

ping(8) 64BTT friendly patch

Source: <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/hackers/2004-09/0385.html>

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Date: 09/28/04

Date: Tue, 28 Sep 2004 20:56:54 +0400 (MSD)
To: hackers@freebsd.org

Here is a patch stolen from OpenBSD via NetBSD (rev. 1.75 ping/ping.c) which does two things:

- stores timestamp in network byte order;
- removes an assumption that `sizeof(struct timeval) == 8` (it's not true on sparc64).

Any comments?

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RCS file: /home/ncvs/src/sbin/ping/ping.c,v
retrieving revision 1.105
diff -u -r1.105 ping.c
--- ping.c 14 Aug 2004 17:46:10 -0000 1.105
+++ ping.c 28 Sep 2004 14:51:04 -0000
@@ -92,7 +92,7 @@
#include <unistd.h>

#define INADDR_LEN ((int)sizeof(in_addr_t))
-#define TIMEVAL_LEN ((int)sizeof(struct timeval))
+#define TIMEVAL_LEN ((int)sizeof(struct tv32))
#define MASK_LEN (ICMP_MASKLEN - ICMP_MINLEN)
#define TS_LEN (ICMP_TSLEN - ICMP_MINLEN)
#define DEFDATALEN 56 /* default data length */
@@ -110,6 +110,11 @@
#define CLR(bit) (A(bit) &= (~B(bit)))
#define TST(bit) (A(bit) & B(bit))

+struct tv32 {
+ int32_t tv32_sec;
+ int32_t tv32_usec;
+};
+
/* various options */
int options;
#define F_FLOOD 0x0001
```

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@@ -838,6 +843,7 @@
pinger(void)
{
    struct timeval now;
+ struct tv32 tv32;
    struct ip *ip;
    struct icmp *icp;
    int cc, i;
@@ -856,13 +862,15 @@
    if ((options & F_TIME) || timing) {
        (void)gettimeofday(&now, NULL);

+ tv32.tv32_sec = htonl(now.tv_sec);
+ tv32.tv32_usec = htonl(now.tv_usec);
        if (options & F_TIME)
            icp->icmp_otime = htonl((now.tv_sec % (24*60*60))
                * 1000 + now.tv_usec / 1000);
        if (timing)
- bcopy((void *)&now,
+ bcopy((void *)&tv32,
        (void *)&outpack[ICMP_MINLEN + phdr_len],
- sizeof(struct timeval));
+ sizeof(tv32));
    }

    cc = ICMP_MINLEN + phdr_len + datalen;
@@ -942,6 +950,7 @@
    triptime = 0.0;
    if (timing) {
        struct timeval tv1;
+ struct tv32 tv32;
#ifdef icmp_data
        tp = &icp->icmp_ip;
#else
@@ -951,7 +960,9 @@

        if (cc - ICMP_MINLEN - phdr_len >= sizeof(tv1)) {
            /* Copy to avoid alignment problems: */
- memcpy(&tv1, tp, sizeof(tv1));
+ memcpy(&tv32, tp, sizeof(tv32));
+ tv1.tv_sec = ntohl(tv32.tv32_sec);
+ tv1.tv_usec = ntohl(tv32.tv32_usec);
            tvsub(tv, &tv1);
            triptime = ((double)tv->tv_sec) * 1000.0 +
                ((double)tv->tv_usec) / 1000.0;
%% %%
```

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Maxim Konovalov
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freebsd-hackers@freebsd.org mailing list
<http://lists.freebsd.org/mailman/listinfo/freebsd-hackers>

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