



F1 Solutions December 2005



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Hello All,

Here we are at the end of another year. I hope it was a profitable and healthy one. Newsletter subscriptions continue to grow and I welcome all my new readers.

I never know exactly how each issue is going to come together. This issue is almost all Exchange 2003. I offer you a sneak peak at the next version of the ExchangeMonPlus utility (<http://www.jdhitsolutions.com/exchangemonplus/index.htm>) and put out a call for beta testers.

This month's tutorial demonstrates how to query Active Directory for Exchange configuration information. Armed with this information we can get the file size of the actual .edb and .stm files. This tutorial expands into the 10 Minute Script section which hopefully will be back in January.

It's official. I will be presenting part of the scripting track at the Techmentor conference in Orlando in March 2006. This should be an exciting conference. I'll be running sessions on command line and Exchange scripting among others. Visit <http://www.techmentorevents.com> to learn more.

As we move into the new year, I'll repeat my request for feedback. What topics would you like to see covered in the newsletter? Any comments on the format and structure? Would you like to see online video demonstrations? Please direct your comments, suggestions and feedback at jhicks@jdhitsolutions.com.

Happy Holidays!

~Jeff

ExchangeMonPlus v2.0 - Beta Testers Needed

I've started working on the next version of the ExchangeMonPlus utility. It has become popular and I've gotten plenty of feedback about things that work and more importantly, things that don't. One of the new features will be a more selective pick list of Exchange servers. Some users have large Exchange infrastructures but they may only have administrative rights to a few servers. The next version will let you select Exchange servers based on selected administrative groups.

I also have learned about a problem with large public folder trees. Enumerating large public folders trees can take a long time and essentially hang the utility. I'll be working to improve performance and provide more feedback about what the tool is doing.

Here is a list of other features I'm hoping to implement (but not guaranteed):

- Export, email, and print options

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Special points of interest:

- ExchangeMonPlus v2.0 Beta
- Gigapixel
- Advanced VBScript for Windows Administrators
- Exchange MailStores

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Product - cont'd.

- Drill down option for more detail in some of the server utilization information such as reporting on individual mailbox utilization.
- Ability to specify alternate credentials.
- Links to Exchange related web sites.
- Links to starting other management tools like System Manager if installed locally.
- Store update interval in registry so that the next time you start the tool, it

uses the last update value set.

- Trending history (will require some sort of database support).
- Number and type of connections to server.
- Exchange server state information including cluster support.
- Exchange queue state information.

I'm looking for a group of users for a more extensive beta

testing process that will start next year. I'd like a variety of Exchange organizations in terms of size and complexity. The tool requires Exchange 2003 servers. If you are interested, please send me an email at jhicks@jdhitsolutions.com with a subject line of "Beta testing". Give me a brief run-down of your Exchange 2003 servers including the number of mailboxes and sizes of your mailbox and public folder stores. I'd especially like to have a tester with clustered Exchange servers.

"If Winter comes,
can Spring be far
behind? "

—Percy Bysshe
Shelley

Web Crawling—Gigapixel image

I found this site through the technology columnist in the local paper and thought it was pretty geeky and cool: <http://www.tawbaware.com/maxlyons/gigapixel.htm>.

The author is a digital photographer specializing in large scale and panoramic images. He has stitched together a 1 gigapixel image. The image is too large to download but you can view a scaled image on the site. At this resolution the detail you can get is incredible.

There's nothing here that will make your job easier, just some awesome technical details and a bit of a gee-wiz factor. As a bonus, some of his other work is equally nice to look at. After looking at the places he gets to photograph, I realize I may be in the wrong business!

IT Bookshelf—Advanced VBScript

Here is the pre-publication announcement about the new book from the Microsoft Press web site (<http://www.microsoft.com/MSPress/books/9085.asp>). The book should be out early next year.

"Get the in-depth scripting guidance you need to take your Windows scripting skills to the next level. Enterprise-level Windows administrators who have experience with Windows scripting will learn advanced VBScript techniques, including Active Directory® Service Interfaces (ADSI) and Windows Management Instrumentation (WMI) scripting, security scripting, building hypertext applications for script graphical interfaces, remote scripting, database scripting, and scripting for Group Policy. You will continue to build your scripting skills by creating scripts to work with Microsoft Exchange Server, Microsoft SQL Server™, Microsoft Operations Manager, and Microsoft Virtual Server. Coverage also includes the latest scripting updates for Windows XP and Windows Server™ 2003. Each chapter highlights powerful, ready-to-run, enterprise-level scripts, and the companion CD-ROM includes sample scripts and utilities to help you put your advanced scripting skills to work right away."



Tech Tutor — Exchange Mailstore Files

With the release of Exchange 2003 SP2 Microsoft upped the ante on the size of your information store from 16GB to 75GB. For many organizations this should be more than sufficient. However, it still would be prudent to keep an eye on file sizes to avoid any surprises. Comparing the file size to the total size of mailboxes can also indicate when an offline compaction will be worth the effort. I've seen this myself in my test network. I've created and populated hundreds of test mailboxes. After moving or deleting them I can see that the file size is 500MB, yet there is only 100MB of actual mailbox utilization.

Now, if you only have a single Exchange server and accepted the installation defaults, the .edb file will be at C:\Program Files\Exchsrvr\MDBDATA\priv1.edb and the .stm file will be C:\Program Files\Exchsrvr\MDBDATA\priv1.stm. But what if you're not sure or have multiple storage groups and information stores? Sure you could find the information and hard code it into a script. But what happens when you need to move the information store? Now you have to remember to revise the script. Fortunately this information is stored in Active Directory.

You'll recall that Exchange configuration information is now stored in Active Directory within the configuration namespace. The distinguished name to the container with the information is rather long but that isn't a problem. All we need to do is query for the information we want. The first thing we need is the distinguished name of each mail store in a given administrative group. By searching the configuration namespace, we can quickly get that information with an ADO query like this "Select distinguishedname,name from '" & strPath & "' WHERE objectclass = 'msExchPrivateMDB' ". *strPath* is the distinguished name of the configuration database. Because this query will bring back ALL mailbox stores, we need some additional logic to make sure we only return mailbox stores on a specified server (*strSrv*) and storage group (*strSG*)

```
If InStr(rs.Fields("distinguishedname"),strSG) And _
InStr(rs.Fields("distinguishedname"),strSrv) Then
    strResults=strResults & rs.Fields("name") & "|" & _
    rs.Fields("distinguishedname") & ";"
End If
```

The code fragments I'm showing here are part of a complete script that was too long to include here. You can download it at <http://www.jdhitsolutions.com/scripts.htm>. Look for a link titled Exchange Mailstore File Size.

Once we have the distinguished name of the mailstore, we can query Active Directory again with ADO and get the filepaths for the edb and stm file. These attributes are msExchEDBFile and msExchSLVFile, respectively.

```
strQuery="Select distinguishedName,msExchEDBfile,msExchSLVFile,name FROM '" & _
strConfigPath & "' WHERE objectclass='msExchPrivateMDB' AND distinguishedname='" & _
strDN & "'"
```

```
Do While Not RS.EOF
    strResults=RS.fields("msExchEDBfile") & ";" & RS.fields("msExchSLVFile")
    rs.movenext
Loop
```

At this point we should have the full paths to the .edb and .stm files relative to the Exchange server. Getting the file size should be trivial using WMI. (You could use the Scripting.FileSystemObject to remotely connect to the server and get the file size, but that would require converting the path to the administrative share C\$ which might have been disabled.) Remember, we're running this script from the comfort of our warm desk on our Windows 2000/XP desktop. Using WMI is the best way, for one thing, we can use alternate credentials. We couldn't do that if using the FileSystemObject.

```
Set SWbemlocator = CreateObject("WbemScripting.SWbemLocator")
Set objWMIService = SWbemlocator.ConnectServer(strSrv,"root\cimv2",_
UserName,Password)
```



“Life is a fatal adventure. It can only have one end. So why not make it as far-ranging and free as possible?”

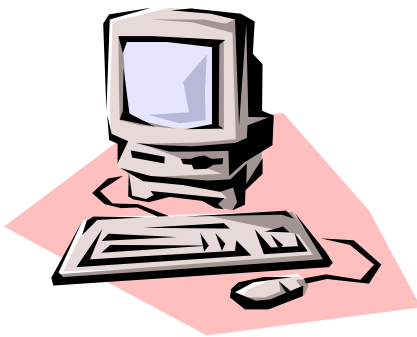
— Alexander Eliot

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Tech Tutor—cont'd

We can query for a file by using the CIM_DATAFILE class, provided we make one minor change. Our ADO query returned the file path like C:\Program Files\Exchsrvr\MDBDATA\priv1.edb. However, WMI will treat the \ character as a separator unless we "escape" it. In the function that returns the file size, we simply need to replace \ with \\.

```
strFile=Replace(strFile,"\\","\\")
```

With this updated string we can query for the file and return the file size, which will be in bytes.

```
strQuery="Select name,filesize from CIM_DATAFILE where name='" &_
strFile & "'"
Set colItems = objWMIService.ExecQuery(strQuery,,48)
For Each file In colItems
strResults=file.filesize
Next
```

All that's left at this point is to format the file size and display the results.

```
'replace \\ back with \ in filepaths
strEDBPath=Replace(strEDBPath,"\\","")
strSTMPath=Replace(strSTMPath,"\\","")

'display file results
wscript.Echo " " & strEDBPath & " = " &_
FormatNumber((iEDBSize/1048756),2) & " MB"
wscript.Echo " " & strSTMPath & " = " &_
FormatNumber((iSTMSize/1048756),2) & " MB"
```

The complete script has been tested with Exchange 2003 but there's no reason to think it wouldn't work with Exchange 2000 since that information is also stored in Active Directory. The script prompts you to enter an Exchange server name and storage group, but you could easily query Active Directory information for that information as well. You will need access to a global catalog server and of course will need WMI connectivity and administrative credentials to the Exchange server. Most of the script is querying Active Directory for information. We only need to make an actual connection to the Exchange server to get the file size.

If you don't get the results you intend, get the file paths and use WBEMTEST to connect to root\CIMv2 on the Exchange server and execute the CIM_DATAFILE query. Don't forget to replace \ with \\ in the filename.

Hopefully you've learned how to query Active Directory to learn information about your Exchange organization. Fire up ADSIEdit and poke around for yourself. I hope to bring more Exchange 2003 scripting samples next year. If there's something specific you'd like to see, please let me know. I'd also like to get some feedback on this tutorial.

Until next year.