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[] = {
 };

 #if defined(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 TMPBUFLEN
 }

-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 TMPBUFLEN
 }

-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_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 -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
```