Write and Submit your first Linux Kernel Patch
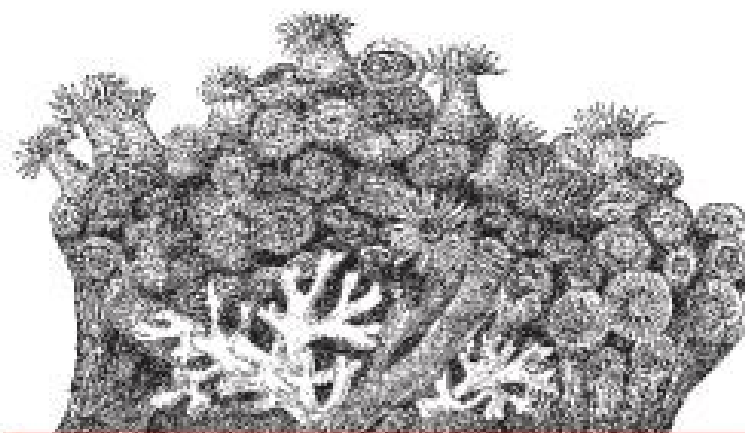
Greg Kroah-Hartman
SUSE Labs / Novell

`git://github.com/gregkh/kernel-tutorial.git`

What we are not going to cover

LINUX
KERNEL

IN A NUTSHELL

A Desktop Quick Reference

O'REILLY®

Greg Kroah-Hartman

SECOND EDITION

Based on
Draft-Proposed
ANSI C

THE

C

PROGRAMMING
LANGUAGE

BRIAN W. KERNIGHAN
DENNIS M. RITCHIE

What we are going to cover

- git basics
- Linux kernel coding style
- Fixing a file
- Generating a patch
- Emailing the patch

git

the fast version control system

git clone

git clone git://git.kernel.org/pub/scm/linux/kernel/git/torvalds/linux-2.6.git

git clone

git clone git://git.kernel.org/pub/scm/linux/kernel/git/torvalds/linux-2.6.git

Linux Kernel Coding Style

Why Care?

"It is not merely a matter of aesthetics that programs should be written in a particular style. Rather there is a psychological basis for writing programs in a conventional manner: programmers have strong expectations that other programmers will follow these discourse rules. If the rules are violated, then the utility afforded by the expectations that programmers have built up over time is effectively nullified."

– Soloway & Ehrlich

Documentation/CodingStyle

Use tabs

All tabs are 8 characters

80 character line limit

```
if (error != -ENODEV) {
        foo();
        bar();
}
```

```c
if (error != -ENODEV) {
        foo();
        bar();
} else {
        report_error();
        goto exit;
}
```

```
if (error != -ENODEV)
        foo();
else

        goto exit;
```

```c
int function(int *baz)
{
        do_something(baz);
        return 0;
}
```

scripts/checkpatch.pl

USB: otg: Fix bug on remove path without transceiver

In the case where a gadget driver is removed while no
transceiver was found at probe time, a bug in
otg_put_transceiver() will trigger.

Signed-off-by: Robert Jarzmik <robert.jarzmik@free.fr>
Acked-by: David Brownell <dbrownell@users.sourceforge.net>
Signed-off-by: Greg Kroah-Hartman <gregkh@suse.de>

--- a/drivers/usb/otg/otg.c
+++ b/drivers/usb/otg/otg.c
@@ -43,7 +43,8 @@ EXPORT_SYMBOL(otg_get_transceiver);
 void otg_put_transceiver(struct otg_transceiver *x)
 {
-        put_device(x->dev);
+   if (x)
+   put_device(x->dev);
 }

Developer's Certificate of Origin

(a) I created this change; or

(b) Based this on a previous work with a
    compatible license; or

(c) Provided to me by (a), (b), or (c) and not
    modified

(d) This contribution is public.

```
git diff

git commit

git show

git format-patch

git send-email
```

Checklist

- Kernel builds with patch applied
- Correct "From:" address
- Concise "Subject:"
- Explain the patch
- Signed-off-by

Git checkout