle driven and remain constant. Character-based development focuses on deep, foundational, unseen traits. They get at the basis of behavior and lead to doing good things for the sake of goodness, not for public recognition. Areas of character development could include integrity, fidelity, temperance, and simplicity. This ethic proposes the primary way to build relationships is by practicing sound, time-tested principles of character development and is the premise of the 7 habits.

Levels of Leadership

In any organization or group there exists four levels of leadership:

PERSONAL
INTERPERSONAL
MANAGERIAL
ORGANIZATIONAL

The seven habits can apply at all four levels, but we will only focus on the first two.

1. Change self though character development and become trusted. Whenever we lead ourselves more effectively, we work to improve our character and competence; we become reliable; others can count on us. This allows people to begin accepting us as **trustworthy** and puts us in a position to lead them with confidence. As we continue to build trust and increase dependability, stronger relationships result and our capacity to lead improves. This is another aspect of the "inside-out"

approach to change.

2. Become trusted and begin to change your organization. Another "inside-out" approach.

Public and Private Victories

The first three habits help us win a quiet, internal victory over self. We work on our character and look at the things that motivate us. We examine our assumptions about life, others and our selves. Then we choose to respond to life based on **self-set** values (Habit 1); we come to understand **our** own purpose for life (Habit 2) and begin to manage ourselves against **our** own priorities (Habit 3).

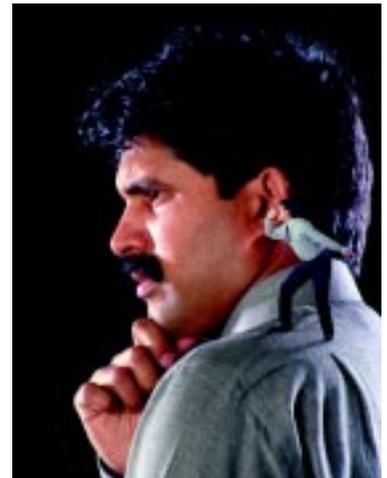
As we discipline ourselves, we achieve a sort of "private victory." This in turns helps us move from dependence to interdependence, a goal Covey insists is necessary if we are going to get to the other habits.

As we move from dependence toward interdependence, we become more fully equipped to build effective relationships and are more prepared to succeed in those relationships (the Public Victory).

Only after we have habits of independent people, can we choose interdependence to develop enduring, cooperative relationships. In all human relations, we are better able to seek the mutual benefit of both ourselves and others (Habit 4); we can interact with others so we are both understood and aware of each others feelings, thoughts, and experiences (Habit 5); and we value diversity for the better ideas it fosters (Habit 6).

Habit 7 is a personal commitment to self-renewal. When we pledge to use this habit to improve any other area of life, it affects both public and private victories in the 7 Habit process.

In the part 2, we will finish this article on Foundational Principles with a presentation on "Principles, Paradigms, and Processes"; "Effectiveness"; and the "Emotional Bank Account."



Category 5 Structured Cabling System

by KeithParsons

We in the Network Computing industry require the Physical Layer carry out all the instructions and protocols riding above that. We know from experience that the majority of network troubleshooting issues can be solved by always checking the physical cable first. This article is the first of a three part series covering wiring and Ethernet standards, and provides a quick overview of Cat5 standards.

Category System Overview

In 1991, the Electronic Industries Associate/ Telecommunications Industry Association (EIA/TIA) developed the “commercial Building Telecommunications Wiring Standard,” designated “EIA/TIA 568” which covered horizontal and backbone wiring, wiring closets, workstation outlets, cable, connecting hardware and more. When the 568 standard was adopted, high-speed UTP cable and connecting hardware were still being developed. The EIA/TIA later released TSB-36 and TSB-40A to provide specifications for UTP cable and connecting hardware, defining a number of physical and electrical properties, particularly attenuation and near-end crosstalk (NEXT). A revised standard, designated “ANSI/TIA/EIA 568A” which incorporated the initial 568 and the two updates, was approved in 1995.

The Unshielded Twisted Pair (UTP) category system includes:

Horizontal Wiring

Horizontal wiring is the cables from the workstation outlets to the wiring closets. The cable used for horizontal wiring consists of four unshielded twisted pairs inside one jacket and that can be either PVC or plenum. When planning your installation, it’s important to know where each workstation will be located in relation to the wiring closet. You must plan your installation so that the length of the horizontal wiring does not exceed 90 meters (295 feet). If any horizontal run is



greater than 90 meters, there are products that can be added to allow you to exceed the distance. However, if you find that a number of workstations will be located beyond the 90-meter limit, it is recommended to plan for more than one wiring closet. You can link wiring closets with a copper or fiber backbone cable. When installing horizontal cabling, here are some guidelines.

- Many networks that run on UTP cable only use two of the four pairs of wires inside the cable jacket. To prevent crosstalk, resist the temptation to use those additional unused cable pairs for voice or other data applications.
- When routing cables through walls and ceilings, always keep them as far as possible from sources of interference (EMI/RFI), such as fluorescent lights, electrical motors, light dimmers, and



Pair	ID	PIN #
T1	5	4
R1	4	3
T2	3	6
R2	6	1
T3	1	2
R3	2	7
T4	7	8
R4	8	



Pair	ID	PIN #
T1	5	4
R1	4	1
T2	1	2
R2	2	3
T3	3	6
R3	6	7
T4	7	8
R4	8	

Category	Description
Category 1	Used for voice and low speed data like RS232 Not recognized as part of 568A
Category 2	Used for data below 4Mbs and voice Not recognized as part of 568A
Category 3	Category 3 UTP cable and connecting hardware have been tested and certified to meet certain specifications at speeds up to 16Mhz and are suitable for use at data rate of up to 10Mbs.
Category 4	Category 4 products have been tested and certified at speeds up to 20Mhz and are suitable for use at data rates of up to 16Mbs.
Category 5	Category 5 products have been tested and certified at speeds up to 100Mhz and can support data rates of 100Mbs.

electrical panels. Never run data cables in the same conduit as electrical wiring.

- Take care during installation not to pull a cable with too much force, or bend it too sharply. Such stresses can change the electrical characteristics of the cable and degrade its performance.

Connecting Hardware

Connecting hardware components can be fixed or modular. Fixed components have a set number of RJ-45 ports and cannot be reconfigured for other applications. They are usually adequate for small, single-system installations with few changes or additions. Modular components can be configured and reconfigured for a variety of applications. These can be color coded to identify multiple systems running over the same structured cabling system. When the structured cabling system is intended to support multiple data applications and voice, the more flexible modular approach should be considered.

Before purchasing connecting hardware, it's important to decide which wiring standard you're going to follow. The wiring standard designates which color wire from the end cables, end to end, are wired using the same color-coding scheme.

Care must be taken when terminating the horizontal wiring at the connecting hardware so as to maintain the highest level of performance possible. ANSI/TIA/EIA 568A specifies the AT&T 110 wiring block as the preferred method for connecting wires from the horizontal cabling to the connecting hardware. The contacts in the 110 block pierce the insulation to make contact with the wire underneath. To get consistently reliable connections, only use a 110-punchdown tool that terminates only one wire at a time.

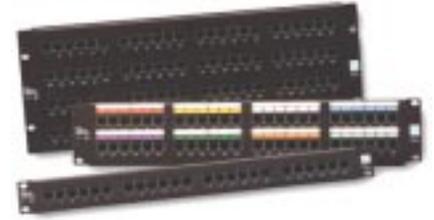
You must also maintain the pair twists to within 1/2 inch or less of the point of termination on the connecting hardware. Any



untwisting of the cable pairs greater than this will adversely effect the performance of the cable and reduce its ability to transmit at Category 5 speeds.

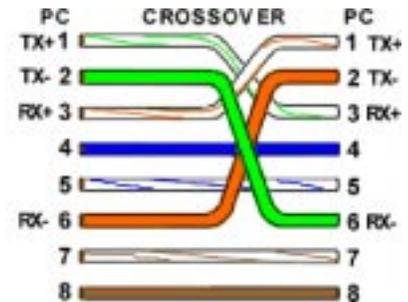
Patch Cables

The quality and performance of the patch cables you use for connecting hubs to patch panels, and workstations to wallplates are as important as any other component in your structured wiring system.



ANSI/TIA/EIA 568-A allows for a maximum patch cable length of 6 meters (20 feet) in the wiring closet and 3 meters (10 feet) at the workstation outlet. If either of these lengths are exceeded, your horizontal cable run must be reduced by the excess amount. By their nature, patch cables are intended to be flexed and moved, so stranded conductor patch cables, which are more flexible and less likely to break than solid conductor, are recommended.

It is also possible to use color-coded patch cables to match the color-coded wiring scheme used in your horizontal cabling system. When connecting either two workstations, or two hubs together, use patch cables designed as cross-over cables following this color coding standard.



Application	Pins 1 2	Pins 3 6	Pins 4 5	Pins 7 8
ISDN	Power	TX	RX	Power
Analog Voice			TX/RX	
8802-3 (10BASE-1)	TX	RX		
8802-5(Token Ring)		TX	RX	
FDDI (TP-PMD)	TX	**	**	RX
ATM User Device	TX	**	**	RX
ATM Network Equip.	RX	**	**	TX
100BASE-VG (802.12)	*Bi	*Bi	*Bi	*Bi
100BASE-T4 (802.3u)	TX	RX	*Bi	*Bi
100BASE-TX (802.3u)	TX	RX		

*Bi=bi-directional

**Optional terminations may be required by some manufacturers' active implementations.

Teaching With Analogies

by **Susan Boyd**, Susan Boyd Associates

Windows Basics

- Windows Recycle Bin - Contains deleted files that are put in a trash can that's out at the curb. You can get in the trash and retrieve something until the garbage truck comes. Emptying the Recycle Bin is like having the trash man come to take away the trash. Then if you want that trash back, you'll need to immediately jump into your "3rd party software program" and go after it.
- Windows is like a house. Different items are behind the different windows.
- Cache Memory - like building blocks of RAM, some are set aside for cash.
- Improper Shutdown - like shutting the file drawer even though some of the files are sticking up and opened.
- Minimize button - like putting a caller on hold
- Close Button - X to exit out of the document or program
- CTRL Click is like the cherry picker
- SHIFT Click is like bookends - gets everything in between
- Double-Click the icon - "Knock Knock" to open the door and let me in
- Double-Click - like saying "Pizza, Pizza" or "Shave and a Haircut - 2 bits"
- Right Click - use your middle finger
- Having more applications on your desktop is like having more crayons in a box (8 in a box vs. 16 or 64)
- Creating folders - use file cabinet analogy to show need for grouping and organizing files. Drawer is the program, Files are stored in a folder created by the program or about a specific subject.
- Document/Folder/File - use literal terms and show placing a piece of paper (document) on the top of your desk (screen). Then place it in a Folder and put it in a file cabinet next to your desk.
- Creating a shortcut on the desktop or in a folder - use analogy of the garage sale - sign to get you where you want to go fast.
- WinZip is a program that works like a Trash compactor to squeeze more into a smaller space. When the file is unzipped, it returns to its previous size.

Application Concepts

- Template is a picture frame. The frame (structure of the document) always looks the same, the contents (information in the document) are what changes.
- Database is a file cabinet
- Access - use Legos to show structure. Tables are bottom row, then Forms, then Reports.
- Query - subset of all data available
- Query is a Question, Results are the Answer. When you look at the results to figure the questions, it's like Jeopardy.
- Spreadsheets - Copying Formulas: Imagine each cell is a room in a building, and a formula tells you to go to a certain room and get the contents. Then move to another room and apply a mathematical operator to the contents of that room. When you copy a formula, you really copy "room movements" (move 1 room to the left, get the contents, find the operator, move down 2 rooms, get the contents ... and complete the formula.)
- Excel - Relative and Absolute Cell References - Relative is like doing a survey involving different people on different blocks with instructions to deliver the survey to 2 neighbors on their right. Absolute cell reference is that any questions about the survey must come back to me, absolutely nowhere else.
- Email programs - Corporate Address Directory is like the Telephone book that is updated regularly by the phone company, while your Personal Directory is like your personal address book that is only updated when you do it.
- When a document is opened within an application, people get confused on whether to close it by clicking the top X or the bottom X. The bottom X (closing the document) is like removing a piece of paper from a typewriter, Closing the top X (the program) is like turning off the typewriter and putting the top on.
- When teaching mail for remote users, explain that the Outbox is like the mailbox on the corner of your street. Mail has been sent but is not yet en route to its destination. It's just sitting there until the mail truck picks it up (when you connect the laptop and do a remote send/receive).
- For the Image product - windup is like handing the final product off to someone to use electronically. Once your part is done, the work is passed to someone else.

NetWare 5 Administration

First in a New Series of Test Prep Helps

by RexMoffitt

Exam Details

Exam Name: **NetWare 5 Administration**
Exam Number: **50-639**
Number of Questions: **69**
Passing Score: **602/1000**
Time to take Exam: **90 minutes**
Standard or Adaptive: **Standard with no simulations**
Certifications Exam Counts Toward: **NetWare 5 CNE, CNA MCP+I, and MCSE+I elective**



Network Definition

Two or more computers that communicate and share resources.

Hardware consists of servers, workstations, networks boards (NIC), and communication media (cable and such).

Minimum Hardware Requirements for NetWare 5 server

Pentium processor
64MB RAM
35MB DOS partition
200MB SYS partition
VGA Video adapter and display
CD-ROM
Network Board NIC

Login Sequence:

Prompts/Validates Username —>
Result: Denied or
Checks Account Restrictions —>
Result: Denied or
Prompted for Password —>
Result: Denied and Intruder Detection
Notified or
Access granted.

Context

Context describes what part of the tree an object resides in.

O- Organization container.
OU- Organizational unit container.
CN- Common name of the leaf object.

The typical context format:
.CN=Joe.OU=FBI.O=USGovernment

Gives a mapping to where it is that that user belongs.

There are two types of context available:

Current context - Defines where you are in the tree at the time.

Object context - Defines where an object resides in the tree.

Types of NDS names:

Distinguished name

Object's complete NDS path.

Complete path for Joe:

.CN=Joe.OU=FBI.O=USGovernment

Relative distinguished name

Object's NDS path, relative to its current context. Relative distinguished names are not preceded by a dot.

Joe's current context:

.OU=FBI.O=USGovernment

Joe's relative distinguished name: CN=Joe

Typefull name

Complete NDS path, which contains descriptors to define the object.

Joe's Typefull name:

.CN=Joe.OU=FBI.O=USGovernment

Typeless name

Complete NDS path, which does not contain descriptors to define the object.

Joe's typeless name: .Joe.FBI.USGovernment

NDS Container Objects

Root - Top of NDS tree structure. Tree can only have one root, from where all other objects branch out.

Country - Container which designates the country that this branch of the network resides in. Must be a two-letter abbreviation (i.e. US, UK, etc...)



Organization – A container that typically represents a company.

Alias - Logical NDS pointer. Can only point to Country and Organization objects, when used as a Container object can be used as a leaf object as well.

Organizational Unit - Container that represents divisions of units. (i.e. Accounting, engineering, etc...)

NDS Leaf Objects

Alias - Logical NDS pointer. Can only point to Container and Leaf objects, when used as a Leaf object.

User Template - Template used to create multiple users with predefined rights.

Organizational Role - Defines a position in organization. Used to assign privileges to anyone in a certain position.

Profile - Contains login script for a group of unrelated users.

Directory Map - Represents a logical pointer to a directory in the server file system. Used to centrally manage drive mappings.

Application - Provides ability to manage applications as NDS objects.

NDPS Printing

Single utility that manages all printing in the NetWare 5 environment. Downloads all necessary drivers to the workstation. Supports TCP/IP.

NDPS Manager: the Manager controls All agents (object that is the combined printer, print queues and print server). Controls printing on workstations.

NDPS Gateway: Installed on the NetWare 5 server. Acts as agent for non-NDPS aware printers (most today).

NDPS Broker: allows for:

- SRS (Service Registry Services) for public access printers to be advertised on the network.
- ENS (Event Notification Services) delivers messages to users regarding job status/ events.
- RMS (Resource Management Services) centrally manages drivers, definition files, banners, and fonts.

Printer Types include;

Public: no NDS object (resides in Broker) no security anyone can print to it at any time.

Controlled Access: NDS object uses corresponding NDPS Gateway. More secure way of printing.

Commands

NWADMIN – NetWare Administrator is the GUI used to manage NetWare resources

FILER - Used to manage files/directories, display volume information, and save and purge files.

FLAG - Changes file/directory attributes.

NDIR - Used to view files, directories and volumes.

NCOPY – Copies Directory Structure, and Files (including NetWare attributes)

RENDIR – Renames directory.

UIMPORT- Used to import users from a database to NDS. (Delimited ASCII file)Sample syntax: UIMPORT LIST.CTL LIST.DAT **CONSOLE1** - Java based management utility (requires Java Runtime Environment). - Can be used to create User, Group, Organization, and Organizational Unit objects.

If not available in Application Launcher then,

MAP command options

MAP

Displays a list of current drive mappings.

MAP X:=SERVER1\SYS:

Maps the X drive to the SYS volume on SERVER1.

MAP N SERVER1\SYS:

Maps the next available drive to the SYS volume on SERVER1.

MAP DEL X:

Deletes the drive mapping to X:

MAP S2:=SYS:SYSTEM

Makes the SYS:SYSTEM directory the second search drive.

MAP C S2:

Maps the second search drive to a network drive.

Path =

servername_SYS:PUBLIC\MGMT\CONSOLE1.EXE

NetWare 5 File System

The file system organizes internal disks into one or more volumes.

To rename a physical volume, change its server definition with INSTALL.NLM

To rename a logical volume, use NWADMIN.

NetWare default directory structure:

SYS

Contains OS files, NLMs and NDS programs.

www.inpnet.org/NICs

By default, access limited to users with Supervisor rights.

PUBLIC

Contains user utilities and commands.

NLS

Contains message and help files for multi-lingual support.

ETC

Sample and miscellaneous files.

DOC

Contains NetWare's documentation files.

Security (File & NDS)

W: Write - Grants rights to open and change contents of files.

R: Read - Open files.

M: Modify- Change attributes or renames a file/directory.

F: File Scan- See files/directories, but unable to open/copy.

A: Access Control- Change trustee assignments and IRFs.

C: Create- Create new files and directories.

E: Erase- Delete files and directories.

S: Supervisor- Grants all rights to files and directories.

DOCVIEW

Contains DynaText viewers to view documentation.

Supervisor rights cannot be blocked by an IRF for file system security

Supervisor rights can be blocked by an IRF for NDS security.

Rights from NDS do not transfer into the file-system, except for Supervisory rights.

Creator is always given supervisor rights to the File/Directory they create.

Container is always given RF access to SYS:PUBLIC

User is always given RWCEMFA access to their own personal directory.

In NWADMIN:

Rights to Files and Directories is used to assign rights from a user's aspect.

Trustees of this Directory are used to assign rights from a directory's aspect.

www.inpnet.org/NICs

IRF (Inherited Rights Filter):

When the filter is applied, the rights specified are the rights allowed to pass through.

If Joe has RF rights, and goes through an IRF with only F specified, Joe keeps only F rights.

Security equivalence:

When one object's access rights are specified to be equivalent of another object's access rights.

Ancestral Inheritance:

By default, any object is security equivalent to its parent container.

Server Security

Implement the following steps to ensure file server security:

- 1) Restrict physical access to the file server.
- 2) Lock the file server console using SCRSERVER.NLM
- 3) Load SECURE CONSOLE to allow NLMs to only be loaded from the SYS:SYSTEM directory.
- 4) Load REMOTE.NLM to allow only remote access to the server.

Login Scripts

Execution order for login scripts (also order of use):

- 1) Container - Script for Organization or Organizational Unit containers used for all users in the container.
- 2) Profile - Script, which contains specific parameters for a group of, unrelated users.
- 3) User - User specific script.
- 4) Default - Executed for any user without individual user login script. To avoid having the default run you need to specify in a container or profile NO_DEFAULT

Users can only be assigned to one profile group.

Sample Syntax: WRITE "Good %Greeting_Time,%Login_Name"

Remarks are used to insert a line of text that will be ignored by NetWare. REMARK, REM, ;, or * can be inserted before the line of text to define it as a remarked line.

Sample Syntax: REM MAPF:=SYS:PUBLIC

DOS executables, commands unrecognized by a login script, need to be preceded by # to specify that the script will need to run an external command. #CAPTURE P=HPLJColor5





The @ command can also be used to specify a DOS command that needs to be ran.

ZENWORKS 1.0

Distributes applications to users through a single point of administration.

Provides: Location Independence (by use of URLs), Application Fault Tolerance (by use secondary copies of the application), Application Load Balancing (by use of multiple servers), and Roaming Profile Support: (by use of workstation OS detection)

Application Launcher (NAL.EXE): A component that is pushed to the workstation. Determines the proper application launch settings, regardless of client operating system.

SnAppShot: Creates an image of current applications/settings and allows distribution.

AOT: Binary file where snapshot info is stored. Accessed by NWADMIN in application object.

Pull distribution: Places application icon (mapped to resources) on the user's desktop.
Push distribution: The Focused Run feature allows for the user to receive the software locally at a specified interval such as at login.

Alternative Utilities are: Application Explorer (Win95/NT only), NALEXPLD.EXE, and AXT (text version of AOT)

Policy Package Object: Controls specific to Workstations and Users such as, desktop environment, remote control of workstations, and information through Help Requestor.

User Policies: associated with the following objects: Containers, User Groups, and User.
Workstation Policies: only associated with Containers, Workstation Groups, and Workstations. (Users must register workstations with NDS before they can be treated as objects.)

Only one WIN 95 user package can be associated with the Admin.

Policy rights are applied in the order of object then container.

Client 32

Supports both TCP/IP (Required for Internet) and IPX (Required for older Novell Networks) Protocols.

Requires ODI (Legacy Dos/Win 3.x), or NDIS (Win95, NT) capability.

(This binds multiple protocols to a single card.)

NT Tech Tips

FIND WINDOWS NT WORKSTATION 4.0 CD KEY NUMBER

If you've lost your CD Key and need to reinstall NT Workstation 4.0 later, you may find you need it.

You'll find the CD Key number in the NT Registry. You don't need to modify the Registry to recover the Key number, you should still be careful when using RegEdit.

Click Start, Run, type in "regedit" (without the quotes) and press Enter. When RegEdit opens, navigate to HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion. The ProductId string contains the CD Key in digits 6 through 15.

Note: This may not be the case if you use an OEM version of Windows NT Workstation 4.0. Some OEM users report that the entire ProductId string is the CD Key.

Adding Utility Icons To Start Menu

Have you ever wished for a shortcut to *Control Panel* in the *Start Menu*? Follow these steps to add any one/or all of these system folders to your start menu.

Right click on the *Start* button and select *Open, Inside the Start Menu* window, *right-click* on a blank area and select *File, New, Folder*. Type one of the following names, depending on the folder you'd like to create:

- Control Panel.{21EC2020-3AEA-10690A2DD-08002B30309D}
- DUN.{992CFFA0-F557-101A-88EC-00DD010CC48}
- Printers.{2227A280-3AEA-1069-A2DE-08002B30309D}

Then press [Enter].

You'll know you've successfully completed this step when you see a folder with the appropriate icon and name. If you typed in the name incorrectly, press [F2] for Rename, and try again, noting there is no space between the period and the open bracket.

Old Fashion Backup & Synchronization

by KeithParsons

Over the past couple of months I've tried all sorts of sophisticated options for keeping my Laptop and Desktop computers synchronized. I've tried Briefcase, PC Anywhere, LapLink, and other professional syncing products. Though they each worked at some level, each wasn't what I needed. Every solution had some unwanted side effect, either too slow, not robust enough, or unable to work well over the net.

Finally, I returned to my DOS roots and developed a manual system using DOS commands. Then after a couple of manual cycles, I codified the process with a batch file.

The goal of this project wasn't to backup my entire system, I only needed to keep data files on the two platforms synchronized. I've tried to keep the *My Documents* folder as the central repository of all my files. But a couple of programs refused to move their data files and these directories needed to be also backed up.

First I needed to get a network connection between the two machines. So this would work from any Internet connection I added the IP address and NetBIOS names of the two machines in an LMHOSTS file.

Then using the NET commands I was able to map a drives for both the laptop and the desktop. Running the *net use* with the */delete* option forced the connection closed before attempting an open. This was necessary in case I had inadvertently left the connection open then the batch file would hang waiting for a keyboard input, and I wanted this batch file to be self running.

Next, I used the XCOPY command with the */s* switch for subdirectories, and the */d* switch for copying only files that have changed since the last sync. Before Windows 95, XCOPY's */d* function required you provide a date, now the lack of a date tells it to copy only new and changed files. I needed to backup certain directories to specific locations, and thus the multiple XCOPY commands. I also added REM statements to let me debug and remember what each command was for.



*You don't need to back up your entire hard drive, just backup what's hardest to replace; **your working documents.***

LMHOSTS File

```
# This file contains the mappings of IP addresses to NT computernames
# (NetBIOS) names. Each entry should be kept on an individual line.
# The IP address should be placed in the first column followed by the
# corresponding computername. The address and the computername
# should be separated by at least one space or tab. The "#" character
# is generally used to denote the start of a comment (see the exceptions
# below).
#
# Following any entry in the file with the characters "#PRE" will cause
# the entry to be preloaded into the name cache. By default, entries are
# not preloaded, but are parsed only after dynamic name resolution fails.
#
XXX.XXX.XXX.XXX      Keith_Dell      #PRE
XXX.XXX.XXX.XXX      Keith_4080      #PRE
XXX.XXX.XXX.XXX      MAIL_Server    #PRE
XXX.XXX.XXX.XXX      FTP_Server     #PRE
```

Synchronization Batch File

```
net use s: /delete
net use s: \\Keith_Dell\data

net use t: /delete
net use t: \\Keith_Dell\programs

REM - Copy current favorites from Dell's C: to 4080's C:
xcopy t:\windows\favori~1\*. * c:\windows\favori~1\ /s /d

REM - Copy current Address book from Dell's C: to 4080's C:
xcopy t:\windows\applic~1\micro~1\adres~1\keith.wab c:\windows\applic~1\micro~1\adres~1\ /s /d

REM - Copy current Ascend database from Dell's C: to 4080's C:
xcopy t:\progra~1\frankl~1\planner\data.mdb c:\progra~1\frankl~1\planner\ /s /d
xcopy t:\progra~1\frankl~1\planner\audit.dat c:\progra~1\frankl~1\planner\ /s /d

REM - Copy current Quicken files from Dell's backup on C: to 4080's C:
xcopy t:\quickenw\*.q* c:\quickenw\ /s /d
xcopy t:\quickenw\qw.cfg c:\quickenw\ /s /d
xcopy t:\quickenw\q3.dir c:\quickenw\ /s /d

REM - Copy current Outlook Express Mail from Dell's D:\My Documents to 4080's C:
xcopy s:\mydocu~1\mail\*. * c:\windows\applic~1\identi~1\{e3966~1\micro~1\outloo~1\ /s /d

REM - Copy all updated files from Dell's D:\My Documents to 4080's D:\My Documents
xcopy s:\mydocu~1\*. * d:\mydocu~1\ /s /d

cls
REM          Sync Complete
REM
```

Synchronization Batch File

keeps a backup of all my important files on a daily basis.



This only did the synchronization in one direction, I did a search and replace to come up with the reverse process and ended up with two batch files. One to sync from the laptop to the desktop, and the other to sync from the desktop to the laptop. Now, after being on the road for awhile I use the batch file to sync to my desktop, and before leaving I sync back to the laptop. This process took a bit of time to debug, but now I have a great way to not only keep my working files in sync, but it also

In practice this synchronization takes under 1 minute to keep my two systems in sync using a 100Mb Ethernet connection. When I'm on the road I use a modified batch file to sync but to leave out some of the larger e-mail archive files to cut down on the connect time. *(You can also use this same technique to backup your working files to a removable drive for a 'manual' backup system.)* Give it a try on your own system. ↩

NT Tech Tips

KILL HUNG PROCESSES WHEN LOGGING OFF

When you tell Windows NT to shut down, it first sends shutdown requests to any running processes. Most 32-bit applications honor these requests and shut down, but older 16-bit apps running in the Virtual DOS Machine often won't. When this occurs, the operating system prompts you with a dialog box asking if you want to kill the task, wait for the task to die on its own, or cancel the shutdown. You can automate this process by editing the registry, and force NT to kill all running processes on shutdown by adding a REG_SZ value named

HKEY_USER\

You can also add this value to HKEY_USERS\.\DEFAULT so that all new accounts will shut down the same way.

Running a Successful Group of Network Professionals (part 2)

By EdKrach, CNP

Meeting expenses

I've set up a relationship with a local Courtyard Marriott where we have a meeting room every month, complete with tables, chairs arranged in theater style, and projector screen. We get this room at no charge as long as the vendor host picks up the tab for finger food and soft drinks. I've sat down with the hotel's food and beverage person and worked out a menu that I fax to the vendor who is going to make the presentation. The form is very basic (one is attached to the end of this document) and it removes you from the loop of handling billing, requesting P.O., trying to get reimbursed, and waiting for a check.) The vendor makes a menu selection, completes the contact info, and the hotel contacts them to handle the billing. Vendors love this as it is so simple and requires no thought or effort on their part. It's a simple business expense for them. The vendor does not have to justify cutting a check to the group and the group does not have to worry about the vendor not paying the bill. Just fax the form and you're done. Not a single cent has passed through your group account. The Northern Utah chapter has done this for over two years. This means we were meeting, eating, and having a good time without spending a dime. We've experienced chapter growth without the use of any chapter funds.

Meeting objectives

You should have the following in mind when planning your group meetings.

1. Monthly Meetings with great technical presentations, food and above all, Fun!
2. Opportunities to network on a personal level to make strategic business contacts.

Recruiting new members is vital to the growth of your group. You have a real opportunity if you go out and visit education centers, colleges and large companies. I have a simple routine, which revolves around 4 questions.

1. Do you work with networks day in and day out?

2. Do you want to stay current with technology?
3. Do you enjoy "networking" on a personal level with your peers?
4. Do you want to be the best at what you do?

If a person answers YES to all of the above questions, then I invite them to come to one of our meetings and I tell them how great our GROUP is and about the things we do.

Remember, in their eyes, YOU are the association and so is your group, so sell them on the **benefits** of being part of your group.

- Tell them that they'll be educated in the latest technology by the industry's leading vendors while at the same time being able to mingle with people that have the same interests.
- They'll get answers to their toughest problems during the Open Technical Forum.
- They'll go home with some of the latest evaluation software in the industry (if they join).
- And they'll make some of the most important contacts in their career.

At this point, you've qualified the candidate, explained how great your group is and that he ought to be a member. Now it's time to hand them an application. While they're looking at it, tell them about some of the benefits that they'll receive in the mail like the technical resource CD and the NICs newsletter. In most cases, they'll be filling out the application by now, but at this moment, you need to set the level of expectation of the required meeting attendance. Explain to them that you would like them to join, but members are expected to attend every meeting. Ask them if they can make a commitment for one evening a month. If they say no, then take the application back because they won't help your group anyway. There's a chance they'll change their mind, but in any case, your meeting attendance levels will rise with this style of recruiting. It's worked for me in two countries. ✚



Building the Perfect Resume

by Deni Berger



With the market place rapidly changing, many of us are scrambling to find the perfect job. Some of us have jobs that are keepers while others search often for the perfect one. What is it that you need to get in the door of the perfect business? For starters, you need a resume. A resume is the single most important thing in getting you in the door. Depending on what point you are in your life will depend on what type of resume you will need. Here are a few tips for those of you who are just beginning and for those who are looking for your “perfect” job.

Getting Started

Before you get started you need to get your information organized. Know who your audience is and **pay attention to details**. Make sure you get contact names right and watch your spelling. Many programs have a spell checker but they do not always catch every misspelled word. Be aware of that or you may be sorry if you are not careful.

When you are finished getting all of the relevant information together, you need to decide what format you would like to use. There are many different types of resume formats as well as resume templates. It is not recommended that you use a template if you are going to be sending your resume to many companies. Templates tend to take the value away from your resume because they make the document look like it was thrown together in a few minutes. You need to remember that your resume will be the first step to getting your foot in the door. If you want that interview, spend time on your resume.

Before you begin

Before you begin your resume, be sure you can answer the following questions: What knowledge, skills, and abilities do you need to have

to fill the position? Which of your qualifications are relevant to the desired job? Have you tailored your resume to fit the companies' needs? Answering these questions will give you a good start.

Fresh out of College

It is very common for a person to write an objective at the beginning of his/her resume. However, if you choose to write an objective, you need to be careful in choosing your words. Objectives can be to your best interest and they can also limit your possibilities in getting the job you are looking for.

If you are just finishing college, the first thing that you should list on your resume is your education. Many companies scan the resumes that come in before they are actually looked at by human eyes. If your education is listed first, key words will automatically stick out.

Next, you need to list your relevant work experience. If you are trying to get a job in networking, it isn't a good idea to list that you worked as a pizza delivery person for your experience. It is good to know that you have held a job or two but when you're trying to get a job in the field, delivering pizza is not relevant work experience.

Finally, you need to list your extracurricular involvement. If you participated in the band, list that. If you participated in sports or clubs, list that information too. Recruiters like to see that you were involved in school. It is also good to list if you were in a leadership position; this shows that you are capable of being a team leader.

On the road again

Unfortunately for most of us, the perfect job has not landed in our lap, so we must continue to search. Second-time resumes are quite different than first-time resumes. If you plan to just simply update your first resume, don't be surprised if employers overlook you.

In the National Association of Colleges and Employers Magazine 42nd edition, a few pointers were listed for second-time resumes.

1. Rather than listing an objective for your first line, you need to **list a skill summary**. Employers would like to know what you have done. You might want to use a short paragraph or a bullet point format.



2. **Lead with experience, not education**. Right now your actual experience is more important than your education.

3. **Accomplishments, not just responsibilities**: Of course it is important to list that you had responsibilities in your previous job, but more important is that you list your accomplishments. Many employees have responsibilities that never get done.

4. **Include relevant activities, not hobbies**: Self-improvement activities are most relevant to your resume. Continued education would also be a plus on your resume.

5. **Your resume isn't limited to one page**: Finally, you can fit all that you want on your resume without limiting it to one page. Don't be too lengthy but put all relevant information to help you shine.

Name and Contact Information

SUMMARY	I am a certified network professional specializing in... My broad experience includes both Novell's NetWare and Microsoft NT, as well as, several versions of ...
Experience and Accomplishments	<p>As network administrator for ... I stabilized and upgraded their network, saving the company \$XXXXXX annually in consultant fees and XX hours each day in operational costs.</p> <p>Keep current in the industry with a minimum of 60 hours for each of the last 5 years, by attending technical training seminars, self-study and Computer Based Training. This is evidenced in my current certifications...</p> <p>Kept careful logs of all network analysis for ... Using this information, I was able to accurately advise management of needed upgrades. This resulted my high performance reviews and the company keeping current during critical production cycles.</p> <p><i>List between 5 to 7 good solid contributions you made for past employers or clients. What difference did you make for who and how much.</i></p>
Professional Affiliations	Active member of the City-wide Network Society Team leader for local Linux special interest group

Remember that your resume is the most critical document you need for that perfect job. Other things to remember for both types of resumes are to have enough white space. You don't want to have too much. A rule of thumb to remember, if the employer does not see that he is interested in you within the first few moments, you might as well forget it. Be sure to put the most pertinent information at the very beginning. This is your time to shine.

If you need more pointers, check out the web. There are many tutorials out there to help you. Happy writing. ✎

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