Downsizing the CPE Linux® Flash Image

Revision History

Revision	Date	Change Description
96XXX-AN101-R	11/14/13	**Updated:** • "Software Components in the Flash Image" on page 9 • "Kernel Customization" on page 10 • "Image Size Examples" on page 16 **Added:** • "Memory-Related Changes" on page 7 • "Reducing WLAN Image Size" on page 15 • "Determining the Root File System Size" on page 17
96XXX-AN100-R	12/01/10	Initial release

Table of Contents

List of Tables

About This Document

Purpose and Audience

This application note discusses methods for reducing the image size that can lead to the use of smaller NOR Flash and reduce the overall bill of materials (BOM) cost. This discussion is based on the latest 4.14L.03 release, although, the techniques presented here are generally applicable to other releases as well.

The example profile used in this application note is the BCM96328GW. This application note discusses methods to reduce WLAN image size based on experience gained with eCos. Related memory changes are also covered. This application note does not discuss methods to reduce the VoIP image size, even though it could be part of the Flash image.

Acronyms and Abbreviations

In most cases, acronyms and abbreviations are defined on first use.

For a comprehensive list of acronyms and other terms used in Broadcom documents, go to: http://www.broadcom.com/press/glossary.php.

Document Conventions

The following conventions may be used in this document:

Convention	Description
Bold	User input and actions: for example, type **exit**, click **OK,** press **Alt+C**
`Monospace`	Code: `#include <iostream>` HTML: `<td rowspan = 3>` Command line commands and parameters: `wl [-l] <command>`
`< >`	Placeholders for *required* elements: enter your `<username>` or `wl <command>`
`[ ]`	Indicates *optional* command-line parameters: `wl [-l]` Indicates bit and byte ranges (inclusive): [0:3] or [7:0]

References

The references in this section may be used in conjunction with this document.

> **Note:** Broadcom provides customer access to technical documentation and software through its Customer Support Portal (CSP) and Downloads and Support site (see Technical Support).

For Broadcom documents, replace the "xx" in the document number with the largest number available in the repository to ensure that you have the most current version of the document.

Document (or Item) Name	Number	Source
Broadcom Items		
[1] CPE Memory Accounting	963XX-AN600-R	CSP

Technical Support

Broadcom provides customer access to a wide range of information, including technical documentation, schematic diagrams, product bill of materials, PCB layout information, and software updates through its customer support portal (https://support.broadcom.com). For a CSP account, contact your Sales or Engineering support representative.

In addition, Broadcom provides other product support through its Downloads and Support site (http://www.broadcom.com/support/).

Memory-Related Changes

The differences in memory management features between the 2.6.30 and the 3.4 Kernel are minimal. For detailed memory-related tuning refer to the *CPE Memory Accounting* Application Note, see Reference [1] on page 6.

All tools/commands mentioned in the above document still exist in the 4.14L.03 release using 3.4 Linux® Kernel. For instance:

```
Cat /proc/meminfo
Cat /proc/slabinfo
Cat /proc/driver/bcmsw/* ; checking the tx/rx buffer descriptors status
Cat /proc/driver/xtm/*
Cat /proc/pid/maps
Cat /proc/pid/smaps
ps command to see the physical memory usage (under VSZ column)
```

One noticeable difference is the process's address space mapping, for instance in the 3.4 Kernel, using ssk as an example:

```
# cat /proc/pid-of-ssk/maps
00400000-00410000 r-xp 00000000 1f:00 120          /bin/ssk
0041f000-00420000 rw-p 0000f000 1f:00 120          /bin/ssk
006b6000-006d9000 rwxp 00000000 00:00 0            [heap]
58800000-58888000 rw-s 00000000 00:04 0            /SYSV00000000 (deleted)
7789e000-77905000 r-xp 00000000 1f:00 581          /lib/libc.so.0
77905000-77914000 ---p 00000000 00:00 0
77914000-77915000 r--p 00066000 1f:00 581          /lib/libc.so.0
77915000-77916000 rw-p 00067000 1f:00 581          /lib/libc.so.0
77916000-7791c000 rw-p 00000000 00:00 0
7791c000-77946000 r-xp 00000000 1f:00 585          /lib/libgcc_s.so.1
77946000-77955000 ---p 00000000 00:00 0
77955000-77956000 rw-p 00029000 1f:00 585          /lib/libgcc_s.so.1
77956000-77959000 r-xp 00000000 1f:00 499          /lib/libcrypt.so.0
77959000-77968000 ---p 00000000 00:00 0
77968000-77969000 rw-p 00002000 1f:00 499          /lib/libcrypt.so.0
77969000-7797a000 rw-p 00000000 00:00 0
7797a000-7797c000 r-xp 00000000 1f:00 590          /lib/public/libcms_boardctl.so
7797c000-7798b000 ---p 00000000 00:00 0
7798b000-7798c000 rw-p 00001000 1f:00 590          /lib/public/libcms_boardctl.so
7798c000-779a7000 r-xp 00000000 1f:00 593          /lib/public/libcms_util.so
779a7000-779b7000 ---p 00000000 00:00 0
779b7000-779b8000 rw-p 0001b000 1f:00 593          /lib/public/libcms_util.so
779b8000-779ce000 r-xp 00000000 1f:00 587          /lib/libm.so.0
779ce000-779de000 ---p 00000000 00:00 0
779de000-779df000 rw-p 00016000 1f:00 587          /lib/libm.so.0
779df000-779e1000 r-xp 00000000 1f:00 470          /lib/private/libfapctl.so
779e1000-779f0000 ---p 00000000 00:00 0
779f0000-779f1000 rw-p 00001000 1f:00 470          /lib/private/libfapctl.so
779f1000-779fe000 r-xp 00000000 1f:00 496          /lib/private/libethswctl.so
779fe000-77a0d000 ---p 00000000 00:00 0
77a0d000-77a0e000 rw-p 0000c000 1f:00 496          /lib/private/libethswctl.so
77a0e000-77a10000 r-xp 00000000 1f:00 485          /lib/private/libpwrctl.so
77a10000-77a1f000 ---p 00000000 00:00 0
77a1f000-77a20000 rw-p 00001000 1f:00 485          /lib/private/libpwrctl.so
77a20000-77a21000 r-xp 00000000 1f:00 475          /lib/private/libspuctl.so
```

```
77a21000-77a30000 ---p 00000000 00:00 0
77a30000-77a31000 rw-p 00000000 1f:00 475        /lib/private/libspuctl.so
77a31000-77a38000 r-xp 00000000 1f:00 478        /lib/private/libvlanctl.so
77a38000-77a47000 ---p 00000000 00:00 0
77a47000-77a48000 rw-p 00006000 1f:00 478        /lib/private/libvlanctl.so
77a48000-77a4a000 r-xp 00000000 1f:00 477        /lib/private/libatmctl.so
77a4a000-77a5a000 ---p 00000000 00:00 0
77a5a000-77a5b000 rw-p 00002000 1f:00 477        /lib/private/libatmctl.so
77a5b000-77a61000 r-xp 00000000 1f:00 476        /lib/private/libxdslctl.so
77a61000-77a70000 ---p 00000000 00:00 0
77a70000-77a71000 rw-p 00005000 1f:00 476        /lib/private/libxdslctl.so
77a71000-77a88000 r-xp 00000000 1f:00 467        /lib/private/libmdm.so
77a88000-77a97000 ---p 00000000 00:00 0
77a97000-77aa9000 rw-p 00016000 1f:00 467        /lib/private/libmdm.so
77aa9000-77aab000 r-xp 00000000 1f:00 577        /lib/libdl.so.0
77aab000-77aba000 ---p 00000000 00:00 0
77aba000-77abb000 r--p 00001000 1f:00 577        /lib/libdl.so.0
77abb000-77abc000 rw-p 00002000 1f:00 577        /lib/libdl.so.0
77abc000-77abe000 r-xp 00000000 1f:00 483        /lib/private/libnanoxml.so
77abe000-77acd000 ---p 00000000 00:00 0
77acd000-77ace000 rw-p 00001000 1f:00 483        /lib/private/libnanoxml.so
77ace000-77ad0000 r-xp 00000000 1f:00 494        /lib/private/libcms_qdm.so
77ad0000-77adf000 ---p 00000000 00:00 0
77adf000-77ae0000 rw-p 00001000 1f:00 494        /lib/private/libcms_qdm.so
77ae0000-77b70000 r-xp 00000000 1f:00 468        /lib/private/libcms_core.so
77b70000-77b74000 rw-p 00090000 1f:00 468        /lib/private/libcms_core.so
77b74000-77b77000 r-xp 00000000 1f:00 592        /lib/public/libcms_msg.so
77b77000-77b86000 ---p 00000000 00:00 0
77b86000-77b87000 rw-p 00002000 1f:00 592        /lib/public/libcms_msg.so
77b87000-77bab000 r-xp 00000000 1f:00 482        /lib/private/libcms_dal.so
77bab000-77bbb000 ---p 00000000 00:00 0
77bbb000-77bbc000 rw-p 00024000 1f:00 482        /lib/private/libcms_dal.so
77bbc000-77bc1000 r-xp 00000000 1f:00 578        /lib/ld-uClibc.so.0
77bce000-77bcf000 rw-p 00000000 00:00 0
77bd0000-77bd1000 r--p 00004000 1f:00 578        /lib/ld-uClibc.so.0
77bd1000-77bd2000 rw-p 00005000 1f:00 578        /lib/ld-uClibc.so.0
77bd2000-77bd3000 rw-p 00000000 00:00 0
7fe94000-7feb5000 rwxp 00000000 00:00 0          [stack]
7fff7000-7fff8000 r-xp 00000000 00:00 0          [vdso]
```

Using the `cat /proc/pid/maps` output, it shows the virtual address range for each VMA. It is not possible to know the RSS (physical memory) that each VMA occupies. To determine the RSS that each VMA occupies, use another file called smaps in the /prod/pid-of-ssk/ directory.

Notice how the address space of the library has changed from 0x2xxxxxxx to 0x77xxxxxx in the 3.4 Kernel, and that the last line of ELF object that Kernel maps to is called [vdso].

The vDSO object is a virtual dynamic shared object that is always mapped into the address space of an amd64 process under Linux. It can be used to implement quick system calls. To access the functions inside the vDSO object, the user must locate the object and extract an address from the symbol table.

For more detailed description, refer to the following two documents:

• Documentation/ABI/stable/vdso
• Documentation/vDSO/parse_vdso.c

Software Components in the Flash Image

The following components make up the Flash image. Their name and size are shown (for the BCM96328GW profile):

- **CFE**: the boot loader (64 KB, compressed)
- **Linux kernel**: vmlinux (4,072,316 Bytes, stripped, uncompressed)
- **Linux kernel**: vmlinux.lz (1,389,434 Bytes, stripped, compressed)
- **Root file system**: (18,372 KB, stripped, uncompressed). The root file system used in the system is the squash file system and the version number is 4.0. Note that the squash file system is read-only.
- **PSI**: Persistent Storage Information for storing configuration file of the CPE (24 KB, compressed)

The size for the CFE is fixed at 64 KB and the PSI is small and is usually fixed in size. These two components are not discussed further in this application note. This discussion focuses on the Linux kernel and Root file system.

Determining the Kernel Size

To find out the kernel size in the final image, go to the finished build profile and list the size.

```
# cd ~commengine/targets/96328GW      // Your top directory may differ from this but they all
                                       // contain "targets" subdirectory.
# ls –l vmlinux
-rwxr-xr-x 1 root root 4072316 Oct 1515:43 vmlinux
```

The size shown above is stripped and uncompressed.

Determining the Root File System Size

To find out the size for the root file system, enter the following at the command line:

```
# cd ~commengine/targets/96328GW          // Your top directory may differ from this but they all
                                              contain a "targets" subdirectory.)

#du fs
 12 fs/sys
.
.
.
592 fs/etc/adsl
8 fs/etc/dhcp
6032fs/lib/modules
4664fs/bin
18372fs
```

This shows the root file system is 18,372 KB in size; again, this is stripped and uncompressed. Notice that the root file system contains an xDSL PHY image and its size is 592 KB, as shown in the code above.

Image Types

The image builder can be located under hostTools/bcmImagebuilder and hostTools/createimg. It is the image builder's task to combine the bootloader, Linux kernel (vmlinx), and root file system into the final downloadable image to the CPE modem. There are four kinds of images that the image builder builds, using the BCM96328GW as an example, they are:

- bcm96328GW_cfe_fs_kernel (size = 6,699,482 bytes): bootloader + kernel + file system
- bcm96328GW_fs_kernel (size = 6,640,762 bytes): kernel + file system
- bcm96328GW_flash_image_96328AVNG (size = 6,706,332 bytes): bootloader + NVRAM + kernel + file system
- bcm96328GW_flash_image_96328AVNG.w (size = 6,706,342 bytes): same as the above + 20 bytes CRC

The compression utility used along with the image builder is LZMA 4.57 (see www.7-zip.org).

Kernel Customization

Using the BCM96328GW's default setting, the Linux kernel image includes the following components: crypto, arch, init, block, drivers (non-Broadcom drivers), kernel, sound, mm, firmware, ipc, security, net, and fs. The following command, executed from the kernel/linux directory, can be used to check the size of each component. Notice that the sizes shown are non-stripped:

```
# find ./  -name built-in.o | xargs ls –l
-rw-r--r-- 1 root root    279704 Oct 15 16:41 ./arch/mips/bcm963xx/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:41 ./arch/mips/bcm963xx/ktools/built-in.o
-rw-r--r-- 1 root root   3864828 Oct 15 16:42 ./arch/mips/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:44 ./arch/mips/fw/lib/built-in.o
-rw-r--r-- 1 root root   1143788 Oct 15 16:42 ./arch/mips/kernel/built-in.o
-rw-r--r-- 1 root root    131454 Oct 15 16:44 ./arch/mips/lib/built-in.o
-rw-r--r-- 1 root root   1401417 Oct 15 16:42 ./arch/mips/math-emu/built-in.o
-rw-r--r-- 1 root root   1048049 Oct 15 16:42 ./arch/mips/mm/built-in.o
-rw-r--r-- 1 root root    176193 Oct 15 16:42 ./arch/mips/pci/built-in.o
-rw-r--r-- 1 root root   2768928 Oct 15 16:42 ./block/built-in.o
-rw-r--r-- 1 root root    481897 Oct 15 16:42 ./block/partitions/built-in.o
-rw-r--r-- 1 root root   2867190 Oct 15 16:42 ./crypto/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:42 ./drivers/atm/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:42 ./drivers/auxdisplay/built-in.o
-rw-r--r-- 1 root root    884621 Oct 15 16:42 ./drivers/base/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:42 ./drivers/base/power/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:42 ./drivers/block/built-in.o
-rw-r--r-- 1 root root  11928909 Oct 15 16:43 ./drivers/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:42 ./drivers/cdrom/built-in.o
-rw-r--r-- 1 root root    330687 Oct 15 16:42 ./drivers/char/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:42 ./drivers/clk/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:42 ./drivers/clocksource/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:42 ./drivers/crypto/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:42 ./drivers/firewire/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:42 ./drivers/firmware/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:42 ./drivers/gpio/built-in.o
-rw-r--r-- 1 root root       257 Oct 15 16:42 ./drivers/gpu/built-in.o
-rw-r--r-- 1 root root       257 Oct 15 16:42 ./drivers/gpu/drm/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:42 ./drivers/gpu/drm/i2c/built-in.o
-rw-r--r-- 1 root root         8 Oct 15 16:42 ./drivers/gpu/stub/built-in.o
```

```
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/gpu/vga/built-in.o
-rw-r--r-- 1 root root      257 Oct 15 16:42 ./drivers/hsi/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/hsi/clients/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/i2c/algos/built-in.o
-rw-r--r-- 1 root root      257 Oct 15 16:42 ./drivers/i2c/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/i2c/busses/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/i2c/muxes/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/idle/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/ieee802154/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/leds/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/lguest/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/macintosh/built-in.o
-rw-r--r-- 1 root root      257 Oct 15 16:42 ./drivers/media/built-in.o
-rw-r--r-- 1 root root      257 Oct 15 16:42 ./drivers/media/common/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/media/common/tuners/built-in.o
-rw-r--r-- 1 root root      257 Oct 15 16:42 ./drivers/media/rc/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/media/rc/keymaps/built-in.o
-rw-r--r-- 1 root root      257 Oct 15 16:42 ./drivers/media/video/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/media/video/davinci/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/mfd/built-in.o
-rw-r--r-- 1 root root      257 Oct 15 16:42 ./drivers/misc/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/misc/carma/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/misc/cb710/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/misc/eeprom/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/misc/lis3lv02d/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/misc/ti-st/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/mmc/built-in.o
-rw-r--r-- 1 root root   655022 Oct 15 16:42 ./drivers/mtd/built-in.o
-rw-r--r-- 1 root root    66798 Oct 15 16:42 ./drivers/mtd/chips/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/mtd/devices/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/mtd/lpddr/built-in.o
-rw-r--r-- 1 root root    62456 Oct 15 16:42 ./drivers/mtd/maps/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/mtd/nand/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/mtd/onenand/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/mtd/tests/built-in.o
-rw-r--r-- 1 root root  1713454 Oct 15 16:42 ./drivers/net/built-in.o
-rw-r--r-- 1 root root  1117530 Oct 15 16:42 ./drivers/net/ppp/built-in.o
-rw-r--r-- 1 root root   173797 Oct 15 16:42 ./drivers/net/slip/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/nfc/built-in.o
-rw-r--r-- 1 root root  1842406 Oct 15 16:43 ./drivers/pci/built-in.o
-rw-r--r-- 1 root root   246815 Oct 15 16:43 ./drivers/pci/pcie/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/pinctrl/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:42 ./drivers/platform/built-in.o
-rw-r--r-- 1 root root    21570 Oct 15 16:42 ./drivers/rtc/built-in.o
-rw-r--r-- 1 root root  2006758 Oct 15 16:43 ./drivers/scsi/built-in.o
-rw-r--r-- 1 root root   113510 Oct 15 16:43 ./drivers/spi/built-in.o
-rw-r--r-- 1 root root  1333865 Oct 15 16:43 ./drivers/tty/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:43 ./drivers/tty/ipwireless/built-in.o
-rw-r--r-- 1 root root   200207 Oct 15 16:43 ./drivers/tty/serial/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:43 ./drivers/tty/vt/built-in.o
-rw-r--r-- 1 root root  2991179 Oct 15 16:43 ./drivers/usb/built-in.o
-rw-r--r-- 1 root root   148017 Oct 15 16:43 ./drivers/usb/class/built-in.o
-rw-r--r-- 1 root root  2111647 Oct 15 16:43 ./drivers/usb/core/built-in.o
-rw-r--r-- 1 root root   729645 Oct 15 16:43 ./drivers/usb/host/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:43 ./drivers/usb/misc/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:43 ./drivers/usb/storage/built-in.o
-rw-r--r-- 1 root root        8 Oct 15 16:43 ./drivers/video/backlight/built-in.o
```

```
-rw-r--r-- 1 root root      80838 Oct 15 16:43 ./drivers/video/built-in.o
-rw-r--r-- 1 root root        257 Oct 15 16:43 ./drivers/video/omap2/built-in.o
-rw-r--r-- 1 root root          8 Oct 15 16:43 ./drivers/video/omap2/displays/built-in.o
-rw-r--r-- 1 root root          8 Oct 15 16:42 ./firmware/built-in.o
-rw-r--r-- 1 root root   13861875 Oct 15 16:43 ./fs/built-in.o
-rw-r--r-- 1 root root     190863 Oct 15 16:42 ./fs/debugfs/built-in.o
-rw-r--r-- 1 root root     105154 Oct 15 16:42 ./fs/devpts/built-in.o
-rw-r--r-- 1 root root          8 Oct 15 16:42 ./fs/exofs/built-in.o
-rw-r--r-- 1 root root    1869304 Oct 15 16:42 ./fs/ext3/built-in.o
-rw-r--r-- 1 root root     776814 Oct 15 16:42 ./fs/fat/built-in.o
-rw-r--r-- 1 root root     774738 Oct 15 16:42 ./fs/fuse/built-in.o
-rw-r--r-- 1 root root     718947 Oct 15 16:42 ./fs/jbd/built-in.o
-rw-r--r-- 1 root root      79918 Oct 15 16:42 ./fs/nls/built-in.o
-rw-r--r-- 1 root root     627723 Oct 15 16:43 ./fs/notify/built-in.o
-rw-r--r-- 1 root root          8 Oct 15 16:43 ./fs/notify/dnotify/built-in.o
-rw-r--r-- 1 root root          8 Oct 15 16:43 ./fs/notify/fanotify/built-in.o
-rw-r--r-- 1 root root     170852 Oct 15 16:43 ./fs/notify/inotify/built-in.o
-rw-r--r-- 1 root root    2041969 Oct 15 16:43 ./fs/proc/built-in.o
-rw-r--r-- 1 root root          8 Oct 15 16:43 ./fs/quota/built-in.o
-rw-r--r-- 1 root root     119402 Oct 15 16:43 ./fs/ramfs/built-in.o
-rw-r--r-- 1 root root     699002 Oct 15 16:43 ./fs/squashfs/built-in.o
-rw-r--r-- 1 root root     511593 Oct 15 16:43 ./fs/sysfs/built-in.o
-rw-r--r-- 1 root root      38222 Oct 15 21:08 ./init/built-in.o
-rw-r--r-- 1 root root     642380 Oct 15 16:42 ./ipc/built-in.o
-rw-r--r-- 1 root root    6739303 Oct 15 16:42 ./kernel/built-in.o
-rw-r--r-- 1 root root     510740 Oct 15 16:42 ./kernel/irq/built-in.o
-rw-r--r-- 1 root root     103231 Oct 15 16:42 ./kernel/power/built-in.o
-rw-r--r-- 1 root root     538125 Oct 15 16:42 ./kernel/sched/built-in.o
-rw-r--r-- 1 root root     613980 Oct 15 16:42 ./kernel/time/built-in.o
-rw-r--r-- 1 root root     979375 Oct 15 16:44 ./lib/built-in.o
-rw-r--r-- 1 root root     103722 Oct 15 16:44 ./lib/xz/built-in.o
-rw-r--r-- 1 root root      82956 Oct 15 16:44 ./lib/zlib_deflate/built-in.o
-rw-r--r-- 1 root root      73687 Oct 15 16:44 ./lib/zlib_inflate/built-in.o
-rw-r--r-- 1 root root    4331406 Oct 15 16:42 ./mm/built-in.o
-rw-r--r-- 1 root root     743424 Oct 15 16:44 ./net/8021q/built-in.o
-rw-r--r-- 1 root root     392243 Oct 15 16:44 ./net/802/built-in.o
-rw-r--r-- 1 root root    1780179 Oct 15 16:44 ./net/atm/built-in.o
-rw-r--r-- 1 root root    5103895 Oct 15 16:44 ./net/bridge/built-in.o
-rw-r--r-- 1 root root    1851127 Oct 15 16:44 ./net/bridge/netfilter/built-in.o
-rw-r--r-- 1 root root   33896557 Oct 15 16:45 ./net/built-in.o
-rw-r--r-- 1 root root    5957029 Oct 15 16:44 ./net/core/built-in.o
-rw-r--r-- 1 root root     158667 Oct 15 16:44 ./net/ethernet/built-in.o
-rw-r--r-- 1 root root   10418262 Oct 15 16:45 ./net/ipv4/built-in.o
-rw-r--r-- 1 root root          8 Oct 15 16:44 ./net/ipv4/netfilter/built-in.o
-rw-r--r-- 1 root root     279785 Oct 15 16:44 ./net/ipv6/built-in.o
-rw-r--r-- 1 root root          8 Oct 15 16:44 ./net/ipv6/netfilter/built-in.o
-rw-r--r-- 1 root root     351824 Oct 15 16:44 ./net/key/built-in.o
-rw-r--r-- 1 root root     389404 Oct 15 16:44 ./net/llc/built-in.o
-rw-r--r-- 1 root root     978341 Oct 15 16:45 ./net/netfilter/built-in.o
-rw-r--r-- 1 root root     511371 Oct 15 16:44 ./net/netlink/built-in.o
-rw-r--r-- 1 root root     350007 Oct 15 16:44 ./net/packet/built-in.o
-rw-r--r-- 1 root root    3682552 Oct 15 16:45 ./net/sched/built-in.o
-rw-r--r-- 1 root root     593299 Oct 15 16:44 ./net/unix/built-in.o
-rw-r--r-- 1 root root    1859520 Oct 15 16:45 ./net/xfrm/built-in.o
-rw-r--r-- 1 root root     129348 Oct 15 16:42 ./security/built-in.o
-rw-r--r-- 1 root root          8 Oct 15 16:42 ./sound/built-in.o
-rw-r--r-- 1 root root          8 Oct 15 16:41 ./usr/built-in.o
```

Reducing the Image Size

To determine what file systems are currently built in the image perform the following steps:

1. Check all built-in .o's under fs/xx/built-in.o and determine if they are needed or not.

2. Remove any wanted file systems.
    For instance, if the ext3 file system is currently built-in and you want to remove it from your build, enter the following at the command line:

    ```
    # vi hostTools/script/gendefconfig.d/20usbhost.conf
    ```

3. Search for EXT3 and remove both CONFIG_EXT3_FS and CONFIG_EXT3_FS_XATTR/ .

4. Return to the top directory and execute `make PROFILE=96328GW clean` and `make PROFILE=96328GW` to rebuild the image without the ext3 file system.

5. Re-execute the command (`# find ./ -name built-in.o | xargs ls -l`) to list all the components in the kernel, you will see that the ext3 is absent and the size of `fs/built-in.o` has been reduced. You may apply the same mechanism to other kernel components.

In addition to the above-mentioned method, there are also kernel-related parameters that can be unconfigured from the Kernel via `make menuconfig` for instance.

From the Main Menu of `make menuconfig`, select **Debug Selection** and then you may deselect the following features from the kernel:
*   Enable KALLSYMS in kernel.
*   Enable Kernel CONFIG_PRINTK and CONFIG_BUG.
*   Enable Linux Kernel Hacking/Debug Features.
*   Enable spinlock Debug.
*   Enable Mutex Debug.
*   Enable RCU stall detector.
*   Enable Magic SysRq.

If desired, you can also remove other kernel-related debugging features that you don't need in the production build.

There is another section under `make menuconfig` called **Kernel Configuration Selection** where other features may be disabled. For instance, use **Kernel Cryptographic Selection → Cryptographic API** to disable the cryptographic API. However, ensure that there are no modules in the Kernel that use the library, before yo disable it.

Customization of Modules

All modules are part of the root file system and they include Broadcom device drivers/modules, Linux netfilter modules, and ALG modules. For downsizing Broadcom modules, the only option that exists is to turn off the debugging support of the driver, if it exists. For example, you might deselect **Packet Acceleration → Debug Support**. This is disabled by default.

For other modules, you may select them to be built inside the Linux kernel (vmlinux). The steps to perform this are as follows:

1. From **Main Menu** of `make menuconfig`, after loading your profile (that is, 96328GW), select **Firewall, ALGs, and Networking Features → Netfilter and Firewall Selection**.

2. Once in this page, replace the M with * as follows:
    From
    ```
    <M> Firewall support
    ```
    to
    ```
    <*> Firewall support
    ```

Perform the same operation for other modules and ALGs.

Using the BCM96328 profile, this has shown a 100 KB (compressed) reduction in the final image.

> **Note:** You are NOT allowed to apply the same mechanism to Broadcom proprietary drivers (dynamically loadable modules).

Finally, not all the modules and loadable drivers are needed in a specific tender. For instance, if USB is not required, then the driver can be removed from `make menuconfig`, etc. Some ALG modules such as IPsec and port triggering, are not always mandatory for Telcos; they can be removed from `make menuconfig` by deselecting them.

Customization of User Space

Review the following possibilities to reduce user-space code.

1. The easiest way to reduce user-space code is to remove features that your customers (Telcos) do not need. For instance, if RIPD is not required, deselect it, in the same way that can be applied to ssh, tr64, ipv6, snmp, and others. Again, this depends on the Telcos' requirements from RFP.

2. Remove debugging features related to user-space code.
    For example, under **Main Menu → Debug Selection**, deselect the following debugging features to reduce the image size:
    *   Enable Debug tools.
    *   Enable CMS Debug Logging.
    *   Enable CMS memory boundary check.
    *   Enable CMS memory poison Allocs and frees.
    *   Enable CMS Asserts.

3. There is a set of sysstat-related utilities that can be deselected. These include mpstat, iostat, pidstat, sar, etc. To deselect these, from **Main Menu → Debug Selection**, deselect the following item:

    Build SYSSTAT family of utilities (mpstat, etc.)

4. When TR69+SSL is required, select TR69_BCM_SSL instead of TR69_SSL.
    BCM_SSL uses much smaller crypto libraries than the one provided through openssl (libcrypto.so).

Miscellaneous

In the 4.10 release, using the compiler flag –0s instead of –02 saves 25K of Flash space in the current BCM96328GW build. –0s is were used by default in the 4.10 release. However, in the 4.14L03 release, when using -02 the user-space code generates compile errors.

The following items can be removed to save a small amount of space. If your system is really short of space, it may be worthwhile.

-   Remove help text from webGUI.
-   Remove unused commands from BusyBox. The official way of performing this is through make menuconfig. From **Main Menu → Major Feature Selection →**, select **Minimal** for BusyBox Features Selection.
-   Remove CLI commands and use the Linux shell. This requires going to the source code and commenting out sections of code, etc.
-   Delete unused HTML files.

Reducing WLAN Image Size

WLAN includes user space and a driver as shown below:

User Space

```
-rwxr-xr-x 1 eddieshi  eddieshi   33868 Oct 16 05:09 epi_ttcp

-rwxr-xr-x 1 eddieshi  eddieshi   42892 Oct 16 05:09 hspotap
-rwxr-xr-x 1 eddieshi  eddieshi   54016 Oct 16 05:09 nas

-rwxr-xr-x 1 eddieshi  eddieshi    4892 Oct 16 05:09 nvram
-rwxr-xr-x 1 eddieshi  eddieshi    6420 Oct 16 05:09 nvramUpdate
l
-rwxr-xr-x 1 eddieshi  eddieshi    4852 Oct 16 05:09 wlctl
-rwxr-xr-x 1 eddieshi  eddieshi    4700 Oct 16 05:09 wlevt
-rwxr-xr-x 1 eddieshi  eddieshi    7180 Oct 16 05:09 wlmngr
lrwxrwxrwx 1 eddieshi  eddieshi      16 Oct 16 05:08 wl_server -> wl_server_socket
-rwxr-xr-x 1 eddieshi  eddieshi    6924 Oct 16 05:09 wl_server_socket
-rwxr-xr-x 1 eddieshi  eddieshi  149476 Oct 16 05:09 wps_monitor
-rwxr-xr-x 1 eddieshi  eddieshi   87344 Oct 16 05:09 libhspotap.so

-rwxr-xr-x 1 eddieshi  eddieshi    7808 Oct 16 05:09 libnvram.so
-rwxr-xr-x 1 eddieshi  eddieshi   96232 Oct 16 05:09 libwlbcmcrypto.so
-rwxr-xr-x 1 eddieshi  eddieshi   62392 Oct 16 05:09 libwlbcmshared.so
-rwxr-xr-x 1 eddieshi  eddieshi  463656 Oct 16 05:09 libwlctl.so
-rwxr-xr-x 1 eddieshi  eddieshi  212024 Oct 16 05:09 libwlmngr.so
```

```
-rwxr-xr-x 1 eddieshi eddieshi  29212 Oct 16 05:09 libwl_server_socket.so
-rwxr-xr-x 1 eddieshi eddieshi  40344 Oct 16 05:09 libwlupnp.so
-rwxr-xr-x 1 eddieshi eddieshi  33348 Oct 16 05:09 libwps.so
-r--r--r-- 1 eddieshi eddieshi    999 Oct 16 05:08 wifiwanadderr.html
-r--r--r-- 1 eddieshi eddieshi   1080 Oct 16 05:08 wifiwandelerr.html
-r--r--r-- 1 eddieshi eddieshi  63113 Oct 16 05:08 wlcfgadv.html
-r--r--r-- 1 eddieshi eddieshi  17618 Oct 16 05:08 wlcfg.html
-r--r--r-- 1 eddieshi eddieshi   5866 Oct 16 05:08 wlcfgkey.html
-r--r--r-- 1 eddieshi eddieshi   1719 Oct 16 05:08 wlmacflt.html
-r--r--r-- 1 eddieshi eddieshi    925 Oct 16 05:08 wlrefresh.html
-r--r--r-- 1 eddieshi eddieshi  45835 Oct 16 05:08 wlsecurity.html
-r--r--r-- 1 eddieshi eddieshi   3678 Oct 16 05:08 wlsetup.html
-r-xr-xr-x 1 eddieshi eddieshi   9577 Oct 16 05:08 wlwapias.html
```

WLAN Driver

```
-rw-rw-r-- 1 eddieshi eddieshi 4439716 Oct 16 05:09 wl.ko
```

This section lists methods in reducing the overall WLAN image size based on work done for eCos.

- Remove EPITTCP.
- Reduce preallocated buffer (this may not help reduce image size, but rather memory).
- Reduce WLAN driver features by conditionally compiling APCS, WL_OVERTHRUSTER, WDS, WLTEST, SMF_STATS, BCMECICOEX, BCM_DCS.
- Remove unnecessary ucode that are not related to the running chip.
- Remove all help text from wlctl.
- Remove libupnp in the WLAN component, this is only needed if WPS is configured.
- Remove lib/ libhspotap.so

Image Size Examples

Table 1 shows several different possible image sizes, starting from the default BCM96328GW profile in the 4.14L.03 release. Then with all debugging features removed from kernel and user space with WLAN still included. An image was built based on one Telco's requirements with no WLAN requirement but with more Residential Gateway (RG) features needed, such as Ipv6.

WLAN related modules (both user and kernel) take up approximately 1.8 MB

Table 1: Image Sizes Possible from Default BCM96328GW Profile

	Image/Subtraction	*Size*
1.	Revision 4.14L03 default BCM96328GW profile	6,640,762 bytes
2.	All kernel and user debugging facilities removed.	6,010,884 bytes
3.	WLAN removed from the above profile.	4,269,422 bytes
4.	Minimum router features without WLAN; this includes DHCP, DNS, IGMP, firewall, brctl, TR69, httpd, console, and cli, with no RIP.	2,671,134 bytes

Determining the Root File System Size

To find out the size of the root file system in the system refer to the following code.

```
# cd ~targets/96328GW/
# du fs

4fs/opt/modules
4fs/opt/bin
84fs/opt/scripts
96fs/opt
4fs/data
4664fs/bin
1296fs/webs
4fs/sbin
4fs/var/log/sa
8fs/var/log
12fs/var
8fs/lib/modules/3.4.11-rt19/kernel/drivers/scsi
92fs/lib/modules/3.4.11-rt19/kernel/drivers/usb/storage
96fs/lib/modules/3.4.11-rt19/kernel/drivers/usb
108fs/lib/modules/3.4.11-rt19/kernel/drivers
20fs/lib/modules/3.4.11-rt19/kernel/crypto
192fs/lib/modules/3.4.11-rt19/kernel/net/ipv4/netfilter
196fs/lib/modules/3.4.11-rt19/kernel/net/ipv4
344fs/lib/modules/3.4.11-rt19/kernel/net/netfilter
544fs/lib/modules/3.4.11-rt19/kernel/net
676fs/lib/modules/3.4.11-rt19/kernel
5348fs/lib/modules/3.4.11-rt19/extra
6028fs/lib/modules/3.4.11-rt19
6032fs/lib/modules
1460fs/lib/private
1024fs/lib/public
88fs/lib/sa
140fs/lib/gpl
10908fs/lib
4fs/etc/iproute2
36fs/etc/cms_entity_info.d
12fs/etc/sysconfig
88fs/etc/wlan
24fs/etc/ppp
4fs/etc/rc3.d
592fs/etc/adsl
32fs/etc/init.d
4fs/etc/snmp
8fs/etc/dhcp
900fs/etc
4fs/sys/kernel/debug
8fs/sys/kernel
12fs/sys
4fs/dev/pts
4fs/dev/misc
12fs/dev
4fs/proc
4fs/mnt
```

```
444fs/usr/bin
4fs/usr/sbin
452fs/usr
18372fs


List of files in the system:


drwxr-xr-x  2 eddieshi eddieshi 4096 Oct 16 05:08 bin
drwxrwxr-x  2 eddieshi eddieshi 4096 Oct 16 05:09 data
lrwxrwxrwx  1 eddieshi eddieshi   16 Oct 16 05:09 debug -> sys/kernel/debug
drwxrwxr-x  4 eddieshi eddieshi 4096 Oct 16 05:09 dev
drwxrwxr-x 12 eddieshi eddieshi 4096 Oct 16 05:09 etc
drwxrwxr-x  7 eddieshi eddieshi 4096 Oct 16 05:09 lib
lrwxrwxrwx  1 eddieshi eddieshi   11 Oct 16 05:08 linuxrc -> bin/busybox
drwxrwxr-x  2 eddieshi eddieshi 4096 Oct 16 05:09 mnt
drwxrwxr-x  5 eddieshi eddieshi 4096 Oct 16 04:06 opt
drwxrwxr-x  2 eddieshi eddieshi 4096 Oct 16 05:09 proc
drwxrwxr-x  2 eddieshi eddieshi 4096 Oct 16 05:08 sbin
drwxrwxr-x  3 eddieshi eddieshi 4096 Oct 16 05:09 sys
lrwxrwxrwx  1 eddieshi eddieshi    8 Oct 16 05:09 tmp -> /var/tmp
drwxrwxr-x  4 eddieshi eddieshi 4096 Oct 16 04:25 usr
drwxrwxr-x  3 eddieshi eddieshi 4096 Oct 16 04:24 var
drwxrwxr-x  2 eddieshi eddieshi 4096 Oct 16 05:08 webs


fs/bin:
total 4660
-rwxr-xr-x 1 eddieshi eddieshi  15564 Oct 16 05:09 acs_cli
-rwxr-xr-x 1 eddieshi eddieshi  70596 Oct 16 05:09 acsd
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 adsl -> xdslctl
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 adslctl -> xdslctl
lrwxrwxrwx 1 eddieshi eddieshi      6 Oct 16 05:08 arl -> arlctl
-rwxr-xr-x 1 eddieshi eddieshi   6288 Oct 16 05:09 arlctl
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 ash -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 bash -> busybox
-rwxr-xr-x 1 eddieshi eddieshi   5108 Oct 16 05:09 bcm_boot_launcher
-rwxr-xr-x 1 eddieshi eddieshi  17843 Oct 16 05:09 bftpd
lrwxrwxrwx 1 eddieshi eddieshi      6 Oct 16 05:08 bpm -> bpmctl
-rwxr-xr-x 1 eddieshi eddieshi   6760 Oct 16 05:09 bpmctl
-rwxr-xr-x 1 eddieshi eddieshi  41920 Oct 16 05:09 brctl
-rwxr-xr-x 1 eddieshi eddieshi 286868 Oct 16 05:09 busybox
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 cat -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 chmod -> busybox
-rwxr-xr-x 1 eddieshi eddieshi   6728 Oct 16 05:09 consoled
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 cp -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 date -> busybox
-rwxr-xr-x 1 eddieshi eddieshi  15328 Oct 16 05:09 ddnsd
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 deluser -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 df -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      6 Oct 16 05:08 dhcpc -> udhcpd
lrwxrwxrwx 1 eddieshi eddieshi      6 Oct 16 05:08 dhcpd -> udhcpd
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 dmesg -> busybox
-rwxr-xr-x 1 eddieshi eddieshi  40720 Oct 16 05:09 dnsproxy
-rwxr-xr-x 1 eddieshi eddieshi   3868 Oct 16 05:09 dnsspoof
-rwxr-xr-x 1 eddieshi eddieshi  12700 Oct 16 05:09 dsldiagd
lrwxrwxrwx 1 eddieshi eddieshi      6 Oct 16 05:08 dumpmem -> xtmctl
-rwxr-xr-x 1 eddieshi eddieshi  32560 Oct 16 05:09 eapd
-rwxr-xr-x 1 eddieshi eddieshi   2740 Oct 16 05:09 ebtables
```

```
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 echo -> busybox
-rwxr-xr-x 1 eddieshi eddieshi  33868 Oct 16 05:09 epi_ttcp
-rwxr-xr-x 1 eddieshi eddieshi  12640 Oct 16 05:09 ethctl
-rwxr-xr-x 1 eddieshi eddieshi  47120 Oct 16 05:09 ethswctl
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 false -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      5 Oct 16 05:08 fc -> fcctl
-rwxr-xr-x 1 eddieshi eddieshi  13687 Oct 16 05:09 fcctl
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 grep -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 gunzip -> busybox
-rwxr-xr-x 1 eddieshi eddieshi   7420 Oct 16 05:09 hotplug
-rwxr-xr-x 1 eddieshi eddieshi  42892 Oct 16 05:09 hspotap
-rwxr-xr-x 1 eddieshi eddieshi 372080 Oct 16 05:09 httpd
-rwxr-xr-x 1 eddieshi eddieshi 201912 Oct 16 05:09 ip
-rwxr-xr-x 1 eddieshi eddieshi  25064 Oct 16 05:09 ippd
lrwxrwxrwx 1 eddieshi eddieshi     13 Oct 16 05:08 iptables -> xtables-multi
lrwxrwxrwx 1 eddieshi eddieshi      5 Oct 16 05:08 iq -> iqctl
-rwxr-xr-x 1 eddieshi eddieshi   9336 Oct 16 05:09 iqctl
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 kill -> busybox
-rwxr-xr-x 1 eddieshi eddieshi  55504 Oct 16 05:09 lld2d
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 ln -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 ls -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      6 Oct 16 05:08 mcp -> mcpctl
-rwxr-xr-x 1 eddieshi eddieshi   3812 Oct 16 05:09 mcpctl
-rwxr-xr-x 1 eddieshi eddieshi  71700 Oct 16 05:09 mcpd
-rwxr-xr-x 1 eddieshi eddieshi   6024 Oct 16 05:09 mdkshell
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 mkdir -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 mknod -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 mount -> busybox
-rwxr-xr-x 1 eddieshi eddieshi   5508 Oct 16 05:09 mroute
-rwxr-xr-x 1 eddieshi eddieshi  54016 Oct 16 05:09 nas
lrwxrwxrwx 1 eddieshi eddieshi     10 Oct 16 05:08 nas4not -> ../bin/nas
-rwxr-xr-x 1 eddieshi eddieshi 126220 Oct 16 05:09 ntfs-3g
-rwxr-xr-x 1 eddieshi eddieshi   4892 Oct 16 05:09 nvram
-rwxr-xr-x 1 eddieshi eddieshi   6420 Oct 16 05:09 nvramUpdate
-rwxr-xr-x 1 eddieshi eddieshi 267416 Oct 16 05:09 openssl
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 ping -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 ping6 -> busybox
-rwxr-xr-x 1 eddieshi eddieshi 216524 Oct 16 05:09 pppd
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 ps -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 pwd -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      6 Oct 16 05:08 pwr -> pwrctl
-rwxr-xr-x 1 eddieshi eddieshi  10324 Oct 16 05:09 pwrctl
-rwxr-xr-x 1 eddieshi eddieshi 611168 Oct 16 05:09 racoon
-rwxr-xr-x 1 eddieshi eddieshi   5780 Oct 16 05:09 rawSocketTest
-rwxr-xr-x 1 eddieshi eddieshi  76232 Oct 16 05:09 ripd
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 rm -> busybox
-rwxr-xr-x 1 eddieshi eddieshi   4940 Oct 16 05:09 send_cms_msg
-rwxr-xr-x 1 eddieshi eddieshi 100264 Oct 16 05:09 setkey
lrwxrwxrwx 1 eddieshi eddieshi      6 Oct 16 05:08 setmem -> xtmctl
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 sh -> busybox
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 sleep -> busybox
-rwxr-xr-x 1 eddieshi eddieshi  45808 Oct 16 05:09 smd
-rwxr-xr-x 1 eddieshi eddieshi  13736 Oct 16 05:09 sntp
-rwxr-xr-x 1 eddieshi eddieshi 145884 Oct 16 05:09 sshd
-rwxr-xr-x 1 eddieshi eddieshi  62700 Oct 16 05:09 ssk
-rwxr-xr-x 1 eddieshi eddieshi  17056 Oct 16 05:09 stress
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 stty -> busybox
```

```
-rwxr-xr-x 1 eddieshi eddieshi  13284 Oct 16 05:09 swmdk
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 sync -> busybox
-rwxr-xr-x 1 eddieshi eddieshi 226388 Oct 16 05:09 tc
-rwxr-xr-x 1 eddieshi eddieshi  10352 Oct 16 05:09 telnetd
-rwxr-xr-x 1 eddieshi eddieshi 207204 Oct 16 05:09 tr64c
-rwxr-xr-x 1 eddieshi eddieshi 188548 Oct 16 05:09 tr69c
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 true -> busybox
-rwxr-xr-x 1 eddieshi eddieshi  50784 Oct 16 05:09 udhcpd
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 umount -> busybox
-rwxr-xr-x 1 eddieshi eddieshi 108924 Oct 16 05:09 upnp
-rwxr-xr-x 1 eddieshi eddieshi  38987 Oct 16 05:09 urlfilterd
-rwxr-xr-x 1 eddieshi eddieshi  29088 Oct 16 05:09 vlanctl
lrwxrwxrwx 1 eddieshi eddieshi      5 Oct 16 05:08 wl -> wlctl
-rwxr-xr-x 1 eddieshi eddieshi   4852 Oct 16 05:09 wlctl
-rwxr-xr-x 1 eddieshi eddieshi   4700 Oct 16 05:09 wlevt
-rwxr-xr-x 1 eddieshi eddieshi   7180 Oct 16 05:09 wlmngr
lrwxrwxrwx 1 eddieshi eddieshi     16 Oct 16 05:08 wl_server -> wl_server_socket
-rwxr-xr-x 1 eddieshi eddieshi   6924 Oct 16 05:09 wl_server_socket
-rwxr-xr-x 1 eddieshi eddieshi 149476 Oct 16 05:09 wps_monitor
-rwxr-xr-x 1 eddieshi eddieshi  49288 Oct 16 05:09 xdslctl
-rwxr-xr-x 1 eddieshi eddieshi 188672 Oct 16 05:09 xtables-multi
lrwxrwxrwx 1 eddieshi eddieshi      6 Oct 16 05:08 xtm -> xtmctl
-rwxr-xr-x 1 eddieshi eddieshi  27084 Oct 16 05:09 xtmctl
lrwxrwxrwx 1 eddieshi eddieshi      7 Oct 16 05:08 zcat -> busybox
-rwxr-xr-x 1 eddieshi eddieshi  67364 Oct 16 05:09 zebra

fs/data:
total 0

fs/dev:
total 8
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 ac97
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 baloo
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcm
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmaal20
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmadsl0
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmadsl1
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmarl
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmatm0
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmatmb0
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmendpoint0
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmfap
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmles0
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmmoca0
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmmoca1
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcm_omci
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmomcipm
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcm_ploam
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmprof
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmrdpa
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcm_user_ploam
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcm_user_tod
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmvdsl0
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmvlan
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bcmxtmcfg0
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bdmf_shell
-rw-r--r-- 1 eddieshi eddieshi      0 Oct 16 05:09 bounce
```

```
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 bpm
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 brcmboard
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 capi20
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 chipinfo
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 console
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 dect
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 dectdbg
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 dectshim
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 epon_stack_shell
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ext_bonding
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 fbond
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 fcache
lrwxrwxrwx 1 eddieshi eddieshi    9 Oct 16 05:09 fuse -> /var/fuse
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 gmac
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 hwrandom
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 i2c-0
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ingqos
prw-rw-r-- 1 eddieshi eddieshi    0 Oct 16 05:09 initctl
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ippp0
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ippp1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 isdn
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 isdnctrl
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 isdnctrl0
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 isdninfo
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 kmem
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 laser_dev
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 linux-uk-proxy
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 linux-user-bde
lrwxrwxrwx 1 eddieshi eddieshi   12 Oct 16 05:09 log -> /var/log/log
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 mem
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:09 misc
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 mtd0
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 mtd1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 mtd2
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 mtd3
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 mtdblock0
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 mtdblock1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 mtdblock2
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 mtdblock3
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 mtdblock4
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 mtdblock5
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 mtdblock6
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 mtdblock7
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 null
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 p8021ag0
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 pcmshim0
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 pktcmf
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 pmon
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 port
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ppp
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 printer0
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptm
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:09 pts
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptyp0
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptyp1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptyp2
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptyp3
```

```
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptyp4
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptyp5
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptyp6
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptyp7
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptyp8
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptyp9
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptypa
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptypb
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptypc
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptypd
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptype
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ptypf
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 pwrmngt
lrwxrwxrwx 1 eddieshi eddieshi    4 Oct 16 05:09 ram -> ram1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ram0
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ram1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ram2
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ram3
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 random
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 rgs_logger
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sda
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sda1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sda2
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sda3
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sda4
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sda5
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sda6
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sda7
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sda8
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sda9
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdb
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdb1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdb2
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdb3
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdb4
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdb5
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdb6
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdb7
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdb8
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdb9
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdc
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdc1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdc2
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdc3
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdc4
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdc5
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdc6
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdc7
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdc8
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdc9
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdd
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdd1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdd2
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdd3
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdd4
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sde
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sde1
```

```
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sde2
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sde3
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sde4
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdf
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdf1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdf2
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdf3
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdf4
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdg
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdg1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdg2
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdg3
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdg4
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdh
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdh1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdh2
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdh3
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 sdh4
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 si3215
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 slac
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 spu
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 tms
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 tty
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 tty0
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 tty1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttyp0
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttyp1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttyp2
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttyp3
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttyp4
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttyp5
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttyp6
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttyp7
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttyp8
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttyp9
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttypa
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttypb
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttypc
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttypd
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttype
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttypf
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttyS0
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ttyS1
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ubi0
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 ubi_ctrl
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 urandom
-rw-r--r-- 1 eddieshi eddieshi    0 Oct 16 05:09 zero

fs/dev/misc:
total 0
lrwxrwxrwx 1 eddieshi eddieshi 9 Oct 16 05:09 fuse -> /var/fuse

fs/dev/pts:
total 0
-rw-r--r-- 1 eddieshi eddieshi 0 Oct 16 05:09 0
-rw-r--r-- 1 eddieshi eddieshi 0 Oct 16 05:09 1
```

```
fs/etc:
total 132
-rw-rw-r-- 1 eddieshi eddieshi 9949 Oct 16 05:09 96328GW
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:09 adsl
-r--r--r-- 1 eddieshi eddieshi  499 Oct 16 03:07 arl
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:08 cms_entity_info.d
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 03:07 dhcp
-r--r--r-- 1 eddieshi eddieshi  185 Oct 16 03:07 dhcp6c.conf.sample
-r--r--r-- 1 eddieshi eddieshi  256 Oct 16 03:07 dhcp6s.conf.sample
lrwxrwxrwx 1 eddieshi eddieshi   13 Oct 16 05:09 dms.conf -> /var/dms.conf
-r-xr-xr-x 1 eddieshi eddieshi  489 Oct 16 03:07 dyndscp.sh
-rw-r--r-- 1 eddieshi eddieshi 1317 Oct 16 05:07 ethertypes
-r--r--r-- 1 eddieshi eddieshi   10 Oct 16 03:07 filesystems
-r-xr-xr-x 1 eddieshi eddieshi  213 Oct 16 05:09 fstab
lrwxrwxrwx 1 eddieshi eddieshi   20 Oct 16 05:09 gateway.conf -> /var/fyi/sys/gateway
lrwxrwxrwx 1 eddieshi eddieshi   10 Oct 16 05:09 group -> /var/group
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:09 init.d
-r-xr-xr-x 1 eddieshi eddieshi  642 Oct 16 03:07 inittab
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:09 iproute2
lrwxrwxrwx 1 eddieshi eddieshi   21 Oct 16 05:09 ipsec.conf -> /var/ipsec/ipsec.conf
-r--r--r-- 1 eddieshi eddieshi  586 Oct 16 03:07 ipv6_start.sample
-r-xr-xr-x 1 eddieshi eddieshi   20 Oct 16 03:07 mdk
lrwxrwxrwx 1 eddieshi eddieshi    9 Oct 16 05:09 mtab -> /var/mtab
lrwxrwxrwx 1 eddieshi eddieshi   11 Oct 16 05:09 passwd -> /var/passwd
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 03:07 ppp
lrwxrwxrwx 1 eddieshi eddieshi   15 Oct 16 05:09 pppmsg -> /var/ppp/pppmsg
-r-xr-xr-x 1 eddieshi eddieshi  168 Oct 16 03:07 profile
lrwxrwxrwx 1 eddieshi eddieshi   18 Oct 16 05:09 psk.txt -> /var/ipsec/psk.txt
lrwxrwxrwx 1 eddieshi eddieshi   22 Oct 16 05:09 racoon.conf -> /var/ipsec/racoon.conf
-r--r--r-- 1 eddieshi eddieshi 1871 Oct 16 03:07 radvd.conf.sample
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:08 rc3.d
lrwxrwxrwx 1 eddieshi eddieshi   16 Oct 16 05:09 resolv.conf -> /var/fyi/sys/dns
-rw------- 1 eddieshi eddieshi  427 Oct 16 04:03 rsa_host_key
lrwxrwxrwx 1 eddieshi eddieshi   10 Oct 16 05:09 samba -> /var/samba
-r-xr-xr-x 1 eddieshi eddieshi 5685 Oct 16 03:07 services
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 04:06 snmp
-r--r--r-- 1 eddieshi eddieshi  555 Oct 16 03:07 soft_bridge
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:08 sysconfig
lrwxrwxrwx 1 eddieshi eddieshi   11 Oct 16 05:09 sysmsg -> /var/sysmsg
lrwxrwxrwx 1 eddieshi eddieshi   23 Oct 16 05:09 udhcpd.conf -> /var/udhcpd/udhcpd.conf
lrwxrwxrwx 1 eddieshi eddieshi   25 Oct 16 05:09 udhcpd.leases -> /var/udhcpd/udhcpd.leases
-r--r--r-- 1 eddieshi eddieshi  273 Oct 16 03:07 vlan
drwxr-xr-x 2 eddieshi eddieshi 4096 Oct 16 05:08 wlan
-r--r--r-- 1 eddieshi eddieshi 7358 Oct 16 05:08 wrt54g.large.ico
-r--r--r-- 1 eddieshi eddieshi 3262 Oct 16 05:08 wrt54g.small.ico

fs/etc/adsl:
total 588
-rw-rw-r-- 1 eddieshi eddieshi 598524 Oct 16 04:08 adsl_phy.bin

fs/etc/cms_entity_info.d:
total 32
-rwxr-xr-x 1 eddieshi eddieshi 6310 Oct 16 05:07 eid_bcm_base.txt
-rwxr-xr-x 1 eddieshi eddieshi 6436 Oct 16 05:07 eid_bcm_kthreads.txt
-rwxr-xr-x 1 eddieshi eddieshi 3701 Oct 16 05:07 eid_bcm_mgmt.txt
-rw-r--r-- 1 eddieshi eddieshi   90 Oct 16 05:08 eid_bcm_swmdk.txt
-rwxr-xr-x 1 eddieshi eddieshi  549 Oct 16 05:07 eid_bcm_voip.txt
```

```
-rwxr-xr-x 1 eddieshi eddieshi 3638 Oct 16 05:07 symbol_table.txt

fs/etc/dhcp:
total 4
-r-xr-xr-x 1 eddieshi eddieshi 313 Oct 16 03:07 dhcp_getdata

fs/etc/init.d:
total 28
-r-xr-xr-x 1 eddieshi eddieshi 7462 Oct 16 05:09 bcm-base-drivers.sh
-r-xr-xr-x 1 eddieshi eddieshi  514 Oct 16 03:07 mount-fs.sh
-rwxr-xr-x 1 eddieshi eddieshi  260 Oct 16 05:08 save-dmesg.sh
-rwxr-xr-x 1 eddieshi eddieshi  236 Oct 16 05:07 smd.sh
-rwxr-xr-x 1 eddieshi eddieshi  148 Oct 16 05:08 swmdk.sh
-r-xr-xr-x 1 eddieshi eddieshi  370 Oct 16 03:07 system-config.sh

fs/etc/iproute2:
total 0
lrwxrwxrwx 1 eddieshi eddieshi 23 Oct 16 05:09 rt_tables -> /var/iproute2/rt_tables

fs/etc/ppp:
total 20
-r-xr-xr-x 1 eddieshi eddieshi  93 Oct 16 03:07 chap-secrets
-r-xr-xr-x 1 eddieshi eddieshi 310 Oct 16 03:07 ip-down
-r-xr-xr-x 1 eddieshi eddieshi 362 Oct 16 03:07 ip-up
-r-xr-xr-x 1 eddieshi eddieshi  41 Oct 16 03:07 options
-r-xr-xr-x 1 eddieshi eddieshi  93 Oct 16 03:07 pap-secrets

fs/etc/rc3.d:
total 0
lrwxrwxrwx 1 eddieshi eddieshi 16 Oct 16 05:07 K25smd -> ../init.d/smd.sh
lrwxrwxrwx 1 eddieshi eddieshi 21 Oct 16 05:09 K95mount-fs -> ../init.d/mount-fs.sh
lrwxrwxrwx 1 eddieshi eddieshi 21 Oct 16 05:09 S25mount-fs -> ../init.d/mount-fs.sh
lrwxrwxrwx 1 eddieshi eddieshi 26 Oct 16 05:09 S35system-config -> ../init.d/system-config.sh
lrwxrwxrwx 1 eddieshi eddieshi 29 Oct 16 05:09 S45bcm-base-drivers -> ../init.d/bcm-base-
drivers.sh
lrwxrwxrwx 1 eddieshi eddieshi 18 Oct 16 05:08 S45swmdk -> ../init.d/swmdk.sh
lrwxrwxrwx 1 eddieshi eddieshi 23 Oct 16 05:08 S63save-dmesg -> ../init.d/save-dmesg.sh
lrwxrwxrwx 1 eddieshi eddieshi 16 Oct 16 05:07 S65smd -> ../init.d/smd.sh

fs/etc/snmp:
total 0

fs/etc/sysconfig:
total 8
-rw-r--r-- 1 eddieshi eddieshi 5682 Oct 16 05:08 sysstat.ioconf

fs/etc/wlan:
total 84
-rwxr-xr-x 1 eddieshi eddieshi  448 Oct 16 05:07 bcm43112_map.bin
-rwxr-xr-x 1 eddieshi eddieshi  448 Oct 16 05:07 bcm43131_map.bin
-rwxr-xr-x 1 eddieshi eddieshi  448 Oct 16 05:07 bcm4313_map.bin
-rwxr-xr-x 1 eddieshi eddieshi  448 Oct 16 05:07 bcm43217_map.bin
-rwxr-xr-x 1 eddieshi eddieshi  448 Oct 16 05:07 bcm4321_map.bin
-rwxr-xr-x 1 eddieshi eddieshi  448 Oct 16 05:07 bcm43222_map.bin
-rwxr-xr-x 1 eddieshi eddieshi  448 Oct 16 05:07 bcm43224_map.bin
-rwxr-xr-x 1 eddieshi eddieshi  448 Oct 16 05:07 bcm43225_map.bin
-rwxr-xr-x 1 eddieshi eddieshi  448 Oct 16 05:07 bcm43226_map.bin
```

```
-rwxr-xr-x 1 eddieshi eddieshi  448 Oct 16 05:07 bcm43227_map.bin
-rwxr-xr-x 1 eddieshi eddieshi  448 Oct 16 05:07 bcm43228_map.bin
-rwxr-xr-x 1 eddieshi eddieshi  448 Oct 16 05:07 bcm4322_map.bin
-rwxr-xr-x 1 eddieshi eddieshi  448 Oct 16 05:07 bcm4331_map.bin
-rwxr-xr-x 1 eddieshi eddieshi 2224 Oct 16 05:07 bcm4331_vars.bin
-rwxr-xr-x 1 eddieshi eddieshi  448 Oct 16 05:07 bcm43428_map.bin
-rwxr-xr-x 1 eddieshi eddieshi  480 Oct 16 05:07 bcm4360_963168AC5_map.bin
-rwxr-xr-x 1 eddieshi eddieshi  480 Oct 16 05:07 bcm4360_963168ACH5_map.bin
-rwxr-xr-x 1 eddieshi eddieshi  480 Oct 16 05:07 bcm4360_map.bin
-rwxr-xr-x 1 eddieshi eddieshi   32 Oct 16 05:07 bcm4360_nvramvars.bin
-rwxr-xr-x 1 eddieshi eddieshi    0 Oct 16 05:07 bcm6362_map.bin
-rwxr-xr-x 1 eddieshi eddieshi   32 Oct 16 05:07 bcmcmn_nvramvars.bin
-rwxr-xr-x 1 eddieshi eddieshi   89 Oct 16 05:08 nvram_params

fs/lib:
total 2180
drwxrwxr-x 2 eddieshi eddieshi   4096 Oct 16 05:09 gpl
-rwxr-xr-x 1 eddieshi eddieshi  20691 Oct 16 05:09 ld-uClibc.so.0
lrwxrwxrwx 1 eddieshi eddieshi     30 Oct 16 05:09 libcms_boardctl.so -> /lib/public/
libcms_boardctl.so
lrwxrwxrwx 1 eddieshi eddieshi     25 Oct 16 05:09 libcms_msg.so -> /lib/public/libcms_msg.so
lrwxrwxrwx 1 eddieshi eddieshi     26 Oct 16 05:09 libcms_util.so -> /lib/public/libcms_util.so
-rwxr-xr-x 1 eddieshi eddieshi   9952 Oct 16 05:09 libcrypt.so.0
-rwxr-xr-x 1 eddieshi eddieshi 425968 Oct 16 05:09 libc.so.0
-rwxr-xr-x 1 eddieshi eddieshi   8312 Oct 16 05:09 libdl.so.0
-rwxr-xr-x 1 eddieshi eddieshi 169712 Oct 16 05:09 libgcc_s.so.1
-rwxr-xr-x 1 eddieshi eddieshi  87344 Oct 16 05:09 libhspotap.so
-rwxr-xr-x 1 eddieshi eddieshi  90584 Oct 16 05:09 libm.so.0
-rwxr-xr-x 1 eddieshi eddieshi 334020 Oct 16 05:09 libntfs-3g.so.83
-rwxr-xr-x 1 eddieshi eddieshi   7808 Oct 16 05:09 libnvram.so
-rwxr-xr-x 1 eddieshi eddieshi  71288 Oct 16 05:09 libpthread.so.0
-rwxr-xr-x 1 eddieshi eddieshi    885 Oct 16 05:09 libresolv.so.0
-rwxr-xr-x 1 eddieshi eddieshi   4052 Oct 16 05:09 libutil.so.0
-rwxr-xr-x 1 eddieshi eddieshi  96232 Oct 16 05:09 libwlbcmcrypto.so
-rwxr-xr-x 1 eddieshi eddieshi  62392 Oct 16 05:09 libwlbcmshared.so
-rwxr-xr-x 1 eddieshi eddieshi 463656 Oct 16 05:09 libwlctl.so
-rwxr-xr-x 1 eddieshi eddieshi 212024 Oct 16 05:09 libwlmngr.so
-rwxr-xr-x 1 eddieshi eddieshi  29212 Oct 16 05:09 libwl_server_socket.so
-rwxr-xr-x 1 eddieshi eddieshi  40344 Oct 16 05:09 libwlupnp.so
-rwxr-xr-x 1 eddieshi eddieshi  33348 Oct 16 05:09 libwps.so
drwxrwxr-x 3 eddieshi eddieshi   4096 Oct 16 04:12 modules
drwxrwxr-x 2 eddieshi eddieshi   4096 Oct 16 05:09 private
drwxrwxr-x 2 eddieshi eddieshi   4096 Oct 16 05:09 public
drwxrwxr-x 2 eddieshi eddieshi   4096 Oct 16 05:08 sa

fs/lib/gpl:
total 136
-rwxrwxr-x 1 eddieshi eddieshi  1144 Oct 16 05:09 libebtable_broute.so
-rwxrwxr-x 1 eddieshi eddieshi  1316 Oct 16 05:09 libebtable_filter.so
-rwxrwxr-x 1 eddieshi eddieshi  1316 Oct 16 05:09 libebtable_nat.so
-rwxrwxr-x 1 eddieshi eddieshi 62828 Oct 16 05:09 libebtc.so
-rwxrwxr-x 1 eddieshi eddieshi  3236 Oct 16 05:09 libebt_ftos.so
-rwxrwxr-x 1 eddieshi eddieshi 10168 Oct 16 05:09 libebt_ip6.so
-rwxrwxr-x 1 eddieshi eddieshi  7060 Oct 16 05:09 libebt_ip.so
-rwxrwxr-x 1 eddieshi eddieshi  2512 Oct 16 05:09 libebt_mark_m.so
-rwxrwxr-x 1 eddieshi eddieshi  4388 Oct 16 05:09 libebt_mark.so
-rwxrwxr-x 1 eddieshi eddieshi  1239 Oct 16 05:09 libebt_skiplog.so
```

```
-rwxrwxr-x 1 eddieshi eddieshi  1691 Oct 16 05:09 libebt_standard.so
-rwxrwxr-x 1 eddieshi eddieshi  5260 Oct 16 05:09 libebt_time.so
-rwxrwxr-x 1 eddieshi eddieshi  3852 Oct 16 05:09 libebt_vlan.so
-rwxrwxr-x 1 eddieshi eddieshi  3960 Oct 16 05:09 libebt_wmm_mark.so

fs/lib/modules:
total 4
drwxrwxr-x 4 eddieshi eddieshi 4096 Oct 16 05:07 3.4.11-rt19

fs/lib/modules/3.4.11-rt19:
total 8
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:09 extra
drwxrwxr-x 5 eddieshi eddieshi 4096 Oct 16 05:07 kernel

fs/lib/modules/3.4.11-rt19/extra:
total 5344
-rw-rw-r-- 1 eddieshi eddieshi  328752 Oct 16 05:09 adsldd.ko
-rw-rw-r-- 1 eddieshi eddieshi   12132 Oct 16 05:09 bcmarl.ko
-rw-rw-r-- 1 eddieshi eddieshi   18676 Oct 16 05:09 bcm_bpm.ko
-rw-rw-r-- 1 eddieshi eddieshi  257512 Oct 16 05:09 bcm_enet.ko
-rw-rw-r-- 1 eddieshi eddieshi   14936 Oct 16 05:09 bcm_ingqos.ko
-rw-rw-r-- 1 eddieshi eddieshi   39024 Oct 16 05:09 bcm_usb.ko
-rw-rw-r-- 1 eddieshi eddieshi  142532 Oct 16 05:09 bcmvlan.ko
-rw-rw-r-- 1 eddieshi eddieshi   87336 Oct 16 05:09 bcmxtmcfg.ko
-rw-rw-r-- 1 eddieshi eddieshi    4064 Oct 16 05:09 chipinfo.ko
-rw-rw-r-- 1 eddieshi eddieshi   10872 Oct 16 05:09 p8021ag.ko
-rw-rw-r-- 1 eddieshi eddieshi   83472 Oct 16 05:09 pktflow.ko
-rw-rw-r-- 1 eddieshi eddieshi   13584 Oct 16 05:09 pwrmngtd.ko
-rw-rw-r-- 1 eddieshi eddieshi 4439716 Oct 16 05:09 wl.ko

fs/lib/modules/3.4.11-rt19/kernel:
total 12
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:09 crypto
drwxrwxr-x 4 eddieshi eddieshi 4096 Oct 16 05:07 drivers
drwxrwxr-x 4 eddieshi eddieshi 4096 Oct 16 05:07 net

fs/lib/modules/3.4.11-rt19/kernel/crypto:
total 16
-rw-rw-r-- 1 eddieshi eddieshi 5076 Oct 16 05:09 ecb.ko
-rw-rw-r-- 1 eddieshi eddieshi 6432 Oct 16 05:09 pcbc.ko

fs/lib/modules/3.4.11-rt19/kernel/drivers:
total 8
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:09 scsi
drwxrwxr-x 3 eddieshi eddieshi 4096 Oct 16 05:07 usb

fs/lib/modules/3.4.11-rt19/kernel/drivers/scsi:
total 4
-rw-rw-r-- 1 eddieshi eddieshi 2480 Oct 16 05:09 scsi_wait_scan.ko

fs/lib/modules/3.4.11-rt19/kernel/drivers/usb:
total 4
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:09 storage

fs/lib/modules/3.4.11-rt19/kernel/drivers/usb/storage:
total 88
-rw-rw-r-- 1 eddieshi eddieshi 89996 Oct 16 05:09 usb-storage.ko
```

```
fs/lib/modules/3.4.11-rt19/kernel/net:
total 8
drwxrwxr-x 3 eddieshi eddieshi 4096 Oct 16 05:07 ipv4
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:09 netfilter

fs/lib/modules/3.4.11-rt19/kernel/net/ipv4:
total 4
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:09 netfilter

fs/lib/modules/3.4.11-rt19/kernel/net/ipv4/netfilter:
total 188
-rw-rw-r-- 1 eddieshi eddieshi  4744 Oct 16 05:09 iptable_filter.ko
-rw-rw-r-- 1 eddieshi eddieshi  4844 Oct 16 05:09 iptable_mangle.ko
-rw-rw-r-- 1 eddieshi eddieshi  9108 Oct 16 05:09 iptable_nat.ko
-rw-rw-r-- 1 eddieshi eddieshi 19740 Oct 16 05:09 ip_tables.ko
-rw-rw-r-- 1 eddieshi eddieshi  7048 Oct 16 05:09 ipt_MASQUERADE.ko
-rw-rw-r-- 1 eddieshi eddieshi  3392 Oct 16 05:09 ipt_REDIRECT.ko
-rw-rw-r-- 1 eddieshi eddieshi 21548 Oct 16 05:09 nf_conntrack_ipv4.ko
-rw-rw-r-- 1 eddieshi eddieshi  3624 Oct 16 05:09 nf_defrag_ipv4.ko
-rw-rw-r-- 1 eddieshi eddieshi  4516 Oct 16 05:09 nf_nat_ftp.ko
-rw-rw-r-- 1 eddieshi eddieshi 11968 Oct 16 05:09 nf_nat_h323.ko
-rw-rw-r-- 1 eddieshi eddieshi  4240 Oct 16 05:09 nf_nat_irc.ko
-rw-rw-r-- 1 eddieshi eddieshi 23568 Oct 16 05:09 nf_nat.ko
-rw-rw-r-- 1 eddieshi eddieshi  5096 Oct 16 05:09 nf_nat_pptp.ko
-rw-rw-r-- 1 eddieshi eddieshi  4124 Oct 16 05:09 nf_nat_proto_gre.ko
-rw-rw-r-- 1 eddieshi eddieshi  9200 Oct 16 05:09 nf_nat_pt.ko
-rw-rw-r-- 1 eddieshi eddieshi  7660 Oct 16 05:09 nf_nat_rtsp.ko
-rw-rw-r-- 1 eddieshi eddieshi  8000 Oct 16 05:09 nf_nat_sip.ko
-rw-rw-r-- 1 eddieshi eddieshi  2964 Oct 16 05:09 nf_nat_tftp.ko

fs/lib/modules/3.4.11-rt19/kernel/net/netfilter:
total 340
-rw-rw-r-- 1 eddieshi eddieshi 11720 Oct 16 05:09 nf_conntrack_ftp.ko
-rw-rw-r-- 1 eddieshi eddieshi 56492 Oct 16 05:09 nf_conntrack_h323.ko
-rw-rw-r-- 1 eddieshi eddieshi  9548 Oct 16 05:09 nf_conntrack_irc.ko
-rw-rw-r-- 1 eddieshi eddieshi 91052 Oct 16 05:09 nf_conntrack.ko
-rw-rw-r-- 1 eddieshi eddieshi 10000 Oct 16 05:09 nf_conntrack_pptp.ko
-rw-rw-r-- 1 eddieshi eddieshi  8400 Oct 16 05:09 nf_conntrack_proto_gre.ko
-rw-rw-r-- 1 eddieshi eddieshi 14640 Oct 16 05:09 nf_conntrack_rtsp.ko
-rw-rw-r-- 1 eddieshi eddieshi 17788 Oct 16 05:09 nf_conntrack_sip.ko
-rw-rw-r-- 1 eddieshi eddieshi  7284 Oct 16 05:09 nf_conntrack_tftp.ko
-rw-rw-r-- 1 eddieshi eddieshi  8044 Oct 16 05:09 nfnetlink.ko
-rw-rw-r-- 1 eddieshi eddieshi 14660 Oct 16 05:09 nfnetlink_queue.ko
-rw-rw-r-- 1 eddieshi eddieshi  5960 Oct 16 05:09 xt_conntrack.ko
-rw-rw-r-- 1 eddieshi eddieshi  4032 Oct 16 05:09 xt_dscp.ko
-rw-rw-r-- 1 eddieshi eddieshi  4852 Oct 16 05:09 xt_DSCP.ko
-rw-rw-r-- 1 eddieshi eddieshi  4668 Oct 16 05:09 xt_limit.ko
-rw-rw-r-- 1 eddieshi eddieshi 13280 Oct 16 05:09 xt_LOG.ko
-rw-rw-r-- 1 eddieshi eddieshi  3100 Oct 16 05:09 xt_mac.ko
-rw-rw-r-- 1 eddieshi eddieshi  3600 Oct 16 05:09 xt_mark.ko
-rw-rw-r-- 1 eddieshi eddieshi  4132 Oct 16 05:09 xt_multiport.ko
-rw-rw-r-- 1 eddieshi eddieshi  3016 Oct 16 05:09 xt_SKIPLOG.ko
-rw-rw-r-- 1 eddieshi eddieshi  3764 Oct 16 05:09 xt_state.ko
-rw-rw-r-- 1 eddieshi eddieshi  5716 Oct 16 05:09 xt_TCPMSS.ko

fs/lib/private:
```

```
total 1456
-rwxrwxr-x 1 eddieshi eddieshi   8336 Oct 16 05:09 libatmctl.so
-rwxrwxr-x 1 eddieshi eddieshi  32640 Oct 16 05:09 libbmdapi.so
-rwxrwxr-x 1 eddieshi eddieshi  56028 Oct 16 05:09 libbmdpkgsrc.so
-rwxrwxr-x 1 eddieshi eddieshi  16620 Oct 16 05:09 libbmdshared.so
-rwxrwxr-x 1 eddieshi eddieshi  59292 Oct 16 05:09 libbmdshell.so
-rwxr-xr-x 1 eddieshi eddieshi   1848 Oct 16 05:09 libcdkdsym.so
-rwxrwxr-x 1 eddieshi eddieshi  17540 Oct 16 05:09 libcdklibc.so
-rwxrwxr-x 1 eddieshi eddieshi  17140 Oct 16 05:09 libcdkmain.so
-rwxrwxr-x 1 eddieshi eddieshi  18444 Oct 16 05:09 libcdkpkgsrc.so
-rwxrwxr-x 1 eddieshi eddieshi  10576 Oct 16 05:09 libcdkshared.so
-rwxrwxr-x 1 eddieshi eddieshi  34124 Oct 16 05:09 libcdkshell.so
-rwxrwxr-x 1 eddieshi eddieshi   1896 Oct 16 05:09 libcdksym.so
-rwxrwxr-x 1 eddieshi eddieshi 106464 Oct 16 05:09 libcms_cli.so
-rwxrwxr-x 1 eddieshi eddieshi 583992 Oct 16 05:09 libcms_core.so
-rwxrwxr-x 1 eddieshi eddieshi 145776 Oct 16 05:09 libcms_dal.so
-rwxrwxr-x 1 eddieshi eddieshi   8152 Oct 16 05:09 libcms_qdm.so
-rwxrwxr-x 1 eddieshi eddieshi  52292 Oct 16 05:09 libethswctl.so
-rwxrwxr-x 1 eddieshi eddieshi   3520 Oct 16 05:09 libfcctl.so
-rwxrwxr-x 1 eddieshi eddieshi   4292 Oct 16 05:09 libiqctl.so
-rwxrwxr-x 1 eddieshi eddieshi 157952 Oct 16 05:09 libmdm.so
-rwxrwxr-x 1 eddieshi eddieshi   4272 Oct 16 05:09 libnanoxml.so
-rwxrwxr-x 1 eddieshi eddieshi   7856 Oct 16 05:09 libphygeneric.so
-rwxrwxr-x 1 eddieshi eddieshi  15928 Oct 16 05:09 libphypkgsrc.so
-rwxrwxr-x 1 eddieshi eddieshi   1896 Oct 16 05:09 libphysym.so
-rwxrwxr-x 1 eddieshi eddieshi   6972 Oct 16 05:09 libphyutil.so
-rwxrwxr-x 1 eddieshi eddieshi   4484 Oct 16 05:09 libpwrctl.so
-rwxrwxr-x 1 eddieshi eddieshi   5200 Oct 16 05:09 libsnoopctl.so
-rwxrwxr-x 1 eddieshi eddieshi  24844 Oct 16 05:09 libvlanctl.so
-rwxrwxr-x 1 eddieshi eddieshi  21612 Oct 16 05:09 libxdslctl.so

fs/lib/public:
total 1020
-rwxrwxr-x 1 eddieshi eddieshi   5056 Oct 16 05:09 libcms_boardctl.so
-rwxrwxr-x 1 eddieshi eddieshi   8732 Oct 16 05:09 libcms_msg.so
-rwxrwxr-x 1 eddieshi eddieshi 108932 Oct 16 05:09 libcms_util.so
lrwxrwxrwx 1 eddieshi eddieshi     18 Oct 16 05:07 libcrypto.so -> libcrypto.so.0.9.7
-rwxrwxr-x 1 eddieshi eddieshi 771084 Oct 16 05:09 libcrypto.so.0.9.7
lrwxrwxrwx 1 eddieshi eddieshi     15 Oct 16 05:07 libssl.so -> libssl.so.0.9.7
-rwxrwxr-x 1 eddieshi eddieshi 136924 Oct 16 05:09 libssl.so.0.9.7

fs/lib/sa:
total 84
-rwxr-xr-x 1 eddieshi eddieshi 84220 Oct 16 05:08 sadc

fs/mnt:
total 0

fs/opt:
total 12
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 04:06 bin
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 04:06 modules
drwxrwxrwx 2 eddieshi eddieshi 4096 Oct 16 05:09 scripts

fs/opt/bin:
total 0
```

```
fs/opt/modules:
total 0

fs/opt/scripts:
total 80
-r-xr-xr-x 1 eddieshi eddieshi   33 Oct 16 03:12 bcmlog
-r-xr-xr-x 1 eddieshi eddieshi  218 Oct 16 03:12 db
-r-xr-xr-x 1 eddieshi eddieshi  223 Oct 16 03:12 dh
-r-xr-xr-x 1 eddieshi eddieshi   40 Oct 16 03:12 dumpmem
-rwxr-xr-x 1 eddieshi eddieshi 6330 Oct 16 05:08 dumpsysinfo.sh
-r-xr-xr-x 1 eddieshi eddieshi  217 Oct 16 03:12 dw
-r-xr-xr-x 1 eddieshi eddieshi  153 Oct 16 03:12 fb
-r-xr-xr-x 1 eddieshi eddieshi  157 Oct 16 03:12 fh
-r-xr-xr-x 1 eddieshi eddieshi  153 Oct 16 03:12 fw
-r-xr-xr-x 1 eddieshi eddieshi  134 Oct 16 03:12 sb
-r-xr-xr-x 1 eddieshi eddieshi   46 Oct 16 03:12 setmem
-r-xr-xr-x 1 eddieshi eddieshi  138 Oct 16 03:12 sh
-r-xr-xr-x 1 eddieshi eddieshi  282 Oct 16 03:12 spitr
-rwxr-xr-x 1 eddieshi eddieshi 1319 Oct 16 05:08 stress-fs-flist.txt
-rwxr-xr-x 1 eddieshi eddieshi 8023 Oct 16 05:08 stress-fs.sh
-rwxr-xr-x 1 eddieshi eddieshi  568 Oct 16 05:08 stress-proc.sh
-rwxr-xr-x 1 eddieshi eddieshi  715 Oct 16 05:08 stress-xdslupdown.sh
-r-xr-xr-x 1 eddieshi eddieshi  134 Oct 16 03:12 sw

fs/proc:
total 0

fs/sbin:
total 0
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 depmod -> ../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi 13 Oct 16 05:08 ethctl -> ../bin/ethctl
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 halt -> ../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 hotplug -> ../bin/hotplug
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 ifconfig -> ../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 init -> ../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 insmod -> ../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 klogd -> ../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 logread -> ../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 modprobe -> ../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 poweroff -> ../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 reboot -> ../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 rmmod -> ../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 route -> ../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 sysinfo -> ../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 syslogd -> ../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi 14 Oct 16 05:08 vconfig -> ../bin/busybox

fs/sys:
total 4
drwxrwxr-x 3 eddieshi eddieshi 4096 Oct 16 05:09 kernel

fs/sys/kernel:
total 4
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:09 debug

fs/sys/kernel/debug:
total 0
```

```
fs/usr:
total 8
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:08 bin
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 05:08 sbin

fs/usr/bin:
total 440
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 [ -> ../../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 [[ -> ../../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 chrt -> ../../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 expr -> ../../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 ftpget -> ../../bin/busybox
-rwxr-xr-x 1 eddieshi eddieshi  71632 Oct 16 05:08 iostat
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 killall -> ../../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 logger -> ../../bin/busybox
-rwxr-xr-x 1 eddieshi eddieshi  62764 Oct 16 05:08 mpstat
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 nc -> ../../bin/busybox
-rwxr-xr-x 1 eddieshi eddieshi  73384 Oct 16 05:08 pidstat
-rwxr-xr-x 1 eddieshi eddieshi 138980 Oct 16 05:08 sadf
-rwxr-xr-x 1 eddieshi eddieshi  96548 Oct 16 05:08 sar
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 sendarp -> ../../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 taskset -> ../../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 test -> ../../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 tftp -> ../../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 tftpd -> ../../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 top -> ../../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 tty -> ../../bin/busybox
lrwxrwxrwx 1 eddieshi eddieshi     17 Oct 16 05:08 wget -> ../../bin/busybox

fs/usr/sbin:
total 0
lrwxrwxrwx 1 eddieshi eddieshi 17 Oct 16 05:08 flash_eraseall -> ../../bin/busybox

fs/var:
total 4
drwxrwxr-x 3 eddieshi eddieshi 4096 Oct 16 04:24 log

fs/var/log:
total 4
drwxrwxr-x 2 eddieshi eddieshi 4096 Oct 16 04:24 sa

fs/var/log/sa:
total 0

fs/webs:
total 1292
-r--r--r-- 1 eddieshi eddieshi  2975 Oct 16 05:08 adslcfgc.html
-r--r--r-- 1 eddieshi eddieshi  4808 Oct 16 05:08 adslcfg.html
-r--r--r-- 1 eddieshi eddieshi  2392 Oct 16 05:08 algcfg.html
-r--r--r-- 1 eddieshi eddieshi  1078 Oct 16 05:08 atmdelerr.html
-r--r--r-- 1 eddieshi eddieshi   844 Oct 16 05:08 backupsettings.html
-r--r--r-- 1 eddieshi eddieshi  1215 Oct 16 05:08 berrun.html
-r--r--r-- 1 eddieshi eddieshi  1586 Oct 16 05:08 berstart.html
-r--r--r-- 1 eddieshi eddieshi  1020 Oct 16 05:08 berstop.html
-r--r--r-- 1 eddieshi eddieshi 21040 Oct 16 05:08 certadd.html
-r--r--r-- 1 eddieshi eddieshi  2007 Oct 16 05:08 certcaimport.html
```

```
-r--r--r-- 1 eddieshi eddieshi  2602 Oct 16 05:08 certimport.html
-r--r--r-- 1 eddieshi eddieshi  2151 Oct 16 05:08 certloadsigned.html
-r--r--r-- 1 eddieshi eddieshi 19135 Oct 16 05:08 cfgatm.html
-r-xr-xr-x 1 eddieshi eddieshi  2715 Oct 16 05:08 cfgeth.html
-r--r--r-- 1 eddieshi eddieshi  9492 Oct 16 05:08 cfgptm.html
-r--r--r-- 1 eddieshi eddieshi  2538 Oct 16 05:08 cfgwlwan.html
-r--r--r-- 1 eddieshi eddieshi   875 Oct 16 05:08 colors.css
-r--r--r-- 1 eddieshi eddieshi  6440 Oct 16 05:08 ddnsadd.html
-r--r--r-- 1 eddieshi eddieshi   946 Oct 16 05:08 defaultsettings.html
-r--r--r-- 1 eddieshi eddieshi   807 Oct 16 05:08 dhcpinfo.html
-r-xr-xr-x 1 eddieshi eddieshi  5852 Oct 16 05:08 diag8021ag.html
-r--r--r-- 1 eddieshi eddieshi  4740 Oct 16 05:08 diagbr.html
-r-xr-xr-x 1 eddieshi eddieshi 19339 Oct 16 05:08 diagethoam.html
-r--r--r-- 1 eddieshi eddieshi  2583 Oct 16 05:08 diag.html
-r--r--r-- 1 eddieshi eddieshi  3744 Oct 16 05:08 diagipow.html
-r--r--r-- 1 eddieshi eddieshi  2555 Oct 16 05:08 diaglan.html
-r--r--r-- 1 eddieshi eddieshi  5548 Oct 16 05:08 diagmer.html
-r--r--r-- 1 eddieshi eddieshi  6249 Oct 16 05:08 diagpppoa.html
-r--r--r-- 1 eddieshi eddieshi  6486 Oct 16 05:08 diagpppoe.html
-r--r--r-- 1 eddieshi eddieshi 14641 Oct 16 05:08 dnscfg.html
-r--r--r-- 1 eddieshi eddieshi  3058 Oct 16 05:08 dnsproxycfg.html
-r--r--r-- 1 eddieshi eddieshi   994 Oct 16 05:08 dsladderr.html
-r--r--r-- 1 eddieshi eddieshi  3381 Oct 16 05:08 dslbondingcfg.html
-r--r--r-- 1 eddieshi eddieshi  2316 Oct 16 05:08 enblbridge.html
-r--r--r-- 1 eddieshi eddieshi  2556 Oct 16 05:08 enblservice.html
-r--r--r-- 1 eddieshi eddieshi  7384 Oct 16 05:08 engdebug.html
-r-xr-xr-x 1 eddieshi eddieshi   997 Oct 16 05:08 ethadderr.html
-r-xr-xr-x 1 eddieshi eddieshi  1076 Oct 16 05:08 ethdelerr.html
-r--r--r-- 1 eddieshi eddieshi   821 Oct 16 05:08 footer.html
-r--r--r-- 1 eddieshi eddieshi  3012 Oct 16 05:08 hlpadslsync.html
-r--r--r-- 1 eddieshi eddieshi  2592 Oct 16 05:08 hlpatmetoe.html
-r--r--r-- 1 eddieshi eddieshi  2660 Oct 16 05:08 hlpatmseg.html
-r--r--r-- 1 eddieshi eddieshi  2614 Oct 16 05:08 hlpethconn.html
-r--r--r-- 1 eddieshi eddieshi  2498 Oct 16 05:08 hlpppngdns.html
-r--r--r-- 1 eddieshi eddieshi  2150 Oct 16 05:08 hlpppnggw.html
-r--r--r-- 1 eddieshi eddieshi  2500 Oct 16 05:08 hlppppoasess.html
-r--r--r-- 1 eddieshi eddieshi  3167 Oct 16 05:08 hlppppoeauth.html
-r--r--r-- 1 eddieshi eddieshi  2942 Oct 16 05:08 hlppppoeconn.html
-r--r--r-- 1 eddieshi eddieshi  2579 Oct 16 05:08 hlppppoeip.html
-r--r--r-- 1 eddieshi eddieshi  2503 Oct 16 05:08 hlptstdns.html
-r--r--r-- 1 eddieshi eddieshi  2450 Oct 16 05:08 hlpusbconn.html
-r--r--r-- 1 eddieshi eddieshi  2315 Oct 16 05:08 hlpwlconn.html
-r--r--r-- 1 eddieshi eddieshi 15119 Oct 16 05:08 ifcdns.html
-r--r--r-- 1 eddieshi eddieshi  8095 Oct 16 05:08 ifcgateway.html
-r--r--r-- 1 eddieshi eddieshi   423 Oct 16 05:08 index.html
-r--r--r-- 1 eddieshi eddieshi  7929 Oct 16 05:08 info.html
-r--r--r-- 1 eddieshi eddieshi  2269 Oct 16 05:08 ipoacfg.html
-r--r--r-- 1 eddieshi eddieshi  2900 Oct 16 05:08 ippcfg.html
-r--r--r-- 1 eddieshi eddieshi 25311 Oct 16 05:08 ipsconfig.html
-r--r--r-- 1 eddieshi eddieshi  1979 Oct 16 05:08 ipsec.html
-r--r--r-- 1 eddieshi eddieshi 21882 Oct 16 05:08 lancfg2.html
-r--r--r-- 1 eddieshi eddieshi  6952 Oct 16 05:08 lanvlancfg.html
-r--r--r-- 1 eddieshi eddieshi   861 Oct 16 05:08 lockerror.html
-r--r--r-- 1 eddieshi eddieshi  7687 Oct 16 05:08 logconfig.html
-r--r--r-- 1 eddieshi eddieshi  1459 Oct 16 05:08 logintro.html
-r--r--r-- 1 eddieshi eddieshi 15112 Oct 16 05:08 logobkg.gif
-r--r--r-- 1 eddieshi eddieshi   111 Oct 16 05:08 logoc.gif
```

```
-r--r--r-- 1 eddieshi eddieshi 10261 Oct 16 05:08 logo_corp.gif
-r--r--r-- 1 eddieshi eddieshi   650 Oct 16 05:08 logo.html
-r--r--r-- 1 eddieshi eddieshi  6108 Oct 16 05:08 logomenu.gif
-r--r--r-- 1 eddieshi eddieshi  1245 Oct 16 05:08 main.html
-r--r--r-- 1 eddieshi eddieshi 41920 Oct 16 05:08 menuBcm.js
-r--r--r-- 1 eddieshi eddieshi  5939 Oct 16 05:08 menu.html
-r--r--r-- 1 eddieshi eddieshi 13337 Oct 16 05:08 menuTitle.js
-r--r--r-- 1 eddieshi eddieshi  9647 Oct 16 05:08 menuTree.js
-r--r--r-- 1 eddieshi eddieshi 13476 Oct 16 05:08 multicast.html
-r--r--r-- 1 eddieshi eddieshi 14501 Oct 16 05:08 natcfg2.html
-r--r--r-- 1 eddieshi eddieshi  3847 Oct 16 05:08 ntwksum2.html
-r--r--r-- 1 eddieshi eddieshi  3075 Oct 16 05:08 password.html
-r--r--r-- 1 eddieshi eddieshi  8688 Oct 16 05:08 portmapadd.html
-r--r--r-- 1 eddieshi eddieshi  9549 Oct 16 05:08 portmapedit.html
-r--r--r-- 1 eddieshi eddieshi  3163 Oct 16 05:08 portName.js
-r--r--r-- 1 eddieshi eddieshi 33928 Oct 16 05:08 pppoe.html
-r--r--r-- 1 eddieshi eddieshi  7606 Oct 16 05:08 pradd.html
-r--r--r-- 1 eddieshi eddieshi   993 Oct 16 05:08 ptmadderr.html
-r--r--r-- 1 eddieshi eddieshi  1072 Oct 16 05:08 ptmdelerr.html
-r--r--r-- 1 eddieshi eddieshi 11607 Oct 16 05:08 pwrmngt.html
-r--r--r-- 1 eddieshi eddieshi 34199 Oct 16 05:08 qoscls.html
-r--r--r-- 1 eddieshi eddieshi 20786 Oct 16 05:08 qospoliceradd.html
-r--r--r-- 1 eddieshi eddieshi  3588 Oct 16 05:08 qosportshaping.html
-r--r--r-- 1 eddieshi eddieshi  5512 Oct 16 05:08 qosqmgmt.html
-r--r--r-- 1 eddieshi eddieshi 25129 Oct 16 05:08 qosqueueadd.html
-r--r--r-- 1 eddieshi eddieshi  1135 Oct 16 05:08 qsmain.html
-r--r--r-- 1 eddieshi eddieshi  1237 Oct 16 05:08 quicksetuperr.html
-r--r--r-- 1 eddieshi eddieshi  5192 Oct 16 05:08 quicksetup.html
-r--r--r-- 1 eddieshi eddieshi  1432 Oct 16 05:08 quicksetuptesterr.html
-r--r--r-- 1 eddieshi eddieshi   977 Oct 16 05:08 quicksetuptestsucc.html
-r--r--r-- 1 eddieshi eddieshi   832 Oct 16 05:08 rebootinfo.html
-r--r--r-- 1 eddieshi eddieshi   816 Oct 16 05:08 resetrouter.html
-r--r--r-- 1 eddieshi eddieshi   982 Oct 16 05:08 restoreinfo.html
-r--r--r-- 1 eddieshi eddieshi  9236 Oct 16 05:08 routeadd.html
-r--r--r-- 1 eddieshi eddieshi  1019 Oct 16 05:08 rtdefaultcfgerr.html
-r--r--r-- 1 eddieshi eddieshi  7345 Oct 16 05:08 rtdefaultcfg.html
-r--r--r-- 1 eddieshi eddieshi  2310 Oct 16 05:08 scdmz.html
-r--r--r-- 1 eddieshi eddieshi  9514 Oct 16 05:08 scinflt.html
-r--r--r-- 1 eddieshi eddieshi  4650 Oct 16 05:08 scmacflt.html
-r--r--r-- 1 eddieshi eddieshi  1731 Oct 16 05:08 scmacpolicy.html
-r--r--r-- 1 eddieshi eddieshi  6988 Oct 16 05:08 scoutflt.html
-r--r--r-- 1 eddieshi eddieshi 18718 Oct 16 05:08 scprttrg.html
-r--r--r-- 1 eddieshi eddieshi 54763 Oct 16 05:08 scvrtsrv.html
-r-xr-xr-x 1 eddieshi eddieshi  1741 Oct 16 05:08 seclogintro.html
-r--r--r-- 1 eddieshi eddieshi 14542 Oct 16 05:08 sntpcfg.html
-r--r--r-- 1 eddieshi eddieshi  1830 Oct 16 05:08 StaticIpAdd.html
-r--r--r-- 1 eddieshi eddieshi   746 Oct 16 05:08 StaticIpErr.html
-r--r--r-- 1 eddieshi eddieshi  1015 Oct 16 05:08 statsadslerr.html
-r--r--r-- 1 eddieshi eddieshi  2561 Oct 16 05:08 statsadsl.html
-r--r--r-- 1 eddieshi eddieshi   454 Oct 16 05:08 statsadslreset.html
-r--r--r-- 1 eddieshi eddieshi  2837 Oct 16 05:08 statsifc.html
-r--r--r-- 1 eddieshi eddieshi   452 Oct 16 05:08 statsifcreset.html
-r--r--r-- 1 eddieshi eddieshi   454 Oct 16 05:08 statsvdslreset.html
-r--r--r-- 1 eddieshi eddieshi   451 Oct 16 05:08 statswanreset.html
-r--r--r-- 1 eddieshi eddieshi   451 Oct 16 05:08 statsxtmreset.html
-r--r--r-- 1 eddieshi eddieshi  3244 Oct 16 05:08 storageusraccadd.html
-r--r--r-- 1 eddieshi eddieshi   639 Oct 16 05:08 stylemain.css
```

```
-r--r--r-- 1 eddieshi eddieshi  7477 Oct 16 05:08 todadd.html
-r--r--r-- 1 eddieshi eddieshi  7773 Oct 16 05:08 tr69cfg.html
-r--r--r-- 1 eddieshi eddieshi  1289 Oct 16 05:08 updatesettings.html
-r--r--r-- 1 eddieshi eddieshi  1680 Oct 16 05:08 upload.html
-r--r--r-- 1 eddieshi eddieshi  1911 Oct 16 05:08 uploadinfo.html
-r--r--r-- 1 eddieshi eddieshi  1698 Oct 16 05:08 upnpcfg.html
-r--r--r-- 1 eddieshi eddieshi  1996 Oct 16 05:08 url_add.html
-r--r--r-- 1 eddieshi eddieshi 14542 Oct 16 05:08 util.js
-r--r--r-- 1 eddieshi eddieshi  1046 Oct 16 05:08 wanadderr.html
-r--r--r-- 1 eddieshi eddieshi 16233 Oct 16 05:08 wancfg.html
-r--r--r-- 1 eddieshi eddieshi   999 Oct 16 05:08 wifiwanadderr.html
-r--r--r-- 1 eddieshi eddieshi  1080 Oct 16 05:08 wifiwandelerr.html
-r--r--r-- 1 eddieshi eddieshi 63113 Oct 16 05:08 wlcfgadv.html
-r--r--r-- 1 eddieshi eddieshi 17618 Oct 16 05:08 wlcfg.html
-r--r--r-- 1 eddieshi eddieshi  5866 Oct 16 05:08 wlcfgkey.html
-r--r--r-- 1 eddieshi eddieshi  1719 Oct 16 05:08 wlmacflt.html
-r--r--r-- 1 eddieshi eddieshi   925 Oct 16 05:08 wlrefresh.html
-r--r--r-- 1 eddieshi eddieshi 45835 Oct 16 05:08 wlsecurity.html
-r--r--r-- 1 eddieshi eddieshi  3678 Oct 16 05:08 wlsetup.html
-r-xr-xr-x 1 eddieshi eddieshi  9577 Oct 16 05:08 wlwapias.html
-r--r--r-- 1 eddieshi eddieshi  9313 Oct 16 05:08 xdslcfg.html
```

Broadcom Confidential

Connecting
e v e r y t h i n g ®

BROADCOM.

BROADCOM CORPORATION
5300 California Avenue
Irvine, CA 92617
© 2013 by BROADCOM CORPORATION. All rights reserved.

Phone: 949-926-5000
Fax: 949-926-5203
E-mail: info@broadcom.com
Web: www.broadcom.com

96XXX-AN101-D3   November 11, 2013