

---

Subject: [RFC][PATCH 4/5] utsname namespaces: sysctl hack

Posted by [serue](#) on Fri, 07 Apr 2006 18:36:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Sysctl uts patch. This clearly will need to be done another way, but since sysctl itself needs to be container aware, 'the right thing' is a separate patchset.

Signed-off-by: Serge E. Hallyn <serue@us.ibm.com>

---

```
kernel/sysctl.c | 38 ++++++-----
1 files changed, 28 insertions(+), 10 deletions(-)
```

```
40f7e1320c82efb6e875fc3bf44408cdfd093f21
```

```
diff --git a/kernel/sysctl.c b/kernel/sysctl.c
```

```
index e82726f..c2b18ef 100644
```

```
--- a/kernel/sysctl.c
```

```
+++ b/kernel/sysctl.c
```

```
@@ -233,8 +233,8 @@ static ctl_table kern_table[] = {
{
```

```
    .ctl_name = KERN_OSTYPE,
    .procname = "ostype",
-   .data = system_utsname.sysname,
-   .maxlen = sizeof(system_utsname.sysname),
+   .data = init_uts_ns.name.sysname,
+   .maxlen = sizeof(init_uts_ns.name.sysname),
    .mode = 0444,
    .proc_handler = &proc_doutsstring,
    .strategy = &sysctl_string,
```

```
@@ -242,8 +242,8 @@ static ctl_table kern_table[] = {
{
```

```
    .ctl_name = KERN_OSRELEASE,
    .procname = "osrelease",
-   .data = system_utsname.release,
-   .maxlen = sizeof(system_utsname.release),
+   .data = init_uts_ns.name.release,
+   .maxlen = sizeof(init_uts_ns.name.release),
    .mode = 0444,
    .proc_handler = &proc_doutsstring,
    .strategy = &sysctl_string,
```

```
@@ -251,8 +251,8 @@ static ctl_table kern_table[] = {
{
```

```
    .ctl_name = KERN_VERSION,
    .procname = "version",
-   .data = system_utsname.version,
-   .maxlen = sizeof(system_utsname.version),
+   .data = init_uts_ns.name.version,
+   .maxlen = sizeof(init_uts_ns.name.version),
```

```

.mode = 0444,
.proc_handler = &proc_doutsstring,
.strategy = &sysctl_string,
@@ -260,8 +260,8 @@ static ctl_table kern_table[] = {
{
.ctl_name = KERN_NODENAME,
.procname = "hostname",
- .data = system_utsname.nodename,
- .maxlen = sizeof(system_utsname.nodename),
+ .data = init_uts_ns.name.nodename,
+ .maxlen = sizeof(init_uts_ns.name.nodename),
.mode = 0644,
.proc_handler = &proc_doutsstring,
.strategy = &sysctl_string,
@@ -269,8 +269,8 @@ static ctl_table kern_table[] = {
{
.ctl_name = KERN_DOMAINNAME,
.procname = "domainname",
- .data = system_utsname.domainname,
- .maxlen = sizeof(system_utsname.domainname),
+ .data = init_uts_ns.name.domainname,
+ .maxlen = sizeof(init_uts_ns.name.domainname),
.mode = 0644,
.proc_handler = &proc_doutsstring,
.strategy = &sysctl_string,
@@ -1619,6 +1619,24 @@ static int proc_doutsstring(ctl_table *t
{
int r;

+ switch (table->ctl_name) {
+ case KERN_OSTYPE:
+ table->data = utsname()->sysname;
+ break;
+ case KERN_OSRELEASE:
+ table->data = utsname()->release;
+ break;
+ case KERN_VERSION:
+ table->data = utsname()->version;
+ break;
+ case KERN_NODENAME:
+ table->data = utsname()->nodename;
+ break;
+ case KERN_DOMAINNAME:
+ table->data = utsname()->domainname;
+ break;
+ }
+
if (!write) {

```

```
down_read(&uts_sem);
r=proc_dostring(table,0,filp,buffer,lenp, ppos);
```

--  
1.2.4

---

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack  
Posted by [dev](#) on Wed, 19 Apr 2006 15:10:22 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Serge,

can we do nothing with sysctls at this moment, instead of committing hacks?

Thanks,  
Kirill

> Sysctl uts patch. This clearly will need to be done another way, but  
> since sysctl itself needs to be container aware, 'the right thing' is  
> a separate patchset.

>  
> Signed-off-by: Serge E. Hallyn <serue@us.ibm.com>

> ---  
> kernel/sysctl.c | 38 ++++++-----  
> 1 files changed, 28 insertions(+), 10 deletions(-)

>  
> 40f7e1320c82efb6e875fc3bf44408cdfd093f21  
> diff --git a/kernel/sysctl.c b/kernel/sysctl.c  
> index e82726f..c2b18ef 100644  
> --- a/kernel/sysctl.c  
> +++ b/kernel/sysctl.c  
> @@ -233,8 +233,8 @@ static ctl\_table kern\_table[] = {  
> {  
> .ctl\_name = KERN\_OSTYPE,  
> .procname = "ostype",  
> - .data = system\_utsname.sysname,  
> - .maxlen = sizeof(system\_utsname.sysname),  
> + .data = init\_uts\_ns.name.sysname,  
> + .maxlen = sizeof(init\_uts\_ns.name.sysname),  
> .mode = 0444,  
> .proc\_handler = &proc\_doutsstring,  
> .strategy = &sysctl\_string,  
> @@ -242,8 +242,8 @@ static ctl\_table kern\_table[] = {  
> {  
> .ctl\_name = KERN\_OSRELEASE,  
> .procname = "osrelease",  
> - .data = system\_utsname.release,  
> - .maxlen = sizeof(system\_utsname.release),

```

> + .data = init_uts_ns.name.release,
> + .maxlen = sizeof(init_uts_ns.name.release),
> .mode = 0444,
> .proc_handler = &proc_doutsstring,
> .strategy = &sysctl_string,
> @@ -251,8 +251,8 @@ static ctl_table kern_table[] = {
> {
> .ctl_name = KERN_VERSION,
> .procname = "version",
> - .data = system_utsname.version,
> - .maxlen = sizeof(system_utsname.version),
> + .data = init_uts_ns.name.version,
> + .maxlen = sizeof(init_uts_ns.name.version),
> .mode = 0444,
> .proc_handler = &proc_doutsstring,
> .strategy = &sysctl_string,
> @@ -260,8 +260,8 @@ static ctl_table kern_table[] = {
> {
> .ctl_name = KERN_NODENAME,
> .procname = "hostname",
> - .data = system_utsname.nodename,
> - .maxlen = sizeof(system_utsname.nodename),
> + .data = init_uts_ns.name.nodename,
> + .maxlen = sizeof(init_uts_ns.name.nodename),
> .mode = 0644,
> .proc_handler = &proc_doutsstring,
> .strategy = &sysctl_string,
> @@ -269,8 +269,8 @@ static ctl_table kern_table[] = {
> {
> .ctl_name = KERN_DOMAINNAME,
> .procname = "domainname",
> - .data = system_utsname.domainname,
> - .maxlen = sizeof(system_utsname.domainname),
> + .data = init_uts_ns.name.domainname,
> + .maxlen = sizeof(init_uts_ns.name.domainname),
> .mode = 0644,
> .proc_handler = &proc_doutsstring,
> .strategy = &sysctl_string,
> @@ -1619,6 +1619,24 @@ static int proc_doutsstring(ctl_table *t
> {
> int r;
>
> + switch (table->ctl_name) {
> + case KERN_OSTYPE:
> + table->data = utsname()->sysname;
> + break;
> + case KERN_OSRELEASE:
> + table->data = utsname()->release;

```

```
> + break;
> + case KERN_VERSION:
> + table->data = utsname()->version;
> + break;
> + case KERN_NODENAME:
> + table->data = utsname()->nodename;
> + break;
> + case KERN_DOMAINNAME:
> + table->data = utsname()->domainname;
> + break;
> + }
> +
> if (!write) {
>   down_read(&uts_sem);
>   r=proc_dostring(table,0,filp,buffer,lenp, ppos);
```

---

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack  
Posted by [serue](#) on Wed, 19 Apr 2006 15:21:29 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Quoting Kirill Korotaev (dev@sw.ru):

```
> Serge,
>
> can we do nothing with sysctls at this moment, instead of committing hacks?
```

Please look closer at the patch.

I *am* doing nothing with sysctls.

system\_utsname no longer exists, and the way to get to that is by using  
init\_uts\_ns.name. That's all this does.

-serge

```
>
> Thanks,
> Kirill
>
> >Sysctl uts patch. This clearly will need to be done another way, but
> >since sysctl itself needs to be container aware, 'the right thing' is
> >a separate patchset.
> >
> >Signed-off-by: Serge E. Hallyn <serue@us.ibm.com>
> >---
> > kernel/sysctl.c | 38 ++++++-----
> > 1 files changed, 28 insertions(+), 10 deletions(-)
> >
```

```

> >40f7e1320c82efb6e875fc3bf44408cdfd093f21
> >diff --git a/kernel/sysctl.c b/kernel/sysctl.c
> >index e82726f..c2b18ef 100644
> >--- a/kernel/sysctl.c
> >+++ b/kernel/sysctl.c
> >@@ -233,8 +233,8 @@ static ctl_table kern_table[] = {
> > {
> > .ctl_name = KERN_OSTYPE,
> > .procname = "ostype",
> >- .data = system_utsname.sysname,
> >- .maxlen = sizeof(system_utsname.sysname),
> >+ .data = init_uts_ns.name.sysname,
> >+ .maxlen = sizeof(init_uts_ns.name.sysname),
> > .mode = 0444,
> > .proc_handler = &proc_doutsstring,
> > .strategy = &sysctl_string,
> >@@ -242,8 +242,8 @@ static ctl_table kern_table[] = {
> > {
> > .ctl_name = KERN_OSRELEASE,
> > .procname = "osrelease",
> >- .data = system_utsname.release,
> >- .maxlen = sizeof(system_utsname.release),
> >+ .data = init_uts_ns.name.release,
> >+ .maxlen = sizeof(init_uts_ns.name.release),
> > .mode = 0444,
> > .proc_handler = &proc_doutsstring,
> > .strategy = &sysctl_string,
> >@@ -251,8 +251,8 @@ static ctl_table kern_table[] = {
> > {
> > .ctl_name = KERN_VERSION,
> > .procname = "version",
> >- .data = system_utsname.version,
> >- .maxlen = sizeof(system_utsname.version),
> >+ .data = init_uts_ns.name.version,
> >+ .maxlen = sizeof(init_uts_ns.name.version),
> > .mode = 0444,
> > .proc_handler = &proc_doutsstring,
> > .strategy = &sysctl_string,
> >@@ -260,8 +260,8 @@ static ctl_table kern_table[] = {
> > {
> > .ctl_name = KERN_NODENAME,
> > .procname = "hostname",
> >- .data = system_utsname.nodename,
> >- .maxlen = sizeof(system_utsname.nodename),
> >+ .data = init_uts_ns.name.nodename,
> >+ .maxlen = sizeof(init_uts_ns.name.nodename),
> > .mode = 0644,
> > .proc_handler = &proc_doutsstring,

```

```

>> .strategy = &sysctl_string,
>>@@ -269,8 +269,8 @@ static ctl_table kern_table[] = {
>> {
>> .ctl_name = KERN_DOMAINNAME,
>> .procname = "domainname",
>>- .data = system_utsname.domainname,
>>- .maxlen = sizeof(system_utsname.domainname),
>>+ .data = init_uts_ns.name.domainname,
>>+ .maxlen = sizeof(init_uts_ns.name.domainname),
>> .mode = 0644,
>> .proc_handler = &proc_doutsstring,
>> .strategy = &sysctl_string,
>>@@ -1619,6 +1619,24 @@ static int proc_doutsstring(ctl_table *t
>> {
>> int r;
>>
>>+ switch (table->ctl_name) {
>>+ case KERN_OSTYPE:
>>+ table->data = utsname()->sysname;
>>+ break;
>>+ case KERN_OSRELEASE:
>>+ table->data = utsname()->release;
>>+ break;
>>+ case KERN_VERSION:
>>+ table->data = utsname()->version;
>>+ break;
>>+ case KERN_NODENAME:
>>+ table->data = utsname()->nodename;
>>+ break;
>>+ case KERN_DOMAINNAME:
>>+ table->data = utsname()->domainname;
>>+ break;
>>+ }
>>+
>> if (!write) {
>> down_read(&uts_sem);
>> r=proc_dostring(table,0,filp,buffer,lenp, ppos);
>

```

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack  
 Posted by [ebiederm](#) on Wed, 19 Apr 2006 15:29:32 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Kirill Korotaev <dev@sw.ru> writes:

> Serge,  
 >

> can we do nothing with sysctls at this moment, instead of committing hacks?

Except that we modify a static table changing the uts behaviour in proc\_doutsstring isn't all that bad.

I'm just about to start on something more comprehensive, in the sysctl case.

Eric

---

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack

Posted by [dev](#) on Wed, 19 Apr 2006 15:43:24 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Serge,

> Please look closer at the patch.

> I \*am\* doing nothing with sysctls.

>

> system\_utsname no longer exists, and the way to get to that is by using

> init\_uts\_ns.name. That's all this does.

Sorry for being not concrete enough.

I mean switch () in the code. Until we decided how to virtualize sysctls/proc, I believe no dead code/hacks should be committed. IMHO.

FYI, I strongly object against virtualizing sysctls this way as it is not flexible and is a real hack from my POV.

Sure, change of system\_utsname.sysname -> init\_uts\_ns.name.sysname is Ok.

Thanks,  
Kirill

>>>Sysctl uts patch. This clearly will need to be done another way, but  
>>>since sysctl itself needs to be container aware, 'the right thing' is  
>>>a separate patchset.

>>>

>>>Signed-off-by: Serge E. Hallyn <serue@us.ibm.com>

>>>---

>>>kernel/sysctl.c | 38 ++++++-----

>>>1 files changed, 28 insertions(+), 10 deletions(-)

>>>

>>>40f7e1320c82efb6e875fc3bf44408cdfd093f21

>>>diff --git a/kernel/sysctl.c b/kernel/sysctl.c

>>>index e82726f..c2b18ef 100644

>>>--- a/kernel/sysctl.c

>>>+++ b/kernel/sysctl.c

```

>>> @@ -233,8 +233,8 @@ static ctl_table kern_table[] = {
>>> {
>>> .ctl_name = KERN_OSTYPE,
>>> .procname = "ostype",
>>>- .data = system_utsname.sysname,
>>>- .maxlen = sizeof(system_utsname.sysname),
>>>+ .data = init_uts_ns.name.sysname,
>>>+ .maxlen = sizeof(init_uts_ns.name.sysname),
>>> .mode = 0444,
>>> .proc_handler = &proc_doutsstring,
>>> .strategy = &sysctl_string,
>>> @@ -242,8 +242,8 @@ static ctl_table kern_table[] = {
>>> {
>>> .ctl_name = KERN_OSRELEASE,
>>> .procname = "osrelease",
>>>- .data = system_utsname.release,
>>>- .maxlen = sizeof(system_utsname.release),
>>>+ .data = init_uts_ns.name.release,
>>>+ .maxlen = sizeof(init_uts_ns.name.release),
>>> .mode = 0444,
>>> .proc_handler = &proc_doutsstring,
>>> .strategy = &sysctl_string,
>>> @@ -251,8 +251,8 @@ static ctl_table kern_table[] = {
>>> {
>>> .ctl_name = KERN_VERSION,
>>> .procname = "version",
>>>- .data = system_utsname.version,
>>>- .maxlen = sizeof(system_utsname.version),
>>>+ .data = init_uts_ns.name.version,
>>>+ .maxlen = sizeof(init_uts_ns.name.version),
>>> .mode = 0444,
>>> .proc_handler = &proc_doutsstring,
>>> .strategy = &sysctl_string,
>>> @@ -260,8 +260,8 @@ static ctl_table kern_table[] = {
>>> {
>>> .ctl_name = KERN_NODENAME,
>>> .procname = "hostname",
>>>- .data = system_utsname.nodename,
>>>- .maxlen = sizeof(system_utsname.nodename),
>>>+ .data = init_uts_ns.name.nodename,
>>>+ .maxlen = sizeof(init_uts_ns.name.nodename),
>>> .mode = 0644,
>>> .proc_handler = &proc_doutsstring,
>>> .strategy = &sysctl_string,
>>> @@ -269,8 +269,8 @@ static ctl_table kern_table[] = {
>>> {
>>> .ctl_name = KERN_DOMAINNAME,
>>> .procname = "domainname",

```

```

>>>- .data = system_utsname.domainname,
>>>- .maxlen = sizeof(system_utsname.domainname),
>>>+ .data = init_uts_ns.name.domainname,
>>>+ .maxlen = sizeof(init_uts_ns.name.domainname),
>>> .mode = 0644,
>>> .proc_handler = &proc_doutsstring,
>>> .strategy = &sysctl_string,
>>>@@ -1619,6 +1619,24 @@ static int proc_doutsstring(ctl_table *t
>>>{
>>> int r;
>>>
>>>+ switch (table->ctl_name) {
>>>+ case KERN_OSTYPE:
>>>+ table->data = utsname()->sysname;
>>>+ break;
>>>+ case KERN_OSRELEASE:
>>>+ table->data = utsname()->release;
>>>+ break;
>>>+ case KERN_VERSION:
>>>+ table->data = utsname()->version;
>>>+ break;
>>>+ case KERN_NODENAME:
>>>+ table->data = utsname()->nodename;
>>>+ break;
>>>+ case KERN_DOMAINNAME:
>>>+ table->data = utsname()->domainname;
>>>+ break;
>>>+ }
>>>+
>>> if (!write) {
>>> down_read(&uts_sem);
>>> r=proc_dostring(table,0,filp,buffer,lenp, ppos);
>>
>

```

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack  
 Posted by [ebiederm](#) on Wed, 19 Apr 2006 15:52:42 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

"Serge E. Hallyn" <serue@us.ibm.com> writes:

```

> Quoting Kirill Korotaev (dev@sw.ru):
>> Serge,
>>
>> can we do nothing with sysctls at this moment, instead of committing hacks?
>
> Please look closer at the patch.

```

>  
> I \*am\* doing nothing with sysctls.  
>  
> system\_utsname no longer exists, and the way to get to that is by using  
> init\_uts\_ns.name. That's all this does.

Ack. I probably read that question backwards.

Yes you must at least touch kernel/sysctl.c when you kill system\_utsname.

I read it as: Can we do nothing better with sysctls that committing hacks?

Eric

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack  
Posted by [Dave Hansen](#) on Wed, 19 Apr 2006 16:23:34 GMT  
[View Forum Message](#) <> [Reply to Message](#)

Besides ipc and utsnames, can anybody think of some other things in sysctl that we really need to virtualize?

It seems to me that most of the other stuff is kernel-global and we simply won't allow anything in a container to touch it.

That said, there may be things in the future that need to get added as we separate out different subsystems. Things like min\_free\_kbytes could have a container-centric meaning (although I think that is probably a really bad one to mess with).

I have a slightly revamped way of doing the sysv namespace sysctl code. I've attached a couple of (still pretty raw) patches. Do these still fall in the "hacks" category?

-- Dave

#### File Attachments

- 
- 1) [sysv-do-sysctl-strategies2.patch](#), downloaded 323 times
  - 2) [sysv-do-sysctl-strategies1.patch](#), downloaded 329 times
  - 3) [sysv-do-sysctl-strategies0.patch](#), downloaded 305 times
- 

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack  
Posted by [ebiederm](#) on Wed, 19 Apr 2006 16:52:54 GMT  
[View Forum Message](#) <> [Reply to Message](#)

Dave Hansen <haveblue@us.ibm.com> writes:

> Besides ipc and utsnames, can anybody think of some other things in  
> sysctl that we really need to virtualize?

All of the networking entries.

> It seems to me that most of the other stuff is kernel-global and we  
> simply won't allow anything in a container to touch it.  
>  
> That said, there may be things in the future that need to get added as  
> we separate out different subsystems. Things like min\_free\_kbytes could  
> have a container-centric meaning (although I think that is probably a  
> really bad one to mess with).  
>  
> I have a slightly revamped way of doing the sysv namespace sysctl code.  
> I've attached a couple of (still pretty raw) patches. Do these still  
> fall in the "hacks" category?

Only in that you attacked the wrong piece of the puzzle.  
The strategy table entries simply need to die, or be rewritten  
to use the appropriate proc entries.

The proc entries are the real interface, and the two pieces  
don't share an implementation unfortunately.

Eric

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack  
Posted by [Cedric Le Goater](#) on Wed, 19 Apr 2006 16:54:09 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Hello !

Kirill Korotaev wrote:

> Serge,  
>  
>> Please look closer at the patch.  
>> I \*am\* doing nothing with sysctls.  
>>  
>> system\_utsname no longer exists, and the way to get to that is by using  
>> init\_uts\_ns.name. That's all this does.  
> Sorry for being not concrete enough.  
> I mean switch () in the code. Until we decided how to virtualize  
> sysctls/proc, I believe no dead code/hacks should be committed. IMHO.

How could we improve that hack ? Removing the modification of the static

table can easily be worked around but getting rid of the switch() statement is more difficult. Any idea ?

> FYI, I strongly object against virtualizing sysctls this way as it is  
> not flexible and is a real hack from my POV.

what is the issue with flexibility ?

thanks,

C.

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack  
Posted by [ebiederm](#) on Wed, 19 Apr 2006 17:10:01 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Cedric Le Goater <[clg@fr.ibm.com](mailto:clg@fr.ibm.com)> writes:

> Hello !  
>  
> Kirill Korotaev wrote:  
>> Serge,  
>>  
>>> Please look closer at the patch.  
>>> I \*am\* doing nothing with sysctls.  
>>>  
>>> system\_utsname no longer exists, and the way to get to that is by using  
>>> init\_uts\_ns.name. That's all this does.  
>> Sorry for being not concrete enough.  
>> I mean switch () in the code. Until we decided how to virtualize  
>> sysctls/proc, I believe no dead code/hacks should be committed. IMHO.  
>  
> How could we improve that hack ? Removing the modification of the static  
> table can easily be worked around but getting rid of the switch() statement  
> is more difficult. Any idea ?

Store offsetof in data. Not that for such a small case it really matters, but it probably improves maintenance by a little bit.

>> FYI, I strongly object against virtualizing sysctls this way as it is  
>> not flexible and is a real hack from my POV.  
>  
> what is the issue with flexibility ?

The only other thing I would like to see is the process argument passed in.

Eric

---

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack

Posted by [serue](#) on Wed, 19 Apr 2006 17:10:56 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Quoting Kirill Korotaev (dev@sw.ru):

> Serge,

>

> >Please look closer at the patch.

> >I \*am\* doing nothing with sysctls.

> >

> >system\_utsname no longer exists, and the way to get to that is by using

> >init\_uts\_ns.name. That's all this does.

> Sorry for being not concrete enough.

> I mean switch () in the code. Until we decided how to virtualize

> sysctls/proc, I believe no dead code/hacks should be committed. IMHO.

>

> FYI, I strongly object against virtualizing sysctls this way as it is

> not flexible and is a real hack from my POV.

Oops, I forgot that was there!

Sorry.

Yup, I'm fine with leaving that out. After all, nothing in the non-debugging patchset allows userspace to clone the utsnamespace yet, so it's tough to argue that leaving out that switch impacts functionality :)

I believe Dave is working on a more acceptable sysctl adaptation, though I'm not sure when he'll have a patch to submit. In any case, one clear concise piece at a time.

thanks,

-serge

---

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack

Posted by [Dave Hansen](#) on Wed, 19 Apr 2006 17:19:18 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

On Wed, 2006-04-19 at 10:52 -0600, Eric W. Biederman wrote:

> Dave Hansen <haveblue@us.ibm.com> writes:

>

> > Besides ipc and utsnames, can anybody think of some other things in

> > sysctl that we really need to virtualize?  
>  
> All of the networking entries.  
...  
> Only in that you attacked the wrong piece of the puzzle.  
> The strategy table entries simply need to die, or be rewritten  
> to use the appropriate proc entries.

If we are limited to ipc, utsname, and network, I'd be worried trying to justify `_too_` much infrastructure. The network namespaces are not going to be solved any time soon. Why not have something like this which is a quite simple, understandable, minor hack?

> The proc entries are the real interface, and the two pieces  
> don't share an implementation unfortunately.

You're saying that the proc interface doesn't use the `->strategy` entry?  
That isn't what I remember, but I could be completely wrong.

-- Dave

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack  
Posted by [ebiederm](#) on Wed, 19 Apr 2006 17:37:00 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Dave Hansen <haveblue@us.ibm.com> writes:

> On Wed, 2006-04-19 at 10:52 -0600, Eric W. Biederman wrote:  
>> Dave Hansen <haveblue@us.ibm.com> writes:  
>>  
>> > Besides ipc and utsnames, can anybody think of some other things in  
>> > sysctl that we really need to virtualize?  
>>  
>> All of the networking entries.  
> ...  
>> Only in that you attacked the wrong piece of the puzzle.  
>> The strategy table entries simply need to die, or be rewritten  
>> to use the appropriate proc entries.  
>  
> If we are limited to ipc, utsname, and network, I'd be worried trying to  
> justify `_too_` much infrastructure. The network namespaces are not going  
> to be solved any time soon. Why not have something like this which is a  
> quite simple, understandable, minor hack?

Because it doesn't affect what happens in `/proc/sys` !  
Strategy routines only affect `sys_sysctl`.

As strategy routines I have no real problems with them.  
I haven't looked terribly closely yet.

>> The proc entries are the real interface, and the two pieces  
>> don't share an implementation unfortunately.  
>  
> You're saying that the proc interface doesn't use the ->strategy entry?  
> That isn't what I remember, but I could be completely wrong.

Exactly. I have a patch I will be sending out shortly that  
make sys\_sysctl a compile time option (so we can seriously start killing it)  
and it compiles out the strategy routines and /proc/sys still works :)

Eric

---

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack  
Posted by [ebiederm](#) on Wed, 19 Apr 2006 17:48:47 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Dave Hansen <haveblue@us.ibm.com> writes:

> On Wed, 2006-04-19 at 10:52 -0600, Eric W. Biederman wrote:  
>> Dave Hansen <haveblue@us.ibm.com> writes:  
>>  
>> > Besides ipc and utsnames, can anybody think of some other things in  
>> > sysctl that we really need to virtualize?  
>>  
>> All of the networking entries.  
> ...  
>> Only in that you attacked the wrong piece of the puzzle.  
>> The strategy table entries simply need to die, or be rewritten  
>> to use the appropriate proc entries.  
>  
> If we are limited to ipc, utsname, and network, I'd be worried trying to  
> justify too much infrastructure. The network namespaces are not going  
> to be solved any time soon. Why not have something like this which is a  
> quite simple, understandable, minor hack?

As for the network namespaces. It actually isn't that hard, but  
it is tedious and big. Once we get ipc and uts it will probably be  
the namespace to merge. I have the basic code sitting out on a branch.  
Getting the little things like sysctl, sorted out are the primary  
problems. At the same time we don't have to solve the problems for  
the network namespace now. Just don't expect it way of in the  
indefinite future, either.

Eric

---

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack

Posted by [serue](#) on Wed, 19 Apr 2006 17:51:23 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Quoting Eric W. Biederman (ebiederm@xmission.com):

> Kirill Korotaev <dev@sw.ru> writes:

>

>> Serge,

>>

>> can we do nothing with sysctls at this moment, instead of committing hacks?

>

> Except that we modify a static table changing the uts behaviour in

> proc\_doutsstring isn't all that bad.

>

> I'm just about to start on something more comprehensive, in

> the sysctl case.

So assuming that I take out the switch(), leaving that for a better solution by Eric (or Dave, or whoever),

Is it time to ask for the utsname namespace patch to be tried out in -mm?

thanks,

-serge

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack

Posted by [ebiederm](#) on Wed, 19 Apr 2006 18:27:01 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

"Serge E. Hallyn" <serue@us.ibm.com> writes:

> Quoting Eric W. Biederman (ebiederm@xmission.com):

>> Kirill Korotaev <dev@sw.ru> writes:

>>

>>> Serge,

>>>

>>> can we do nothing with sysctls at this moment, instead of committing hacks?

>>>

>>> Except that we modify a static table changing the uts behaviour in

>>> proc\_doutsstring isn't all that bad.

>>>

>>> I'm just about to start on something more comprehensive, in

>>> the sysctl case.

>>>

>>> So assuming that I take out the switch(), leaving that for a better

>>> solution by Eric (or Dave, or whoever),

>  
> Is it time to ask for the utsname namespace patch to be tried out  
> in -mm?

Can we please suggest a syscall interface?

Eric

---

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack  
Posted by [serue](#) on Wed, 19 Apr 2006 20:24:14 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Quoting Eric W. Biederman (ebiederm@xmission.com):

> "Serge E. Hallyn" <serue@us.ibm.com> writes:

>

> > Quoting Eric W. Biederman (ebiederm@xmission.com):

> >> Kirill Korotaev <dev@sw.ru> writes:

> >>

> >> > Serge,

> >> >

> >> > can we do nothing with sysctls at this moment, instead of committing hacks?

> >>

> >> Except that we modify a static table changing the uts behaviour in

> >> proc\_doutsstring isn't all that bad.

> >>

> >> I'm just about to start on something more comprehensive, in

> >> the sysctl case.

> >

> > So assuming that I take out the switch(), leaving that for a better  
> > solution by Eric (or Dave, or whoever),

> >

> > Is it time to ask for the utsname namespace patch to be tried out

> > in -mm?

>

> Can we please suggest a syscall interface?

We can, but I was hoping that would be a separate patch, separate discussion.

Are you asking for a new syscall, specifically to unshare utsname()? Or for discussion over whether we want to do

- one syscall per namespace
- extend CLONE\_NEWns flags
- use unshare
- use namespacefs

-serge

---

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack  
Posted by [Sam Vilain](#) on Wed, 19 Apr 2006 21:44:54 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Eric W. Biederman wrote:

>>Is it time to ask for the utsname namespace patch to be tried out  
>>in -mm?  
>>  
>>  
>  
>Can we please suggest a syscall interface?  
>  
>

What was wrong with the method of the one I posted / extracted from the Linux-VServer project? I mean, apart from the baggage which I intend to remove for the next posting.

The concept was - have a single syscall with versioned subcommands. We can throw all of the namespace syscalls in there.

Sam.

---

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack  
Posted by [serue](#) on Thu, 20 Apr 2006 17:05:59 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Quoting Sam Vilain (sam@vilain.net):

> Eric W. Biederman wrote:  
>  
> >>Is it time to ask for the utsname namespace patch to be tried out  
> >>in -mm?  
> >>  
> >>  
> >  
> >Can we please suggest a syscall interface?  
> >  
> >  
>  
> What was wrong with the method of the one I posted / extracted from the  
> Linux-VServer project? I mean, apart from the baggage which I intend to  
> remove for the next posting.  
>  
> The concept was - have a single syscall with versioned subcommands. We  
> can throw all of the namespace syscalls in there.  
>

> Sam.

Well IIUC on the whole having one syscall multiplexing onto various commands is frowned upon. But please resubmit when you're ready, and we'll see what ppl think of it.

Can you have a version on top of my utsname patches, hooking into the utsname unsharing fn?

thanks,  
-serge

---

Subject: Re: [RFC][PATCH 4/5] utsname namespaces: sysctl hack  
Posted by [serue](#) on Tue, 25 Apr 2006 22:00:22 GMT  
[View Forum Message](#) <> [Reply to Message](#)

Quoting Sam Vilain (sam@vilain.net):

> Eric W. Biederman wrote:

>

> >>Is it time to ask for the utsname namespace patch to be tried out

> >>in -mm?

> >>

> >>

> >

> >Can we please suggest a syscall interface?

Eric,

Did you have any ideas for how you'd want to interface to look? Are you fine with the vserver approach?

> What was wrong with the method of the one I posted / extracted from the  
> Linux-VServer project? I mean, apart from the baggage which I intend to  
> remove for the next posting.

Sam,

Are you working on a next posting?

-serge