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Subject: utrace regressions (was: -mm merge plans for 2.6.21)

Posted by [adobriyan](#) on Mon, 12 Feb 2007 12:47:06 GMT

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> utrace-utrace-tracehook.patch  
> utrace-utrace-tracehook-ia64.patch  
> utrace-utrace-tracehook-sparc64.patch  
> utrace-utrace-tracehook-s390.patch  
> utrace-utrace-regset.patch  
> utrace-utrace-regset-ia64.patch  
> utrace-utrace-regset-sparc64.patch  
> utrace-utrace-regset-s390.patch  
> utrace-utrace-core.patch  
> utrace-utrace-ptrace-compatible.patch  
> utrace-utrace-ptrace-compatible-ia64.patch  
> utrace-utrace-ptrace-compatible-sparc64.patch  
> utrace-utrace-ptrace-compatible-s390.patch

> utrace just got added to -mm.

We're aware of two regressions compared to mainline if ptrace is utrace:

1) zero holes for PTRACE\_PEEKUSR vanished.

strace(1) when sees unknown syscall, does something like:

```
for (i = 0; i < MAX_ARGS; i++)  
    if (ptrace(PTRACE_PEEKUSR, i * 4, ...) < 0)  
        return -1;
```

since THREAD\_SIZE is 17 on x86 which is less than MAX\_ARGS (32 on x86), you'll get -EIO(utrace) or 0(ptrace) when i=0.

No new syscalls stracing for developers.

Proposed patch:

```
--- a/arch/i386/kernel/ptrace.c  
+++ b/arch/i386/kernel/ptrace.c  
@@ -728,6 +728,7 @@ EXPORT_SYMBOL_GPL(utrace_i386_native);  
#ifdef CONFIG_PTRACE  
static const struct ptrace_layout_segment i386_uarea[] = {  
    {0, FRAME_SIZE*4, 0, 0},  
+ {FRAME_SIZE*4, offsetof(struct user, u_debugreg[0]), -1, 0},  
    {offsetof(struct user, u_debugreg[0]),  
      offsetof(struct user, u_debugreg[8]), 4, 0},  
    {0, 0, -1, 0}
```

Looks like x86\_64 also needs zero holes added, haven't checked in runtime.

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2. The following proggy renders box unusable in ~10 seconds (but not mainline kernel where Ctrl+C will kill process).

```
#include <stdio.h>
#include <unistd.h>
#include <pthread.h>
#include <sys/ptrace.h>
#include <signal.h>

static void *thread_func(void *arg)
{
    execl("/proc/self/exe", NULL);
    return NULL;
}

int main(int argc, const char *argv[])
{
    pthread_t thread;
    int pid, n;

    if (argv[0] && (pid = fork()))
        for (n = 1; /*n < 1000000*/; ++n) {
            ptrace(PTRACE_ATTACH, pid, NULL, 0);
            ptrace(PTRACE_DETACH, pid, NULL, 0);
            if (!(n % 100000))
                printf("passed: %d\n", n);
        }

    if (pthread_create(&thread, NULL, thread_func, NULL))
        perror("pthread_create");

    while (1)
        pause();
    return 1;
}
```

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Subject: Re: utrace regressions (was: -mm merge plans for 2.6.21)  
Posted by [Roland McGrath](#) on Mon, 12 Feb 2007 21:36:34 GMT  
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> We're aware of two regressions compared to mainline if ptrace is utrace:

Thanks very much for bringing these to my attention.

> 1) zero holes for PTRACE\_PEEKUSR vanished.

I've fixed this in the current patches.

> 2. The following proggie renders box unusable in ~10 seconds (but not  
> mainline kernel where Ctrl+C will kill process).

I haven't been able to reproduce this so far on my test machine. I got bored after about 10 minutes ("passed: 119200000"). The machine remains responsive and the test dies immediately on hitting C-c. I'll try it on some other machines. It would help to know what kind of unusable (crashy, leaky, wedgy?).

Thanks,  
Roland

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Subject: Re: utrace regressions (was: -mm merge plans for 2.6.21)

Posted by [adobriyan](#) on Tue, 13 Feb 2007 13:05:30 GMT

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On Mon, Feb 12, 2007 at 01:36:34PM -0800, Roland McGrath wrote:

> > 2. The following proggie renders box unusable in ~10 seconds (but not  
> > mainline kernel where Ctrl+C will kill process).

>

> I haven't been able to reproduce this so far on my test machine. I got  
> bored after about 10 minutes ("passed: 119200000"). The machine remains  
> responsive and the test dies immediately on hitting C-c. I'll try it on  
> some other machines. It would help to know what kind of unusable (crashy,  
> leaky, wedgy?).

This is fresh pull 2.6.20-ec2f9d1331f658433411c58077871e1eef4ee1b4 with  
linux-2.6.20-current-utrace.patch slapped on top (without rejects)  
utrace is on and ptrace is on too.

the behaviour is

```
$ expl_ptratt
```

```
passed: 100000
```

```
passed: 200000
```

```
...
```

```
passed: [always different number, but in several seconds]
```

```
[pause]
```

[OOM killer wakes up steadily killing processes ]  
[messages scroll away ]

I'll turn more debugging options now.

Just in case, .config:

```
#
# Automatically generated make config: don't edit
# Linux kernel version: 2.6.20
# Tue Feb 13 15:28:38 2007
#
CONFIG_X86_32=y
CONFIG_GENERIC_TIME=y
CONFIG_LOCKDEP_SUPPORT=y
CONFIG_STACKTRACE_SUPPORT=y
CONFIG_SEMAPHORE_SLEEPERS=y
CONFIG_X86=y
CONFIG_MMU=y
CONFIG_ZONE_DMA=y
CONFIG_GENERIC_ISA_DMA=y
CONFIG_GENERIC_IOMAP=y
CONFIG_GENERIC_BUG=y
CONFIG_GENERIC_HWEIGHT=y
CONFIG_ARCH_MAY_HAVE_PC_FDC=y
CONFIG_DMI=y
CONFIG_DEFCONFIG_LIST="/lib/modules/$UNAME_RELEASE/.config"

#
# Code maturity level options
#
CONFIG_EXPERIMENTAL=y
CONFIG_BROKEN_ON_SMP=y
CONFIG_INIT_ENV_ARG_LIMIT=32

#
# General setup
#
CONFIG_LOCALVERSION=""
# CONFIG_LOCALVERSION_AUTO is not set
CONFIG_SWAP=y
CONFIG_SYSVIPC=y
CONFIG_IPC_NS=y
# CONFIG_POSIX_MQUEUE is not set
# CONFIG_BSD_PROCESS_ACCT is not set
# CONFIG_TASKSTATS is not set
CONFIG_UTS_NS=y
# CONFIG_AUDIT is not set
```

```

CONFIG_IKCONFIG=y
CONFIG_IKCONFIG_PROC=y
# CONFIG_SYSFS_DEPRECATED is not set
# CONFIG_RELAY is not set
# CONFIG_CC_OPTIMIZE_FOR_SIZE is not set
CONFIG_SYSCTL=y
# CONFIG_EMBEDDED is not set
CONFIG_UID16=y
CONFIG_SYSCTL_SYSCALL=y
CONFIG_KALLSYMS=y
CONFIG_KALLSYMS_ALL=y
# CONFIG_KALLSYMS_EXTRA_PASS is not set
CONFIG_HOTPLUG=y
CONFIG_PRINTK=y
CONFIG_BUG=y
CONFIG_ELF_CORE=y
CONFIG_BASE_FULL=y
CONFIG_FUTEX=y
CONFIG_EPOLL=y
CONFIG_SHMEM=y
CONFIG_SLAB=y
CONFIG_VM_EVENT_COUNTERS=y
CONFIG_RT_MUTEXES=y
# CONFIG_TINY_SHMEM is not set
CONFIG_BASE_SMALL=0
# CONFIG_SLOB is not set

#
# Loadable module support
#
CONFIG_MODULES=y
CONFIG_MODULE_UNLOAD=y
# CONFIG_MODULE_FORCE_UNLOAD is not set
# CONFIG_MODVERSIONS is not set
# CONFIG_MODULE_SRCVERSION_ALL is not set
CONFIG_KMOD=y

#
# Process debugging support
#
CONFIG_UTRACE=y
CONFIG_PTRACE=y

#
# Block layer
#
CONFIG_BLOCK=y
# CONFIG_LBD is not set

```

```
# CONFIG_BLK_DEV_IO_TRACE is not set
# CONFIG_LSF is not set

#
# IO Schedulers
#
CONFIG_IOSCHED_NOOP=y
# CONFIG_IOSCHED_AS is not set
# CONFIG_IOSCHED_DEADLINE is not set
CONFIG_IOSCHED_CFQ=y
# CONFIG_DEFAULT_AS is not set
# CONFIG_DEFAULT_DEADLINE is not set
CONFIG_DEFAULT_CFQ=y
# CONFIG_DEFAULT_NOOP is not set
CONFIG_DEFAULT_IOSCHED="cfq"

#
# Processor type and features
#
# CONFIG_SMP is not set
CONFIG_X86_PC=y
# CONFIG_X86_ELAN is not set
# CONFIG_X86_VOYAGER is not set
# CONFIG_X86_NUMAQ is not set
# CONFIG_X86_SUMMIT is not set
# CONFIG_X86_BIGSMP is not set
# CONFIG_X86_VISWS is not set
# CONFIG_X86_GENERICARCH is not set
# CONFIG_X86_ES7000 is not set
# CONFIG_PARAVIRT is not set
# CONFIG_M386 is not set
# CONFIG_M486 is not set
# CONFIG_M586 is not set
# CONFIG_M586TSC is not set
# CONFIG_M586MMX is not set
# CONFIG_M686 is not set
# CONFIG_MPENTIUMII is not set
# CONFIG_MPENTIUMIII is not set
# CONFIG_MPENTIUMMM is not set
# CONFIG_MCORE2 is not set
CONFIG_MPENTIUM4=y
# CONFIG_MK6 is not set
# CONFIG_MK7 is not set
# CONFIG_MK8 is not set
# CONFIG_MCRUSOE is not set
# CONFIG_MEFFICEON is not set
# CONFIG_MWINCHIP6 is not set
# CONFIG_MWINCHIP2 is not set
```

```
# CONFIG_MWINCHIP3D is not set
# CONFIG_MGEODEGX1 is not set
# CONFIG_MGEODE_LX is not set
# CONFIG_MCYRIXIII is not set
# CONFIG_MVIAC3_2 is not set
# CONFIG_X86_GENERIC is not set
CONFIG_X86_CMPXCHG=y
CONFIG_X86_XADD=y
CONFIG_X86_L1_CACHE_SHIFT=7
CONFIG_RWSEM_XCHGADD_ALGORITHM=y
# CONFIG_ARCH_HAS_ILOG2_U32 is not set
# CONFIG_ARCH_HAS_ILOG2_U64 is not set
CONFIG_GENERIC_CALIBRATE_DELAY=y
CONFIG_X86_WP_WORKS_OK=y
CONFIG_X86_INVLPG=y
CONFIG_X86_BSWAP=y
CONFIG_X86_POPAD_OK=y
CONFIG_X86_CMPXCHG64=y
CONFIG_X86_GOOD_APIC=y
CONFIG_X86_INTEL_USERCOPY=y
CONFIG_X86_USE_PPRO_CHECKSUM=y
CONFIG_X86_TSC=y
CONFIG_HPET_TIMER=y
CONFIG_HPET_EMULATE_RTC=y
# CONFIG_PREEMPT_NONE is not set
CONFIG_PREEMPT_VOLUNTARY=y
# CONFIG_PREEMPT is not set
# CONFIG_X86_UP_APIC is not set
CONFIG_X86_MCE=y
CONFIG_X86_MCE_NONFATAL=y
CONFIG_VM86=y
# CONFIG_TOSHIBA is not set
# CONFIG_I8K is not set
# CONFIG_X86_REBOOTFIXUPS is not set
# CONFIG_MICROCODE is not set
CONFIG_X86_MSR=m
CONFIG_X86_CPUID=m
```

```
#
# Firmware Drivers
#
# CONFIG_EDD is not set
# CONFIG_DELL_RBU is not set
# CONFIG_DCDBAS is not set
# CONFIG_NOHIGHMEM is not set
CONFIG_HIGHMEM4G=y
# CONFIG_HIGHMEM64G is not set
CONFIG_PAGE_OFFSET=0xC0000000
```

```

CONFIG_HIGHMEM=y
CONFIG_ARCH_FLATMEM_ENABLE=y
CONFIG_ARCH_SPARSEMEM_ENABLE=y
CONFIG_ARCH_SELECT_MEMORY_MODEL=y
CONFIG_ARCH_POPULATES_NODE_MAP=y
CONFIG_SELECT_MEMORY_MODEL=y
CONFIG_FLATMEM_MANUAL=y
# CONFIG_DISCONTIGMEM_MANUAL is not set
# CONFIG_SPARSEMEM_MANUAL is not set
CONFIG_FLATMEM=y
CONFIG_FLAT_NODE_MEM_MAP=y
CONFIG_SPARSEMEM_STATIC=y
CONFIG_SPLIT_PTLOCK_CPUS=4
# CONFIG_RESOURCES_64BIT is not set
CONFIG_ZONE_DMA_FLAG=1
CONFIG_HIGHPTE=y
# CONFIG_MATH_EMULATION is not set
CONFIG_MTRR=y
# CONFIG_EFI is not set
# CONFIG_SECCOMP is not set
# CONFIG_HZ_100 is not set
CONFIG_HZ_250=y
# CONFIG_HZ_300 is not set
# CONFIG_HZ_1000 is not set
CONFIG_HZ=250
# CONFIG_KEXEC is not set
# CONFIG_CRASH_DUMP is not set
CONFIG_PHYSICAL_START=0x100000
# CONFIG_RELOCATABLE is not set
CONFIG_PHYSICAL_ALIGN=0x100000
# CONFIG_COMPAT_VDSO is not set
CONFIG_ARCH_ENABLE_MEMORY_HOTPLUG=y

#
# Power management options (ACPI, APM)
#
CONFIG_PM=y
# CONFIG_PM_LEGACY is not set
# CONFIG_PM_DEBUG is not set
# CONFIG_PM_SYSFS_DEPRECATED is not set
# CONFIG_SOFTWARE_SUSPEND is not set

#
# ACPI (Advanced Configuration and Power Interface) Support
#
CONFIG_ACPI=y
CONFIG_ACPI_SLEEP=y
CONFIG_ACPI_SLEEP_PROC_FS=y

```



```
# CONFIG_ACPI_SLEEP_PROC_SLEEP is not set
# CONFIG_ACPI_PROCFS is not set
# CONFIG_ACPI_AC is not set
# CONFIG_ACPI_BATTERY is not set
CONFIG_ACPI_BUTTON=m
CONFIG_ACPI_HOTKEY=m
CONFIG_ACPI_FAN=m
# CONFIG_ACPI_DOCK is not set
# CONFIG_ACPI_BAY is not set
# CONFIG_ACPI_PROCESSOR is not set
# CONFIG_ACPI_ASUS is not set
# CONFIG_ACPI_IBM is not set
# CONFIG_ACPI_TOSHIBA is not set
CONFIG_ACPI_BLACKLIST_YEAR=0
# CONFIG_ACPI_DEBUG is not set
CONFIG_ACPI_EC=y
CONFIG_ACPI_POWER=y
CONFIG_ACPI_SYSTEM=y
CONFIG_X86_PM_TIMER=y
# CONFIG_ACPI_CONTAINER is not set

#
# APM (Advanced Power Management) BIOS Support
#
# CONFIG_APM is not set

#
# CPU Frequency scaling
#
CONFIG_CPU_FREQ=y
CONFIG_CPU_FREQ_TABLE=y
# CONFIG_CPU_FREQ_DEBUG is not set
CONFIG_CPU_FREQ_STAT=y
# CONFIG_CPU_FREQ_STAT_DETAILS is not set
CONFIG_CPU_FREQ_DEFAULT_GOV_PERFORMANCE=y
# CONFIG_CPU_FREQ_DEFAULT_GOV_USERSPACE is not set
CONFIG_CPU_FREQ_GOV_PERFORMANCE=y
# CONFIG_CPU_FREQ_GOV_POWERSAVE is not set
# CONFIG_CPU_FREQ_GOV_USERSPACE is not set
# CONFIG_CPU_FREQ_GOV_ONDEMAND is not set
# CONFIG_CPU_FREQ_GOV_CONSERVATIVE is not set

#
# CPUFreq processor drivers
#
# CONFIG_X86_POWERNOW_K6 is not set
# CONFIG_X86_POWERNOW_K7 is not set
# CONFIG_X86_POWERNOW_K8 is not set
```

```
# CONFIG_X86_GX_SUSPMOD is not set
# CONFIG_X86_SPEEDSTEP_CENTRINO is not set
# CONFIG_X86_SPEEDSTEP_ICH is not set
# CONFIG_X86_SPEEDSTEP_SMI is not set
CONFIG_X86_P4_CLOCKMOD=m
# CONFIG_X86_CPUFREQ_NFORCE2 is not set
# CONFIG_X86_LONGRUN is not set
```

```
#
# shared options
#
CONFIG_X86_SPEEDSTEP_LIB=m
```

```
#
# Bus options (PCI, PCMCIA, EISA, MCA, ISA)
#
CONFIG_PCI=y
# CONFIG_PCI_GOBIOS is not set
# CONFIG_PCI_GOMMCONFIG is not set
# CONFIG_PCI_GODIRECT is not set
CONFIG_PCI_GOANY=y
CONFIG_PCI_BIOS=y
CONFIG_PCI_DIRECT=y
CONFIG_PCI_MMCONFIG=y
# CONFIG_PCIEPORTBUS is not set
# CONFIG_PCI_DEBUG is not set
CONFIG_ISA_DMA_API=y
# CONFIG_ISA is not set
# CONFIG_MCA is not set
# CONFIG_SCx200 is not set
```

```
#
# PCCARD (PCMCIA/CardBus) support
#
# CONFIG_PCCARD is not set
```

```
#
# PCI Hotplug Support
#
# CONFIG_HOTPLUG_PCI is not set
```

```
#
# Executable file formats
#
CONFIG_BINFMT_ELF=y
# CONFIG_BINFMT_AOUT is not set
# CONFIG_BINFMT_MISC is not set
```

```
#
# Networking
#
CONFIG_NET=y

#
# Networking options
#
# CONFIG_NETDEBUG is not set
CONFIG_PACKET=m
CONFIG_PACKET_MMAP=y
CONFIG_UNIX=y
# CONFIG_NET_KEY is not set
CONFIG_INET=y
# CONFIG_IP_MULTICAST is not set
CONFIG_IP_ADVANCED_ROUTER=y
CONFIG_ASK_IP_FIB_HASH=y
# CONFIG_IP_FIB_TRIE is not set
CONFIG_IP_FIB_HASH=y
CONFIG_IP_MULTIPLE_TABLES=y
CONFIG_IP_ROUTE_MULTIPATH=y
# CONFIG_IP_ROUTE_MULTIPATH_CACHED is not set
CONFIG_IP_ROUTE_VERBOSE=y
# CONFIG_IP_PNP is not set
CONFIG_NET_IPIP=m
CONFIG_NET_IPGRE=m
# CONFIG_ARPD is not set
CONFIG_SYN_COOKIES=y
# CONFIG_INET_AH is not set
# CONFIG_INET_ESP is not set
# CONFIG_INET_IPCOMP is not set
# CONFIG_INET_XFRM_TUNNEL is not set
CONFIG_INET_TUNNEL=m
# CONFIG_INET_XFRM_MODE_TRANSPORT is not set
# CONFIG_INET_XFRM_MODE_TUNNEL is not set
# CONFIG_INET_XFRM_MODE_BEET is not set
CONFIG_INET_DIAG=y
CONFIG_INET_TCP_DIAG=y
# CONFIG_TCP_CONG_ADVANCED is not set
CONFIG_TCP_CONG_CUBIC=y
CONFIG_DEFAULT_TCP_CONG="cubic"
# CONFIG_TCP_MD5SIG is not set

#
# IP: Virtual Server Configuration
#
# CONFIG_IP_VS is not set
# CONFIG_IPV6 is not set
```

```
# CONFIG_INET6_XFRM_TUNNEL is not set
# CONFIG_INET6_TUNNEL is not set
# CONFIG_NETWORK_SECMARK is not set
CONFIG_NETFILTER=y
# CONFIG_NETFILTER_DEBUG is not set

#
# Core Netfilter Configuration
#
# CONFIG_NETFILTER_NETLINK is not set
# CONFIG_NF_CONNTRACK_ENABLED is not set
CONFIG_NETFILTER_XTABLES=m
# CONFIG_NETFILTER_XT_TARGET_CLASSIFY is not set
# CONFIG_NETFILTER_XT_TARGET_MARK is not set
# CONFIG_NETFILTER_XT_TARGET_NFQUEUE is not set
# CONFIG_NETFILTER_XT_TARGET_NFLOG is not set
# CONFIG_NETFILTER_XT_TARGET_TCPMSS is not set
# CONFIG_NETFILTER_XT_MATCH_COMMENT is not set
# CONFIG_NETFILTER_XT_MATCH_DCCP is not set
# CONFIG_NETFILTER_XT_MATCH_DSCP is not set
# CONFIG_NETFILTER_XT_MATCH_ESP is not set
CONFIG_NETFILTER_XT_MATCH_LENGTH=m
CONFIG_NETFILTER_XT_MATCH_LIMIT=m
CONFIG_NETFILTER_XT_MATCH_MAC=m
CONFIG_NETFILTER_XT_MATCH_MARK=m
CONFIG_NETFILTER_XT_MATCH_MULTIPORT=m
# CONFIG_NETFILTER_XT_MATCH_PKTTYPE is not set
# CONFIG_NETFILTER_XT_MATCH_QUOTA is not set
# CONFIG_NETFILTER_XT_MATCH_REALM is not set
# CONFIG_NETFILTER_XT_MATCH_SCTP is not set
# CONFIG_NETFILTER_XT_MATCH_STATISTIC is not set
# CONFIG_NETFILTER_XT_MATCH_STRING is not set
# CONFIG_NETFILTER_XT_MATCH_TCPMSS is not set
# CONFIG_NETFILTER_XT_MATCH_HASHLIMIT is not set

#
# IP: Netfilter Configuration
#
# CONFIG_IP_NF_QUEUE is not set
CONFIG_IP_NF_IPTABLES=m
CONFIG_IP_NF_MATCH_IPRANGE=m
CONFIG_IP_NF_MATCH_TOS=m
CONFIG_IP_NF_MATCH_RECENT=m
# CONFIG_IP_NF_MATCH_ECN is not set
# CONFIG_IP_NF_MATCH_AH is not set
CONFIG_IP_NF_MATCH_TTL=m
# CONFIG_IP_NF_MATCH_OWNER is not set
# CONFIG_IP_NF_MATCH_ADDRTYPE is not set
```

```
CONFIG_IP_NF_FILTER=m
CONFIG_IP_NF_TARGET_REJECT=m
CONFIG_IP_NF_TARGET_LOG=m
# CONFIG_IP_NF_TARGET_ULOG is not set
# CONFIG_IP_NF_MANGLE is not set
# CONFIG_IP_NF_RAW is not set
# CONFIG_IP_NF_ARPTABLES is not set

#
# DCCP Configuration (EXPERIMENTAL)
#
# CONFIG_IP_DCCP is not set

#
# SCTP Configuration (EXPERIMENTAL)
#
# CONFIG_IP_SCTP is not set

#
# TIPC Configuration (EXPERIMENTAL)
#
# CONFIG_TIPC is not set
# CONFIG_ATM is not set
# CONFIG_BRIDGE is not set
# CONFIG_VLAN_8021Q is not set
# CONFIG_DECNET is not set
# CONFIG_LLC2 is not set
# CONFIG_IPX is not set
# CONFIG_ATALK is not set
# CONFIG_X25 is not set
# CONFIG_LAPB is not set
# CONFIG_ECONET is not set
# CONFIG_WAN_ROUTER is not set

#
# QoS and/or fair queueing
#
CONFIG_NET_SCHED=y
CONFIG_NET_SCH_FIFO=y
CONFIG_NET_SCH_CLK_JIFFIES=y
# CONFIG_NET_SCH_CLK_GETTIMEOFDAY is not set
# CONFIG_NET_SCH_CLK_CPU is not set

#
# Queueing/Scheduling
#
CONFIG_NET_SCH_CBQ=m
CONFIG_NET_SCH_HTB=m
```

```
# CONFIG_NET_SCH_HFSC is not set
CONFIG_NET_SCH_PRIO=m
CONFIG_NET_SCH_RED=m
CONFIG_NET_SCH_SFQ=m
CONFIG_NET_SCH_TEQL=m
CONFIG_NET_SCH_TBF=m
CONFIG_NET_SCH_GRED=m
CONFIG_NET_SCH_DSMARK=m
# CONFIG_NET_SCH_NETEM is not set
CONFIG_NET_SCH_INGRESS=m
```

```
#
# Classification
#
CONFIG_NET_CLS=y
# CONFIG_NET_CLS_BASIC is not set
CONFIG_NET_CLS_TCINDEX=m
CONFIG_NET_CLS_ROUTE4=m
CONFIG_NET_CLS_ROUTE=y
CONFIG_NET_CLS_FW=m
CONFIG_NET_CLS_U32=m
# CONFIG_CLS_U32_PERF is not set
# CONFIG_CLS_U32_MARK is not set
# CONFIG_NET_CLS_RSVP is not set
# CONFIG_NET_CLS_RSVP6 is not set
# CONFIG_NET_EMATCH is not set
# CONFIG_NET_CLS_ACT is not set
CONFIG_NET_CLS_POLICE=y
# CONFIG_NET_CLS_IND is not set
CONFIG_NET_ESTIMATOR=y
```

```
#
# Network testing
#
# CONFIG_NET_PKTGEN is not set
# CONFIG_HAMRADIO is not set
# CONFIG_IRDA is not set
# CONFIG_BT is not set
# CONFIG_IEEE80211 is not set
CONFIG_FIB_RULES=y
```

```
#
# Device Drivers
#
```

```
#
# Generic Driver Options
#
```

```
CONFIG_STANDALONE=y
CONFIG_PREVENT_FIRMWARE_BUILD=y
CONFIG_FW_LOADER=y
# CONFIG_DEBUG_DRIVER is not set
# CONFIG_DEBUG_DEVRES is not set
# CONFIG_SYS_HYPERVISOR is not set

#
# Connector - unified userspace <-> kernelspace linker
#
# CONFIG_CONNECTOR is not set

#
# Memory Technology Devices (MTD)
#
# CONFIG_MTD is not set

#
# Parallel port support
#
# CONFIG_PARPORT is not set

#
# Plug and Play support
#
# CONFIG_PNP is not set

#
# Block devices
#
# CONFIG_BLK_DEV_FD is not set
# CONFIG_BLK_CPQ_DA is not set
# CONFIG_BLK_CPQ_CISS_DA is not set
# CONFIG_BLK_DEV_DAC960 is not set
# CONFIG_BLK_DEV_UMEM is not set
# CONFIG_BLK_DEV_COW_COMMON is not set
CONFIG_BLK_DEV_LOOP=y
# CONFIG_BLK_DEV_CRYPTOLOOP is not set
# CONFIG_BLK_DEV_NBD is not set
# CONFIG_BLK_DEV_SX8 is not set
# CONFIG_BLK_DEV_UB is not set
# CONFIG_BLK_DEV_RAM is not set
# CONFIG_BLK_DEV_INITRD is not set
# CONFIG_CDROM_PKTCDVD is not set
# CONFIG_ATA_OVER_ETH is not set

#
# Misc devices
```

```
#
# CONFIG_IBM_ASM is not set
# CONFIG_SGI_IOC4 is not set
# CONFIG_TIFM_CORE is not set

#
# ATA/ATAPI/MFM/RLL support
#
CONFIG_IDE=y
CONFIG_BLK_DEV_IDE=y

#
# Please see Documentation/ide.txt for help/info on IDE drives
#
# CONFIG_BLK_DEV_IDE_SATA is not set
# CONFIG_BLK_DEV_HD_IDE is not set
CONFIG_BLK_DEV_IDEDISK=y
# CONFIG_IDEDISK_MULTI_MODE is not set
CONFIG_BLK_DEV_IDECD=m
# CONFIG_BLK_DEV_IDETAPE is not set
# CONFIG_BLK_DEV_IDEFLOPPY is not set
CONFIG_BLK_DEV_IDESCSI=m
# CONFIG_BLK_DEV_IDEACPI is not set
# CONFIG_IDE_TASK_IOCTL is not set

#
# IDE chipset support/bugfixes
#
CONFIG_IDE_GENERIC=y
# CONFIG_BLK_DEV_CMD640 is not set
CONFIG_BLK_DEV_IDEPCI=y
CONFIG_IDEPCI_SHARE_IRQ=y
# CONFIG_BLK_DEV_OFFBOARD is not set
CONFIG_BLK_DEV_GENERIC=y
# CONFIG_BLK_DEV_OPTI621 is not set
# CONFIG_BLK_DEV_RZ1000 is not set
CONFIG_BLK_DEV_IDEDMA_PCI=y
# CONFIG_BLK_DEV_IDEDMA_FORCED is not set
CONFIG_IDEDMA_PCI_AUTO=y
# CONFIG_IDEDMA_ONLYDISK is not set
# CONFIG_BLK_DEV_AEC62XX is not set
# CONFIG_BLK_DEV_ALI15X3 is not set
# CONFIG_BLK_DEV_AMD74XX is not set
# CONFIG_BLK_DEV_ATIIXP is not set
# CONFIG_BLK_DEV_CMD64X is not set
# CONFIG_BLK_DEV_TRIFLEX is not set
# CONFIG_BLK_DEV_CY82C693 is not set
# CONFIG_BLK_DEV_CS5520 is not set
```



```
# CONFIG_BLK_DEV_CS5530 is not set
# CONFIG_BLK_DEV_CS5535 is not set
# CONFIG_BLK_DEV_HPT34X is not set
# CONFIG_BLK_DEV_HPT366 is not set
# CONFIG_BLK_DEV_JMICRON is not set
# CONFIG_BLK_DEV_SC1200 is not set
CONFIG_BLK_DEV_PIIX=y
# CONFIG_BLK_DEV_IT8213 is not set
# CONFIG_BLK_DEV_IT821X is not set
# CONFIG_BLK_DEV_NS87415 is not set
# CONFIG_BLK_DEV_PDC202XX_OLD is not set
# CONFIG_BLK_DEV_PDC202XX_NEW is not set
# CONFIG_BLK_DEV_SVWKS is not set
# CONFIG_BLK_DEV_SIIMAGE is not set
# CONFIG_BLK_DEV_SIS5513 is not set
# CONFIG_BLK_DEV_SLC90E66 is not set
# CONFIG_BLK_DEV_TRM290 is not set
# CONFIG_BLK_DEV_VIA82CXXX is not set
# CONFIG_BLK_DEV_TC86C001 is not set
# CONFIG_IDE_ARM is not set
CONFIG_BLK_DEV_IDEDMA=y
# CONFIG_IDEDMA_IVB is not set
CONFIG_IDEDMA_AUTO=y
# CONFIG_BLK_DEV_HD is not set

#
# SCSI device support
#
# CONFIG_RAID_ATTRS is not set
CONFIG_SCSI=y
# CONFIG_SCSI_TGT is not set
# CONFIG_SCSI_NETLINK is not set
# CONFIG_SCSI_PROC_FS is not set

#
# SCSI support type (disk, tape, CD-ROM)
#
CONFIG_BLK_DEV_SD=y
# CONFIG_CHR_DEV_ST is not set
# CONFIG_CHR_DEV_OSST is not set
CONFIG_BLK_DEV_SR=m
# CONFIG_BLK_DEV_SR_VENDOR is not set
CONFIG_CHR_DEV_SG=m
# CONFIG_CHR_DEV_SCH is not set

#
# Some SCSI devices (e.g. CD jukebox) support multiple LUNs
#
```

```
# CONFIG_SCSI_MULTI_LUN is not set
CONFIG_SCSI_CONSTANTS=y
CONFIG_SCSI_LOGGING=y
# CONFIG_SCSI_SCAN_ASYNC is not set

#
# SCSI Transports
#
# CONFIG_SCSI_SPI_ATTRS is not set
# CONFIG_SCSI_FC_ATTRS is not set
# CONFIG_SCSI_ISCSI_ATTRS is not set
# CONFIG_SCSI_SAS_ATTRS is not set
# CONFIG_SCSI_SAS_LIBSAS is not set

#
# SCSI low-level drivers
#
# CONFIG_ISCSI_TCP is not set
# CONFIG_BLK_DEV_3W_XXXX_RAID is not set
# CONFIG_SCSI_3W_9XXX is not set
# CONFIG_SCSI_ACARD is not set
# CONFIG_SCSI_AACRAID is not set
# CONFIG_SCSI_AIC7XXX is not set
# CONFIG_SCSI_AIC7XXX_OLD is not set
# CONFIG_SCSI_AIC79XX is not set
# CONFIG_SCSI_AIC94XX is not set
# CONFIG_SCSI_DPT_I2O is not set
# CONFIG_SCSI_ADVANSYS is not set
# CONFIG_SCSI_ARCMSR is not set
# CONFIG_MEGARAID_NEWGEN is not set
# CONFIG_MEGARAID_LEGACY is not set
# CONFIG_MEGARAID_SAS is not set
# CONFIG_SCSI_HPTIOP is not set
# CONFIG_SCSI_BUSLOGIC is not set
# CONFIG_SCSI_DM3191D is not set
# CONFIG_SCSI_EATA is not set
# CONFIG_SCSI_FUTURE_DOMAIN is not set
# CONFIG_SCSI_GDTH is not set
# CONFIG_SCSI_IPS is not set
# CONFIG_SCSI_INITIO is not set
# CONFIG_SCSI_INIA100 is not set
# CONFIG_SCSI_STEX is not set
# CONFIG_SCSI_SYM53C8XX_2 is not set
# CONFIG_SCSI_IPR is not set
# CONFIG_SCSI_QLOGIC_1280 is not set
# CONFIG_SCSI_QLA_FC is not set
# CONFIG_SCSI_QLA_ISCSI is not set
# CONFIG_SCSI_LPFC is not set
```

```
# CONFIG_SCSI_DC395x is not set
# CONFIG_SCSI_DC390T is not set
# CONFIG_SCSI_NSP32 is not set
# CONFIG_SCSI_DEBUG is not set
# CONFIG_SCSI_SRP is not set

#
# Serial ATA (prod) and Parallel ATA (experimental) drivers
#
CONFIG_ATA=y
# CONFIG_ATA_NONSTANDARD is not set
# CONFIG_SATA_AHCI is not set
# CONFIG_SATA_SVW is not set
CONFIG_ATA_PII=y
# CONFIG_SATA_MV is not set
# CONFIG_SATA_NV is not set
# CONFIG_PDC_ADMA is not set
# CONFIG_SATA_QSTOR is not set
# CONFIG_SATA_PROMISE is not set
# CONFIG_SATA_SX4 is not set
# CONFIG_SATA_SIL is not set
# CONFIG_SATA_SIL24 is not set
# CONFIG_SATA_SIS is not set
# CONFIG_SATA_ULI is not set
# CONFIG_SATA_VIA is not set
# CONFIG_SATA_VITESSE is not set
# CONFIG_SATA_INIC162X is not set
CONFIG_SATA_INTEL_COMBINED=y
# CONFIG_PATA_ALI is not set
# CONFIG_PATA_AMD is not set
# CONFIG_PATA_ARTOP is not set
# CONFIG_PATA_ATIIXP is not set
# CONFIG_PATA_CMD64X is not set
# CONFIG_PATA_CS5520 is not set
# CONFIG_PATA_CS5530 is not set
# CONFIG_PATA_CS5535 is not set
# CONFIG_PATA_CYPRESS is not set
# CONFIG_PATA_EFAR is not set
# CONFIG_ATA_GENERIC is not set
# CONFIG_PATA_HPT366 is not set
# CONFIG_PATA_HPT37X is not set
# CONFIG_PATA_HPT3X2N is not set
# CONFIG_PATA_HPT3X3 is not set
# CONFIG_PATA_IT821X is not set
# CONFIG_PATA_IT8213 is not set
# CONFIG_PATA_JMICRON is not set
# CONFIG_PATA_TRIFLEX is not set
# CONFIG_PATA_MARVELL is not set
```

# CONFIG\_PATA\_MPIIX is not set  
# CONFIG\_PATA\_OLDPIIX is not set  
# CONFIG\_PATA\_NETCELL is not set  
# CONFIG\_PATA\_NS87410 is not set  
# CONFIG\_PATA\_OPTI is not set  
# CONFIG\_PATA\_OPTIDMA is not set  
# CONFIG\_PATA\_PDC\_OLD is not set  
# CONFIG\_PATA\_RADISYS is not set  
# CONFIG\_PATA\_RZ1000 is not set  
# CONFIG\_PATA\_SC1200 is not set  
# CONFIG\_PATA\_SERVERWORKS is not set  
# CONFIG\_PATA\_PDC2027X is not set  
# CONFIG\_PATA\_SIL680 is not set  
# CONFIG\_PATA\_SIS is not set  
# CONFIG\_PATA\_VIA is not set  
# CONFIG\_PATA\_WINBOND is not set

#  
# Multi-device support (RAID and LVM)  
#  
# CONFIG\_MD is not set

#  
# Fusion MPT device support  
#  
# CONFIG\_FUSION is not set  
# CONFIG\_FUSION\_SPI is not set  
# CONFIG\_FUSION\_FC is not set  
# CONFIG\_FUSION\_SAS is not set

#  
# IEEE 1394 (FireWire) support  
#  
# CONFIG\_IEEE1394 is not set

#  
# I2O device support  
#  
# CONFIG\_I2O is not set

#  
# Macintosh device drivers  
#  
# CONFIG\_MAC\_EMUMOUSEBTN is not set

#  
# Network device support  
#

```
CONFIG_NETDEVICES=y
# CONFIG_DUMMY is not set
# CONFIG_BONDING is not set
# CONFIG_EQUALIZER is not set
# CONFIG_TUN is not set

#
# ARCnet devices
#
# CONFIG_ARCNET is not set

#
# PHY device support
#

#
# Ethernet (10 or 100Mbit)
#
# CONFIG_NET_ETHERNET is not set

#
# Ethernet (1000 Mbit)
#
# CONFIG_ACENIC is not set
# CONFIG_DL2K is not set
CONFIG_E1000=m
# CONFIG_E1000_NAPI is not set
# CONFIG_E1000_DISABLE_PACKET_SPLIT is not set
# CONFIG_NS83820 is not set
# CONFIG_HAMACHI is not set
# CONFIG_YELLOWFIN is not set
# CONFIG_R8169 is not set
# CONFIG_SIS190 is not set
# CONFIG_SKGE is not set
# CONFIG_SKY2 is not set
# CONFIG_SK98LIN is not set
# CONFIG_TIGON3 is not set
# CONFIG_BNX2 is not set
# CONFIG_QLA3XXX is not set

#
# Ethernet (10000 Mbit)
#
# CONFIG_CHELSIO_T1 is not set
# CONFIG_CHELSIO_T3 is not set
# CONFIG_IXGB is not set
# CONFIG_S2IO is not set
# CONFIG_MYRI10GE is not set
```

```
# CONFIG_NETXEN_NIC is not set

#
# Token Ring devices
#
# CONFIG_TR is not set

#
# Wireless LAN (non-hamradio)
#
# CONFIG_NET_RADIO is not set

#
# Wan interfaces
#
# CONFIG_WAN is not set
# CONFIG_FDDI is not set
# CONFIG_HIPPI is not set
# CONFIG_PPP is not set
# CONFIG_SLIP is not set
# CONFIG_NET_FC is not set
# CONFIG_SHAPER is not set
# CONFIG_NETCONSOLE is not set
# CONFIG_NETPOLL is not set
# CONFIG_NET_POLL_CONTROLLER is not set

#
# ISDN subsystem
#
# CONFIG_ISDN is not set

#
# Telephony Support
#
# CONFIG_PHONE is not set

#
# Input device support
#
CONFIG_INPUT=y
# CONFIG_INPUT_FF_MEMLESS is not set

#
# Userland interfaces
#
CONFIG_INPUT_MOUSEDEV=y
# CONFIG_INPUT_MOUSEDEV_PSAUX is not set
CONFIG_INPUT_MOUSEDEV_SCREEN_X=1024
```

```
CONFIG_INPUT_MOUSEDEV_SCREEN_Y=768
# CONFIG_INPUT_JOYDEV is not set
# CONFIG_INPUT_TSDEV is not set
CONFIG_INPUT_EVDEV=y
# CONFIG_INPUT_EVBUG is not set

#
# Input Device Drivers
#
CONFIG_INPUT_KEYBOARD=y
CONFIG_KEYBOARD_ATKBD=y
# CONFIG_KEYBOARD_SUNKBD is not set
# CONFIG_KEYBOARD_LKKBD is not set
# CONFIG_KEYBOARD_XTKBD is not set
# CONFIG_KEYBOARD_NEWTON is not set
# CONFIG_KEYBOARD_STOWAWAY is not set
CONFIG_INPUT_MOUSE=y
CONFIG_MOUSE_PS2=y
# CONFIG_MOUSE_SERIAL is not set
# CONFIG_MOUSE_VSXXXAA is not set
# CONFIG_INPUT_JOYSTICK is not set
# CONFIG_INPUT_TOUCHSCREEN is not set
# CONFIG_INPUT_MISC is not set

#
# Hardware I/O ports
#
CONFIG_SERIO=y
CONFIG_SERIO_I8042=y
CONFIG_SERIO_SERPORT=y
# CONFIG_SERIO_CT82C710 is not set
# CONFIG_SERIO_PCIPS2 is not set
CONFIG_SERIO_LIBPS2=y
# CONFIG_SERIO_RAW is not set
# CONFIG_GAMEPORT is not set

#
# Character devices
#
CONFIG_VT=y
CONFIG_VT_CONSOLE=y
CONFIG_HW_CONSOLE=y
# CONFIG_VT_HW_CONSOLE_BINDING is not set
# CONFIG_SERIAL_NONSTANDARD is not set

#
# Serial drivers
#
```

```
CONFIG_SERIAL_8250=y
CONFIG_SERIAL_8250_CONSOLE=y
CONFIG_SERIAL_8250_PCI=y
CONFIG_SERIAL_8250_NR_UARTS=4
CONFIG_SERIAL_8250_RUNTIME_UARTS=4
# CONFIG_SERIAL_8250_EXTENDED is not set
```

```
#
# Non-8250 serial port support
#
CONFIG_SERIAL_CORE=y
CONFIG_SERIAL_CORE_CONSOLE=y
# CONFIG_SERIAL_JSM is not set
CONFIG_UNIX98_PTYS=y
CONFIG_LEGACY_PTYS=y
CONFIG_LEGACY_PTY_COUNT=256
```

```
#
# IPMI
#
# CONFIG_IPMI_HANDLER is not set
```

```
#
# Watchdog Cards
#
# CONFIG_WATCHDOG is not set
# CONFIG_HW_RANDOM is not set
# CONFIG_NVRAM is not set
CONFIG_RTC=y
# CONFIG_DTLK is not set
# CONFIG_R3964 is not set
# CONFIG_APPLICOM is not set
# CONFIG_SONYPI is not set
CONFIG_AGP=y
# CONFIG_AGP_ALI is not set
# CONFIG_AGP_ATI is not set
# CONFIG_AGP_AMD is not set
# CONFIG_AGP_AMD64 is not set
CONFIG_AGP_INTEL=y
# CONFIG_AGP_NVIDIA is not set
# CONFIG_AGP_SIS is not set
# CONFIG_AGP_SWWORKS is not set
# CONFIG_AGP_VIA is not set
# CONFIG_AGP_EFFICEON is not set
CONFIG_DRM=y
# CONFIG_DRM_TDFX is not set
# CONFIG_DRM_R128 is not set
# CONFIG_DRM_RADEON is not set
```



# CONFIG\_DRM\_I810 is not set  
# CONFIG\_DRM\_I830 is not set  
CONFIG\_DRM\_I915=y  
# CONFIG\_DRM\_MGA is not set  
# CONFIG\_DRM\_SIS is not set  
# CONFIG\_DRM\_VIA is not set  
# CONFIG\_DRM\_SAVAGE is not set  
# CONFIG\_MWAVE is not set  
# CONFIG\_PC8736x\_GPIO is not set  
# CONFIG\_NSC\_GPIO is not set  
# CONFIG\_CS5535\_GPIO is not set  
# CONFIG\_RAW\_DRIVER is not set  
# CONFIG\_HPET is not set  
# CONFIG\_HANGCHECK\_TIMER is not set

#  
# TPM devices  
#  
# CONFIG\_TCG\_TPM is not set  
# CONFIG\_TELCLOCK is not set

#  
# I2C support  
#  
# CONFIG\_I2C is not set

#  
# SPI support  
#  
# CONFIG\_SPI is not set  
# CONFIG\_SPI\_MASTER is not set

#  
# Dallas's 1-wire bus  
#  
# CONFIG\_W1 is not set

#  
# Hardware Monitoring support  
#  
# CONFIG\_HWMON is not set  
# CONFIG\_HWMON\_VID is not set

#  
# Multimedia devices  
#  
# CONFIG\_VIDEO\_DEV is not set

```
#
# Digital Video Broadcasting Devices
#
# CONFIG_DVB is not set
# CONFIG_USB_DABUSB is not set

#
# Graphics support
#
# CONFIG_FIRMWARE_EDID is not set
CONFIG_FB=y
CONFIG_FB_CFB_FILLRECT=y
CONFIG_FB_CFB_COPYAREA=y
CONFIG_FB_CFB_IMAGEBLIT=y
# CONFIG_FB_SVGALIB is not set
# CONFIG_FB_MACMODES is not set
# CONFIG_FB_BACKLIGHT is not set
CONFIG_FB_MODE_HELPERS=y
# CONFIG_FB_TILEBLITTING is not set
# CONFIG_FB_CIRRUS is not set
# CONFIG_FB_PM2 is not set
# CONFIG_FB_CYBER2000 is not set
# CONFIG_FB_ARC is not set
# CONFIG_FB_ASILANT is not set
# CONFIG_FB_IMSTT is not set
# CONFIG_FB_VGA16 is not set
CONFIG_FB_VESA=y
# CONFIG_FB_HGA is not set
# CONFIG_FB_S1D13XXX is not set
# CONFIG_FB_NVIDIA is not set
# CONFIG_FB_RIVA is not set
# CONFIG_FB_I810 is not set
CONFIG_FB_INTEL=y
# CONFIG_FB_INTEL_DEBUG is not set
# CONFIG_FB_INTEL_I2C is not set
# CONFIG_FB_MATROX is not set
# CONFIG_FB_RADEON is not set
# CONFIG_FB_ATY128 is not set
# CONFIG_FB_ATY is not set
# CONFIG_FB_S3 is not set
# CONFIG_FB_SAVAGE is not set
# CONFIG_FB_SIS is not set
# CONFIG_FB_NEOMAGIC is not set
# CONFIG_FB_KYRO is not set
# CONFIG_FB_3DFX is not set
# CONFIG_FB_VOODOO1 is not set
# CONFIG_FB_CYBLA is not set
# CONFIG_FB_TRIDENT is not set
```

```
# CONFIG_FB_GEODE is not set
# CONFIG_FB_VIRTUAL is not set

#
# Console display driver support
#
CONFIG_VGA_CONSOLE=y
CONFIG_VGACON_SOFT_SCROLLBACK=y
CONFIG_VGACON_SOFT_SCROLLBACK_SIZE=64
CONFIG_VIDEO_SELECT=y
CONFIG_DUMMY_CONSOLE=y
CONFIG_FRAMEBUFFER_CONSOLE=y
# CONFIG_FRAMEBUFFER_CONSOLE_ROTATION is not set
# CONFIG_FONTS is not set
CONFIG_FONT_8x8=y
CONFIG_FONT_8x16=y

#
# Logo configuration
#
CONFIG_LOGO=y
# CONFIG_LOGO_LINUX_MONO is not set
# CONFIG_LOGO_LINUX_VGA16 is not set
CONFIG_LOGO_LINUX_CLUT224=y
# CONFIG_BACKLIGHT_LCD_SUPPORT is not set

#
# Sound
#
# CONFIG_SOUND is not set

#
# HID Devices
#
# CONFIG_HID is not set

#
# USB support
#
CONFIG_USB_ARCH_HAS_HCD=y
CONFIG_USB_ARCH_HAS_OHCI=y
CONFIG_USB_ARCH_HAS_EHCI=y
CONFIG_USB=m
# CONFIG_USB_DEBUG is not set

#
# Miscellaneous USB options
#
```

```
CONFIG_USB_DEVICEFS=y
# CONFIG_USB_DYNAMIC_MINORS is not set
# CONFIG_USB_SUSPEND is not set
# CONFIG_USB_OTG is not set

#
# USB Host Controller Drivers
#
CONFIG_USB_EHCI_HCD=m
# CONFIG_USB_EHCI_SPLIT_ISO is not set
# CONFIG_USB_EHCI_ROOT_HUB_TT is not set
# CONFIG_USB_EHCI_TT_NEWSCHED is not set
# CONFIG_USB_EHCI_BIG_ENDIAN_MMIO is not set
# CONFIG_USB_ISP116X_HCD is not set
CONFIG_USB_OHCI_HCD=m
# CONFIG_USB_OHCI_BIG_ENDIAN_DESC is not set
# CONFIG_USB_OHCI_BIG_ENDIAN_MMIO is not set
CONFIG_USB_OHCI_LITTLE_ENDIAN=y
CONFIG_USB_UHCI_HCD=m
# CONFIG_USB_SL811_HCD is not set

#
# USB Device Class drivers
#
# CONFIG_USB_ACM is not set
# CONFIG_USB_PRINTER is not set

#
# NOTE: USB_STORAGE enables SCSI, and 'SCSI disk support'
#

#
# may also be needed; see USB_STORAGE Help for more information
#
CONFIG_USB_STORAGE=m
# CONFIG_USB_STORAGE_DEBUG is not set
# CONFIG_USB_STORAGE_DATAFAB is not set
# CONFIG_USB_STORAGE_FREECOM is not set
# CONFIG_USB_STORAGE_ISD200 is not set
# CONFIG_USB_STORAGE_DPCM is not set
# CONFIG_USB_STORAGE_USBAT is not set
# CONFIG_USB_STORAGE_SDDR09 is not set
# CONFIG_USB_STORAGE_SDDR55 is not set
# CONFIG_USB_STORAGE_JUMPSHOT is not set
# CONFIG_USB_STORAGE_ALAUDA is not set
# CONFIG_USB_STORAGE_KARMA is not set
# CONFIG_USB_LIBUSUAL is not set
```

```
#
# USB Input Devices
#
# CONFIG_USB_HID is not set

#
# USB HID Boot Protocol drivers
#
# CONFIG_USB_KBD is not set
# CONFIG_USB_MOUSE is not set
# CONFIG_USB_AIPTEK is not set
# CONFIG_USB_WACOM is not set
# CONFIG_USB_ACECAD is not set
# CONFIG_USB_KBTAB is not set
# CONFIG_USB_POWERMATE is not set
# CONFIG_USB_TOUCHSCREEN is not set
# CONFIG_USB_YEALINK is not set
# CONFIG_USB_XPAD is not set
# CONFIG_USB_ATI_REMOTE is not set
# CONFIG_USB_ATI_REMOTE2 is not set
# CONFIG_USB_KEYSPAN_REMOTE is not set
# CONFIG_USB_APPLETOUCH is not set
# CONFIG_USB_GTCO is not set

#
# USB Imaging devices
#
# CONFIG_USB_MDC800 is not set
# CONFIG_USB_MICROTEK is not set

#
# USB Network Adapters
#
# CONFIG_USB_CATC is not set
# CONFIG_USB_KAWETH is not set
# CONFIG_USB_PEGASUS is not set
# CONFIG_USB_RTL8150 is not set
# CONFIG_USB_USBNET_MII is not set
# CONFIG_USB_USBNET is not set
# CONFIG_USB_MON is not set

#
# USB port drivers
#

#
# USB Serial Converter support
#
```

# CONFIG\_USB\_SERIAL is not set

#

# USB Miscellaneous drivers

#

# CONFIG\_USB\_EMI62 is not set

# CONFIG\_USB\_EMI26 is not set

# CONFIG\_USB\_ADUTUX is not set

# CONFIG\_USB\_AUERSWALD is not set

# CONFIG\_USB\_RIO500 is not set

# CONFIG\_USB\_LEGOTOWER is not set

# CONFIG\_USB\_LCD is not set

# CONFIG\_USB\_LED is not set

# CONFIG\_USB\_CYPRESS\_CY7C63 is not set

# CONFIG\_USB\_CYTHERM is not set

# CONFIG\_USB\_PHIDGET is not set

# CONFIG\_USB\_IDMOUSE is not set

# CONFIG\_USB\_FTDI\_ELAN is not set

# CONFIG\_USB\_APPLEDISPLAY is not set

# CONFIG\_USB\_SISUSBVGA is not set

# CONFIG\_USB\_LD is not set

# CONFIG\_USB\_TRANCEVIBRATOR is not set

# CONFIG\_USB\_TEST is not set

#

# USB DSL modem support

#

#

# USB Gadget Support

#

# CONFIG\_USB\_GADGET is not set

#

# MMC/SD Card support

#

# CONFIG\_MMC is not set

#

# LED devices

#

# CONFIG\_NEW\_LEDS is not set

#

# LED drivers

#

#

```
# LED Triggers
#

#
# InfiniBand support
#
# CONFIG_INFINIBAND is not set

#
# EDAC - error detection and reporting (RAS) (EXPERIMENTAL)
#
# CONFIG_EDAC is not set

#
# Real Time Clock
#
# CONFIG_RTC_CLASS is not set

#
# DMA Engine support
#
# CONFIG_DMA_ENGINE is not set

#
# DMA Clients
#

#
# DMA Devices
#

#
# Auxiliary Display support
#

#
# Virtualization
#
# CONFIG_KVM is not set

#
# File systems
#
CONFIG_EXT2_FS=y
# CONFIG_EXT2_FS_XATTR is not set
# CONFIG_EXT2_FS_XIP is not set
CONFIG_EXT3_FS=y
CONFIG_EXT3_FS_XATTR=y
```

```
# CONFIG_EXT3_FS_POSIX_ACL is not set
# CONFIG_EXT3_FS_SECURITY is not set
# CONFIG_EXT4DEV_FS is not set
CONFIG_JBD=y
CONFIG_JBD_DEBUG=y
CONFIG_FS_MBCACHE=y
CONFIG_REISERFS_FS=m
# CONFIG_REISERFS_CHECK is not set
CONFIG_REISERFS_PROC_INFO=y
# CONFIG_REISERFS_FS_XATTR is not set
CONFIG_JFS_FS=m
# CONFIG_JFS_POSIX_ACL is not set
# CONFIG_JFS_SECURITY is not set
CONFIG_JFS_DEBUG=y
CONFIG_JFS_STATISTICS=y
# CONFIG_FS_POSIX_ACL is not set
CONFIG_XFS_FS=m
CONFIG_XFS_QUOTA=y
# CONFIG_XFS_SECURITY is not set
# CONFIG_XFS_POSIX_ACL is not set
# CONFIG_XFS_RT is not set
# CONFIG_GFS2_FS is not set
# CONFIG_OCFS2_FS is not set
# CONFIG_MINIX_FS is not set
# CONFIG_ROMFS_FS is not set
# CONFIG_INOTIFY is not set
CONFIG_QUOTA=y
# CONFIG_QFMT_V1 is not set
CONFIG_QFMT_V2=y
CONFIG_QUOTACTL=y
CONFIG_DNOTIFY=y
# CONFIG_AUTOFS_FS is not set
# CONFIG_AUTOFS4_FS is not set
# CONFIG_FUSE_FS is not set
```

```
#
# CD-ROM/DVD Filesystems
#
CONFIG_ISO9660_FS=m
# CONFIG_JOLIET is not set
# CONFIG_ZISOFS is not set
# CONFIG_UDF_FS is not set
```

```
#
# DOS/FAT/NT Filesystems
#
CONFIG_FAT_FS=m
CONFIG_MSDOS_FS=m
```



```
CONFIG_VFAT_FS=m
CONFIG_FAT_DEFAULT_CODEPAGE=866
CONFIG_FAT_DEFAULT_IOCHARSET="koi8-r"
# CONFIG_NTFS_FS is not set
```

```
#
# Pseudo filesystems
#
CONFIG_PROC_FS=y
CONFIG_PROC_KCORE=y
CONFIG_PROC_SYSCTL=y
CONFIG_SYSFS=y
CONFIG_TMPFS=y
# CONFIG_TMPFS_POSIX_ACL is not set
# CONFIG_HUGETLBFS is not set
# CONFIG_HUGETLB_PAGE is not set
CONFIG_RAMFS=y
# CONFIG_CONFIGFS_FS is not set
```

```
#
# Miscellaneous filesystems
#
# CONFIG_ADFS_FS is not set
# CONFIG_AFFS_FS is not set
# CONFIG_HFS_FS is not set
# CONFIG_HFSPLUS_FS is not set
# CONFIG_BEFS_FS is not set
# CONFIG_BFS_FS is not set
# CONFIG_EFS_FS is not set
# CONFIG_CRAMFS is not set
# CONFIG_VXFS_FS is not set
# CONFIG_HPFS_FS is not set
# CONFIG_QNX4FS_FS is not set
# CONFIG_SYSV_FS is not set
# CONFIG_UFS_FS is not set
```

```
#
# Network File Systems
#
# CONFIG_NFS_FS is not set
# CONFIG_NFSD is not set
# CONFIG_SMB_FS is not set
# CONFIG_CIFS is not set
# CONFIG_NCP_FS is not set
# CONFIG_CODA_FS is not set
# CONFIG_AFS_FS is not set
# CONFIG_9P_FS is not set
```

```
#
# Partition Types
#
# CONFIG_PARTITION_ADVANCED is not set
CONFIG_MSDOS_PARTITION=y

#
# Native Language Support
#
CONFIG_NLS=y
CONFIG_NLS_DEFAULT="iso8859-1"
CONFIG_NLS_CODEPAGE_437=m
# CONFIG_NLS_CODEPAGE_737 is not set
# CONFIG_NLS_CODEPAGE_775 is not set
# CONFIG_NLS_CODEPAGE_850 is not set
# CONFIG_NLS_CODEPAGE_852 is not set
CONFIG_NLS_CODEPAGE_855=m
# CONFIG_NLS_CODEPAGE_857 is not set
# CONFIG_NLS_CODEPAGE_860 is not set
# CONFIG_NLS_CODEPAGE_861 is not set
# CONFIG_NLS_CODEPAGE_862 is not set
# CONFIG_NLS_CODEPAGE_863 is not set
# CONFIG_NLS_CODEPAGE_864 is not set
# CONFIG_NLS_CODEPAGE_865 is not set
CONFIG_NLS_CODEPAGE_866=m
# CONFIG_NLS_CODEPAGE_869 is not set
# CONFIG_NLS_CODEPAGE_936 is not set
# CONFIG_NLS_CODEPAGE_950 is not set
# CONFIG_NLS_CODEPAGE_932 is not set
# CONFIG_NLS_CODEPAGE_949 is not set
# CONFIG_NLS_CODEPAGE_874 is not set
# CONFIG_NLS_ISO8859_8 is not set
# CONFIG_NLS_CODEPAGE_1250 is not set
CONFIG_NLS_CODEPAGE_1251=m
CONFIG_NLS_ASCII=m
CONFIG_NLS_ISO8859_1=m
# CONFIG_NLS_ISO8859_2 is not set
# CONFIG_NLS_ISO8859_3 is not set
# CONFIG_NLS_ISO8859_4 is not set
CONFIG_NLS_ISO8859_5=m
# CONFIG_NLS_ISO8859_6 is not set
# CONFIG_NLS_ISO8859_7 is not set
# CONFIG_NLS_ISO8859_9 is not set
# CONFIG_NLS_ISO8859_13 is not set
# CONFIG_NLS_ISO8859_14 is not set
# CONFIG_NLS_ISO8859_15 is not set
CONFIG_NLS_KOI8_R=m
# CONFIG_NLS_KOI8_U is not set
```

CONFIG\_NLS\_UTF8=m

#

# Distributed Lock Manager

#

# CONFIG\_DLM is not set

#

# Instrumentation Support

#

CONFIG\_PROFILING=y

CONFIG\_OPROFILE=m

# CONFIG\_KPROBES is not set

#

# Kernel hacking

#

CONFIG\_TRACE\_IRQFLAGS\_SUPPORT=y

# CONFIG\_PRINTK\_TIME is not set

# CONFIG\_ENABLE\_MUST\_CHECK is not set

CONFIG\_MAGIC\_SYSRQ=y

# CONFIG\_UNUSED\_SYMBOLS is not set

# CONFIG\_DEBUG\_FS is not set

# CONFIG\_HEADERS\_CHECK is not set

CONFIG\_DEBUG\_KERNEL=y

# CONFIG\_DEBUG\_SHIRQ is not set

CONFIG\_LOG\_BUF\_SHIFT=14

# CONFIG\_DETECT\_SOFTLOCKUP is not set

# CONFIG\_SCHEDSTATS is not set

# CONFIG\_DEBUG\_SLAB is not set

# CONFIG\_DEBUG\_RT\_MUTEXES is not set

# CONFIG\_RT\_MUTEX\_TESTER is not set

# CONFIG\_DEBUG\_SPINLOCK is not set

# CONFIG\_DEBUG\_MUTEXES is not set

# CONFIG\_DEBUG\_LOCK\_ALLOC is not set

# CONFIG\_PROVE\_LOCKING is not set

# CONFIG\_DEBUG\_SPINLOCK\_SLEEP is not set

# CONFIG\_DEBUG\_LOCKING\_API\_SELFTESTS is not set

# CONFIG\_DEBUG\_KOBJECT is not set

# CONFIG\_DEBUG\_HIGHMEM is not set

CONFIG\_DEBUG\_BUGVERBOSE=y

# CONFIG\_DEBUG\_INFO is not set

# CONFIG\_DEBUG\_VM is not set

# CONFIG\_DEBUG\_LIST is not set

# CONFIG\_FRAME\_POINTER is not set

CONFIG\_FORCED\_INLINING=y

# CONFIG\_RCU\_TORTURE\_TEST is not set

CONFIG\_EARLY\_PRINTK=y

```
# CONFIG_DEBUG_STACKOVERFLOW is not set
# CONFIG_DEBUG_STACK_USAGE is not set
# CONFIG_DEBUG_PAGEALLOC is not set
# CONFIG_DEBUG_RODATA is not set
CONFIG_4KSTACKS=y
CONFIG_DOUBLEFAULT=y
```

```
#
# Security options
#
# CONFIG_KEYS is not set
# CONFIG_SECURITY is not set
```

```
#
# Cryptographic options
#
# CONFIG_CRYPTOTO is not set
```

```
#
# Library routines
#
CONFIG_BITREVERSE=y
# CONFIG_CRC_CCITT is not set
# CONFIG_CRC16 is not set
CONFIG_CRC32=y
# CONFIG_LIBCRC32C is not set
CONFIG_PLIST=y
CONFIG_HAS_IOMEM=y
CONFIG_HAS_IOPORT=y
CONFIG_GENERIC_HARDIRQS=y
CONFIG_GENERIC_IRQ_PROBE=y
CONFIG_X86_BIOS_REBOOT=y
CONFIG_KTIME_SCALAR=y
```

---

Subject: Re: utrace regressions (was: -mm merge plans for 2.6.21)

Posted by [adobriyan](#) on Tue, 13 Feb 2007 15:28:13 GMT

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---

On Mon, Feb 12, 2007 at 01:36:34PM -0800, Roland McGrath wrote:

> > We're aware of two regressions compared to mainline if ptrace is utrace:

>

> Thanks very much for bringing these to my attention.

>

> > 1) zero holes for PTRACE\_PEEKUSR vanished.

>

> I've fixed this in the current patches.

Looking at mainline x86\_64 ptrace code I think hole for u\_debugreg[4] and [5] is also needed.

```
--- a/arch/x86_64/kernel/ptrace.c
+++ b/arch/x86_64/kernel/ptrace.c
@@ -687,6 +687,8 @@ EXPORT_SYMBOL_GPL(utrace_x86_64_native);
#ifdef CONFIG_PTRACE
static const struct ptrace_layout_segment x86_64_uarea[] = {
    {0, sizeof(struct user_regs_struct), 0, 0},
+ {sizeof(struct user_regs_struct),
+  offsetof(struct user, u_debugreg[0]), -1, 0},
    {offsetof(struct user, u_debugreg[0]),
      offsetof(struct user, u_debugreg[4]), 3, 0},
    {offsetof(struct user, u_debugreg[6]),
```

---

---

Subject: Re: utrace regressions (was: -mm merge plans for 2.6.21)

Posted by [adobriyan](#) on Thu, 15 Feb 2007 12:02:03 GMT

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---

On Tue, Feb 13, 2007 at 04:05:30PM +0300, Alexey Dobriyan wrote:

> On Mon, Feb 12, 2007 at 01:36:34PM -0800, Roland McGrath wrote:

> > > 2. The following proggy renders box unusable in ~10 seconds (but not

> > > mainline kernel where Ctrl+C will kill process).

> >

> > I haven't been able to reproduce this so far on my test machine. I got

> > bored after about 10 minutes ("passed: 119200000"). The machine remains

> > responsive and the test dies immediately on hitting C-c. I'll try it on

> > some other machines. It would help to know what kind of unusable (crashy,

> > leaky, wedgy?).

>

> This is fresh pull 2.6.20-ec2f9d1331f658433411c58077871e1eef4ee1b4 with

> linux-2.6.20-current-utrace.patch slapped on top (without rejects)

> utrace is on and ptrace is on too.

>

> the behaviour is

>

> \$ expl\_ptratt

> passed: 100000

> passed: 200000

> ...

> passed: [always different number, but in several seconds]

> [pause]

> [OOM killer wakes up steadily killing processes ]

> [messages scroll away ]

>

> I'll turn more debugging options now.

>

> Just in case, .config:

Turning preempt off makes OOM-killings dissappear.

> # CONFIG\_PREEMPT\_NONE is not set  
> CONFIG\_PREEMPT\_VOLUNTARY=y  
> # CONFIG\_PREEMPT is not set  
> # CONFIG\_X86\_UP\_APIC is not set

---

---

Subject: Re: utrace regressions (was: -mm merge plans for 2.6.21)

Posted by [Roland McGrath](#) on Sun, 18 Feb 2007 02:35:31 GMT

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---

> Looking at mainline x86\_64 ptrace code I think hole for u\_debugreg[4]  
> and [5] is also needed.

It's not. The utrace\_regset for the debugregs already has that behavior for those two words, so mapping all 8 uarea words to the regset is fine.

Thanks,  
Roland

---

---

Subject: Re: utrace regressions (was: -mm merge plans for 2.6.21)

Posted by [adobriyan](#) on Wed, 21 Feb 2007 13:30:28 GMT

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---

On Sat, Feb 17, 2007 at 06:35:31PM -0800, Roland McGrath wrote:

> > Looking at mainline x86\_64 ptrace code I think hole for u\_debugreg[4]  
> > and [5] is also needed.

>

> It's not. The utrace\_regset for the debugregs already has that behavior  
> for those two words, so mapping all 8 uarea words to the regset is fine.

Sorry, I don't get it. Choosing segment from x86\_64\_uarea is done before calling regset->set and regset->get as well as before zero-filling. No segment for u\_debugreg[4] and [5] means -EIO before segment handlers will have a chance to be called.

Do you want to consolidate these two?

```
{offsetof(struct user, u_debugreg[0]), offsetof(struct user, u_debugreg[4]), 3, 0},  
{offsetof(struct user, u_debugreg[6]), offsetof(struct user, u_debugreg[8]), 3, 6 * sizeof(long)},
```

---

---

Subject: Re: utrace regressions (was: -mm merge plans for 2.6.21)

Posted by [Roland McGrath](#) on Wed, 07 Mar 2007 09:10:29 GMT

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> On Sat, Feb 17, 2007 at 06:35:31PM -0800, Roland McGrath wrote:

> > > Looking at mainline x86\_64 ptrace code I think hole for u\_debugreg[4]

> > > and [5] is also needed.

> >

> > It's not. The utrace\_regset for the debugregs already has that behavior

> > for those two words, so mapping all 8 uarea words to the regset is fine.

>

> Sorry, I don't get it. Choosing segment from x86\_64\_uarea is done before

> calling regset->set and regset->get as well as before zero-filling. No

> segment for u\_debugreg[4] and [5] means -EIO before segment handlers

> will have a chance to be called.

>

> Do you want to consolidate these two?

>

> {offsetof(struct user, u\_debugreg[0]), offsetof(struct user, u\_debugreg[4]), 3, 0},

> {offsetof(struct user, u\_debugreg[6]), offsetof(struct user, u\_debugreg[8]), 3, 6 \* sizeof(long)},

Oops! I was misremembering what was in x86\_64\_uarea when I wrote that.

I've indeed fixed it to match what I thought it was:

```
{offsetof(struct user, u_debugreg[0]),  
  offsetof(struct user, u_debugreg[8]), 3, 0},
```

Thanks,  
Roland

---