

The cPanel logo is displayed prominently in the center of the image. It consists of the lowercase letters "cPanel" in a bold, white, sans-serif font. The letter "P" is stylized with a circular hole through its center. The background behind the text is a dark navy blue.

cPanel

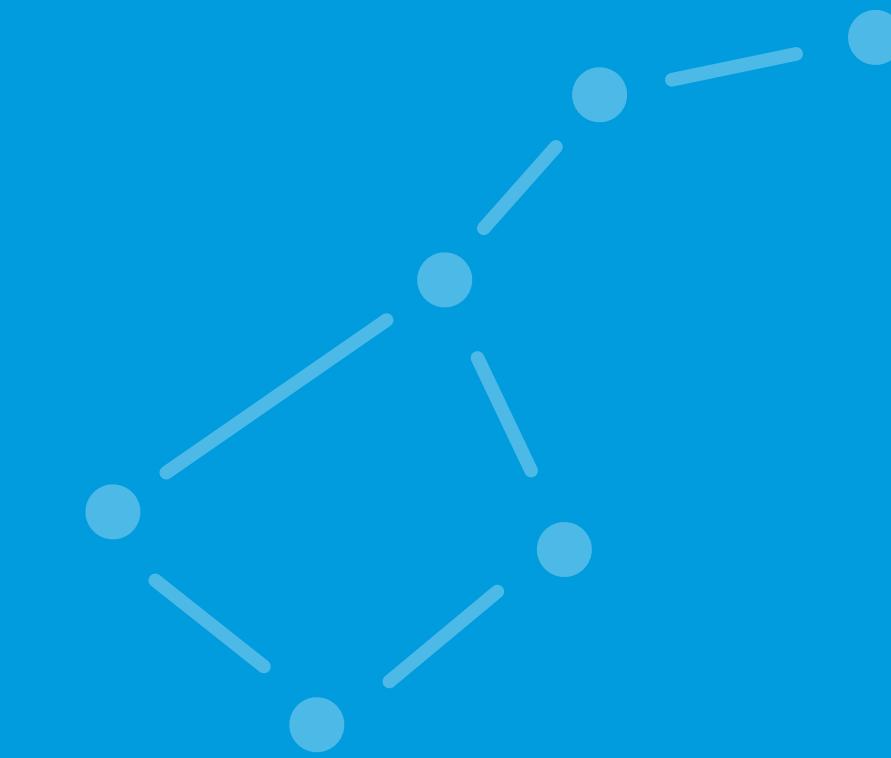




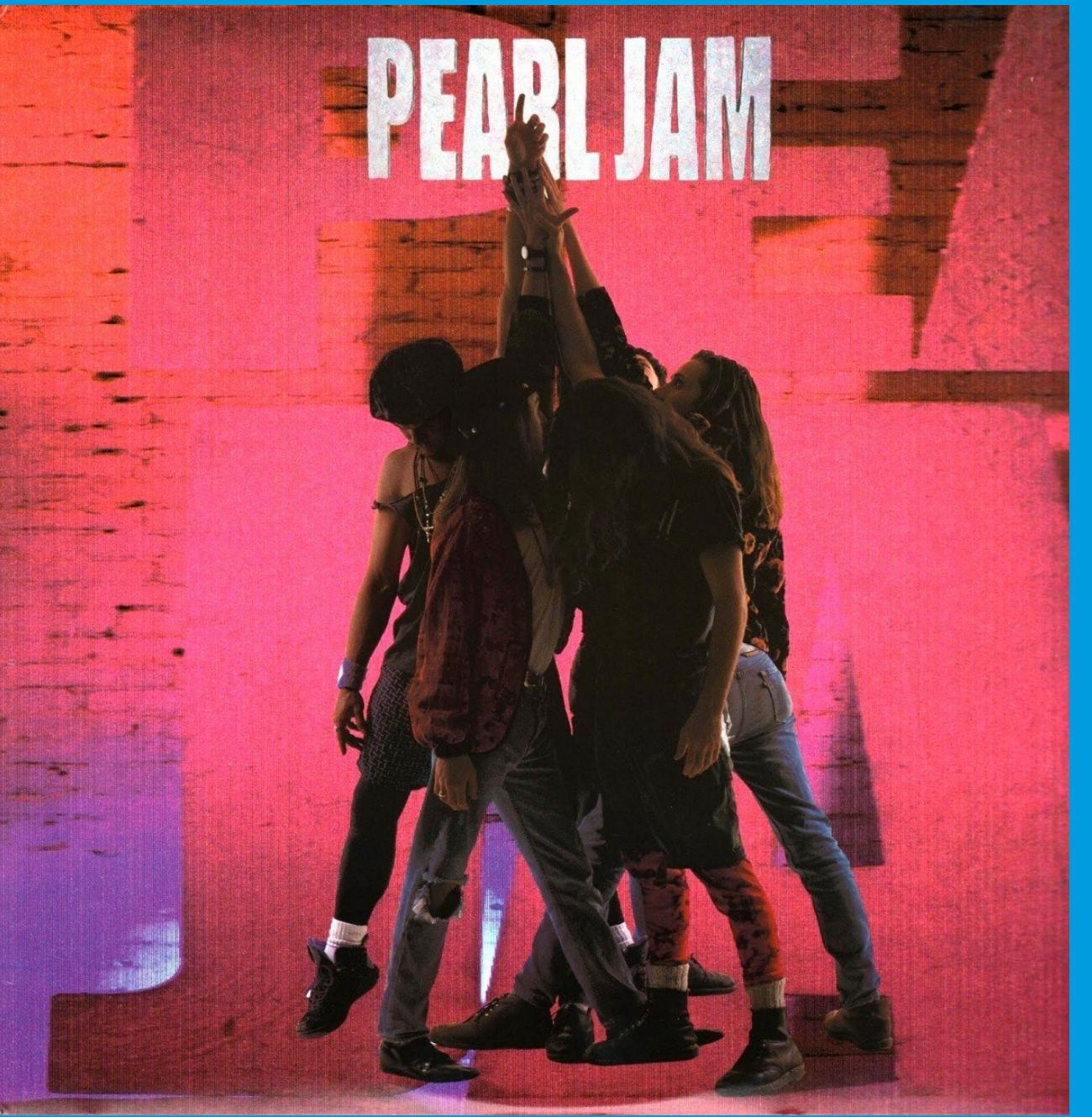
Using STRACE

AKA Knowing What You Don't Know

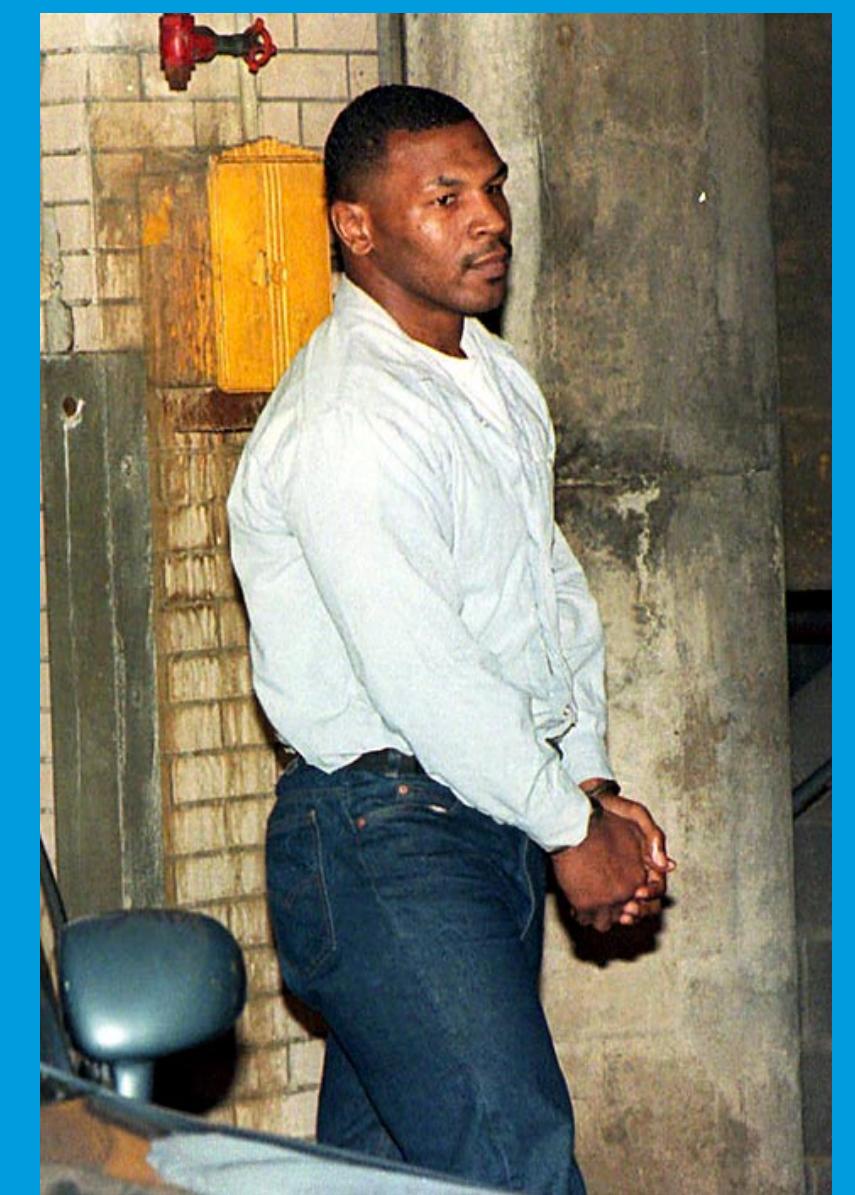
Companion PDF: go.cpanel.net/strace



IN THE BEGINNING



1991



cPanel

Paul Kranenburg

1991



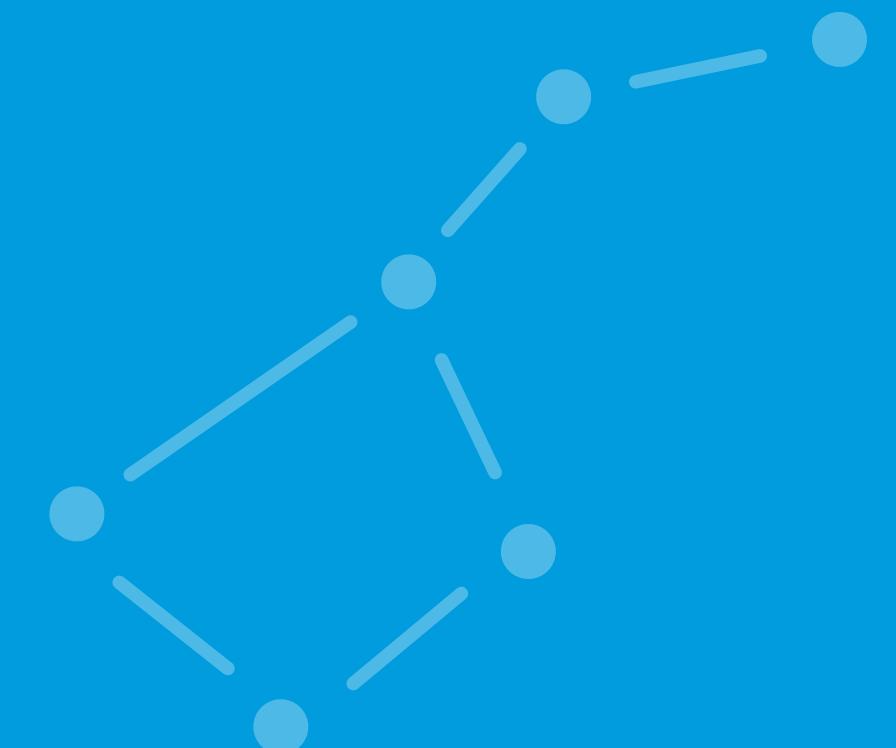
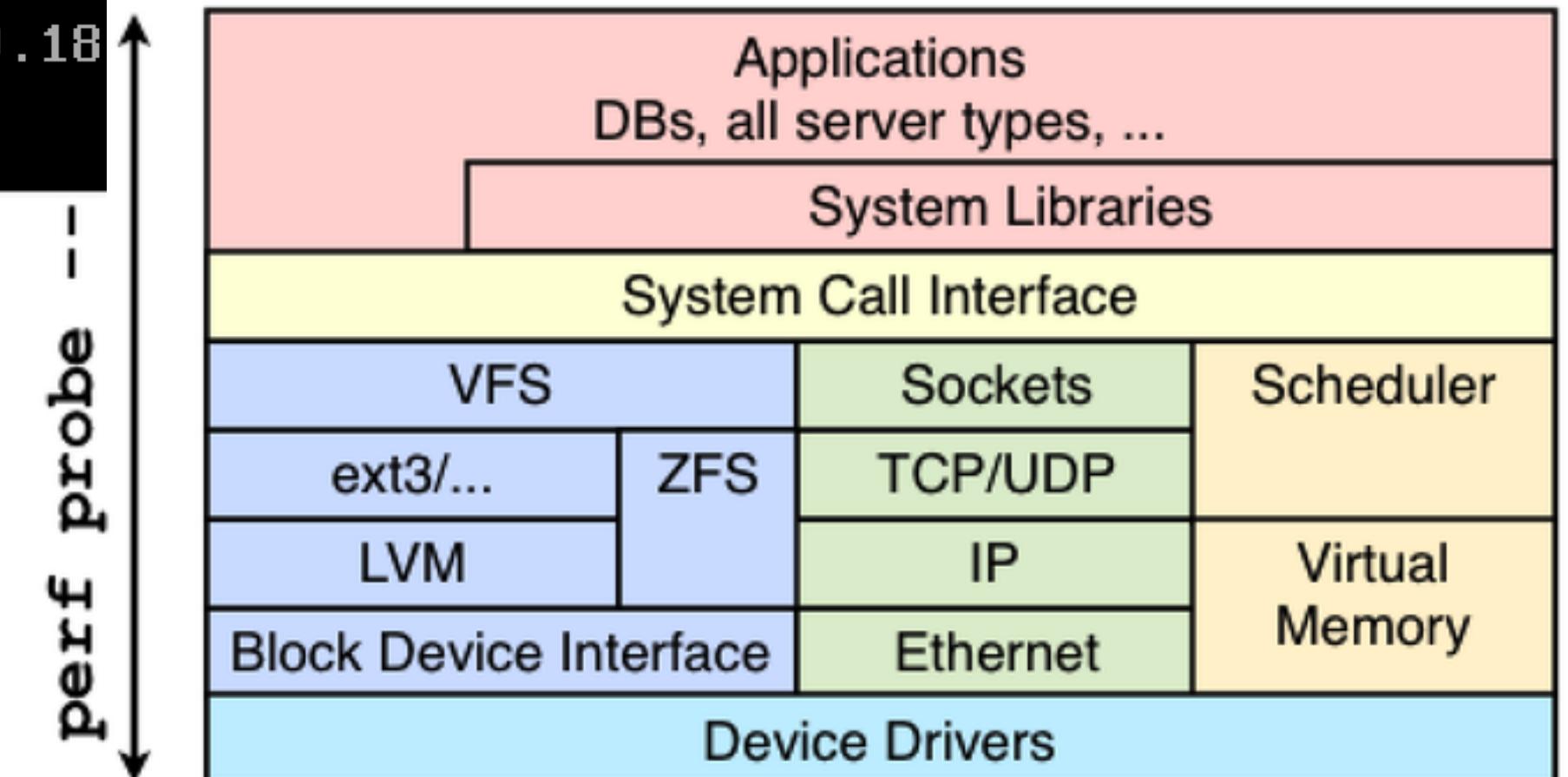
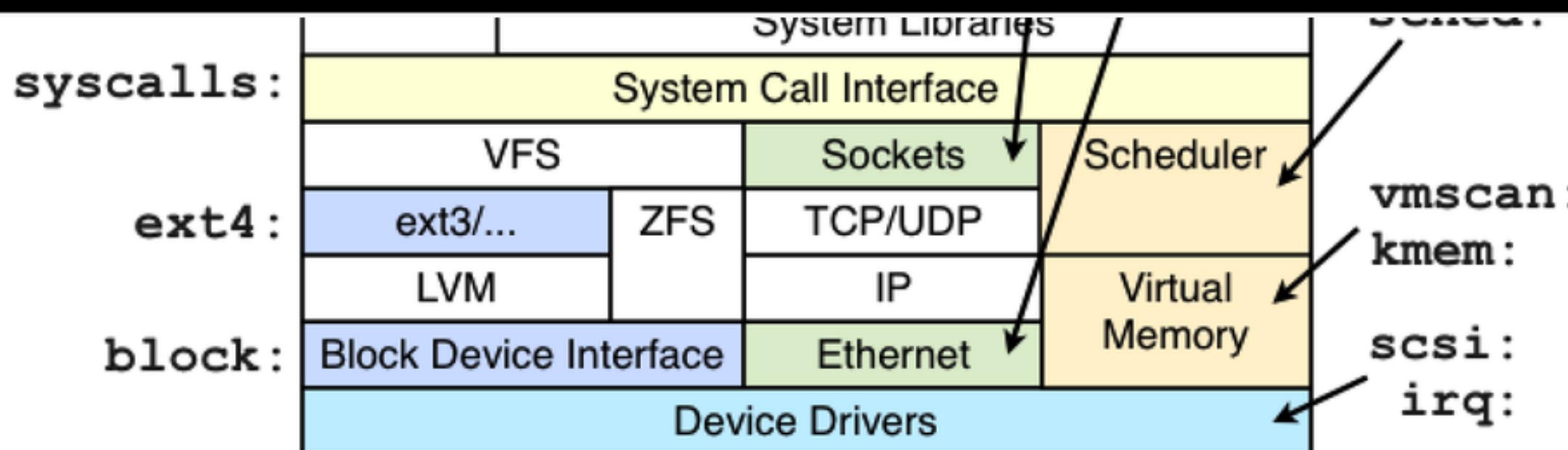
strace(1) is a system call tracer for Sun(tm) systems much like the Sun supplied program **trace(1)**.

strace(1) is a useful utility to sort of debug programs for which no source is available which unfortunately includes almost all of the Sun supplied system software.

```

sendto(3, "N24\0\0\0\26\0\1\3\276\347}Y\0\0\0\0\0\0\0", 20, 0, {sa_family=AF_N
ETLINK, pid=0, groups=00000000}, 12) = 20
connect(3, {sa_family=AF_LOCAL, sun_path="/var/run/nscd/socket"}, 110) = -1 ENO
E (No such file or directory)
connect(3, {sa_family=AF_LOCAL, sun_path="/var/run/nscd/socket"}, 110) = -1 ENO
E (No such file or directory)
connect(3, {sa_family=AF_INET, sin_port=htons(53), sin_addr=inet_addr("75.75.75.
75")}, 16) = 0
poll([{fd=3, events=POLLOUT}], 1, 0) = 1 ({fd=3, revents=POLLOUT})
sendto(3, "Z\243\1\0\0\1\0\0\0\0\0\0\3www\5ahoo\3com\0\0\1\0\1", 31, MSG_NOSIGN
AL, NULL, 0) = 31
poll([{fd=3, events=POLLIN|POLLOUT}], 1, 5000) = 1 ({fd=3, revents=POLLOUT})
sendto(3, "\323[\1\0\0\1\0\0\0\0\0\0\3www\5ahoo\3com\0\0\34\0\1", 31, MSG_NOSIG
NAL, NULL, 0) = 31
poll([{fd=3, events=POLLIN}], 1, 4999) = 1 ({fd=3, revents=POLLIN})
recvfrom(3, "Z\243\201\200\0\1\0\3\0\0\0\0\3www\5ahoo\3com\0\0\1\0\1\300"..., 2
048, 0, {sa_family=AF_INET, sin_port=htons(53), sin_addr=inet_addr("75.75.75.7
5")}, [16]) = 92
poll([{fd=3, events=POLLIN}], 1, 4958) = 1 ({fd=3, revents=POLLIN})
recvfrom(3, "\323[\201\200\0\1\0\2\0\0\0\0\3www\5ahoo\3com\0\0\34\0\1\300"..., 6
5536, 0, {sa_family=AF_INET, sin_port=htons(53), sin_addr=inet_addr("75.75.75.7
5")}, [16]) = 88
connect(3, {sa_family=AF_INET, sin_port=htons(80), sin_addr=inet_addr("98.139.18
0.149")}, 16) = 0

```



Operating System

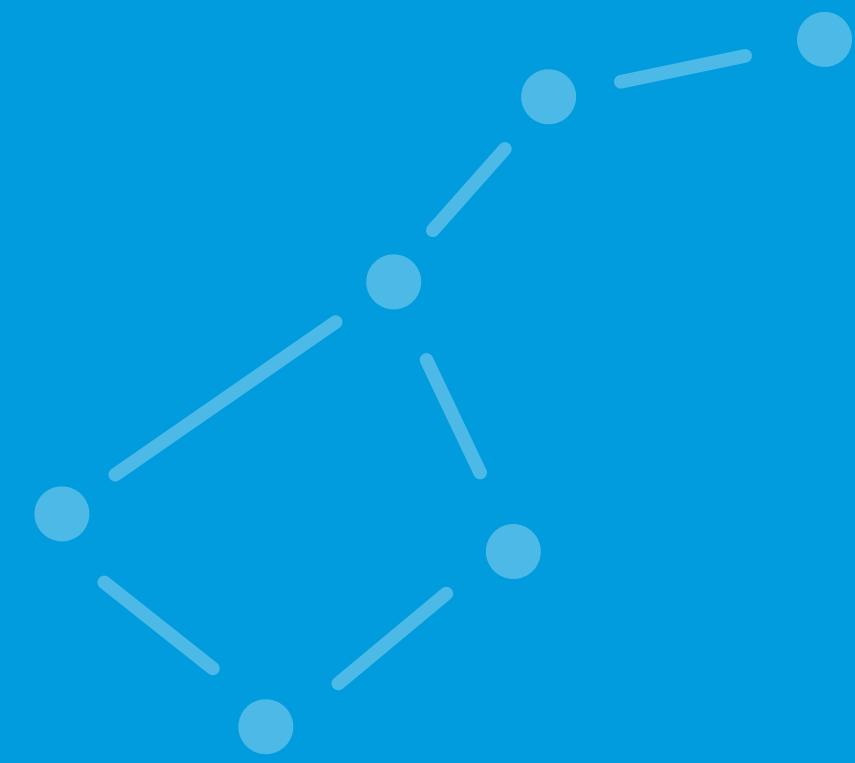
Applications
DBs, all server types, ...

System Libraries

System Call Interface

VFS Sockets Scheduler
ext3/... ZFS TCP/UDP
LVM IP Virtual
Block Device Interface Ethernet Memory
Device Drivers





English - detected ➔ German

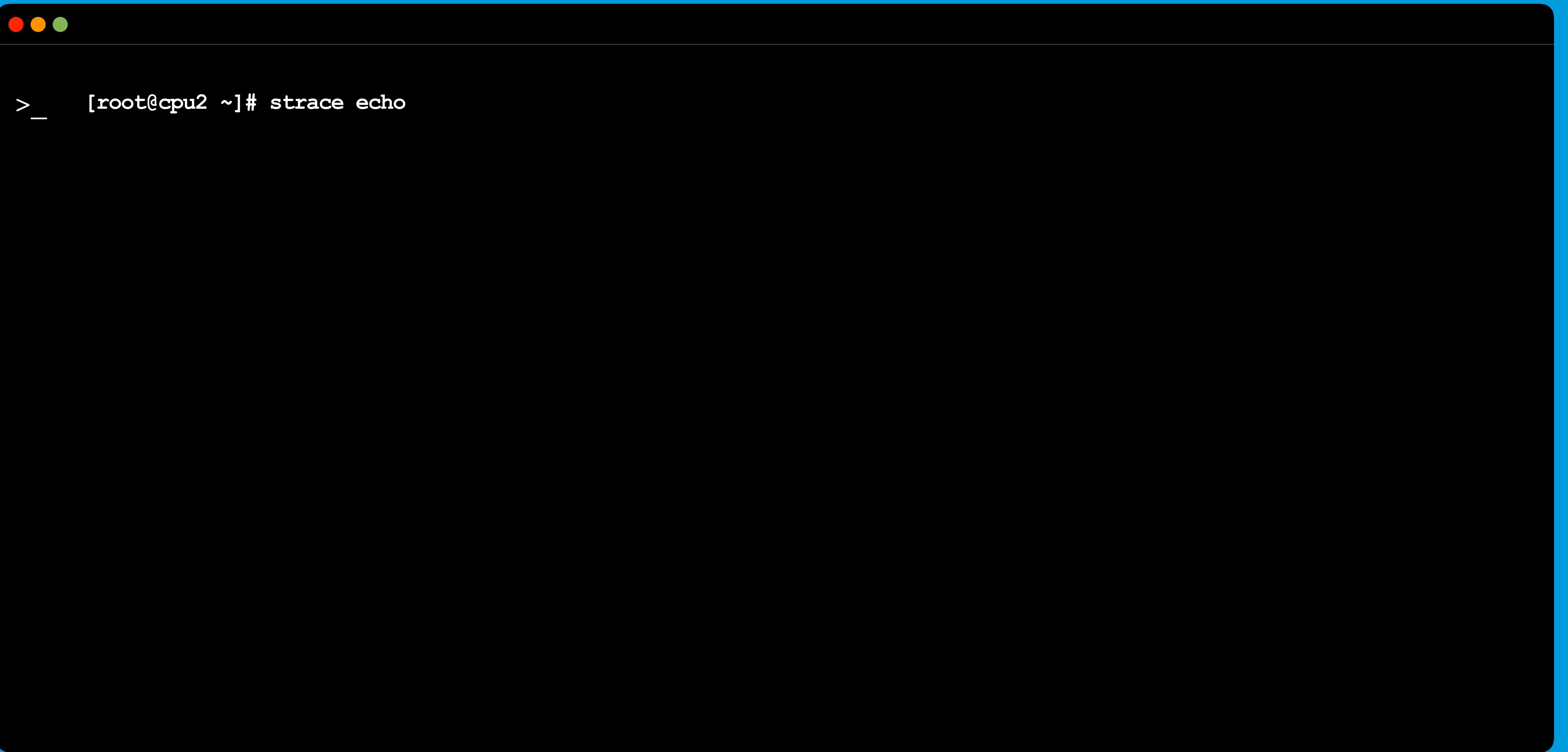
ostrich × Strauß

'ästriCH

Getting on with it

```
>_ # Already installed?  
which strace  
# Ubuntu or Debian-based?  
apt-get install strace manpages-dev  
# CentOS or Redhat-based?  
yum install strace
```

Getting on with it



```
>_ [root@cpu2 ~]# strace echo
```

Getting on with it

Getting on with it

Getting on with it

```
>_ [root@cpu2 ~]# strace echo  
execve("/bin/echo", ["echo"], /* 18 vars */) = 0
```

```
execve("/bin/echo", ["echo"], /* 18 vars */) = 0
```

Getting on with it

Getting on with it

```
>_ [root@cpu2 ~]# strace echo  
execve("/bin/echo", ["echo"], /* 18 vars */) = 0  
brk(NULL) = 0x6f0000  
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7f4a42948000  
access("/etc/ld.so.preload", R_OK) = -1 ENOENT (No such file or directory)  
open("/etc/ld.so.cache", O_RDONLY|O_CLOEXEC) = 3
```

open("/etc/ld.so.cache", O_RDONLY|O_CLOEXEC) = 3

```
fstat(3, {st_mode=S_IFREG|0755, st_size=2151672, ...}) = 0  
mmap(NULL, 3981792, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f4a4235b000  
mprotect(0x7f4a4251d000, 2097152, PROT_NONE) = 0  
mmap(0x7f4a4271d000, 24576, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1c2000) =  
0x7f4a4271d000  
mmap(0x7f4a42723000, 16864, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f4a42723000  
close(3) = 0  
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7f4a4293b000  
mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7f4a42939000
```

Getting on with it

```
>_ [root@cpu2 ~]# strace echo  
execve("/bin/echo", ["echo"], /* 18 vars */) = 0  
brk(NULL) = 0x6f0000  
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7f4a42948000  
access("/etc/ld.so.preload", R_OK) = -1 ENOENT (No such file or directory)  
open("/etc/ld.so.cache", O_RDONLY|O_CLOEXEC) = 3  
fstat(3, {st_mode=S_IFREG|0644, st_size=45266, ...}) = 0  
mmap(NULL, 45266, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7f4a4293c000
```

fstat(3, {st_mode=S_IFREG|0644, st_size=45266, ...}) = 0

```
-----  
mprotect(0x7f4a4251d000, 2097152, PROT_NONE) = 0  
mmap(0x7f4a4271d000, 24576, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1c2000) = 0x7f4a4271d000  
mmap(0x7f4a42723000, 16864, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f4a42723000  
close(3) = 0  
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7f4a4293b000  
mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7f4a42939000
```

Getting on with it

Let's do some stuff.



Let's do some stuff.

