
Subject: Re: CUDA support inside containers
Posted by [abufrejoval](#) on Fri, 18 Nov 2016 04:10:43 GMT
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...any attempt to attach a file (5k zip or 15k text) will result in a "file attachment too big..." error:
Should I actually paste into a response? It's very ugly (and a little big)

sorry, then here it goes (deviceQuery utility fails inside the container while attempts load the nvidia kernel modules, since it couldn't find them in /proc/modules)

```
execve("./deviceQuery", [".deviceQuery"], [/* 19 vars */]) = 0
brk(0) = 0xcd1000
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7f125fb1b000
access("/etc/ld.so.preload", R_OK) = -1 ENOENT (No such file or directory)
open("/usr/local/cuda-8.0/lib64/tls/x86_64/librt.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
stat("/usr/local/cuda-8.0/lib64/tls/x86_64", 0x7ffe4d063450) = -1 ENOENT (No such file or directory)
open("/usr/local/cuda-8.0/lib64/tls/librt.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
stat("/usr/local/cuda-8.0/lib64/tls", 0x7ffe4d063450) = -1 ENOENT (No such file or directory)
open("/usr/local/cuda-8.0/lib64/x86_64/librt.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
stat("/usr/local/cuda-8.0/lib64/x86_64", 0x7ffe4d063450) = -1 ENOENT (No such file or directory)
open("/usr/local/cuda-8.0/lib64/librt.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
stat("/usr/local/cuda-8.0/lib64", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
open("/etc/ld.so.cache", O_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=93681, ...}) = 0
mmap(NULL, 93681, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7f125fb04000
close(3) = 0
open("/lib64/librt.so.1", O_RDONLY|O_CLOEXEC) = 3
read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\300\`\0\0\0\0\0\0 \"..., 832) = 832
fstat(3, {st_mode=S_IFREG|0755, st_size=44096, ...}) = 0
mmap(NULL, 2128952, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f125f6f3000
mprotect(0x7f125f6fa000, 2093056, PROT_NONE) = 0
mmap(0x7f125f8f9000, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x6000) = 0x7f125f8f9000
close(3) = 0
open("/usr/local/cuda-8.0/lib64/libpthread.so.0", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("/lib64/libpthread.so.0", O_RDONLY|O_CLOEXEC) = 3
read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\240\`\0\0\0\0\0\0 \"..., 832) = 832
fstat(3, {st_mode=S_IFREG|0755, st_size=142304, ...}) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7f125fb03000
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mmap(NULL, 2208864, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) =
0x7f125f4d7000
mprotect(0x7f125f4ed000, 2097152, PROT_NONE) = 0
mmap(0x7f125f6ed000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x16000) = 0x7f125f6ed000
mmap(0x7f125f6ef000, 13408, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f125f6ef000
close(3) = 0
open("/usr/local/cuda-8.0/lib64/libdl.so.2", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file
or directory)
open("/lib64/libdl.so.2", O_RDONLY|O_CLOEXEC) = 3
read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\320\16\0\0\0\0\0 "..., 832) = 832
fstat(3, {st_mode=S_IFREG|0755, st_size=19520, ...}) = 0
mmap(NULL, 2109744, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) =
0x7f125f2d3000
mprotect(0x7f125f2d6000, 2093056, PROT_NONE) = 0
mmap(0x7f125f4d5000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x2000) = 0x7f125f4d5000
close(3) = 0
open("/usr/local/cuda-8.0/lib64/libstdc++.so.6", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No
such file or directory)
open("/lib64/libstdc++.so.6", O_RDONLY|O_CLOEXEC) = 3
read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\20\265\5\0\0\0\0 "..., 832) = 832
fstat(3, {st_mode=S_IFREG|0755, st_size=995840, ...}) = 0
mmap(NULL, 3175456, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) =
0x7f125efcb000
mprotect(0x7f125f0b4000, 2097152, PROT_NONE) = 0
mmap(0x7f125f2b4000, 40960, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0xe9000) = 0x7f125f2b4000
mmap(0x7f125f2be000, 82976, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f125f2be000
close(3) = 0
open("/usr/local/cuda-8.0/lib64/libm.so.6", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file
or directory)
open("/lib64/libm.so.6", O_RDONLY|O_CLOEXEC) = 3
read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\260T\0\0\0\0\0 "..., 832) = 832
fstat(3, {st_mode=S_IFREG|0755, st_size=1141560, ...}) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f125fb02000
mmap(NULL, 3150168, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) =
0x7f125ecc9000
mprotect(0x7f125edca000, 2093056, PROT_NONE) = 0
mmap(0x7f125efc9000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x100000) = 0x7f125efc9000
close(3) = 0
open("/usr/local/cuda-8.0/lib64/libgcc_s.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such
file or directory)
open("/lib64/libgcc_s.so.1", O_RDONLY|O_CLOEXEC) = 3

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read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\360*\0\0\0\0\0\0 "..., 832) = 832
fstat(3, {st_mode=S_IFREG|0755, st_size=88720, ...}) = 0
mmap(NULL, 2184192, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) =
0x7f125eab3000
mprotect(0x7f125eac8000, 2093056, PROT_NONE) = 0
mmap(0x7f125ecc7000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x14000) = 0x7f125ecc7000
close(3) = 0
open("/usr/local/cuda-8.0/lib64/libc.so.6", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file
or directory)
open("/lib64/libc.so.6", O_RDONLY|O_CLOEXEC) = 3
read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\3\0>\0\1\0\0\0 \34\2\0\0\0\0\0"... , 832) = 832
fstat(3, {st_mode=S_IFREG|0755, st_size=2112384, ...}) = 0
mmap(NULL, 3936832, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) =
0x7f125e6f1000
mprotect(0x7f125e8a8000, 2097152, PROT_NONE) = 0
mmap(0x7f125eaa8000, 24576, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1b7000) = 0x7f125eaa8000
mmap(0x7f125eaae000, 16960, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f125eaae000
close(3) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f125fb01000
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f125fb00000
mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f125fafe000
arch_prctl(ARCH_SET_FS, 0x7f125fafe740) = 0
mprotect(0x7f125eaa8000, 16384, PROT_READ) = 0
mprotect(0x7f125ecc7000, 4096, PROT_READ) = 0
mprotect(0x7f125efc9000, 4096, PROT_READ) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f125fafd000
mprotect(0x7f125f2b4000, 32768, PROT_READ) = 0
mprotect(0x7f125f4d5000, 4096, PROT_READ) = 0
mprotect(0x7f125f6ed000, 4096, PROT_READ) = 0
mprotect(0x7f125f8f9000, 4096, PROT_READ) = 0
mprotect(0x667000, 12288, PROT_READ) = 0
mprotect(0x7f125fb1c000, 4096, PROT_READ) = 0
munmap(0x7f125fb04000, 93681) = 0
set_tid_address(0x7f125fafea10) = 16610
set_robust_list(0x7f125fafea20, 24) = 0
rt_sigaction(SIGRTMIN, {0x7f125f4dd780, [], SA_RESTORER|SA_SIGINFO, 0x7f125f4e6100},
NULL, 8) = 0
rt_sigaction(SIGRT_1, {0x7f125f4dd810, [], SA_RESTORER|SA_RESTART|SA_SIGINFO,
0x7f125f4e6100}, NULL, 8) = 0
rt_sigprocmask(SIG_UNBLOCK, [RTMIN RT_1], NULL, 8) = 0
getrlimit(RLIMIT_STACK, {rlim_cur=8192*1024, rlim_max=RLIM64_INFINITY}) = 0

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Page 4 of 6 ---- Generated from [OpenVZ Forum](#)

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mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f125fb19000
read(3, "4096\n", 1024)          = 5
close(3)                        = 0
munmap(0x7f125fb19000, 4096)    = 0
open("/sys/devices/system/cpu/online", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or
directory)
open("/proc/stat", O_RDONLY|O_CLOEXEC) = 3
read(3, "cpu 165242 0 39288 54855748 329"..., 8192) = 959
close(3)                        = 0
statfs("/dev/shm/", {f_type=0x1021994, f_bsize=4096, f_blocks=65536, f_bfree=65536,
f_bavail=65536, f_files=65536, f_ffree=65535, f_fsid={0, 0}, f_namelen=255, f_frsize=4096}) = 0
futext(0x7f125f8fa330, FUTEX_WAKE_PRIVATE, 2147483647) = 0
open("/dev/shm/cuda_injection_path_shm", O_RDWR|O_NOFOLLOW|O_CLOEXEC) = -1
ENOENT (No such file or directory)
open("/root/.nv/nvidia-application-profile-globals-rc", O_RDONLY) = -1 ENOENT (No such file or
directory)
open("/root/.nv/nvidia-application-profiles-rc", O_RDONLY) = -1 ENOENT (No such file or
directory)
open("/root/.nv/nvidia-application-profiles-rc.d", O_RDONLY) = -1 ENOENT (No such file or
directory)
open("/etc/nvidia/nvidia-application-profiles-rc", O_RDONLY) = -1 ENOENT (No such file or
directory)
open("/etc/nvidia/nvidia-application-profiles-rc.d/", O_RDONLY) = -1 ENOENT (No such file or
directory)
open("/usr/share/nvidia/nvidia-application-profiles-367.48-rc ", O_RDONLY) = 3
fstat(3, {st_mode=S_IFREG|0444, st_size=5225, ...}) = 0
fstat(3, {st_mode=S_IFREG|0444, st_size=5225, ...}) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f125fb19000
read(3, "# Application profiles for the N"..., 4096) = 4096
read(3, "tern\" : { \"feature\" : \"procname\""..., 4096) = 1129
close(3)                        = 0
munmap(0x7f125fb19000, 4096)    = 0
open("/usr/share/nvidia/nvidia-application-profiles-rc", O_RDONLY) = -1 ENOENT (No such file or
directory)
readlink("/proc/16610/exe", "/home/thomas/NVIDIA_CUDA-8.0_Sam"..., 4095) = 72
geteuid()                       = 0
socket(PF_LOCAL, SOCK_SEQPACKET|SOCK_CLOEXEC, 0) = 3
setsockopt(3, SOL_SOCKET, SO_PASSCRED, [1], 4) = 0
connect(3, {sa_family=AF_LOCAL, sun_path="/tmp/nvidia-mps/control"}, 26) = -1 ENOENT (No
such file or directory)
close(3)                        = 0
lstat("/proc", {st_mode=S_IFDIR|0555, st_size=0, ...}) = 0
lstat("/proc/self", {st_mode=S_IFLNK|S_ISVTX|0777, st_size=0, ...}) = 0
readlink("/proc/self", "16610", 4095) = 5
lstat("/proc/16610", {st_mode=S_IFDIR|0555, st_size=0, ...}) = 0
lstat("/proc/16610/exe", {st_mode=S_IFLNK|0777, st_size=0, ...}) = 0

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readlink("/proc/16610/exe", "/home/thomas/NVIDIA_CUDA-8.0_Sam"... , 4095) = 72
lstat("/home", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat("/home/thomas", {st_mode=S_IFDIR|0700, st_size=4096, ...}) = 0
lstat("/home/thomas/NVIDIA_CUDA-8.0_Samples", {st_mode=S_IFDIR|0775, st_size=4096, ...}) =
0
lstat("/home/thomas/NVIDIA_CUDA-8.0_Samples/1_Uutilities", {st_mode=S_IFDIR|0755,
st_size=4096, ...}) = 0
lstat("/home/thomas/NVIDIA_CUDA-8.0_Samples/1_Uutilities/deviceQuery ",
{st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
lstat("/home/thomas/NVIDIA_CUDA-8.0_Samples/1_Uutilities/deviceQuery /deviceQuery ",
{st_mode=S_IFREG|0775, st_size=578786, ...}) = 0
open("/proc/modules", O_RDONLY) = 3
fstat(3, {st_mode=S_IFREG|0444, st_size=0, ...}) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f125fb19000
read(3, "", 1024) = 0
close(3) = 0
munmap(0x7f125fb19000, 4096) = 0
stat("/sys/bus/pci/devices", 0x7ffe4d0582f0) = -1 ENOENT (No such file or directory)
geteuid() = 0
open("/proc/sys/kernel/modprobe", O_RDONLY) = 3
fstat(3, {st_mode=S_IFREG|0444, st_size=0, ...}) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f125fb19000
read(3, "/sbin/modprobe\n", 1024) = 15
read(3, "", 1024) = 0
close(3) = 0
munmap(0x7f125fb19000, 4096) = 0
stat("/sbin/modprobe", {st_mode=S_IFREG|0755, st_size=150664, ...}) = 0
clone(child_stack=0, flags=CLONE_CHILD_CLEARPID|CLONE_CHILD_SETTID|SIGCHLD,
child_tidptr=0x7f125fafea10) = 16611
wait4(16611, [{WIFEXITED(s) && WEXITSTATUS(s) == 1}], 0, NULL) = 16611
--- SIGCHLD {si_signo=SIGCHLD, si_code=CLD_EXITED, si_pid=16611, si_status=1,
si_utime=0, si_stime=0} ---
stat("/usr/bin/nvidia-modprobe", {st_mode=S_IFREG|S_ISUID|0755, st_size=29384, ...}) = 0
geteuid() = 0
ioctl(-1, FIOGETBSZ, 0) = -1 EBADF (Bad file descriptor)
munmap(0x7f125dd0d000, 10370056) = 0
munmap(0x7f125dabf000, 2416520) = 0
futex(0x66b260, FUTEX_WAKE_PRIVATE, 2147483647) = 0
write(1, "./deviceQuery Starting...\n\n CUDA"... , 155) = 155
exit_group(1) = ?
+++ exited with 1 +++

```
