

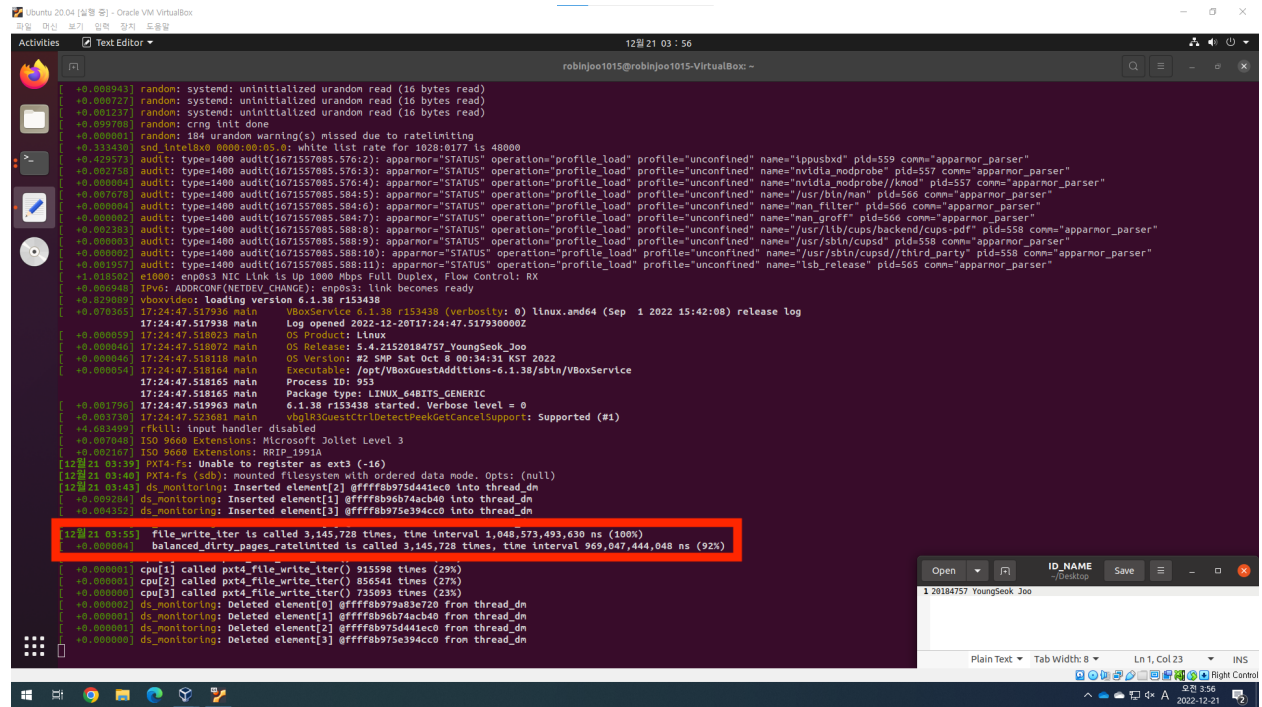


Linux System and its Applications: Assignment-10

(2022-2)

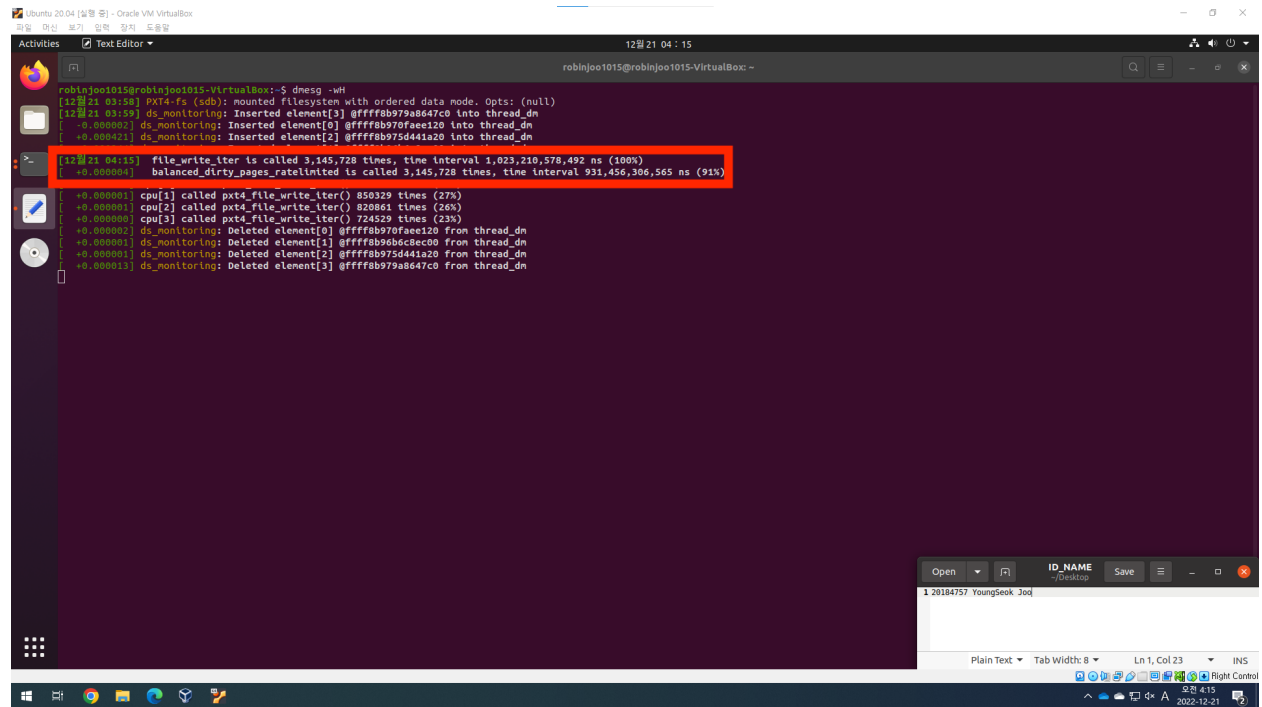
Course / Class:	Linux System and its Applications Class 02
Professor:	Yongseok Son
Submission Date:	2022. 12. 21
Student ID:	20184757
Name:	주영석

1. vm.dirty_ratio = 20 (default)



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+0.000943] random: systemd: uninitialized urandom read (16 bytes read)
+0.000727] random: systemd: uninitialized urandom read (16 bytes read)
+0.001237] random: systemd: uninitialized urandom read (16 bytes read)
+0.009700] random: crng init done
+0.000002] random: 184 urandom warning(s) missed due to ratelimiting
+0.333430] snd_intel8x0 0000:00:05:0: white list rate for 1028:0177 is 48000
+0.429573] audit: type=1400 audit(1671557885.576:22): apparmor="STATUS" operation="profile_load" profile="unconfined" name="lppusbxd" pid=559 comm="apparmor_parser"
+0.000750] audit: type=1400 audit(1671557885.576:33): apparmor="STATUS" operation="profile_load" profile="unconfined" name="nvidia_modprobe" pid=557 comm="apparmor_parser"
+0.000004] audit: type=1400 audit(1671557885.576:4): apparmor="STATUS" operation="profile_load" profile="unconfined" name="nvidia_modprobe/kinod" pid=557 comm="apparmor_parser"
+0.000004] audit: type=1400 audit(1671557885.584:5): apparmor="STATUS" operation="profile_load" profile="unconfined" name="/usr/bin/nan" pid=566 comm="apparmor_parser"
+0.000768] audit: type=1400 audit(1671557885.584:6): apparmor="STATUS" operation="profile_load" profile="unconfined" name="nan_filter" pid=566 comm="apparmor_parser"
+0.000004] audit: type=1400 audit(1671557885.584:7): apparmor="STATUS" operation="profile_load" profile="unconfined" name="nan_groff" pid=566 comm="apparmor_parser"
+0.000381] audit: type=1400 audit(1671557885.588:8): apparmor="STATUS" operation="profile_load" profile="unconfined" name="/usr/lib/cups/backend/cups-pdf" pid=558 comm="apparmor_parser"
+0.000003] audit: type=1400 audit(1671557885.588:9): apparmor="STATUS" operation="profile_load" profile="unconfined" name="/usr/sbin/cupsd" pid=558 comm="apparmor_parser"
+0.000002] audit: type=1400 audit(1671557885.588:10): apparmor="STATUS" operation="profile_load" profile="unconfined" name="/usr/sbin/cupsd/third_party" pid=558 comm="apparmor_parser"
+0.001577] audit: type=1400 audit(1671557885.588:11): apparmor="STATUS" operation="profile_load" profile="unconfined" name="/usr/sbin/cupsd/third_party" pid=558 comm="apparmor_parser"
+0.010592] e1000: emps83 NIC Link is Up 1000 Mbps Full Duplex, Flow Control: RX
+0.000948] IPv6: ADDRCONF(NETDEV_CHANGE): emps83: link becomes ready
+0.020009] VBoxVidExt: Loading version 6.1.38 r153438
+0.070369] 17:24:47.517936 main VBoxService 6.1.38 r153438 (verbosity: 0) linux.amd64 (Sep 1 2022 15:42:08) release log
[17:24:47.517936 main Log opened 2022-12-20T17:24:47.517930000Z
[17:24:47.518023 main OS Product: Linux
[17:24:47.518072 main OS Release: 5.4.21520184757_YoungSeok_Joo
[17:24:47.518110 main OS Version: #2 SMP Sat Oct 8 00:34:31 KST 2022
[17:24:47.518164 main Executable: /opt/VBoxGuestAdditions-6.1.38/sbin/VBoxService
[17:24:47.518165 main Process ID: 953
[17:24:47.518165 main Package type: LINUX_64BITS_GENERIC
[17:24:47.519963 main 6.1.38 r153438 started. Verbose level = 0
[17:24:47.523681 main vbglR3GuestCtrlDetectPeekGetCancelSupport: Supported (#1)
[+0.003499] rfxkill: input handler disabled
[+0.007048] ISO 9660 Extensions: Microsoft Joliet Level 3
[+0.001107] ISO 9660 Extensions: RRIP-1991A
[12월 21 03:39] PXT4-fs: Unable to register as ext3 (-16)
[12월 21 03:40] PXT4-fs (sdb): mounted filesystem with ordered data mode. Opts: (null)
[12월 21 03:43] ds_monitoring: Inserted element[2] @ffff8b975d441a20 into thread_dn
[+0.009284] ds_monitoring: Inserted element[1] @ffff8b96b74acbd0 into thread_dn
[+0.004352] ds_monitoring: Inserted element[3] @ffff8b975e394cc0 into thread_dn
[12월 21 03:55] file_write_iter is called 3,145,728 times, time interval 1,048,573,493,630 ns (100%)
+0.000004] balanced_dirty_pages_ratelimited is called 3,145,728 times, time interval 969,047,444,048 ns (92%)
+0.000001] cpu[1] called pxt4_file_write_iter() 915598 times (29%)
+0.000001] cpu[2] called pxt4_file_write_iter() 856541 times (27%)
+0.000001] cpu[3] called pxt4_file_write_iter() 735093 times (23%)
+0.000002] ds_monitoring: Deleted element[0] @ffff8b979a83e720 from thread_dn
+0.000001] ds_monitoring: Deleted element[1] @ffff8b96b74acbd0 from thread_dn
+0.000001] ds_monitoring: Deleted element[2] @ffff8b975d441a20 from thread_dn
+0.000001] ds_monitoring: Deleted element[3] @ffff8b975e394cc0 from thread_dn
```

2. vm.dirty_ratio = 40



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robinjoo1015@robinjoo1015-VirtualBox: ~$ dmesg -wH
[12월 21 03:50] PXT4-fs (sdb): mounted filesystem with ordered data mode. Opts: (null)
[12월 21 03:59] ds_monitoring: Inserted element[3] @ffff8b979a8647c0 into thread_dn
[+0.000002] ds_monitoring: Inserted element[0] @ffff8b970faee120 into thread_dn
[+0.004412] ds_monitoring: Inserted element[2] @ffff8b975d441a20 into thread_dn
[12월 21 04:15] file_write_iter is called 3,145,728 times, time interval 1,023,210,578,492 ns (100%)
+0.000004] balanced_dirty_pages_ratelimited is called 3,145,728 times, time interval 931,456,306,565 ns (91%)
+0.000001] cpu[1] called pxt4_file_write_iter() 850329 times (27%)
+0.000001] cpu[2] called pxt4_file_write_iter() 820861 times (26%)
+0.000001] cpu[3] called pxt4_file_write_iter() 724529 times (23%)
+0.000002] ds_monitoring: Deleted element[0] @ffff8b970faee120 from thread_dn
+0.000001] ds_monitoring: Deleted element[1] @ffff8b96b68ec00 from thread_dn
+0.000001] ds_monitoring: Deleted element[2] @ffff8b975d441a20 from thread_dn
+0.000013] ds_monitoring: Deleted element[3] @ffff8b979a8647c0 from thread_dn
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3. vm.dirty_ratio = 100

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robinjoo1015@robinjoo1015-VirtualBox: ~$ dmesg -wt
[12월 21 04:31] PXT4-fs: Unable to register as ext3 (-16)
+7.579965] PXT4-fs (sdb): mounted filesystem with ordered data mode. Opts: (null)
+12.749495] ds_monitoring: Inserted element[0] @ffff8b970faee240 into thread_dn
+8.000038] ds_monitoring: Inserted element[2] @ffff8b975d441a60 into thread_dn
+0.000412] ds_monitoring: Inserted element[1] @ffff8b979a83e3c0 into thread_dn
[12월 21 05:21] file_write_iter is called 3,145,728 times, time interval 933,861,511,318 ns (100%)
+0.000000 balanced_dirty_pages_ratelimited is called 3,145,728 times, time interval 856,626,450,438 ns (91%)
+0.000001] cpu[1] called pxt4_file_write_iter() 905768 times (28%)
+0.000000] cpu[2] called pxt4_file_write_iter() 802210 times (25%)
+0.000001] cpu[3] called pxt4_file_write_iter() 624368 times (19%)
+0.000003] ds_monitoring: Deleted element[0] @ffff8b970faee240 from thread_dn
+0.000000] ds_monitoring: Deleted element[1] @ffff8b979a83e3c0 from thread_dn
+0.000001] ds_monitoring: Deleted element[2] @ffff8b975d441a60 from thread_dn
+0.000001] ds_monitoring: Deleted element[3] @ffff8b9710ae5180 from thread_dn
```