
Subject: [PATCH 1/3] sysctl core: Stop using the unnecessary ctl_table typedef
Posted by [ebiederm](#) on Thu, 09 Aug 2007 19:50:51 GMT

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In sysctl.h the typedef struct ctl_table ctl_table violates coding style isn't needed and is a bit of a nuisance because it makes it harder to recognize ctl_table is a type name.

So this patch removes it from the generic sysctl code. Hopefully I will have enough energy to send the rest of my patches will follow and to remove it from the rest of the kernel.

Signed-off-by: Eric W. Biederman <ebiederm@xmission.com>

```
include/linux/sysctl.h | 36 ++++++-----
kernel/sysctl.c        | 114 ++++++-----
2 files changed, 75 insertions(+), 75 deletions(-)
```

diff --git a/include/linux/sysctl.h b/include/linux/sysctl.h

index 483050c..f73be4c 100644

--- a/include/linux/sysctl.h

+++ b/include/linux/sysctl.h

@@ -937,37 +937,37 @@ extern int sysctl_perm(struct ctl_table *table, int op);

typedef struct ctl_table ctl_table;

-typedef int ctl_handler (ctl_table *table, int __user *name, int nlen,
+typedef int ctl_handler (struct ctl_table *table, int __user *name, int nlen,
void __user *oldval, size_t __user *oldlenp,
void __user *newval, size_t newlen);

-typedef int proc_handler (ctl_table *ctl, int write, struct file * filp,
+typedef int proc_handler (struct ctl_table *ctl, int write, struct file * filp,
void __user *buffer, size_t *lenp, loff_t *ppos);

-extern int proc_dostring(ctl_table *, int, struct file *,
+extern int proc_dostring(struct ctl_table *, int, struct file *,
void __user *, size_t *, loff_t *);
-extern int proc_dointvec(ctl_table *, int, struct file *,
+extern int proc_dointvec(struct ctl_table *, int, struct file *,
void __user *, size_t *, loff_t *);
-extern int proc_dointvec_bset(ctl_table *, int, struct file *,
+extern int proc_dointvec_bset(struct ctl_table *, int, struct file *,
void __user *, size_t *, loff_t *);
-extern int proc_dointvec_minmax(ctl_table *, int, struct file *,
+extern int proc_dointvec_minmax(struct ctl_table *, int, struct file *,
void __user *, size_t *, loff_t *);
-extern int proc_dointvec_jiffies(ctl_table *, int, struct file *,

```

+extern int proc_dointvec_jiffies(struct ctl_table *, int, struct file *,
    void __user *, size_t *, loff_t *);
-extern int proc_dointvec_userhz_jiffies(ctl_table *, int, struct file *,
+extern int proc_dointvec_userhz_jiffies(struct ctl_table *, int, struct file *,
    void __user *, size_t *, loff_t *);
-extern int proc_dointvec_ms_jiffies(ctl_table *, int, struct file *,
+extern int proc_dointvec_ms_jiffies(struct ctl_table *, int, struct file *,
    void __user *, size_t *, loff_t *);
-extern int proc_doulongvec_minmax(ctl_table *, int, struct file *,
+extern int proc_doulongvec_minmax(struct ctl_table *, int, struct file *,
    void __user *, size_t *, loff_t *);
-extern int proc_doulongvec_ms_jiffies_minmax(ctl_table *table, int,
+extern int proc_doulongvec_ms_jiffies_minmax(struct ctl_table *table, int,
    struct file *, void __user *, size_t *, loff_t *);

```

```

extern int do_sysctl (int __user *name, int nlen,
    void __user *oldval, size_t __user *oldlenp,
    void __user *newval, size_t newlen);

```

```

-extern int do_sysctl_strategy (ctl_table *table,
+extern int do_sysctl_strategy (struct ctl_table *table,
    int __user *name, int nlen,
    void __user *oldval, size_t __user *oldlenp,
    void __user *newval, size_t newlen);

```

```

@@ -980,7 +980,7 @@ extern ctl_handler sysctl_ms_jiffies;

```

```

/*
 * Register a set of sysctl names by calling register_sysctl_table
- * with an initialised array of ctl_table's. An entry with zero
+ * with an initialised array of struct ctl_table's. An entry with zero
 * ctl_name and NULL procname terminates the table. table->de will be
 * set up by the registration and need not be initialised in advance.
 */

```

```

@@ -1026,8 +1026,8 @@ struct ctl_table
    void *data;
    int maxlen;
    mode_t mode;
-    ctl_table *child;
-    ctl_table *parent; /* Automatically set */
+    struct ctl_table *child;
+    struct ctl_table *parent; /* Automatically set */
    proc_handler *proc_handler; /* Callback for text formatting */
    ctl_handler *strategy; /* Callback function for all r/w */
    void *extra1;
@@ -1035,16 +1035,16 @@ struct ctl_table
};

```

/* struct ctl_table_header is used to maintain dynamic lists of

```

- ctl_table trees. */
+ struct ctl_table trees. */
struct ctl_table_header
{
- ctl_table *ctl_table;
+ struct ctl_table *ctl_table;
  struct list_head ctl_entry;
  int used;
  struct completion *unregistering;
};

-struct ctl_table_header * register_sysctl_table(ctl_table * table);
+struct ctl_table_header *register_sysctl_table(struct ctl_table * table);

void unregister_sysctl_table(struct ctl_table_header * table);

diff --git a/kernel/sysctl.c b/kernel/sysctl.c
index 79c891e..6723f92 100644
--- a/kernel/sysctl.c
+++ b/kernel/sysctl.c
@@ -129,32 +129,32 @@ extern int max_lock_depth;

#ifdef CONFIG_SYSCTL_SYSCALL
static int parse_table(int __user *, int, void __user *, size_t __user *,
- void __user *, size_t, ctl_table *);
+ void __user *, size_t, struct ctl_table *);
#endif

#ifdef CONFIG_PROC_SYSCTL
-static int proc_do_cad_pid(ctl_table *table, int write, struct file *filp,
+static int proc_do_cad_pid(struct ctl_table *table, int write, struct file *filp,
  void __user *buffer, size_t *lenp, loff_t *ppos);
-static int proc_dointvec_taint(ctl_table *table, int write, struct file *filp,
+static int proc_dointvec_taint(struct ctl_table *table, int write, struct file *filp,
  void __user *buffer, size_t *lenp, loff_t *ppos);
#endif

-static ctl_table root_table[];
+static struct ctl_table root_table[];
static struct ctl_table_header root_table_header =
  { root_table, LIST_HEAD_INIT(root_table_header.ctl_entry) };

-static ctl_table kern_table[];
-static ctl_table vm_table[];
-static ctl_table fs_table[];
-static ctl_table debug_table[];
-static ctl_table dev_table[];

```

```

-extern ctl_table random_table[];
+static struct ctl_table kern_table[];
+static struct ctl_table vm_table[];
+static struct ctl_table fs_table[];
+static struct ctl_table debug_table[];
+static struct ctl_table dev_table[];
+extern struct ctl_table random_table[];
#ifdef CONFIG_UNIX98_PTYS
-extern ctl_table pty_table[];
+extern struct ctl_table pty_table[];
#endif
#ifdef CONFIG_INOTIFY_USER
-extern ctl_table inotify_table[];
+extern struct ctl_table inotify_table[];
#endif

#ifdef HAVE_ARCH_PICK_MMAP_LAYOUT
@@ -166,7 +166,7 @@ extern int lock_stat;

/* The default sysctl tables: */

-static ctl_table root_table[] = {
+static struct ctl_table root_table[] = {
{
    .ctl_name = CTL_KERN,
    .procname = "kernel",
@@ -219,7 +219,7 @@ static unsigned long min_wakeup_granularity_ns; /* 0 usecs */
static unsigned long max_wakeup_granularity_ns = 1000000000; /* 1 second */
#endif

-static ctl_table kern_table[] = {
+static struct ctl_table kern_table[] = {
#ifdef CONFIG_SCHED_DEBUG
{
    .ctl_name = CTL_UNNUMBERED,
@@ -762,7 +762,7 @@ static int two = 2;
static int one_hundred = 100;

-static ctl_table vm_table[] = {
+static struct ctl_table vm_table[] = {
{
    .ctl_name = VM_OVERCOMMIT_MEMORY,
    .procname = "overcommit_memory",
@@ -1056,12 +1056,12 @@ static ctl_table vm_table[] = {
};

#ifdef CONFIG_BINFMT_MISC || defined(CONFIG_BINFMT_MISC_MODULE)

```

```

-static ctl_table binfmt_misc_table[] = {
+static struct ctl_table binfmt_misc_table[] = {
    { .ctl_name = 0 }
};
#endif

-static ctl_table fs_table[] = {
+static struct ctl_table fs_table[] = {
    {
        .ctl_name = FS_NRINODE,
        .procname = "inode-nr",
@@ -1202,7 +1202,7 @@ static ctl_table fs_table[] = {
    { .ctl_name = 0 }
};

-static ctl_table debug_table[] = {
+static struct ctl_table debug_table[] = {
#ifdef CONFIG_X86
    {
        .ctl_name = CTL_UNNUMBERED,
@@ -1216,7 +1216,7 @@ static ctl_table debug_table[] = {
    { .ctl_name = 0 }
};

-static ctl_table dev_table[] = {
+static struct ctl_table dev_table[] = {
    { .ctl_name = 0 }
};

@@ -1356,7 +1356,7 @@ static int test_perm(int mode, int op)
    return -EACCES;
}

-int sysctl_perm(ctl_table *table, int op)
+int sysctl_perm(struct ctl_table *table, int op)
{
    int error;
    error = security_sysctl(table, op);
@@ -1369,7 +1369,7 @@ int sysctl_perm(ctl_table *table, int op)
static int parse_table(int __user *name, int nlen,
    void __user *oldval, size_t __user *oldlenp,
    void __user *newval, size_t newlen,
-    ctl_table *table)
+    struct ctl_table *table)
{
    int n;
    repeat:
@@ -1400,7 +1400,7 @@ repeat:

```

```

}

/* Perform the actual read/write of a sysctl table entry. */
-int do_sysctl_strategy (ctl_table *table,
+int do_sysctl_strategy (struct ctl_table *table,
    int __user *name, int nlen,
    void __user *oldval, size_t __user *oldlenp,
    void __user *newval, size_t newlen)
@@ -1475,7 +1475,7 @@ core_initcall(sysctl_init);
 * Register a sysctl table hierarchy. @table should be a filled in ctl_table
 * array. An entry with a ctl_name of 0 terminates the table.
 *
- * The members of the &ctl_table structure are used as follows:
+ * The members of the &struct ctl_table structure are used as follows:
 *
 * ctl_name - This is the numeric sysctl value used by sysctl(2). The number
 *             must be unique within that level of sysctl
@@ -1536,7 +1536,7 @@ core_initcall(sysctl_init);
 * This routine returns %NULL on a failure to register, and a pointer
 * to the table header on success.
 */
-struct ctl_table_header *register_sysctl_table(ctl_table * table)
+struct ctl_table_header *register_sysctl_table(struct ctl_table * table)
{
    struct ctl_table_header *tmp;
    tmp = kmalloc(sizeof(struct ctl_table_header), GFP_KERNEL);
@@ -1570,7 +1570,7 @@ void unregister_sysctl_table(struct ctl_table_header * header)
}

#else /* !CONFIG_SYSCTL */
-struct ctl_table_header *register_sysctl_table(ctl_table * table)
+struct ctl_table_header *register_sysctl_table(struct ctl_table * table)
{
    return NULL;
}
@@ -1663,7 +1663,7 @@ static int _proc_do_string(void* data, int maxlen, int write,
 *
 * Returns 0 on success.
 */
-int proc_dostring(ctl_table *table, int write, struct file *filp,
+int proc_dostring(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    return _proc_do_string(table->data, table->maxlen, write, filp,
@@ -1690,7 +1690,7 @@ static int do_proc_dointvec_conv(int *negp, unsigned long *lvalp,
    return 0;
}

```

```

-static int __do_proc_dointvec(void *tbl_data, ctl_table *table,
+static int __do_proc_dointvec(void *tbl_data, struct ctl_table *table,
    int write, struct file *filp, void __user *buffer,
    size_t *lenp, loff_t *ppos,
    int (*conv)(int *negp, unsigned long *lvalp, int *valp,
@@ -1800,7 +1800,7 @@ static int __do_proc_dointvec(void *tbl_data, ctl_table *table,
#undef TMPBUFLLEN
}

-static int do_proc_dointvec(ctl_table *table, int write, struct file *filp,
+static int do_proc_dointvec(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos,
    int (*conv)(int *negp, unsigned long *lvalp, int *valp,
        int write, void *data),
@@ -1824,7 +1824,7 @@ static int do_proc_dointvec(ctl_table *table, int write, struct file *filp,
*
* Returns 0 on success.
*/
-int proc_dointvec(ctl_table *table, int write, struct file *filp,
+int proc_dointvec(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    return do_proc_dointvec(table, write, filp, buffer, lenp, ppos,
@@ -1864,7 +1864,7 @@ static int do_proc_dointvec_bset_conv(int *negp, unsigned long *lvalp,
* init may raise the set.
*/

-int proc_dointvec_bset(ctl_table *table, int write, struct file *filp,
+int proc_dointvec_bset(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    int op;
@@ -1881,7 +1881,7 @@ int proc_dointvec_bset(ctl_table *table, int write, struct file *filp,
/*
* Taint values can only be increased
*/
-static int proc_dointvec_taint(ctl_table *table, int write, struct file *filp,
+static int proc_dointvec_taint(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    int op;
@@ -1940,7 +1940,7 @@ static int do_proc_dointvec_minmax_conv(int *negp, unsigned long
*lvalp,
*
* Returns 0 on success.
*/
-int proc_dointvec_minmax(ctl_table *table, int write, struct file *filp,
+int proc_dointvec_minmax(struct ctl_table *table, int write, struct file *filp,

```

```

void __user *buffer, size_t *lenp, loff_t *ppos)
{
    struct do_proc_dointvec_minmax_conv_param param = {
@@ -1951,7 +1951,7 @@ int proc_dointvec_minmax(ctl_table *table, int write, struct file *filp,
    do_proc_dointvec_minmax_conv, &param);
}

-static int __do_proc_doulongvec_minmax(void *data, ctl_table *table, int write,
+static int __do_proc_doulongvec_minmax(void *data, struct ctl_table *table, int write,
    struct file *filp,
    void __user *buffer,
    size_t *lenp, loff_t *ppos,
@@ -2056,7 +2056,7 @@ static int __do_proc_doulongvec_minmax(void *data, ctl_table *table,
int write,
#undef TMPBUFLLEN
}

-static int do_proc_doulongvec_minmax(ctl_table *table, int write,
+static int do_proc_doulongvec_minmax(struct ctl_table *table, int write,
    struct file *filp,
    void __user *buffer,
    size_t *lenp, loff_t *ppos,
@@ -2084,7 +2084,7 @@ static int do_proc_doulongvec_minmax(ctl_table *table, int write,
*
* Returns 0 on success.
*/
-int proc_doulongvec_minmax(ctl_table *table, int write, struct file *filp,
+int proc_doulongvec_minmax(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    return do_proc_doulongvec_minmax(table, write, filp, buffer, lenp, ppos, 1l, 1l);
@@ -2108,7 +2108,7 @@ int proc_doulongvec_minmax(ctl_table *table, int write, struct file *filp,
*
* Returns 0 on success.
*/
-int proc_doulongvec_ms_jiffies_minmax(ctl_table *table, int write,
+int proc_doulongvec_ms_jiffies_minmax(struct ctl_table *table, int write,
    struct file *filp,
    void __user *buffer,
    size_t *lenp, loff_t *ppos)
@@ -2201,7 +2201,7 @@ static int do_proc_dointvec_ms_jiffies_conv(int *negp, unsigned long
*lvalp,
*
* Returns 0 on success.
*/
-int proc_dointvec_jiffies(ctl_table *table, int write, struct file *filp,
+int proc_dointvec_jiffies(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)

```

```

{
    return do_proc_dointvec(table,write,filp,buffer,lenp,ppos,
@@ -2224,7 +2224,7 @@ int proc_dointvec_jiffies(ctl_table *table, int write, struct file *filp,
*
* Returns 0 on success.
*/
-int proc_dointvec_userhz_jiffies(ctl_table *table, int write, struct file *filp,
+int proc_dointvec_userhz_jiffies(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    return do_proc_dointvec(table,write,filp,buffer,lenp,ppos,
@@ -2248,14 +2248,14 @@ int proc_dointvec_userhz_jiffies(ctl_table *table, int write, struct file
*filp,
*
* Returns 0 on success.
*/
-int proc_dointvec_ms_jiffies(ctl_table *table, int write, struct file *filp,
+int proc_dointvec_ms_jiffies(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    return do_proc_dointvec(table, write, filp, buffer, lenp, ppos,
        do_proc_dointvec_ms_jiffies_conv, NULL);
}

-static int proc_do_cad_pid(ctl_table *table, int write, struct file *filp,
+static int proc_do_cad_pid(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    struct pid *new_pid;
@@ -2279,55 +2279,55 @@ static int proc_do_cad_pid(ctl_table *table, int write, struct file *filp,

#else /* CONFIG_PROC_FS */

-int proc_dosttring(ctl_table *table, int write, struct file *filp,
+int proc_dosttring(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    return -ENOSYS;
}

-int proc_dointvec(ctl_table *table, int write, struct file *filp,
+int proc_dointvec(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    return -ENOSYS;
}

-int proc_dointvec_bset(ctl_table *table, int write, struct file *filp,

```

```

+int proc_dointvec_bset(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    return -ENOSYS;
}

-int proc_dointvec_minmax(ctl_table *table, int write, struct file *filp,
+int proc_dointvec_minmax(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    return -ENOSYS;
}

-int proc_dointvec_jiffies(ctl_table *table, int write, struct file *filp,
+int proc_dointvec_jiffies(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    return -ENOSYS;
}

-int proc_dointvec_userhz_jiffies(ctl_table *table, int write, struct file *filp,
+int proc_dointvec_userhz_jiffies(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    return -ENOSYS;
}

-int proc_dointvec_ms_jiffies(ctl_table *table, int write, struct file *filp,
+int proc_dointvec_ms_jiffies(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    return -ENOSYS;
}

-int proc_doulongvec_minmax(ctl_table *table, int write, struct file *filp,
+int proc_doulongvec_minmax(struct ctl_table *table, int write, struct file *filp,
    void __user *buffer, size_t *lenp, loff_t *ppos)
{
    return -ENOSYS;
}

-int proc_doulongvec_ms_jiffies_minmax(ctl_table *table, int write,
+int proc_doulongvec_ms_jiffies_minmax(struct ctl_table *table, int write,
    struct file *filp,
    void __user *buffer,
    size_t *lenp, loff_t *ppos)
@@ -2345,7 +2345,7 @@ int proc_doulongvec_ms_jiffies_minmax(ctl_table *table, int write,
    */

```

```

/* The generic string strategy routine: */
-int sysctl_string(ctl_table *table, int __user *name, int nlen,
+int sysctl_string(struct ctl_table *table, int __user *name, int nlen,
    void __user *oldval, size_t __user *oldlenp,
    void __user *newval, size_t newlen)
{
@@ -2391,7 +2391,7 @@ int sysctl_string(ctl_table *table, int __user *name, int nlen,
    * are between the minimum and maximum values given in the arrays
    * table->extra1 and table->extra2, respectively.
    */
-int sysctl_intvec(ctl_table *table, int __user *name, int nlen,
+int sysctl_intvec(struct ctl_table *table, int __user *name, int nlen,
    void __user *oldval, size_t __user *oldlenp,
    void __user *newval, size_t newlen)
{
@@ -2427,7 +2427,7 @@ int sysctl_intvec(ctl_table *table, int __user *name, int nlen,
}

/* Strategy function to convert jiffies to seconds */
-int sysctl_jiffies(ctl_table *table, int __user *name, int nlen,
+int sysctl_jiffies(struct ctl_table *table, int __user *name, int nlen,
    void __user *oldval, size_t __user *oldlenp,
    void __user *newval, size_t newlen)
{
@@ -2461,7 +2461,7 @@ int sysctl_jiffies(ctl_table *table, int __user *name, int nlen,
}

/* Strategy function to convert jiffies to seconds */
-int sysctl_ms_jiffies(ctl_table *table, int __user *name, int nlen,
+int sysctl_ms_jiffies(struct ctl_table *table, int __user *name, int nlen,
    void __user *oldval, size_t __user *oldlenp,
    void __user *newval, size_t newlen)
{
@@ -2532,28 +2532,28 @@ out:
    return -ENOSYS;
}

-int sysctl_string(ctl_table *table, int __user *name, int nlen,
+int sysctl_string(struct ctl_table *table, int __user *name, int nlen,
    void __user *oldval, size_t __user *oldlenp,
    void __user *newval, size_t newlen)
{
    return -ENOSYS;
}

-int sysctl_intvec(ctl_table *table, int __user *name, int nlen,
+int sysctl_intvec(struct ctl_table *table, int __user *name, int nlen,

```

```
void __user *oldval, size_t __user *oldlenp,  
void __user *newval, size_t newlen)  
{  
    return -ENOSYS;  
}
```

```
-int sysctl_jiffies(ctl_table *table, int __user *name, int nlen,  
+int sysctl_jiffies(struct ctl_table *table, int __user *name, int nlen,  
    void __user *oldval, size_t __user *oldlenp,  
    void __user *newval, size_t newlen)  
{  
    return -ENOSYS;  
}
```

```
-int sysctl_ms_jiffies(ctl_table *table, int __user *name, int nlen,  
+int sysctl_ms_jiffies(struct ctl_table *table, int __user *name, int nlen,  
    void __user *oldval, size_t __user *oldlenp,  
    void __user *newval, size_t newlen)  
{  
--
```

1.5.1.1.181.g2de0
