EMS, 7/7, 7/8 고스콥 - 전자인증.

23. 24. 28 53

<간헐적 Status 24 발생>

1. Client Agent Daemon Down -> anti virus 가 Down 시킬 수 있음.

2. 백업 시 Network Load 가 높은 경우 -> 특정 S/W 가 패킷을 전송하는 Port 를 강제로 차단 시키는지 여부 확인 -> /var/log/message 도 확인

3. Client Agent Time Out -> 백업이 Begin Writing 시작 후 파일 리드 시간이 300 초 혹은 3600 초가 넘을 경우, 14400 초(4 시간) 정도 까지 늘려 볼 것

4. Log -> Verbosd Level 5 -> vnetd / bpcd / bpbkar / bpbrm Log 수집 후 분석

<Collecting Issues>

1. How many clients have this error 1
2. Did this client previously work Y
3. What was changed X
4. Does it write some data then fail X
5. Does it fail at the very beginning of the job X 간헐적 발생.
6. Does it always fail at the same point X
7. Operating system of client Unix
8. Operating system of media server Unix Solaris 10.5 sparc
9. NetBackup version NBU 7.7.3
10. Logs from media server - bptm and bpbrm, from client bpbkar, bpcd
    X X

출처: <https://vox.veritas.com/t5/NetBackup/Netbackup-failure-with-code-24/td-p/576636>

<예상가능한 외부 문제점>

A high network load.
Intermittent connectivity.
Packet reordering.
Duplex Mismatch between client and master server NICs.
Small network buffer size

출처: <https://vox.veritas.com/t5/NetBackup/Netbackup-failure-with-code-24/td-p/576636>

Master Server Net_Buffer_SZ
262144

EMS 1 NET_BUFFER_SZ
262144

Solution

A modern, well configured, operating system with properly written TCP drivers is unlikely to need TCP memory tuning by NetBackup. Accordingly the best NetBackup configuration is to disable tuning by placing a zero (0) into the NET_BUFFER_SZ file on media servers and UNIX/Linux clients. Simply deleting the file is not equivalent because some NetBackup process have default setsockopt API calls configured to overcome past external problems with various platforms and drivers.

```
$ echo '0' > /usr/openv/netbackup/NET_BUFFER_SZ
```

On Windows clients, the same effect can sometimes be obtained by placing a 0 into this registry key . But in some cases, explicit values may yield better performance.

HKEY_LOCAL_MACHINE₩SOFTWARE₩VERITAS₩NetBackup₩CurrentVersion₩Config₩Buffer_Size

Note: The registry change may be lost or reverted if other Client Settings are later changed via the Client Host Properties GUI. See the related articles.

To determine if manual tuning can provide better performance than auto-tuning; record the current O/S settings, then temporarily adjust the TCP memory allocations upwards in increments of 65536 or 131072 bytes and observe if the changes are beneficial. Also ensure that TCP window scaling is enabled.

For AIX:

```
$ no -o sb_max[=<newGlobalMax>]
$ no -o tcp_sendspace[=<newValue>]
$ no -o tcp_recvspace[=<newValue>]
$ no -o rfc1323[=1]
```

For HP-UX: (window scaling will occur if > 64 KB)

```
$ ndd -get /dev/tcp tcp_xmit_hiwater_max (global max)
$ ndd -get /dev/tcp tcp_recv_hiwater_max (global max)
$ ndd -get /dev/tcp tcp_xmit_hiwater_def
```

$ ndd -get /dev/tcp tcp_recv_hiwater_def
$ ndd -set /dev/tcp <keyword> <newValue>

For Linux:

$ sysctl net.core.wmem_max (global max)
$ sysctl net.core.rmem_max (global max)
$ sysctl net.ipv4.tcp_wmem
$ sysctl net.ipv4.tcp_rmem
$ sysctl net.ipv4.tcp_window_scaling (1 = on)
$ sysctl net.ipv4.tcp_adv_win_scale (2 = on)
$ sysctl net.ipv4.tcp_moderate_rcvbuf (1 = on)
$ sysctl -w <keyword>=<newValue>

For Solaris:

$ ndd -get /dev/tcp tcp_max_buf (global max) 1048576
$ ndd -get /dev/tcp tcp_xmit_hiwat 49152
$ ndd -get /dev/tcp tcp_recv_hiwat 49152
$ ndd -get /dev/tcp tcp_wscale_always (1 = on) 1
$ ndd -set /dev/tcp <keyword> <newValue>

If the manual tuning provides an increase in performance, the new settings can typically be left in place on standalone media servers because typically only a few hundred connections exist at any given point in time. However, master servers, SAN media servers, and application client hosts may find this tuning non-optimal if there are many hundreds of concurrent connections that do not need high bandwidth [and thus the additional memory]. If so, change the O/S settings back to the original values and then set the NET_BUFFER_SZ contents (in bytes) or the Communication Buffer Size (in KB) to an equivalent value. If performance degrades or connections begin to drop then there is a problem with one of the TCP stacks and the appropriate vendor(s) should be engaged for resolution if the manual O/S tuning cannot be put back in place.

If retaining the new O/S settings, be sure to make them persist across reboots. See the O/S vendor documentation for guidance.

Note 1: In rare situations

It can sometimes be beneficial to adjust NET_BUFFER_SZ or Buffer_size to work around problems with the TCP stack. TCP drivers are complex and occasionally having NetBackup call setsockopt changes their behavior from less desirable to more desirable, however this is unpredictable.

Note 2: NetBackup for Windows Java GUI resetting Buffer_size
Older versions of the NetBackup Java Administration Console on Windows do not recognize 0 as a valid value for Buffer_size. If changes are made to values on the same Host Properties screen, saving those changes will inadvertently change 0 to the prior default value for that version of NetBackup. This is corrected in NetBackup versions 7.6.0.3 and 7.6.1.

Note 3: For clients running NetBackup 7.7.2 - 8.0 (8.1 on Windows)
An Emergency Engineering Binary (EEB) is needed to enable the desired behavior discussed above. In the absence of the EEB, manual tuning of NET_BUFFER_SZ or Buffer_size may be necessary. Please contact NetBackup Technical Services and reference E-Track 3914429 (for UNIX restores) or E-Track 3925723 (for Windows backups and/or restores).

출처: <https://www.veritas.com/support/en_US/article.100016112>

잘되는 서버와 안되는 서버결과값을 비교

1. **/usr/sbin/ndd -get /dev/tcp tcp_keepalive_interval** 7200000 **< - 결과값 확인**
2. `ndd -get /dev/tcptcp_ip_abort_interval` 300000
3. `ndd -get /dev/tcp tcp_rexmit_interval_initial` 1000
4. `ndd -get /dev/tcp tcp_rexmit_interval_max` 60000

ifconfig -a 로 확인.

bp.conf 에서

REQUIRED_INTERFACE = [호스트 이름] 추가.

bpbrm. ERR: Cannot write to STDOUT Errno=32
파이프 끊김

bpbkar status 24: socket write failed.

bptm. System call failed. – peer로 연결 재설정 (at../child.c,1278)

EMS1_Syslog 장애 발생 에러와 EMS 1 장애로 실패 이력 있음.

9/28.

<에러 발생>

7月 8. 9. 10. 16. 17. 24. 23. 28.

8月 4.

[Master Server] NIC 1개. cas1과 통신 장애.

Drive & Robot 1개. 이상 없음.

Media frozen 된 것 없음.

bp.conf 의 REQUIRED_INTERFACE = netbak.

[EMS1] NIC 에러 개 수개?

REQUIRED_INTERFACE 설정 없음.

↳ 192.168.105.81 ems1 설정.