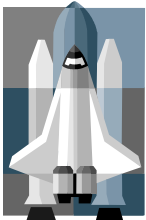


# F1 Solutions

## :::REM

Welcome to the launch of the first issue of F1 Solutions, the monthly technology newsletter of JDH Information Technology Solutions. Our goal is to provide useful and timely information about new technologies, products, resources, or just about anything else that will help you meet the daily challenges of running your network or your business.



We hope to provide brief reviews or overviews of new products. If there is a particular product you would like us to feature, just let us know. We also hope to highlight some web sites and online resources that you may not be familiar with. These online resources have to provide a unique service or content that is technically superior.

Another regular feature will be a brief technical tutorial. Our aim is to help you better understand the technology you may have to deal with on a daily basis.

Finally, we hope to end each newsletter with a short scripting solution, something pulled together to meet a need in less than 10 minutes. Scripting best practice would necessitate extensive comments and error handling. However, our goal in this section is to provide you a “quick and dirty” solution that you could use “as-is” or develop into a full features script. As with any scripting endeavor, it is imperative that you test the script thoroughly in a non-production environment.

We want this newsletter to be of real value to you, otherwise it is not worth doing so please don't hesitate to offer feedback, suggestions and requests. We are eager to hear from you at [newsletters@jdhitsolutions.com](mailto:newsletters@jdhitsolutions.com).

*Jeff*

## Product Feature – PEBuilder

If you're like most system administrators, you have a collection of DOS and Win9x-based boot disks. These disks are indispensable for everything from installing new desktops to recovering downed systems. Unfortunately, as operating systems have become more complex the boot floppy becomes a less effective tool. What is needed is a “boot cd” that can contain all of the tools and utilities you need, all in one place. Linux distributions are one possibility, but they introduce a new tool set which may be unfamiliar to Windows administrators. For system builders and those with the right Microsoft licensing agreement, there is WinPE. WinPE provides a pre-executable operating system on a bootable CD, complete with networking and support for 32 bit utilities and tools. Because of licensing restrictions, WinPE is not readily available to the general IT community. Fortunately, there is an alternative called PE Builder. It is free and provides a full 32-bit operating system.

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### Special points of interest:

- Product Feature
- Book Highlight—Inside Windows Server 2003
- WMIC Tutorial
- Get user's distinguished name in 10 Minute Scripts

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## Product Review cont'd.

PE Builder also allows for plug-ins, and many people have contributed pre-built “packages” for tools like Mozilla, VNC and ERD Commander. Now you can have a fully functional 32-bit OS and all the tools you need to build, image, troubleshoot or recover just about any system.

You can download the necessary files at <http://www.nu2.nu>. All you need is a licensed copy of XP Professional or Windows Server 2003 to build the cd. After you download the additional

plugins, some may require licensed versions of the application such as Ghost, you can run the program which will create an ISO image which you can then burn to CD.,

This is a terrific free tool with many possibilities and applications. As a bonus, check out the rest of the site for other offerings such as boot floppies and boot CDs.



“In a shift from previous years, the second-most expensive computer crime among survey respondents was denial of service, with a cost of \$65,643,300--up 250 percent from last year's losses of \$18,370,500. “

(Source: 2003 CSII/FBI Computer Crime and Security Survey)

## Web Crawling - Labmice.net

One of my favorite web sites, and one that I always recommend to students is **Labmice.net** (<http://www.labmice.net>). With all the great technical content available online, and especially at Microsoft, it is often difficult to find relevant material on current Microsoft technologies and trends. The folks at Labmice have done all the hard work for us. The site is organized by technology, such as Windows Server 2003 and then further categorized with links to external resources. Their goal is to provide access to material with no more than 3 clicks. Each of their over 16,000 links are hand picked and verified.

Even if I know the material I want is on the Microsoft site, I sometimes find it easier to search here and follow the link. I usually find other bits of information I didn't even know existed.

Finally, there is a Utility section that offers organized and categorized links to essential programs that have been personally tested and used.

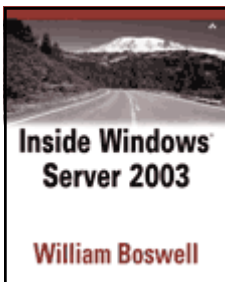
If you have not visited this site, I strongly recommend you make a brief visit. I'm confident you'll end up adding a new bookmark.

## The IT Bookshelf - Inside Windows Server 2003

As I work with clients and students on Windows Server 2003, I'm inevitably asked about reference material. Without hesitation I recommend Inside Windows Server 2003 by William Boswell (Addison-Wesley 2003). This book not only covers the fundamentals you would expect, but also delves into the nitty-gritty, and sometimes obscure, technical details of Windows Server 2003. With excellent illustrations, clear and concise writing, and a soups to nuts approach, this title is a must-have for any Windows administrator.

Online information for this title at Bookpool.com (my favorite place to buy books online) can be found at:

<http://www.bookpool.com/.x/rqcs3bho0n/sm/0735711585>



## Tech Tutor – WMIC

Windows Management Instrumentation (WMI) is an extremely powerful technology that provides tremendous detail on how a computer system is configured and operating. What makes WMI so attractive to Windows administrators is that you don't have to be a programmer to leverage it. WMI is available as a scripting option. There are many WMI VBScripts available online and as part of the Windows 2000/XP/2003 Resource Kits. With a little training and experience, you can develop your own WMI scripts. However all is not lost for those of you not inclined to learn the intricacies of developing a VBScript using WMI. XP includes a command line tool called WMIC which can execute WMI queries for you in a much simpler fashion. There is actually so much to explain about wmic that I can't possibly review it all. I'm only going to discuss enough information to get you started. I urge you to look at the information for wmic in Help & Support. WMI support is included in Windows 2000 and later systems by default.

To use the tool, open a command prompt and type WMIC. The first time you run the program it does a mini-install of sorts. From there after, you will be presented with a wmic prompt (wmi:root\cli>). This is the utility's interactive mode. To quit the program just type 'exit' (without the quotes). You can also execute a full query at the command line which I'll cover at the end. Entering '/' at the prompt will display help information. As you see, to get information, you just need to know an alias for the component you are interested in. Unlike scripting where you would need to know a specific class name, you can get by with a simple name. At the wmic prompt, type in 'cpu'. You will get a report of cpu properties that scrolls off the screen. Typing 'cpu list brief' will return a subset of information. But it is still hard to read. For a better report, type 'cpu list /format:tvlist'.

Other formatting options include CSV (/format:csv), raw XML (/format:rawxml), an HTML table (/format:htable) or an HTML page (/format:hform). If you want to save the output to a file, you can use the /Output switch. You can send output to the Windows clipboard (/Output:clipboard) or a file (/Output:osreport.csv). Be aware that you must put the output switch first in the command. For example, at the prompt type '/output:osreport.htm os list full /format:hform'. You can then open the file osreport.htm in any browser. If you specify a file name with spaces, you must enclose the name in quotes " ".

WMIC is nice but it's real power comes in managing remote systems. At the beginning of your command, simply use '/node:servername', like this: /node:FileSrv01 /output:c:\reports\filesrv01-cpu.htm cpu list /format:hform. If you want to query multiple remote systems, separate computer names with commas (/node:computer1,computer2,computer3). Depending on the query you might also need to pass alternate credentials. At the beginning of the command, use /User and /Password. You can't use different credentials for local systems. Here is a more complete interactive example: /user:mydomain\Admin09 /password:P@sswOrd /node:FileSrv01,FileSrv02 /output:c:\reports\filesrv01-cpu.htm cpu list /format:hform. I mentioned that you can also run commands directly from the command line. All you need to do is type wmic and then the wmic command you tested interactively: wmic /node:FileSrv01 /output:c:\reports\filesrv01-cpu.htm cpu list /format:hform. That's all there is to it.

As I mentioned, WMIC can be a very useful utility and there is much more to it than I can cover here. In the mean time, open up a command prompt and try this commands to see for yourself. Don't worry, no changes will be made to your system, just a report of some local resources and elements. Depending on your system, some commands will provide more values than others.

```
wmic cpu list /format:tvlist
wmic os list /format:tvlist
wmic /output:mypc.htm computersystem list /format:hform (open mypc.htm in browser)
wmic logicaldisk list brief /format:tvlist
wmic csproduct list /format:tvlist
```

Good Luck!



"This market will commoditize over the next two years, resulting in directory services being 'free' in most cases — installation and licensing will be minimal or non-existent.. Directories will be offered as part of framework solutions that include security and identity management applications. Users needing comprehensive services will find a rich selection of vendors in leader and challenger roles, differentiated primarily by scalability, integration, and vendor viability."

META Group  
(January 2004)

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Use at your own risk and test thoroughly in  
a non-production environment.

**Mission Statement**

*Our mission is to provide outstanding information technology consulting services and solutions to our clients utilizing a value-oriented approach. We recognize that most information technology projects are goal not hour driven. Our aim is to leverage technology to solve our clients' business challenges in the most cost-effective manner possible. We succeed when they succeed.*

**10 Minute Scripts**

This script will return a user object's LDAP distinguished name, given a user's downlevel account name, such as jhicks.

```
' NAME: QuickDN.vbs
' USAGE: cscript Quickdn.vbs samaccountname
' example: cscript quickdn.vbs jhicks
```

```
On Error Resume Next
Dim oUser,oArgs
Set oArgs=WScript.Arguments
strUser=oArgs(0)
UserDN=GetDN(strUser)
WScript.Echo UserDN
WScript.quit
```

```
Function GetDN(samAccount)
On Error Resume Next
GetDN=samAccount & " NotFound"
set RootDSE=GetObject("LDAP://RootDSE")
set myDomain=GetObject("LDAP://"&RootDSE.get("DefaultNamingContext"))
'the query should all be on one line
strQuery="Select sAMAccountname,cn,distinguishedname from ' & _
myDomain.ADSPath & "' Where objectcategory='person' AND ob-
jectclass='user' & " AND sAMAccountName=' & samAccount & '"
```

```
set cat=GetObject("GC:")
for each obj in cat
set GC=obj
next
AdsPath=GC.ADSPath
set conn=CreateObject("ADODB.Connection")
set cmd=CreateObject("ADODB.Command")
conn.Provider="ADSDSOObject"
conn.Open
set cmd.ActiveConnection=conn
set RS=conn.Execute(strQuery)
do while not RS.EOF
GetDN=rs.Fields("distinguishedname")
rs.movenext
Loop
rs.Close
conn.Close
```

```
set conn=Nothing
set cmd=Nothing
set RootDSE=Nothing
set cat=Nothing
set RS=nothing
End Function
'EOF
```