
Subject: Hyper-V + Ubuntu + Firebird
Posted by [sg729](#) on Tue, 29 Apr 2025 11:00:20 GMT
[View Forum Message](#) <> [Reply to Message](#)

Ubuntu Server 24.04.2 LTS
LI-V3.0.12.33787 Firebird 3.0 SuperServer

50-60.

Limit	Soft Limit	Hard Limit
Units		
Max open files	524288	524288
files		

262144

firebird.log -

kernel.log -

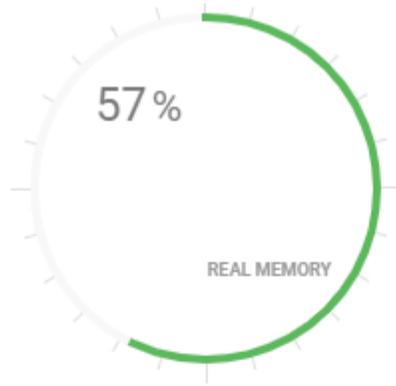
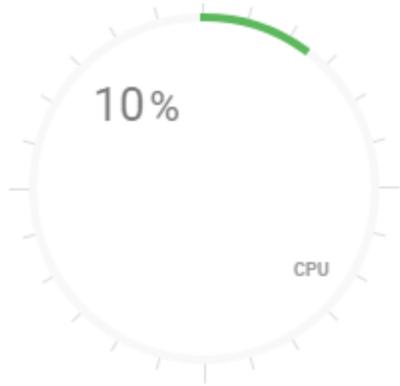
2025-04-29T07:44:56.093002+03:00 ubtest kernel: workqueue: ata_sff_pio_task hogged CPU for >10000us 32 times, consider switching to WQ_UNBOUND

syslog -

<https://tokmakov.msk.ru/blog/item/743>)

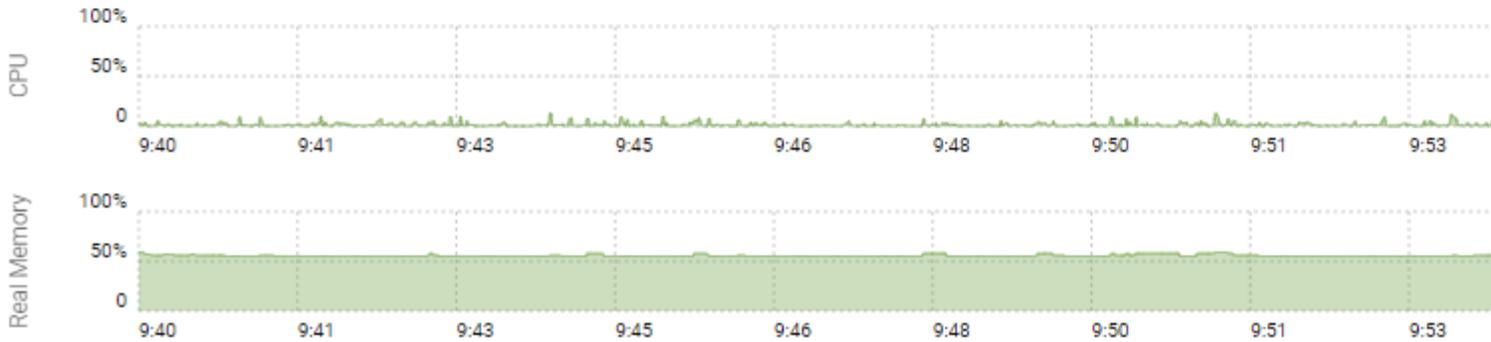
File Attachments

1) [2025-04-29_10-00-16.png](#), downloaded 2022 times



System hostname	ubtest (127.0.1.1)	Operating system	Ubuntu Linux
Webmin version	2.303	Authentic theme version	23.03
Time on system	вторник, 29 апреля 2025 г., 10:00	Kernel and CPU	Linux 6.8.0-5
Processor information	Intel(R) Xeon(R) Silver 4110 CPU @ 2.10GHz, 8 cores	System uptime	12 hours, 46
Running processes	209	CPU load averages	0.16 (1 min)
Real memory	4.36 GiB used / 2.98 GiB cached / 7.73 GiB total	Virtual memory	85.35 MiB us
Local disk space	90.55 GiB used / 401.33 GiB free / 491.88 GiB total	Package updates	1 package

▼ Stats History



2) [2025-04-29_10-00-28.png](#), downloaded 2020 times

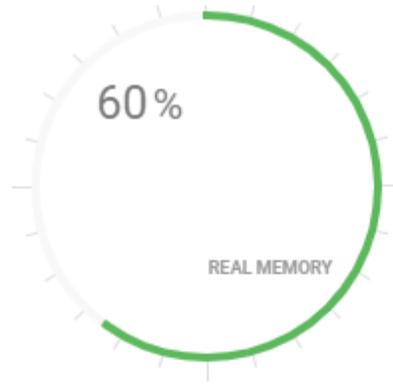
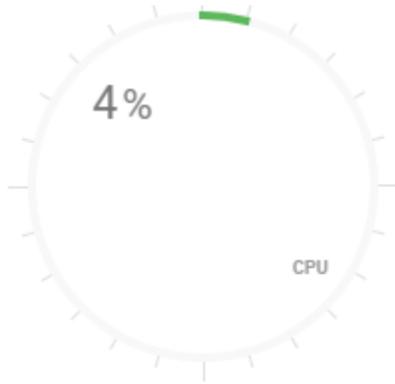
```

0[          0.0%]  4[|||]          2.0%]
1[|||||||]      19.0%]  5[||]          1.3%]
2[|]           1.3%]  6[|]           0.0%]
3[          0.0%]  7[|]           0.6%]
Mem[|||||||||] 4.26G/7.73G] Tasks: 42, 66 thr, 167 kthr; 1 running
Swp[||]        53.4M/4.00G] Load average: 0.20 0.20 0.18
                                Uptime: 12:48:33

```

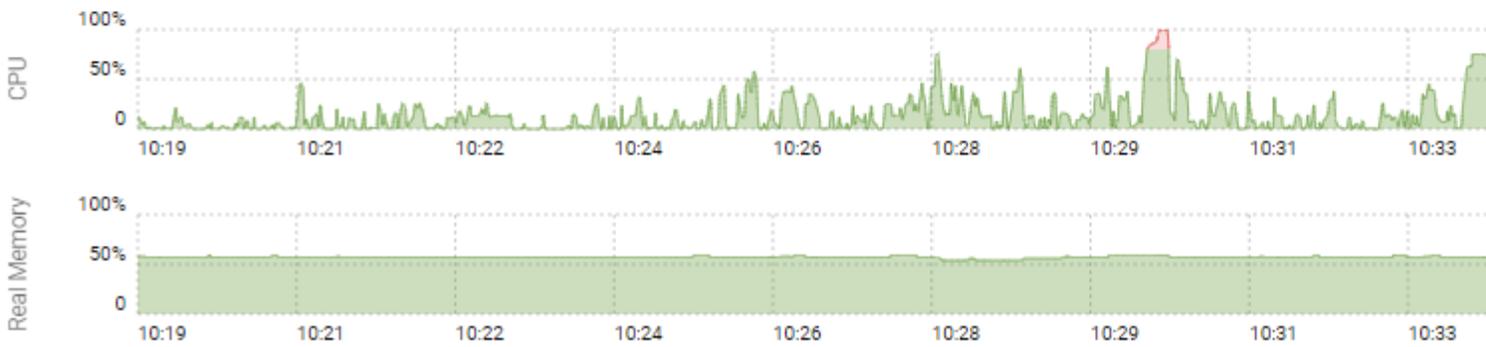
Main		I/O														
PID	USER	PRI	NI	VIRT	RES	SHR	S	CPU%	MEM%	TIME+	Command					
181641	firebird	20	0	43.8G	4034M	25308	S	0.7	51.0	0:12.82	/opt/firebird/bin/firebird					
914	firebird	20	0	11168	1820	1792	S	0.0	0.0	0:00.00	/opt/firebird/bin/fbguard -d					
925	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	19:31.76	/opt/firebird/bin/firebird					
930	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.00	/opt/firebird/bin/firebird					
941	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.88	/opt/firebird/bin/firebird					
159367	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.00	/opt/firebird/bin/firebird					
159603	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.04	/opt/firebird/bin/firebird					
159604	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:05.17	/opt/firebird/bin/firebird					
159610	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.04	/opt/firebird/bin/firebird					
159611	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.37	/opt/firebird/bin/firebird					
160340	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.05	/opt/firebird/bin/firebird					
160341	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.91	/opt/firebird/bin/firebird					
160528	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.05	/opt/firebird/bin/firebird					
160529	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.93	/opt/firebird/bin/firebird					
161161	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.04	/opt/firebird/bin/firebird					
161162	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.40	/opt/firebird/bin/firebird					
161512	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.04	/opt/firebird/bin/firebird					
161513	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:04.30	/opt/firebird/bin/firebird					
161551	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.04	/opt/firebird/bin/firebird					
161552	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:01.37	/opt/firebird/bin/firebird					
161840	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.04	/opt/firebird/bin/firebird					
161841	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.47	/opt/firebird/bin/firebird					
161842	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.04	/opt/firebird/bin/firebird					
161843	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.12	/opt/firebird/bin/firebird					
163849	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.04	/opt/firebird/bin/firebird					
163850	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:01.25	/opt/firebird/bin/firebird					
166338	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.03	/opt/firebird/bin/firebird					
166339	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:01.14	/opt/firebird/bin/firebird					
167072	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.03	/opt/firebird/bin/firebird					
167073	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.32	/opt/firebird/bin/firebird					
169499	firebird	20	0	43.8G	4034M	25308	S	0.0	51.0	0:00.02	/opt/firebird/bin/firebird					

3) [2025-04-29_10-40-17.png](#), downloaded 2036 times



System hostname	ubtest (127.0.1.1)	Operating system	Ubuntu Linux
Webmin version	2.303	Authentic theme version	23.03
Time on system	вторник, 29 апреля 2025 г., 10:40	Kernel and CPU	Linux 6.8.0-39-generic
Processor information	Intel(R) Xeon(R) Silver 4110 CPU @ 2.10GHz, 8 cores	System uptime	13 hours, 21 minutes
Running processes	215	CPU load averages	0.58 (1 min)
Real memory	4.6 GiB used / 2.97 GiB cached / 7.73 GiB total	Virtual memory	85.35 MiB used / 1.00 GiB total
Local disk space	90.56 GiB used / 401.32 GiB free / 491.88 GiB total	Package updates	1 package available

▼ Stats History



4) [2025-04-29_10-40-26.png](#), downloaded 2015 times

```

0[          0.0%]  4[          0.6%]
1[          0.0%]  5[          0.0%]
2[          0.6%]  6[          0.6%]
3[          1.9%]  7[          2.0%]
Mem[|||||4.51G/7.73G] Tasks: 46, 69 thr, 169 kthr; 2 running
Swp[|||          53.4M/4.00G] Load average: 0.52 1.91 1.48
                                Uptime: 13:28:30

```

Main		I/O																			
PID	USER	PRI	NI	VIRT	RES	SHR	S	CPU%	MEM%	TIME+	Command										
941	firebird	20	0	46.7G	4275M	25828	S	0.6	54.0	0:01.00	/opt/firebird/bin/firebird										
914	firebird	20	0	11168	1820	1792	S	0.0	0.0	0:00.00	/opt/firebird/bin/fbguard -d										
925	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	19:37.59	/opt/firebird/bin/firebird										
930	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.00	/opt/firebird/bin/firebird										
159367	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.00	/opt/firebird/bin/firebird										
159603	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.06	/opt/firebird/bin/firebird										
159604	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:05.22	/opt/firebird/bin/firebird										
159610	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.05	/opt/firebird/bin/firebird										
159611	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.48	/opt/firebird/bin/firebird										
160340	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.06	/opt/firebird/bin/firebird										
160341	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:01.28	/opt/firebird/bin/firebird										
160528	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.07	/opt/firebird/bin/firebird										
160529	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:01.20	/opt/firebird/bin/firebird										
161161	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.06	/opt/firebird/bin/firebird										
161162	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.66	/opt/firebird/bin/firebird										
161512	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.06	/opt/firebird/bin/firebird										
161513	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:06.03	/opt/firebird/bin/firebird										
161551	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.06	/opt/firebird/bin/firebird										
161552	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:01.79	/opt/firebird/bin/firebird										
161840	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.06	/opt/firebird/bin/firebird										
161841	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.48	/opt/firebird/bin/firebird										
163849	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.06	/opt/firebird/bin/firebird										
163850	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:01.53	/opt/firebird/bin/firebird										
166338	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.04	/opt/firebird/bin/firebird										
166339	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:01.92	/opt/firebird/bin/firebird										
167072	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.05	/opt/firebird/bin/firebird										
167073	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.39	/opt/firebird/bin/firebird										
169499	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.03	/opt/firebird/bin/firebird										
169500	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.95	/opt/firebird/bin/firebird										
182739	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.01	/opt/firebird/bin/firebird										
182740	firebird	20	0	46.7G	4275M	25828	S	0.0	54.0	0:00.01	/opt/firebird/bin/firebird										

Subject: Re: Hyper-V + Ubuntu + Firebird
 Posted by [SD](#) on Tue, 29 Apr 2025 11:19:33 GMT
[View Forum Message](#) <> [Reply to Message](#)

Subject: Re: Hyper-V + Ubuntu + Firebird

Posted by [sg729](#) on Tue, 29 Apr 2025 12:37:56 GMT

[View Forum Message](#) <> [Reply to Message](#)

<https://habr.com/ru/companies/selectel/articles/267833/>

Subject: Re: Hyper-V + Ubuntu + Firebird

Posted by [m7m](#) on Tue, 29 Apr 2025 16:54:41 GMT

[View Forum Message](#) <> [Reply to Message](#)

<https://habr.com/ru/companies/selectel/articles/267833/>

Trace and Audit Services

Subject: Re: Hyper-V + Ubuntu + Firebird

Posted by [sg729](#) on Wed, 30 Apr 2025 06:57:59 GMT

[View Forum Message](#) <> [Reply to Message](#)

firebird.conf

AuditTraceConfigFile = fbtrace.conf

fbtrace.conf

database = 127.0.0.1:D:\FDB\TEST.FDB

```
{
  enabled = true
  log_filename = D:\fbtrace.log
  max_log_size = 1
  log_statement_finish true
  log_procedure_finish true
  log_trigger_finish true
  print_plan true
  print_perf true
  time_threshold 0
}
```

```
C:\Program Files\Firebird\Firebird_3_0>fbsvcmgr service_mgr action_trace_start trc_name "My
trace" trc_cfg fbtrace.conf
```

```
Trace session ID 2 started
```

```
C:\Program Files\Firebird\Firebird_3_0>fbsvcmgr service_mgr action_trace_list
```

```
Session ID: 2
```

name: My trace
user: USER
date: 2025-04-30 09:31:38
flags: active, trace

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [basid](#) on Wed, 30 Apr 2025 07:37:08 GMT
[View Forum Message](#) <> [Reply to Message](#)

- 09:58:24 up 135 days, 18:53, 2 users, load average: 10,43, 9,39, 9,29
Tasks: 500 total, 1 running, 499 sleeping, 0 stopped, 0 zombie
%Cpu(s): 20,8 us, 2,6 sy, 0,0 ni, 75,4 id, 0,6 wa, 0,4 hi, 0,2 si, 0,0 st
GiB Mem : 251,3 total, 2,4 free, 179,9 used, 69,0 buff/cache
GiB Swap: 68,0 total, 67,6 free, 0,4 used. 69,1 avail Mem

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
710587	firebird	20	0	190,9g	177,5g	328,0m	S	819,2	70,6	5689:34	firebird3.

```
grep PRETTY_NAME /etc/os-release|cut -d\" -f2;\nlscpu|grep -v "^(F|Vu)";\nfree -h;\
```

Architecture: x86_64
CPU(s): 40
Model name: Intel(R) Xeon(R) Silver 4114 CPU @
2.20GHz

Thread(s) per core: 2
 Core(s) per socket: 10
 Socket(s): 2
 CPU max MHz: 3000,0000
 CPU min MHz: 800,0000
 Virtualization: VT-x

	total	used	free	shared
Mem:	251Gi	182Gi	2,0Gi	304Mi
buff/cache	67Gi	66Gi		
Swap:	67Gi	366Mi	67Gi	

NAME	MAJ:MIN	RM	SIZE	RO	TYPE	MOUNTPOINTS
sdb	8:16	0	893,8G	0	disk	

sdc	8:32	0	14T	0	disk	
-----	------	---	-----	---	------	--

avg-cpu: %user %nice %system %iowait %steal %idle
 19,5% 0,0% 2,6% 0,4% 0,0% 77,5%

Device	rB/s	r_await	wB/s	w_await	%util
sdb	0,9k	0,00	132,8k	0,30	0,1%
sdc	207,4M	4,88	8,0M	0,22	46,3%

5. Use sql-trace,

P.S.

P.P.S.

read-intensive.

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [SD](#) on Wed, 30 Apr 2025 12:14:34 GMT
[View Forum Message](#) <> [Reply to Message](#)

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [basid](#) on Thu, 01 May 2025 05:34:21 GMT
[View Forum Message](#) <> [Reply to Message](#)

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [sg729](#) on Thu, 01 May 2025 12:10:01 GMT
[View Forum Message](#) <> [Reply to Message](#)

```
# into log file name matching database name - test.log, azk2.log and
# rulez.log appropriately
#
#database = %[\V](test|azk2|rulez).fdb
#{
# enabled = true
# log_filename = \1.log
#}

{
enabled = true
log_filename = F:\FBTRACE\fbtrace.log
max_log_size = 1
```

```
log_statement_finish true
log_procedure_finish true
log_trigger_finish true
print_plan true
print_perf true
time_threshold 0
}
```

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [sg729](#) on Thu, 01 May 2025 12:12:17 GMT
[View Forum Message](#) <> [Reply to Message](#)

basid,

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [SD](#) on Thu, 01 May 2025 21:37:07 GMT
[View Forum Message](#) <> [Reply to Message](#)

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [basid](#) on Fri, 02 May 2025 06:12:47 GMT
[View Forum Message](#) <> [Reply to Message](#)

--
P.S.

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [sg729](#) on Fri, 02 May 2025 17:47:39 GMT
[View Forum Message](#) <> [Reply to Message](#)

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [sg729](#) on Fri, 02 May 2025 18:00:05 GMT
[View Forum Message](#) <> [Reply to Message](#)

P.S.

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [hvlad](#) on Fri, 02 May 2025 18:32:35 GMT
[View Forum Message](#) <> [Reply to Message](#)

```
{  
  enabled = true  
  log_filename = F:\FBTRACE\fbtrace.log  
  max_log_size = 1
```

```
...  
}
```

PS max_log_size = 1

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [hvlad](#) on Fri, 02 May 2025 18:45:08 GMT
[View Forum Message](#) <> [Reply to Message](#)

```
{  
  enabled = true  
  log_filename = F:\FBTRACE\fbtrace.log  
...  
}
```

```
fbtrace.conf  
# For log file name Sed syntax for substitutions is supported.  
# I.e. \0 - whole matched string, \1 ... \9 - parenthesis subexpressions.  
# \\ is backslash.  
#  
# String values should be enclosed into single quotes if contains spaces  
# embedded, for example:  
# log_filename 'C:\\Documents and Settings\\Firebird\\My Documents\\trace.log'
```

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [sg729](#) on Tue, 06 May 2025 06:17:25 GMT
[View Forum Message](#) <> [Reply to Message](#)

fbtrace.conf

```
{
enabled = true
log_filename = 'F:\\FBTRACE\\fbtrace.log'
max_log_size = 10
log_statement_finish true
log_procedure_finish true
log_trigger_finish true
print_plan true
print_perf true
time_threshold 0
}
```

firebird.conf

Session ID: 2

name: My trace

user: USER

date: 2025-05-06 09:10:45

flags: active, trace

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [SD](#) on Tue, 06 May 2025 11:22:24 GMT
[View Forum Message](#) <> [Reply to Message](#)

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [basid](#) on Tue, 06 May 2025 11:29:47 GMT
[View Forum Message](#) <> [Reply to Message](#)

Firebird 2.5 fbtrace.conf:<database>

```
enabled false
max_log_size 0
log_statement_finish false
</database>
Firebird 3.0 fbtrace.conf:database
{
#enabled = false
#max_log_size = 0
#log_statement_finish = false
```

P.S.

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [hvlad](#) on Tue, 06 May 2025 14:53:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [sg729](#) on Wed, 07 May 2025 07:31:26 GMT
[View Forum Message](#) <> [Reply to Message](#)

hvlad, SD, basid

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [sg729](#) on Tue, 13 May 2025 09:39:01 GMT
[View Forum Message](#) <> [Reply to Message](#)

File Attachments

1) [iostat_2025-05-13.zip](#), downloaded 374 times

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [basid](#) on Tue, 13 May 2025 12:03:53 GMT
[View Forum Message](#) <> [Reply to Message](#)

```
%nice %system %iowait %steal %idle
 0,7% 0,0% 0,5% 8,0% 0,0% 90,9%
 r/s  rMB/s  rrqm/s  %rrqm  r_await  rareq-sz  Device
 1,90  17,6k   0,00  0,0%  156,63   9,3k  sda
 w/s  wMB/s  wrqm/s  %wrqm  w_await  wareq-sz  Device
 68,30  533,6k   3,00  4,2%  17,22   7,8k  sda
 d/s  dMB/s  drqm/s  %drqm  d_await  dareq-sz  Device
 0,00   0,0k   0,00  0,0%   0,00   0,0k  sda
 f/s  f_await  aqu-sz  %util  Device
```

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [sg729](#) on Tue, 13 May 2025 12:19:49 GMT
[View Forum Message](#) <> [Reply to Message](#)

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [basid](#) on Tue, 13 May 2025 17:39:53 GMT
[View Forum Message](#) <> [Reply to Message](#)

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [sg729](#) on Wed, 14 May 2025 05:55:31 GMT
[View Forum Message](#) <> [Reply to Message](#)

basid

13.05.2025 10:45:27

```
avg-cpu: %user  %nice %system %iowait  %steal  %idle
          0,1%  0,0%  0,0%  52,2%  0,0%  47,7%
```

```
 r/s  rMB/s  rrqm/s  %rrqm  r_await  rareq-sz  Device
0,00  0,0k   0,00  0,0%   0,00   0,0k  sda
```

```
 w/s  wMB/s  wrqm/s  %wrqm  w_await  wareq-sz  Device
10,10  92,4k   3,20  24,1%  6127,21   9,1k  sda
```

```
 d/s  dMB/s  drqm/s  %drqm  d_await  dareq-sz  Device
0,00  0,0k   0,00  0,0%   0,00   0,0k  sda
```

```
 f/s  f_await  aqu-sz  %util  Device
0,60  3,83  61,89  97,9%  sda
```

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [basid](#) on Wed, 14 May 2025 08:28:04 GMT
[View Forum Message](#) <> [Reply to Message](#)

```
%system %iowait %steal %idle
          0,1%  0,0%  0,0%  52,2%  0,0%  47,7%
Device  rB/s  r_await  wB/s  w_await  f_await  %util
```

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [SD](#) on Wed, 14 May 2025 11:34:38 GMT
[View Forum Message](#) <> [Reply to Message](#)

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [sg729](#) on Wed, 14 May 2025 11:57:38 GMT
[View Forum Message](#) <> [Reply to Message](#)

/w3/issue/78/Write_Barriers.pdf
is no longer available on this server and there is no forwarding address. Please remove all references to this resource.

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [basid](#) on Wed, 14 May 2025 12:13:44 GMT
[View Forum Message](#) <> [Reply to Message](#)

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [sg729](#) on Wed, 14 May 2025 18:52:22 GMT
[View Forum Message](#) <> [Reply to Message](#)

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [basid](#) on Thu, 15 May 2025 05:23:24 GMT
[View Forum Message](#) <> [Reply to Message](#)

Subject: Re: Hyper-V + Ubuntu + Firebird
Posted by [inoremap](#) on Thu, 15 May 2025 07:34:29 GMT
[View Forum Message](#) <> [Reply to Message](#)

https://web.archive.org/web/20140331184757/https://www.linux-magazine.com/w3/issue/78/Write_Barriers.pdf

Subject: Re: Hyper-V + Ubuntu + Firebird

Posted by [sg729](#) on Thu, 10 Jul 2025 06:03:02 GMT
[View Forum Message](#) <> [Reply to Message](#)
