

Re: Exchange 2003 Private Store Corruption

Source:

<http://www.tech-archive.net/Archive/Exchange/microsoft.public.exchange.admin/2006-07/msg01394.html>

- *From:* "Ben Winzenz [Exchange MVP]" <ben_winzenz@nospamdotmessageonedotcom>
 - *Date:* Wed, 12 Jul 2006 15:47:15 -0500
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Yeah – look at the articles I posted in my last reply. –1018's are never fun. I think you're on the right track with creating a new mailbox store.

Once you've pulled the faulty RAM, create the new mailbox store and move everyone that you can to that new store. I'd recommend that on the first pass, leave the defaults – this will make it so that only the users with problems will end up being skipped. Once you've moved everyone else, then you can start working on the problem mailboxes.

Once you have everyone else moved, dismount the problem mailbox store, and create a copy of it. Then, remount it, and do the move mailbox again, this time telling it to skip corrupt items. You may have to try the move a few times, bumping up the amount of corrupt items it can encounter.

Depending on how much data is lost, you can try to either restore from backup to the Recovery Storage Group, and recover lost mail that way, or you can use something like Quest's Recovery manager to do the same thing.

You could also at that point look at using eseutil against the copy to try and fix it, then mount it to the Recovery Storage Group.

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Read my blog!
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"Corbin O'Reilly" <corbinoreilly@xxxxxxxxxxxxxx> wrote in message [news:F2dtg.8317\\$IF2.1593@xxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:F2dtg.8317$IF2.1593@xxxxxxxxxxxxxxxxxxxxxxxxxxxx)

Hi Ben. Here is the error I am getting. Please advise. Thanks.
Information Store (2856) First Storage Group: The database page read from the file "E:\NewMailboxStore\NewMailbox Store (GTMAIL).edb" at offset

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5251796992 (0x0000000139081000) (database page 1282176 (0x139080)) for 4096 (0x00001000) bytes failed verification due to a page checksum mismatch. The expected checksum was 1873244556488189379 (0x19ff19ffcee9a5c3) and the actual checksum was 5178919806808169513 (0x47df38200d091c29). The read operation will fail with error -1018 (0xffffc06). If this condition persists then please restore the database from a previous backup. This problem is likely due to faulty hardware. Please contact your hardware vendor for further assistance diagnosing the problem.

For more information, click <http://www.microsoft.com/contentredirect.asp>.

For more information, see Help and Support Center at

"Ben Winzenz [Exchange MVP]" <ben_winzenz@nospamdotmessageonedotcom> wrote in message [news:u\\$BCCMdpGHA.524@xxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:u$BCCMdpGHA.524@xxxxxxxxxxxxxxxxxxxxxxxxxxxx)

It could be that it is just DIMM 4 that is the problem. Do you have to have DIMM's installed in pairs in this server? If not, I'd just pull out DIMM 4.

Also, can you post the entire contents of the error event? Does it mention something to the effect of

Information Store (<PID>) The database page read from the file "<path to edb file>" at offset <offset> for <value> bytes failed verification due to a page checksum mismatch. The expected checksum was <checksum> and the actual checksum was <checksum>. The read operation will fail with error <error code> (<error code>). If this condition persists then please restore the database from a previous backup.

and is the error code referenced a -1018 error? If so, then that *is* a database corruption issue, not just a corrupt mailbox. Even if that is the case, I still wouldn't recommend using eseutil or isinteg - those are really last resort utilities. Moving mailboxes is one option. Restoring from backup should be another option you should look at, or restoring from backup to the Recovery Storage Group.

You might also look at the storage group properties and see if you have the option "Zero out deleted database pages" option checked, and if so, you might consider unchecking it.

Also, do you have any Exchange 2003 SP's installed? If not, once you get this fixed, you should really make sure you are up to date. SP1 includes an additional error correcting code that is designed to fix many of the -1018 errors that are as a result of a flipped bit.

Here are some KB articles that talk about 474 errors and -1018 errors. <http://support.microsoft.com/default.aspx?scid=kb:en-us:810411>

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<http://support.microsoft.com/kb/327334/>
<http://support.microsoft.com/default.aspx?scid=kb:en-us:867626>
<http://support.microsoft.com/default.aspx?scid=kb:en-us:314917>
<http://support.microsoft.com/default.aspx?scid=kb:en-us:812531> – webcast on understanding and resolving –1018 errors.

In your case, it really would appear that faulty memory is the underlying cause.

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"Corbin O'Reilly" <corbinoreilly@xxxxxxxxxxxxxx> wrote in message [news:uj9tg.89246\\$qd2.10626@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx](news:uj9tg.89246$qd2.10626@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx)

Thanks for the info Ben. Yes they are mounted now so hopefully you are right and they will mount properly after the reboot. The HP Insight Online Diagnostic Utility says "Correctable Memory Threshold Exceeded" for DIMM 4 so it does look like the memory is faulty. Have you seen 474 errors before? In your experience what leads to a 474 error? The description points to hardware. I am exporting mailboxes to PST files right now. Did you see Mitch's previous response. I am just trying to get the server back up and running without the faulty memory installed. My plan is to create a new store, move as many uncorrupted mailboxes as I can to it, and then try to repair the old stores.

"Ben Winzenz [Exchange MVP]"
<ben_winzenz@nospamdotmessageonedotcom>
wrote in message
<news:%23iUwcpGHA.3600@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>

Inline.

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[news:OX7tg.8250\\$IF2.4659@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx](news:OX7tg.8250$IF2.4659@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx)

Hello everyone. I need some help. We have an Exchange 2003 Enterprise Edition Server running Windows 2003 Enterprise Edition R2 server. The machine is a HP DL380 G4 server with 2 GB of memory and has been online for about two months. The only thing running on this server is Exchange 2003 and Trend-Micro AntiVirus for Exchange. The server came standard with 2 – 512 MB HP-brand DIMMs. We purchased additional memory from CDW. They are 2 –512 MB EDGE-brand DIMMs and are supposed to be compatible. On the first day that we powered up the server the server said there was an issue with DIMM 4, the EDGE-brand chip. After a reboot the error went away. About three weeks ago I noticed that the server had not completed its online backup properly and two of our employees were having Calendar issues. I checked the Event Viewer and it had tons of 474 errors which says that there is

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probably a hardware problem. I created a new store on the server and moved all mailboxes to the new store. The two mailboxes with the corrupted Calendars would not move so I left them in the corrupted store until I got back from vacation. While on vacation for two weeks I checked the NTBACKUP logs daily and the online backups were completing properly. Everything was fine for almost the entire time I was gone. The day before I got back from vacation I got calls from 5 employees saying they were having strange Exchange problems. Some were not getting new e-mails (we use cached mode), others had Inboxes that were empty, etc. I checked the NTBACKUP log and sure enough the new store I created is now corrupted too with a 474 error. My theory is that the EDGE-brand memory chip is acting up and corrupting the store. What I would like to do is shutdown the server and remove the 2 – 512 MB EDGE-brand memory DIMMs from server, and boot it back up. I have a couple of questions:

1. The server is partitioned into a RAID 1 OS C-Drive and a RAID 6 Exchange Data E-Drive. The server currently has 2

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GB of memory and the page file is located on the C-Drive and is set to Initial : 3072 and Maximum: 6144. Since I will be removing the 2 – 512 MB EDGE-brand DIMMs the new total memory size will be 1024 MB (1GB). Should I adjust the page file to Initial: 1536 and Maximum 3072 in Windows 2003 BEFORE or AFTER I remove the memory?

I don't think it much matters whether you do it before or after, though, except that if you do it afterwards, you will have to reboot a second time.

2. Will the server perform OK with 1 GB of memory for a while? We have about 75 mailboxes and a few public folders.

More than likely, it will be just fine. It doesn't sound like your server is heavily loaded

3. Since both Private Info stores are corrupted will they mount properly when the server is rebooted?

Are they mounted right now? If so, then once you reboot, they should be able to mount. Dealing with corrupt mailboxes is somewhat different than dealing with an actual corrupt database. Corrupt databases are

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not mountable. Databases with corrupt mailboxes usually are mountable, but the mailbox itself may or not be able to be fixed. I'd consider using Exmerge to export whatever you can from the corrupt mailboxes. If they can be moved, great. If not, then the mailboxes should be deleted and re-create on the new store.

I am trying desperately to avoid being dead in the water tonight. My concern is that the stores will not come up and we will be totally down. I am getting more complaints from different employees so the problem seems to be spreading and getting worse. I would appreciate your expertise on this problem. Thanks.

As an additional note, have you run any server diagnostics to test the new memory? What is your plan if removing the memory doesn't curtail the problem? It's really better to have a true diagnosis that the memory is faulty before you pull it out. HP should have some diagnostics that you can run to test the memory. I'd do that first before you pull it out.

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