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Howto create an initrd image

Posted by WzL	
WzL Howto create an initrd image June 01, 2012 05:51AM	Registered: 2 years ago Posts: 13
<p>Hi,</p> <p>I'm currently bussy with compiling the latest stable kernel (3.3.7) from kernel.org for the pogoplug and it's booting till the point it searches for his own specific modules in de initrd ramdisk.</p> <p>Loading, please wait... [20.532435] udevd[50]: starting version 175 Begin: Loading essential drivers ... modprobe: chdir(3.3.7): No such file or directory done.</p> <p>Ok, should not be an issue, we create our own initrd image. Some sidenote should be mentioned, i succesfully compiled the kernel in a cross compile enviroment using codesourcery-arm-2011.03.sh. When i'm executing mkinitramfs-kpkg to create an initial ramdisk it is searching in the root (/lib/modules) of my cross compile machine and not in cross compile environment of the target kernel source (/home/user/crossc/linux-3.3.7/lib/modules):</p> <pre>mkinitramfs-kpkg -o initrd 3.3.7 Deprecation WARNING: use update-initramfs(8) grep: /boot/config-3.3.7: No such file or directory WARNING: missing /lib/modules/3.3.7</pre> <p>Question is how do i succesfully create a ramdisk image for the pogoplug in een cross compile environment? Thnx in advance!</p>	
WzL Re: Howto create an initrd image June 12, 2012 04:31AM	Registered: 2 years ago Posts: 13
<p>Answering my own question (for the sake of informational purposes)</p> <p>After compiling your own kernel</p> <pre>make oldconfig && make menuconfig && make uImage && make modules && make modules_install</pre> <p>using a crosscompile environment or, in this case, using the target environment (pogoplug) itself, one can enter the folowing command:</p> <pre>mkinitramfs [OPTION]... -o outfile [version]</pre> <p>So in my case it will be: mkinitramfs -o linux-3.3.8 3.3.8. This creates a initramfs image named linux-3.3.8. This image must be prepared for uboot:</p> <pre>mkimage -A arm -O linux -T ramdisk -C gzip -a 0x00000000 -e 0x00000000 -n "PogoPlug Ramdisk" -d linux-3.3.8 uInitrd</pre> <p>Bootting a Linux 3.3.8 kernel using this specific uInitrd on a Pogoplug v02 gives the folowing output:</p> <pre>U-Boot 2011.12-00447-gfca94c3-dirty (Mar 04 2012 - 21:39:45) Pogoplug E02 SoC: Kirkwood 88F6281_A0 DRAM: 256 MiB WARNING: Caches not enabled NAND: 128 MiB In: serial Out: serial Err: serial Net: egiga0 Hit any key to stop autoboot: 0 (Re)start USB... USB: Register 10011 NbrPorts 1 USB EHCI 1.00 scanning bus for devices... 3 USB Device(s) found scanning bus for storage devices... 1 Storage Device(s) found Loading file "/uImage" from usb device 0:1 (usb0a1) 2272256 bytes read Loading file "/uInitrd" from usb device 0:1 (usb0a1) 10502073 bytes read ## Booting kernel from Legacy Image at 00800000 ... Image Name: Linux-3.3.8 Image Type: ARM Linux Kernel Image (uncompressed) Data Size: 2272192 Bytes = 2.2 MiB Load Address: 00000000 Entry Point: 00000000 Verifying Checksum ... OK ## Loading init Ramdisk from Legacy Image at 01100000 ... Image Name: initramfs-3.3.8 Image Type: ARM Linux RAMDisk Image (gzip compressed) Data Size: 10502009 Bytes = 10 MiB Load Address: 00000000 Entry Point: 00000000 Verifying Checksum ... OK Loading Kernel Image ... OK OK Using machid 0x831 from environment Starting kernel ... Uncompressing Linux... done, booting the kernel. [0.000000] Booting Linux on physical CPU 0 [0.000000] Initializing cgroup subsys cpuset [0.000000] Initializing cgroup subsys cpu [0.000000] Linux version 3.3.8 (root@TP-61) (gcc version 4.4.1 (Sourcery G+2 [0.000000] CPU: Feroceon 88FR131 [56251311] revision 1 (ARMv5TE), cr=0005397 [0.000000] CPU: VIVT data cache, VIVT instruction cache [0.000000] Machine: Marvell SheevaPlug Reference Board [0.000000] Memory policy: ECC disabled, Data cache writeback [0.000000] Built 1 zonelists in Zone order, mobility grouping on. Total pa4 [0.000000] Kernel command line: console=ttys0,115200 [0.000000] PID hash table entries: 1024 (order: 0, 4096 bytes) [0.000000] Dentry cache hash table entries: 32768 (order: 5, 131072 bytes) [0.000000] Inode-cache hash table entries: 16384 (order: 4, 65536 bytes) [0.000000] allocated 524288 bytes of page_cgroup [0.000000] please try 'cgroup_disable=memory' option if you don't want memos</pre>	

```
[ 0.000000] Memory: 256MB = 256MB total
[ 0.000000] Memory: 244148k/244148k available, 17996k reserved, 0K highmem
[ 0.000000] Virtual kernel memory layout:
[ 0.000000]   vector : 0xffff0000 - 0xffff1000   ( 4 kB)
[ 0.000000]   fixmap : 0xffff0000 - 0xffffe000   ( 896 kB)
[ 0.000000]   vmalloc : 0xd0800000 - 0xff000000   ( 744 MB)
[ 0.000000]   lowmem : 0xc0000000 - 0xd0000000   ( 256 MB)
[ 0.000000]   modules : 0xbf000000 - 0xc0000000   ( 16 MB)
[ 0.000000]   .text : 0xc0008000 - 0xc040e35c   (4121 kB)
[ 0.000000]   .init : 0xc040f000 - 0xc0433000   ( 144 kB)
[ 0.000000]   .data : 0xc0434000 - 0xc046e100   ( 233 kB)
[ 0.000000]   .bss : 0xc046e124 - 0xc04d20e8   ( 400 kB)
[ 0.000000] NR_IRQS:114
[ 0.000000] gpiochip_add: registered GPIOs 0 to 31 on device: orion_gpio0
[ 0.000000] gpiochip_add: registered GPIOs 32 to 49 on device: orion_gpio1
[ 0.000000] sched_clock: 32 bits at 200MHz, resolution 5ns, wraps every 2147s
[ 0.000000] Console: colour dummy device 80x30
[ 9.562226] Calibrating delay loop... 1191.11 BogoMIPS (lpj=5955584)
[ 9.652109] pid_max: default: 32768 minimum: 301
[ 9.652238] Security Framework initialized
[ 9.652318] Mount-cache hash table entries: 512
[ 9.652680] Initializing cgroup subsys cpacct
[ 9.652696] Initializing cgroup subsys memory
[ 9.652735] Initializing cgroup subsys devices
[ 9.652747] Initializing cgroup subsys freezer
[ 9.652757] Initializing cgroup subsys net_cls
[ 9.652765] Initializing cgroup subsys blkio
[ 9.652786] Initializing cgroup subsys perf_event
[ 9.652881] CPU: Testing write buffer coherency: ok
[ 9.653171] Setting up static identity map for 0x2e78a0 - 0x2e78dc
[ 9.654394] devtmpfs: initialized
[ 9.656328] print_constraints: dummy:
[ 9.656584] NET: Registered protocol family 16
[ 9.657299] Kirkwood: MV88F6281-A0, TCL=200000000.
[ 9.657315] Feroceon L2: Enabling L2
[ 9.657352] Feroceon L2: Cache support initialised.
[ 9.660071] bio: create slab <bio-0> at 0
[ 9.660411] vgaarb: loaded
[ 9.660953] Switching to clocksource orion_clocksource
[ 9.675561] NET: Registered protocol family 2
[ 9.675806] IP route cache hash table entries: 2048 (order: 1, 8192 bytes)
[ 9.676504] TCP established hash table entries: 8192 (order: 4, 65536 bytes)
[ 9.676691] TCP bind hash table entries: 8192 (order: 3, 32768 bytes)
[ 9.676799] TCP: Hash tables configured (established 8192 bind 8192)
[ 9.676810] TCP reno registered
[ 9.676820] UDP hash table entries: 256 (order: 0, 4096 bytes)
[ 9.676849] UDP: list hash table entries: 256 (order: 0, 4096 bytes)
[ 9.677066] NET: Registered protocol family 1
[ 9.677266] Unpacking initramfs...
[ 10.457382] Freeing initrd memory: 10252K
[ 10.457397] NetWinder Floating Point Emulator V0.97 (double precision)
[ 10.458096] audit: initializing netlink socket (disabled)
[ 10.458142] type=2000 audit(0.880:1): initialized
[ 10.459664] VFS: Disk quotas dquot_6.5.2
[ 10.459763] Dquot-cache hash table entries: 1024 (order 0, 4096 bytes)
[ 10.459870] JFFS2 version 2.2. (NAND) (SUMMARY) © 2001-2006 Red Hat, Inc.
[ 10.460209] msgmni has been set to 496
[ 10.461849] alg: No test for stdrng (krng)
[ 10.461954] Block layer SCSI generic (bsg) driver version 0.4 loaded (major )
[ 10.461969] io scheduler noop registered
[ 10.461977] io scheduler deadline registered
[ 10.462024] io scheduler cfq registered (default)
[ 10.462111] mv_xor_shared mv_xor_shared.0: Marvell shared XOR driver
[ 10.462146] mv_xor_shared mv_xor_shared.1: Marvell shared XOR driver
[ 10.501026] mv_xor mv_xor.0: Marvell XOR: ( xor cpy )
[ 10.541024] mv_xor mv_xor.1: Marvell XOR: ( xor fill cpy )
[ 10.581023] mv_xor mv_xor.2: Marvell XOR: ( xor cpy )
[ 10.621023] mv_xor mv_xor.3: Marvell XOR: ( xor fill cpy )
[ 10.621392] Serial: 8250/16550 driver, 2 ports, IRQ sharing disabled
[ 10.641917] serial8250.0: ttyS0 at MMIO 0xf1012000 (irq = 33) is a 16550A
[ 11.096238] console [ttyS0] enabled
[ 11.109664] NAND device: Manufacturer ID: 0xad, Chip ID: 0xf1 (Hynix NAND 12)
[ 11.109168] Scanning device for bad blocks
[ 11.199740] request_module: runaway loop modprobe binfmt-464c
[ 11.209273] Creating 3 MTD partitions on "orion_nand":
[ 11.214921] 0x000000000000-0x000000100000 : "u-boot"
[ 11.220812] 0x000000100000-0x000000500000 : "uImage"
[ 11.226616] 0x000000500000-0x000000800000 : "root"
[ 11.233013] mousedev: PS/2 mouse device common for all mice
[ 12.241058] rtc-mv rtc-mv: internal RTC not ticking
[ 12.246042] i2c /dev entries driver
[ 12.249673] cpuidle: using governor ladder
[ 12.253881] cpuidle: using governor menu
[ 12.258959] TCP cubic registered
[ 12.262228] NET: Registered protocol family 17
[ 12.266706] Registering the dns_resolver key type
[ 12.271963] registered taskstats version 1
[ 12.276511] drivers/rtc/hctosys.c: unable to open rtc device (rtc0)
[ 12.282874] Initializing network drop monitor service
[ 12.288542] Freeing init memory: 144K
[ 12.302712] request_module: runaway loop modprobe binfmt-464c
[ 12.322821] request_module: runaway loop modprobe binfmt-464c
[ 12.332538] Failed to execute /init
[ 12.346469] request_module: runaway loop modprobe binfmt-464c
[ 12.355986] Kernel panic - not syncing: No init found. Try passing init= op.
[ 12.368867] [] (unwind_backtrace+0x0/0xec) from [] (pani)
[ 12.377113] [] (panic+0x70/0x1c4) from [] (init_post+0xa)
[ 12.384837] [] (init_post+0xa0/0xc4) from [] (kernel_init)
```

Conclusion, creating an initial ramdisk succeeded, but output like

```
runaway loop modprobe binfmt-464c
```

is aparently an error message of the kernel tries to start /sbin/init but it won't recognize the binary format ... so my crosscompile environment (codesourcery-arm) is not yet working properly as it should ...

Edited 1 time(s). Last edit at 06/12/2012 04:49AM by WzL.

WzL	Registered: 2 years ago
Re: Howto create an initrd image	Posts: 13
June 12, 2012 04:48AM	

a fresh recompile of the 3.3.8 kernel and creation ot the ramdisk using the pogoplug environment itself, taking upto several hours ... booting of the 3.3.8 kernel results in the following output:

```
J-Boot 2011.12-00447-gfca94c3-dirty (Mar 04 2012 - 21:39:45)
Pogoplug E02
```

```
SoC: Kirkwood 88F6281_A0
DRAM: 256 MiB
WARNING: Caches not enabled
NAND: 128 MiB
In: serial
Out: serial
Err: serial
Net: egiga0
Hit any key to stop autoboot: 0
(R)start USB...
USB: Register 10011 NbrPorts 1
USB EHCI 1.00
scanning bus for devices... 3 USB Device(s) found
scanning bus for storage devices... 1 Storage Device(s) found
Loading file "/uImage" from usb device 0:1 (usb0a1)
2176832 bytes read
Loading file "/uInitrd" from usb device 0:1 (usb0a1)
7422154 bytes read
## Booting kernel from Legacy Image at 00800000 ...
Image Name: Linux-3.3.8
Image Type: ARM Linux Kernel Image (uncompressed)
Data Size: 2176768 Bytes = 2.1 MiB
Load Address: 00808000
Entry Point: 00808000
Verifying Checksum ... OK
## Loading init Ramdisk from Legacy Image at 01100000 ...
Image Name: Pogoplug Ramdisk
Image Type: ARM Linux RAMDisk Image (gzip compressed)
Data Size: 7422090 Bytes = 7.1 MiB
Load Address: 00000000
Entry Point: 00000000
Verifying Checksum ... OK
Loading Kernel Image ... OK
OK
Using machid 0x831 from environment

Starting kernel ...

Uncompressing Linux... done, booting the kernel.
[ 0.000000] Booting Linux on physical CPU 0
[ 0.000000] Initializing cgroup subsys cpuset
[ 0.000000] Initializing cgroup subsys cpu
[ 0.000000] Linux version 3.3.8 (root@proxy-test) (gcc version 4.6.3 (Debian2
[ 0.000000] CPU: Feroceon 88F6281 [56251311] revision 1 (ARMV5TE), cr=0005397
[ 0.000000] CPU: VIVT data cache, VIVT instruction cache
[ 0.000000] Machine: Marvell SheevaPlug Reference Board
[ 0.000000] Memory policy: ECC disabled, Data cache writeback
[ 0.000000] Built 1 zonelists in Zone order, mobility grouping on. Total pa4
[ 0.000000] Kernel command line: console=ttyS0,115200
[ 0.000000] PID hash table entries: 1024 (order: 0, 4096 bytes)
[ 0.000000] Dentry cache hash table entries: 32768 (order: 5, 131072 bytes)
[ 0.000000] Inode-cache hash table entries: 16384 (order: 4, 65536 bytes)
[ 0.000000] allocated 524288 bytes of page_cgroup
[ 0.000000] please try 'cgroup_disable=memory' option if you don't want memos
[ 0.000000] Memory: 256MB = 256MB total
[ 0.000000] Memory: 247336k/247336k available, 14808k reserved, 0K highmem
[ 0.000000] Virtual kernel memory layout:
[ 0.000000] vector : 0xffff0000 - 0xffff1000 ( 4 kB)
[ 0.000000] fixmap : 0xffff0000 - 0xffffe000 ( 896 kB)
[ 0.000000] vmalloc : 0xd0800000 - 0xffff0000 ( 744 MB)
[ 0.000000] lowmem : 0xc0000000 - 0xd0000000 ( 256 MB)
[ 0.000000] modules : 0xbf000000 - 0xc0000000 ( 16 MB)
[ 0.000000] .text : 0xc0000000 - 0xc03e1cc4 (3944 kB)
[ 0.000000] .init : 0xc03e2000 - 0xc0405000 ( 140 kB)
[ 0.000000] .data : 0xc0406000 - 0xc043ffa0 ( 232 kB)
[ 0.000000] .bss : 0xc043ffc4 - 0xc04a4048 ( 401 kB)
[ 0.000000] NR_IRQS:114
[ 0.000000] gpiochip_add: registered GPIOs 0 to 31 on device: orion_gpio0
[ 0.000000] gpiochip_add: registered GPIOs 32 to 49 on device: orion_gpio1
[ 0.000000] sched_clock: 32 bits at 200MHz, resolution 5ns, wraps every 2147s
[ 0.000000] Console: colour dummy device 80x30
[ 0.000000] Calibrating delay loop... 1191.11 BogoMIPS (lpj=5955584)
[ 0.000000] pid_max: default: 32768 minimum: 301
[ 0.000000] Security Framework initialized
[ 0.000000] Mount-cache hash table entries: 512
[ 0.000000] Initializing cgroup subsys cpuct
[ 0.000000] Initializing cgroup subsys memory
[ 0.000000] Initializing cgroup subsys devices
[ 0.000000] Initializing cgroup subsys freezer
[ 0.000000] Initializing cgroup subsys net_cls
[ 0.000000] Initializing cgroup subsys blkio
[ 0.000000] Initializing cgroup subsys perf_event
[ 0.000000] CPU: Testing write buffer coherency: ok
[ 0.000000] Setting up static identity map for 0x2cdaa0 - 0x2cdadc
[ 0.000000] devtmpfs: initialized
[ 0.000000] print_constraints: dummy:
[ 0.000000] NET: Registered protocol family 16
[ 0.000000] Kirkwood: MV88F6281-A0, TCLK=200000000.
[ 0.000000] Feroceon L2: Enabling L2
[ 0.000000] Feroceon L2: Cache support initialised.
[ 0.000000] bio: create slab <bio-0> at 0
[ 0.000000] vgaarb: loaded
[ 0.000000] Switching to clocksource orion_clocksource
[ 0.000000] NET: Registered protocol family 2
[ 0.000000] IP route cache hash table entries: 2048 (order: 1, 8192 bytes)
[ 0.000000] TCP established hash table entries: 8192 (order: 4, 65536 bytes)
[ 0.000000] TCP bind hash table entries: 8192 (order: 3, 32768 bytes)
[ 0.000000] TCP: Hash tables configured (established 8192 bind 8192)
[ 0.000000] TCP reno registered
[ 0.000000] UDP hash table entries: 256 (order: 0, 4096 bytes)
[ 0.000000] UDP-Lite hash table entries: 256 (order: 0, 4096 bytes)
[ 0.000000] NET: Registered protocol family 1
[ 0.000000] Unpacking initramfs...
[ 0.000000] Freeing initrd memory: 7248K
[ 0.000000] NetWinder Floating Point Emulator V0.97 (double precision)
[ 0.000000] audit: initializing netlink socket (disabled)
[ 0.000000] type=2000 audit(0.71011): initialized
[ 0.000000] VFS: Disk quotas dquot_6.5.2
[ 0.000000] Dquot-cache hash table entries: 1024 (order 0, 4096 bytes)
[ 0.000000] JFFS2 version 2.2. (NAND) (SUMMARY) © 2001-2006 Red Hat, Inc.
[ 0.000000] msgmni has been set to 497
[ 0.000000] alg: No test for stdrng (krng)
[ 0.000000] Block layer SCSI generic (bsg) driver version 0.4 loaded (major )
[ 0.000000] io scheduler noop registered
[ 0.000000] io scheduler deadline registered
[ 0.000000] io scheduler cfq registered (default)
[ 0.000000] mv_xor_shared mv_xor_shared.0: Marvell shared XOR driver
[ 0.000000] mv_xor_shared mv_xor_shared.1: Marvell shared XOR driver
[ 0.000000] mv_xor mv_xor.0: Marvell XOR: ( xor cpy )
[ 0.000000] mv_xor mv_xor.1: Marvell XOR: ( xor fill cpy )
[ 0.000000] mv_xor mv_xor.2: Marvell XOR: ( xor cpy )
[ 0.000000] mv_xor mv_xor.3: Marvell XOR: ( xor fill cpy )
[ 0.000000] Serial: 8250/16550 driver, 2 ports, IRQ sharing disabled
```

```
[ 22.322249] serial8250.0: ttyS0 at MMIO 0xf1012000 (irq = 33) is a 16550A
[ 22.775780] console [ttyS0] enabled
[ 22.780177] NAND device: Manufacturer ID: 0xad, Chip ID: 0xf1 (Hynix NAND 12)
[ 22.780678] Scanning device for bad blocks
[ 22.874087] Creating 3 MTD partitions on "orion_nand":
[ 22.879262] 0x000000000000-0x000000100000 : "u-boot"
[ 22.885131] 0x000000100000-0x000000500000 : "uImage"
[ 22.890878] 0x000000500000-0x000000800000 : "root"
[ 22.897205] mousedev: PS/2 mouse device common for all mice
[ 23.911384] rtc-mv rtc-mv: internal RTC not ticking
[ 23.916362] i2c /dev entries driver
[ 23.919991] cpuidle: using governor ladder
[ 23.924241] cpuidle: using governor menu
[ 23.929170] TCP cubic registered
[ 23.932435] NET: Registered protocol family 17
[ 23.936906] Registering the dns_resolver key type
[ 23.942122] registered taskstats version 1
[ 23.946680] drivers/rtc/hctosys.c: unable to open rtc device (rtc0)
[ 23.953040] Initializing network drop monitor service
[ 23.958686] Freeing init memory: 140K

Loading, please wait...
[ 24.041925] udev[50]: starting version 175
[ 24.108020] mv643xx_eth: MV-643xx 10/100/1000 ethernet driver version 1.4
[ 24.187728] usbcore: registered new interface driver usbfs
[ 24.194452] mv643xx_eth smi: probed
[ 24.228721] mv643xx_eth_port mv643xx_eth_port.0: eth0: port 0 with MAC addre2
[ 24.254756] usbcore: registered new interface driver hub
[ 24.269186] mmc0: mvsdio driver initialized, lacking card detect (fall back )
[ 24.290194] usbcore: registered new device driver usb
[ 24.316829] ehci_hcd: USB 2.0 'Enhanced' Host Controller (EHCI) Driver
[ 24.353539] orion-ehci orion-ehci.0: Marvell Orion EHCI
[ 24.358866] orion-ehci orion-ehci.0: new USB bus registered, assigned bus nul
[ 24.421391] orion-ehci orion-ehci.0: irq 19, io mem 0xf1050000
[ 24.441364] orion-ehci orion-ehci.0: USB 2.0 started, EHCI 1.00
[ 24.447382] usb usb1: New USB device found, idVendor=1d6b, idProduct=0002
[ 24.454222] usb usb1: New USB device strings: Mfr=3, Product=2, SerialNumber1
[ 24.461493] usb usb1: Product: Marvell Orion EHCI
[ 24.462616] usb usb1: Manufacturer: Linux 3.3.8 ehci_hcd
[ 24.471562] usb usb1: SerialNumber: orion-ehci.0
[ 24.477113] hub 1-0:1.0: USB hub found
[ 24.480896] hub 1-0:1.0: 1 port detected
Begin: Loading essential drivers ... modprobe: module unix not found in modules
done.
Begin: Running /scripts/init-premount ... Begin: Running /scripts/local-top ... done.
Begin: Mounting root file system ... Begin: Waiting for root file system ... [ 24.801388] usb 1-1: new high-speed i
[ 24.952797] usb 1-1: New USB device found, idVendor=05e3, idProduct=0608
[ 24.959535] usb 1-1: New USB device strings: Mfr=0, Product=1, SerialNumber=0
[ 24.966716] usb 1-1: Product: USB2.0 Hub
[ 24.980586] hub 1-1:1.0: USB hub found
[ 24.984807] hub 1-1:1.0: 4 ports detected
[ 25.261704] usb 1-1.1: new high-speed USB device number 3 using orion-ehci
[ 25.372546] usb 1-1.1: New USB device found, idVendor=04d9, idProduct=7350
[ 25.379456] usb 1-1.1: New USB device strings: Mfr=1, Product=2, SerialNumbe3
[ 25.386810] usb 1-1.1: Product: OneTouch
[ 25.391470] usb 1-1.1: Manufacturer: Maxtor
[ 25.395846] usb 1-1.1: SerialNumber: 2HAP9KD2
[ 25.420293] SCSI subsystem initialized
[ 25.426741] usbcore: registered new interface driver uas
[ 25.436431] Initializing USB Mass Storage driver...
[ 25.441669] scsi0 : usb-storage 1-1:1.0
[ 25.447203] usbcore: registered new interface driver usb-storage
[ 25.453300] USB Mass Storage support registered.
[ 26.442264] scsi 0:0:0:0: Direct-Access Maxtor OneTouch 0125 P4
[ 26.465844] sd 0:0:0:0: [sda] 312581808 512-byte logical blocks: (160 GB/149
[ 26.474450] sd 0:0:0:0: [sda] Write Protect is off
[ 26.480741] sd 0:0:0:0: [sda] No Caching mode page present
[ 26.486283] sd 0:0:0:0: [sda] Assuming drive cache: write through
[ 26.496066] sd 0:0:0:0: [sda] No Caching mode page present
[ 26.501599] sd 0:0:0:0: [sda] Assuming drive cache: write through
[ 26.819210] sda: sda1 sda2 sda3 sda4 < sda5 sda6 sda7 sda8 >
[ 26.830187] sd 0:0:0:0: [sda] No Caching mode page present
[ 26.835730] sd 0:0:0:0: [sda] Assuming drive cache: write through
[ 26.841876] sd 0:0:0:0: [sda] Attached SCSI disk
done.

Save up waiting for root device. Common problems:
- Boot args (cat /proc/cmdline)
- Check rootdelay= (did the system wait long enough?)
- Check root= (did the system wait for the right device?)
- Missing modules (cat /proc/modules; ls /dev)
ALERT! /dev/disk/by-uuid/22729a72-8156-4930-960a-60315e5a7c4a does not exist. !
modprobe: module i8042 not found in modules.dep
modprobe: module atkbd not found in modules.dep
[ 55.095987] uhci_hcd: USB Universal Host Controller Interface driver
[ 55.110720] ohci_hcd: USB 1.1 'Open' Host Controller (OHCI) Driver
[ 55.137698] usbcore: registered new interface driver usbhid
[ 55.143328] usbhid: USB HID core driver

BusyBox v1.19.3 (Debian 1:1.19.3-7) built-in shell (ash)
Enter 'help' for a list of built-in commands.

/bin/sh: can't access tty: job control turned off
(initramps)

Hmzz... the ramdisk is apparently configured to boot from disk using an uuid from initial target i used building the ramdisk image ... thats one small glitch
```

Edited 1 time(s). Last edit at 06/12/2012 04:56AM by WzL.

WzL

Re: Howto create an initrd image

June 12, 2012 07:59AM

Registered: 2 years ago

Posts: 13

based on the mkraminitfs manual:

Main Logic

Here is mkinitramfs execution chain:

setup

udev

find root

mount root

chroot

4 of 11

07/28/2014 12:25 PM

Question is, how does one define an UUID when there's no access yet to the target system? Answer, through uboot bootloader. For example: setenv bootargs \$(console) root=UUID=12345678-901-2345-6789-0123456789012 rootdelay=5

WzL

Re: Howto create an initrd image

June 12, 2012 05:12PM

Registered: 2 years ago

Posts: 13

Finally succes by adding root=/dev/sda3 to bootargs_console of u-boot

```
setenv bootargs_console console=ttyS0,115200 root=/dev/sda3
```

```
U-Boot 2011.12-00447-gfca94c3-dirty (Mar 04 2012 - 21:39:45)
Pogoplug E02
```

```
SoC: Kirkwood 88F6281_A0
DRAM: 256 MiB
WARNING: Caches not enabled
NAND: 128 MiB
In: serial
Out: serial
Err: serial
Net: egiga0
Hit any key to stop autoboot: 0
PogoE02> setenv bootargs_console console=ttyS0,115200 root=/dev/sda3
PogoE02> boot
(Re)start USB...
USB: Register 10011 NbrPorts 1
USB EHCI 1.00
scanning bus for devices... 3 USB Device(s) found
scanning bus for storage devices... 1 Storage Device(s) found
Loading file "/uImage" from usb device 0:1 (usbda1)
2176832 bytes read
Loading file "/uinitrd" from usb device 0:1 (usbda1)
7422154 bytes read
## Booting kernel from Legacy Image at 00800000 ...
Image Name: Linux-3.3.8
Image Type: ARM Linux Kernel Image (uncompressed)
Data Size: 2176768 Bytes = 2.1 MiB
Load Address: 00000000
Entry Point: 00000000
Verifying Checksum ... OK
## Loading init Ramdisk from Legacy Image at 01100000 ...
Image Name: Pogoplug Ramdisk
Image Type: ARM Linux RAMDisk Image (gzip compressed)
Data Size: 7422090 Bytes = 7.1 MiB
Load Address: 00000000
Entry Point: 00000000
Verifying Checksum ... OK
Loading Kernel Image ... OK
OK
Using machid 0x831 from environment
Starting kernel ...
```

```
Uncompressing Linux... done, booting the kernel.
[ 0.000000] Booting Linux on physical CPU 0
[ 0.000000] Initializing cgroup subsys cpuset
[ 0.000000] Initializing cgroup subsys cpu
[ 0.000000] Linux version 3.3.8 (root@proxy-test) (gcc version 4.6.3 (Debian 4.6.3-1) ) #1 Mon Jun 11 18:08:30 CEST 22
[ 0.000000] CPU: Feroceon 88FR131 [56251311] revision 1 (ARMv5TE), cr=00053977
[ 0.000000] CPU: VIVT data cache, VIVT instruction cache
[ 0.000000] Machine: Marvell SheevaPlug Reference Board
[ 0.000000] Memory policy: ECC disabled, Data cache writeback
[ 0.000000] Built 1 zonelists in Zone order, mobility grouping on. Total pages: 65024
[ 0.000000] Kernel command line: console=ttyS0,115200 root=/dev/sda3
[ 0.000000] PID hash table entries: 1024 (order: 0, 4096 bytes)
[ 0.000000] Dentry cache hash table entries: 32768 (order: 5, 131072 bytes)
[ 0.000000] Inode-cache hash table entries: 16384 (order: 4, 65536 bytes)
[ 0.000000] allocated 524288 bytes of page_cgroup
[ 0.000000] please try 'cgroup_disable=memory' option if you don't want memory cgroups
[ 0.000000] Memory: 256MB = 256MB total
[ 0.000000] Memory: 247336k/247336k available, 14808k reserved, 0K highmem
[ 0.000000] Virtual kernel memory layout:
[ 0.000000] vector : 0xffff0000 - 0xffff1000 ( 4 kB)
[ 0.000000] fixmap : 0xffff0000 - 0xffffe000 ( 896 kB)
[ 0.000000] vmalloc : 0xc0000000 - 0xffff0000 ( 744 MB)
[ 0.000000] lowmem : 0xc0000000 - 0xd0000000 ( 256 MB)
[ 0.000000] modules : 0xbf000000 - 0xc0000000 ( 16 MB)
[ 0.000000] .text : 0xc0000000 - 0xc03e1cc4 (3944 kB)
[ 0.000000] .init : 0xc03e2000 - 0xc0405000 ( 140 kB)
[ 0.000000] .data : 0xc0406000 - 0xc043ffa0 ( 232 kB)
[ 0.000000] .bss : 0xc043ffc4 - 0xc04a4048 ( 401 kB)
[ 0.000000] NR_IRQS:114
[ 0.000000] gpiochip_add: registered GPIOs 0 to 31 on device: orion_gpio0
[ 0.000000] gpiochip_add: registered GPIOs 32 to 49 on device: orion_gpio1
[ 0.000000] sched_clock: 32 bits at 200MHz, resolution 5ns, wraps every 21474ms
[ 0.000000] Console: colour dummy device 80x30
[ 14.393961] Calibrating delay loop... 1191.11 BogoMIPS (lpj=5955584)
[ 14.483845] pid_max: default: 32768 minimum: 301
[ 14.483969] Security Framework initialized
[ 14.484041] Mount-cache hash table entries: 512
[ 14.484384] Initializing cgroup subsys cpacct
[ 14.484399] Initializing cgroup subsys memory
[ 14.484434] Initializing cgroup subsys devices
[ 14.484446] Initializing cgroup subsys freezer
[ 14.484454] Initializing cgroup subsys net_cls
[ 14.484462] Initializing cgroup subsys blkio
[ 14.484481] Initializing cgroup subsys perf_event
[ 14.484571] CPU: Testing write buffer coherency: ok
[ 14.484848] Setting up static identity map for 0x2cdaa0 - 0x2cdadc
[ 14.485971] devtmpfs: initialized
[ 14.487847] print constraints: dummy
[ 14.488096] NET: Registered protocol family 16
[ 14.488766] Kirkwood: MV88F6281-A0, TCLK=200000000.
[ 14.488781] Feroceon L2: Enabling L2
[ 14.488817] Feroceon L2: Cache support initialised.
[ 14.491425] bio: create slab <bio-0> at 0
[ 14.491777] vgaarb: loaded
[ 14.492274] Switching to clocksource orion_clocksource
[ 14.506259] NET: Registered protocol family 2
[ 14.506480] IP route hash table entries: 2048 (order: 1, 8192 bytes)
[ 14.507097] TCP established hash table entries: 8192 (order: 4, 65536 bytes)
[ 14.507282] TCP bind hash table entries: 8192 (order: 3, 32768 bytes)
[ 14.507377] TCP: Hash tables configured (established 8192 bind 8192)
[ 14.507386] TCP reno registered
[ 14.507395] UDP hash table entries: 256 (order: 0, 4096 bytes)
[ 14.507422] UDP-Lite hash table entries: 256 (order: 0, 4096 bytes)
[ 14.507628] NET: Registered protocol family 1
[ 14.507815] Unpacking initramfs...
```

```

[ 15.113053] Freeing initrd memory: 7248K
[ 15.113067] NetWinder Floating Point Emulator V0.97 (double precision)
[ 15.113743] audit: initializing netlink socket (disabled)
[ 15.113762] type=2000 audit(0.710:1): initialized
[ 15.115205] VFS: Disk quotas dquot 6.5.2
[ 15.115280] Dquot-cache hash table entries: 1024 (order 0, 4096 bytes)
[ 15.115393] JFFS2 version 2.2. (NAND) (SUMMARY) © 2001-2006 Red Hat, Inc.
[ 15.115731] msgmni has been set to 497
[ 15.117269] alg: No test for stdrng (krng)
[ 15.117369] Block layer SCSI generic (bsg) driver version 0.4 loaded (major 253)
[ 15.117383] io scheduler noop registered
[ 15.117390] io scheduler deadline registered
[ 15.117436] io scheduler cfq registered (default)
[ 15.117517] mv_xor_shared mv_xor_shared.0: Marvell shared XOR driver
[ 15.117554] mv_xor_shared mv_xor_shared.1: Marvell shared XOR driver
[ 15.152343] mv_xor mv_xor.0: Marvell XOR: ( xor cpy )
[ 15.192339] mv_xor mv_xor.1: Marvell XOR: ( xor fill cpy )
[ 15.232339] mv_xor mv_xor.2: Marvell XOR: ( xor cpy )
[ 15.272338] mv_xor mv_xor.3: Marvell XOR: ( xor fill cpy )
[ 15.272693] Serial: 8250/16550 driver, 2 ports, IRQ sharing disabled
[ 15.293194] serial8250.0: ttyS0 at MMIO 0xf1012000 (irq = 33) is a 16550A
[ 15.748034] console [ttyS0] enabled
[ 15.752454] NAND device: Manufacturer ID: 0xad, Chip ID: 0xf1 (Hynix NAND 128MiB 3,3V 8-bit)
[ 15.760938] Scanning device for bad blocks
[ 15.846325] Creating 3 MTD partitions on "orion_nand":
[ 15.851498] 0x000000000000-0x000000100000 : "u-boot"
[ 15.857372] 0x000000100000-0x000000500000 : "uImage"
[ 15.863142] 0x000000500000-0x000000800000 : "root"
[ 15.869436] mousedev: PS/2 mouse device common for all mice
[ 16.882325] rtc-mv rtc-mv: internal RTC not ticking
[ 16.887300] i2c /dev entries driver
[ 16.890938] cpuidle: using governor ladder
[ 16.895186] cpuidle: using governor menu
[ 16.900117] TCP cubic registered
[ 16.903380] NET: Registered protocol family 17
[ 16.907853] Registering the dns_resolver key type
[ 16.913076] registered taskstats version 1
[ 16.917634] drivers/rtc/hctosys.c: unable to open rtc device (rtc0)
[ 16.923994] Initializing network drop monitor service
[ 16.929630] Freeing init memory: 140K
Loading, please wait...
[ 17.012879] udevd[50]: starting version 175
[ 17.078952] mv643xx_eth: MV-643xx 10/100/1000 ethernet driver version 1.4
[ 17.142755] mv643xx_eth smi: probed
[ 17.189510] mv643xx_eth_port mv643xx_eth_port.0: eth0: port 0 with MAC address 00:25:31:00:5c:62
[ 17.225464] mmc0: mvsdio driver initialized, lacking card detect (fall back to polling)
[ 17.236012] usbcore: registered new interface driver usbfs
[ 17.241606] usbcore: registered new interface driver hub
[ 17.289816] usbcore: registered new device driver usb
[ 17.317312] ehci_hcd: USB 2.0 'Enhanced' Host Controller (EHCI) Driver
[ 17.350470] orion-ehci orion-ehci.0: Marvell Orion EHCI
[ 17.360785] orion-ehci orion-ehci.0: new USB bus registered, assigned bus number 1
[ 17.392332] orion-ehci orion-ehci.0: irq 19, io mem 0xf1050000
[ 17.412322] orion-ehci orion-ehci.0: USB 2.0 started, EHCI 1.00
[ 17.419364] usb usb1: New USB device found, idVendor=1d6b, idProduct=0002
[ 17.426206] usb usb1: New USB device strings: Mfr=3, Product=2, SerialNumber=1
[ 17.433475] usb usb1: Product: Marvell Orion EHCI
[ 17.438200] usb usb1: Manufacturer: Linux 3.3.8 ehci_hcd
[ 17.443547] usb usb1: SerialNumber: orion-ehci.0
[ 17.451098] hub 1-0:1.0: USB hub found
[ 17.454902] hub 1-0:1.0: 1 port detected
Begin: Loading essential drivers ... modprobe: module unix not found in modules.dep
done.
Begin: Running /scripts/init-premount ... done.
Begin: Mounting root file system... Begin: Running /scripts/local-top ... done.
Begin: Waiting for root file system... [ 17.772330] usb 1-1: new high-speed USB device number 2 using orion-ehci
[ 17.923724] usb 1-1: New USB device found, idVendor=05e3, idProduct=0608
[ 17.930464] usb 1-1: New USB device strings: Mfr=0, Product=1, SerialNumber=0
[ 17.937643] usb 1-1: Product: USB2.0 Hub
[ 17.951532] hub 1-1:1.0: USB hub found
[ 17.955748] hub 1-1:1.0: 4 ports detected
[ 18.232630] usb 1-1.1: new high-speed USB device number 3 using orion-ehci
[ 18.343473] usb 1-1.1: New USB device found, idVendor=0d49, idProduct=7350
[ 18.350383] usb 1-1.1: New USB device strings: Mfr=1, Product=2, SerialNumber=3
[ 18.357738] usb 1-1.1: Product: OneTouch
[ 18.362308] usb 1-1.1: Manufacturer: Maxtor
[ 18.366775] usb 1-1.1: SerialNumber: 2HAP9KD2
[ 18.391341] SCSI subsystem initialized
[ 18.397800] usbcore: registered new interface driver uas
[ 18.407523] Initializing USB Mass Storage driver...
[ 18.412758] scsi0 : usb-storage 1-1:1.0
[ 18.418297] usbcore: registered new interface driver usb-storage
[ 18.424395] USB Mass Storage support registered.
[ 19.413317] scsi 0:0:0:0: Direct-Access Maxtor OneTouch 0125 PQ: 0 ANSI: 4
[ 19.436897] sd 0:0:0:0: [sda] 312581808 512-byte logical blocks: (160 GB/149 GiB)
[ 19.445377] sd 0:0:0:0: [sda] Write Protect is off
[ 19.451650] sd 0:0:0:0: [sda] No Caching mode page present
[ 19.457193] sd 0:0:0:0: [sda] Assuming drive cache: write through
[ 19.466994] sd 0:0:0:0: [sda] No Caching mode page present
[ 19.472527] sd 0:0:0:0: [sda] Assuming drive cache: write through
[ 19.790499] sda: sda1 sda2 sda3 sda4 < sda5 sda6 sda7 sda8 >
[ 19.801491] sd 0:0:0:0: [sda] No Caching mode page present
[ 19.807033] sd 0:0:0:0: [sda] Assuming drive cache: write through
[ 19.813179] sd 0:0:0:0: [sda] Attached SCSI disk
done.
Begin: Running /scripts/local-premount ... done.
[ 20.770012] EXT4-fs (sda3): mounted filesystem with ordered data mode. Opts: (null)
Begin: Running /scripts/local-bottom ... done.
done.
Begin: Running /scripts/init-bottom ... done.
INIT: version 2.88 booting
Using makefile-style concurrent boot in runlevel S.
Starting the hotplug events dispatcher: udevd.
[ 22.383157] udevd[208]: starting version 175
Synthesizing the initial hotplug events...done.
Waiting for /dev to be fully populated...done.
Activating swap...[ 24.415228] Adding 249852k swap on /dev/sda2. Priority:-1 extents:1 across:249852k
done.
[ 24.446009] EXT4-fs (sda3): re-mounted. Opts: (null)
Checking root file system...fsck from util-linux 2.20.1
e2fsck 1.42.2 (9-Apr-2012)
/dev/sda3: clean, 7169/249984 files, 73289/999936 blocks
done.
[ 25.328059] EXT4-fs (sda3): re-mounted. Opts: errors=remount-ro
Loading kernel modules...done.
Activating lvm and md swap...done.
Checking file systems...fsck from util-linux 2.20.1
e2fsck 1.42.2 (9-Apr-2012)
/dev/sda1: clean, 530/30976 files, 101291/123904 blocks
e2fsck 1.42.2 (9-Apr-2012)
/dev/sda8: clean, 84759/8749056 files, 9898200/34978816 blocks
e2fsck 1.42.2 (9-Apr-2012)
/dev/sda5: clean, 24/249984 files, 40711/999680 blocks
e2fsck 1.42.2 (9-Apr-2012)

```

```
/dev/sda6: clean, 25004/249984 files, 155149/999680 blocks
e2fsck 1.42.2 (9-Apr-2012)
/dev/sda7: clean, 3094/249984 files, 116923/999680 blocks
done.
Mounting local filesystems...mount: unknown filesystem type 'ext3'
[ 29.587055] EXT4-fs (sda8): mounted filesystem with ordered data mode. Opts: (null)
[ 29.708465] EXT4-fs (sda5): mounted filesystem with ordered data mode. Opts: (null)
[ 29.862976] EXT4-fs (sda6): mounted filesystem with ordered data mode. Opts: (null)
[ 29.988203] EXT4-fs (sda7): mounted filesystem with ordered data mode. Opts: (null)
failed.
Activating swapfile swap...done.
[....] Cleaning up temporary files.... ok
[....] Configuring network interfaces...Internet Systems Consortium DHCP Client 4.2.2
Copyright 2004-2011 Internet Systems Consortium.
All rights reserved.
For info, please visit https://www.isc.org/software/dhcp/

Listening on LPF/eth0/00:25:31:00:5c:62
Sending on LPF/eth0/00:25:31:00:5c:62
Sending on Socket/fallback
DHCPREQUEST on eth0 to 255.255.255.255 port 67
[ 33.416683] mv643xx_eth_port mv643xx_eth.port.0: eth0: Link up, 100 Mb/s, full duplex, flow control disabled
DHCPREQUEST on eth0 to 255.255.255.255 port 67
DHCNACK from 192.167.1.1
DHCPODISCOVER on eth0 to 255.255.255.255 port 67 interval 7
DHCPREQUEST on eth0 to 255.255.255.255 port 67
DHCPOFFER from 192.167.1.1
DHCPACK from 192.167.1.1
bound to 192.167.1.118 -- renewal in 40025 seconds.
done.
[....] Setting kernel variables ...done.
[....] Starting rpcbind daemon...rpcbind: cannot create socket for udp6
rpcbind: cannot create socket for tcp6
. ok
[....] Starting NFS common utilities: statd. ok
[....] Cleaning up temporary files.... ok
INIT: Entering runlevel: 2
[info] Using makefile-style concurrent boot in runlevel 2.
[....] Starting NFS common utilities: statd. ok
[....] Starting rpcbind daemon...[....] Already running.. ok
[....] Starting enhanced syslogd: rsyslogd. ok
[....] Starting deferred execution scheduler: atd. ok
[....] Starting periodic command scheduler: cron. ok
[....] Starting system message bus: dbus. ok
Starting nginx: nginx.
[....] Starting NTP server: ntpd. ok
[....] Starting Mail Transport Agent (MTA): sendmail. ok
[....] Starting OpenBSD Secure Shell server: sshd. ok

Debian GNU/Linux wheezy/sid proxy ttyS0

proxy login: root
Password:

root@proxy:~# uname -a
Linux proxy 3.3.8 #1 Mon Jun 11 18:08:30 CEST 2012 armv5tel GNU/Linux
```

davygravy

Re: Howto create an initrd image

June 12, 2012 05:21PM

Registered: 2 years ago
Posts: 484

Nice detective work.

Is that 3.3.8 kernel your own, or from Debian?

=====

- [My Weather Station: \(Pogoplug E02/Debianized 1-Wire Weather-Station/Cam\)](#)
- [Linux 3.3.2 for Kirkwood Debian package](#)
- [Newer U-Boot for Pogoplug E01/E02, Dockstar, GoFlex Net/Home](#)
- [Rescue V2.8.1 for Pogoplug, Dockstar, GoFlex Net/Home, Zyxel NSA320 & many others](#)
- [Kirkwood Downloads](#) (via my Dropbox public folder)
- [davy's Github Repo's](#) AFPDplug, SMBPlug, OWFSPlug, Cloudprint, Optware-DG, uBoot ...

WzL

Re: Howto create an initrd image

June 12, 2012 05:47PM

Registered: 2 years ago
Posts: 13

[uImage Linux 3.3.8 Kernel Pogoplug v02](#)
[uInitrd ramdisk 3.3.8 Kernel Pogoplug v02](#)

Using the [kernel config](#) provided by [davygravy](#) _0_ in combination with [3.3.8 Linux kernel source](#) from [kernel.org](#)

Edited 3 time(s). Last edit at 06/12/2012 06:02PM by WzL.

WzL

Re: Howto create an initrd image

June 12, 2012 05:53PM

Registered: 2 years ago
Posts: 13

davygravy Wrote:

> Nice detective work.

>

> Is that 3.3.8 kernel your own, or from Debian?

Fresh from kernel.org, compiled by my own! Nothing special though, just a [small patch](#) removing some compile glitches during compilation of some modules.

Need to say that without the help of this forum (especialy your .config of 3.3.2) and the u-boot irc channel i hadn't come this far this quick. Also it's a rough build, i tested very few funtions ...

WzL

Re: Howto create an initrd image

June 13, 2012 03:10PM

Registered: 2 years ago
Posts: 13

Just continued with the [stable 3.4.2 kernel](#).

Again:

```
make oldconfig && make menuconfig && make uImage && make modules && make modules_install
mkinitramfs -o linux-3.4.2 3.4.2
mkimage -A arm -O linux -T ramdisk -C gzip -a 0x00000000 -e 0x00000000 -n "PogoPlug Ramdisk" -d linux-3.4.2 uInitrd
```

Files:

[config](#)
[uInitrd](#)
[uImage](#)

```
U-Boot 2011.12-00447-gfca94c3-dirty (Mar 04 2012 - 21:39:45)
PogoPlug E02

SoC:   Kirkwood 88F6281_A0
DRAM:  256 MiB
WARNING: Caches not enabled
NAND:  128 MiB
In:     serial
Out:    serial
Err:    serial
Net:    egiga0
Hit any key to stop autoboot:  0
(R)start USB...
USB:   Register 10011 NbrPorts 1
USB EHCI 1.00
scanning bus for devices... 3 USB Device(s) found
scanning bus for storage devices... 1 Storage Device(s) found
Loading file "/uImage" from usb device 0:1 (usbda1)
2230704 bytes read
Loading file "/uInitrd" from usb device 0:1 (usbda1)
7400358 bytes read
## Booting kernel from Legacy Image at 00800000 ...
   Image Name:   Linux-3.4.2
   Image Type:   ARM Linux Kernel Image (uncompressed)
   Data Size:    2230640 Bytes = 2.1 MiB
   Load Address: 00000000
   Entry Point:  00000000
   Verifying Checksum ... OK
## Loading init Ramdisk from Legacy Image at 01100000 ...
   Image Name:   PogoPlug Ramdisk
   Image Type:   ARM Linux RAMDisk Image (gzip compressed)
   Data Size:    7400294 Bytes = 7.1 MiB
   Load Address: 00000000
   Entry Point:  00000000
   Verifying Checksum ... OK
   Loading Kernel Image ... OK
OK
Using machid 0x831 from environment

Starting kernel ...

Uncompressing Linux... done, booting the kernel.
[ 0.000000] Booting Linux on physical CPU 0
[ 0.000000] Initializing cgroup subsys cpuset
[ 0.000000] Initializing cgroup subsys cpu
[ 0.000000] Linux version 3.4.2 (root@proxy-test) (gcc version 4.6.3 (Debian 4.6.3-1) ) #1 Wed Jun 13 02:2
[ 0.000000] CPU: Feroceon 88F6281 [56251311] revision 1 (ARMv5TE), cr=00053977
[ 0.000000] CPU: VIVT data cache, VIVT instruction cache
[ 0.000000] Machine: Marvell SheevaPlug Reference Board
[ 0.000000] Memory policy: ECC disabled, Data cache writeback
[ 0.000000] Built 1 zonelists in Zone order, mobility grouping on. Total pages: 65024
[ 0.000000] Kernel command line: console=ttys0,115200 root=/dev/sda3
[ 0.000000] PID hash table entries: 1024 (order: 0, 4096 bytes)
[ 0.000000] Dentry cache hash table entries: 32768 (order: 5, 131072 bytes)
[ 0.000000] Inode-cache hash table entries: 16384 (order: 4, 65536 bytes)
[ 0.000000] allocated 524288 bytes of page_cgroup
[ 0.000000] please try 'cgroup.disable-memory' option if you don't want memory cgroups
[ 0.000000] Memory: 256MB = 256MB total
[ 0.000000] Memory: 247272k/247272k available, 14872k reserved, 0k highmem
[ 0.000000] Virtual kernel memory layout:
[ 0.000000] vector : 0xffff0000 - 0xffff1000 ( 4 kB)
[ 0.000000] fixmap : 0xffff0000 - 0xffffe000 ( 896 kB)
[ 0.000000] vmalloc : 0xd0000000 - 0xffff0000 ( 744 MB)
[ 0.000000] lowmem : 0xc0000000 - 0xd0000000 ( 256 MB)
[ 0.000000] modules : 0xbf000000 - 0xc0000000 ( 16 MB)
[ 0.000000] .text : 0xc0008000 - 0xc03f16c0 (4006 kB)
[ 0.000000] .init : 0xc03f2000 - 0xc0416000 ( 144 kB)
[ 0.000000] .data : 0xc0416000 - 0xc0456ca8 ( 260 kB)
[ 0.000000] .bss : 0xc0456ccc - 0xc04baba4 ( 400 kB)
[ 0.000000] NR_IRQS:114
[ 0.000000] gpiochip_add: registered GPIOs 0 to 31 on device: orion_gpio0
[ 0.000000] gpiochip_add: registered GPIOs 32 to 49 on device: orion_gpio1
[ 0.000000] sched_clock: 32 bits at 200MHz, resolution 5ns, wraps every 21474ms
[ 0.000000] Console: colour dummy device 80x30
[ 21.086532] Calibrating delay loop... 1191.11 BogoMIPS (lpj=5955584)
[ 21.176418] pid_max: default: 32768 minimum: 301
[ 21.176540] Security Framework initialized
[ 21.176615] Mount-cache hash table entries: 512
[ 21.177194] Initializing cgroup subsys cpuctt
[ 21.177210] Initializing cgroup subsys memory
[ 21.177239] Initializing cgroup subsys devices
[ 21.177251] Initializing cgroup subsys freezer
[ 21.177258] Initializing cgroup subsys net_cls
[ 21.177266] Initializing cgroup subsys blkio
[ 21.177288] Initializing cgroup subsys perf_event
[ 21.177377] CPU: Testing write buffer coherency: ok
[ 21.177656] Setting up static identity map for 0x2d6888 - 0x2d68c4
[ 21.178817] devtmpfs: initialized
[ 21.180520] dummy:
[ 21.180771] NET: Registered protocol family 16
[ 21.181485] Kirkwood: MV88F6281-A0, TCLK=200000000.
[ 21.181501] Feroceon L2: Enabling L2
[ 21.181536] Feroceon L2: Cache support initialised.
[ 21.184088] bio: create slab <bio-0> at 0
[ 21.184446] vgaarb: loaded
[ 21.184938] Switching to clocksource orion_clocksource
[ 21.198648] NET: Registered protocol family 2
[ 21.198869] IP route cache hash table entries: 2048 (order: 1, 8192 bytes)
[ 21.199289] TCP established hash table entries: 8192 (order: 4, 65536 bytes)
[ 21.199474] TCP bind hash table entries: 8192 (order: 3, 32768 bytes)
[ 21.199570] TCP: Hash tables configured (established 8192 bind 8192)
[ 21.199579] TCP: reno registered
[ 21.199590] UDP hash table entries: 256 (order: 0, 4096 bytes)
[ 21.199612] UDP-Lite hash table entries: 256 (order: 0, 4096 bytes)
[ 21.199814] NET: Registered protocol family 1
[ 21.199986] Unpacking initramfs...
```



```

[ 21.799704] Freeing initrd memory: 7224K
[ 21.799741] NetWinder Floating Point Emulator V0.97 (double precision)
[ 21.800390] audit: initializing netlink socket (disabled)
[ 21.800437] type=2000 audit(0.799:1): initialized
[ 21.801852] VFS: Disk quotas dquot_6.5.2
[ 21.801912] Dquot-cache hash table entries: 1024 (order 0, 4096 bytes)
[ 21.802031] jffs2: version 2.2. (NAND) (SUMMARY) © 2001-2006 Red Hat, Inc.
[ 21.802372] msgmni has been set to 497
[ 21.803865] alg: No test for stdrng (krng)
[ 21.803966] Block layer SCSI generic (bsg) driver version 0.4 loaded (major 253)
[ 21.803979] io scheduler noop registered
[ 21.803986] io scheduler deadline registered
[ 21.804031] io scheduler cfq registered (default)
[ 21.804119] mv_xor_shared mv_xor_shared.0: Marvell shared XOR driver
[ 21.804154] mv_xor_shared mv_xor_shared.1: Marvell shared XOR driver
[ 21.835000] mv_xor mv_xor.0: Marvell XOR: ( xor cpy )
[ 21.875004] mv_xor mv_xor.1: Marvell XOR: ( xor fill cpy )
[ 21.915004] mv_xor mv_xor.2: Marvell XOR: ( xor cpy )
[ 21.955004] mv_xor mv_xor.3: Marvell XOR: ( xor fill cpy )
[ 21.955312] Serial: 8250/16550 driver, 2 ports, IRQ sharing disabled
[ 21.975787] serial8250.0: ttyS0 at MMIO 0xf1012000 (irq = 33) is a 16550A
[ 22.429146] console [ttyS0] enabled
[ 22.433508] NAND device: Manufacturer ID: 0xad, Chip ID: 0xf1 (Hynix NAND 128MiB 3,3V 8-bit)
[ 22.442015] Scanning device for bad blocks
[ 22.521703] Creating 3 MTD partitions on "orion_nand":
[ 22.526877] 0x000000000000-0x000000100000 : "u-boot"
[ 22.532634] 0x000000100000-0x000000500000 : "uImage"
[ 22.538381] 0x000000500000-0x000000800000 : "root"
[ 22.544620] mousedev: PS/2 mouse device common for all mice
[ 23.554900] rtc-mv rtc-mv: internal RTC not ticking
[ 23.559975] i2c /dev entries driver
[ 23.563608] cpuidle: using governor ladder
[ 23.567867] cpuidle: using governor menu
[ 23.572440] TCP: cubic registered
[ 23.575795] NET: Registered protocol family 17
[ 23.580268] Registering the dns_resolver key type
[ 23.585475] registered taskstats version 1
[ 23.590105] drivers/rtc/hctosys.c: unable to open rtc device (rtc0)
[ 23.596425] ## of selftest(): No testcase data in device tree; not running tests
[ 23.603980] Initializing network drop monitor service
[ 23.609710] Freeing init memory: 144K
Loading, please wait...
[ 23.695574] udevd[49]: starting version 175
[ 23.768496] mv643xx_eth: MV-643xx 10/100/1000 ethernet driver version 1.4
[ 23.835038] mv643xx_eth smi: probed
[ 23.859338] usbcore: registered new interface driver usbfs
[ 23.864931] usbcore: registered new interface driver hub
[ 23.876591] mv643xx_eth_port mv643xx_eth.port.0: eth0: port 0 with MAC address 00:25:31:00:5c:62
[ 23.917037] mmc0: mvsdio driver initialized, lacking card detect (fall back to polling)
[ 23.937865] usbcore: registered new device driver usb
[ 23.944798] ehci_hcd: USB 2.0 'Enhanced' Host Controller (EHCI) Driver
[ 24.001794] orion-ehci orion-ehci.0: Marvell Orion EHCI
[ 24.025414] orion-ehci orion-ehci.0: new USB bus registered, assigned bus number 1
[ 24.055011] orion-ehci orion-ehci.0: irq 19, io mem 0xf1050000
[ 24.074973] orion-ehci orion-ehci.0: USB 2.0 started, EHCI 1.00
[ 24.080990] usb usb1: New USB device found, idVendor=1d6b, idProduct=0002
[ 24.087835] usb usb1: New USB device strings: Mfr=3, Product=2, SerialNumber=1
[ 24.095107] usb usb1: Product: Marvell Orion EHCI
[ 24.099828] usb usb1: Manufacturer: Linux 3.4.2 ehci_hcd
[ 24.105174] usb usb1: SerialNumber: orion-ehci.0
[ 24.110704] hub 1-0:1.0: USB hub found
[ 24.114482] hub 1-0:1.0: 1 port detected
Begin: Loading essential drivers ... modprobe: module unix not found in modules.dep
done.
Begin: Running /scripts/init-premount .... done.
Begin: Mounting root file system ... Begin: Running /scripts/local-top .... done.
Begin: Waiting for root file system ... [ 24.434994] usb 1-1: new high-speed USB device number 2 using orion
[ 24.586355] usb 1-1: New USB device found, idVendor=05e3, idProduct=0608
[ 24.593094] usb 1-1: New USB device strings: Mfr=0, Product=1, SerialNumber=0
[ 24.600275] usb 1-1: Product: USB2.0 Hub
[ 24.614041] hub 1-1:1.0: USB hub found
[ 24.618246] hub 1-1:1.0: 4 ports detected
[ 24.895259] usb 1-1.1: new high-speed USB device number 3 using orion-ehci
[ 25.006104] usb 1-1.1: New USB device found, idVendor=0d49, idProduct=7350
[ 25.013023] usb 1-1.1: New USB device strings: Mfr=1, Product=2, SerialNumber=3
[ 25.020379] usb 1-1.1: Product: OneTouch
[ 25.025044] usb 1-1.1: Manufacturer: Maxtor
[ 25.029414] usb 1-1.1: SerialNumber: 2HAP9K02
[ 25.053903] SCSI subsystem initialized
[ 25.060334] usbcore: registered new interface driver uas
[ 25.070015] Initializing USB Mass Storage driver...
[ 25.075247] scsi0 : usb-storage 1-1:1.0
[ 25.080777] usbcore: registered new interface driver usb-storage
[ 25.086869] USB Mass Storage support registered.
[ 26.075945] scsi 0:0:0:0: Direct-Access Maxtor OneTouch 0125 PQ: 0 ANSI: 4
[ 26.099399] sd 0:0:0:0: [sda] 312581808 512-byte logical blocks: (160 GB/149 GiB)
[ 26.108006] sd 0:0:0:0: [sda] Write Protect is off
[ 26.114274] sd 0:0:0:0: [sda] No Caching mode page present
[ 26.119816] sd 0:0:0:0: [sda] Assuming drive cache: write through
[ 26.129623] sd 0:0:0:0: [sda] No Caching mode page present
[ 26.135160] sd 0:0:0:0: [sda] Assuming drive cache: write through
[ 26.467129] sda: sda1 sda2 sda3 sda4 < sda5 sda6 sda7 sda8 >
[ 26.480876] sd 0:0:0:0: [sda] No Caching mode page present
[ 26.486411] sd 0:0:0:0: [sda] Assuming drive cache: write through
[ 26.492537] sd 0:0:0:0: [sda] Attached SCSI disk
done.
Begin: Running /scripts/local-premount ... done.
[ 27.279828] EXT4-fs (sda3): mounted filesystem with ordered data mode. Opts: (null)
Begin: Running /scripts/local-bottom ... done.
done.
Begin: Running /scripts/init-bottom .... done.
INIT: version 2.88 booting
Using makefile-style concurrent boot in runlevel S.
Starting the hotplug events dispatcher: udevd.
[ 29.226187] udevd[209]: starting version 175
Synthesizing the initial hotplug events...done.
Waiting for /dev to be fully populated...done.
Activating swap...[ 31.280234] Adding 249852k swap on /dev/sda2. Priority:-1 extents:1 across:249852k
done.
[ 31.306897] EXT4-fs (sda3): re-mounted. Opts: (null)
Checking root file system...fsck from util-linux 2.20.1
e2fsck 1.42.2 (9-Apr-2012)
/dev/sda3: clean, 7191/249984 files, 78169/999936 blocks
done.
[ 32.205066] EXT4-fs (sda3): re-mounted. Opts: errors=remount-ro
Loading kernel modules...done.
Activating lvm and md swap...done.
Checking file systems...fsck from util-linux 2.20.1
e2fsck 1.42.2 (9-Apr-2012)
/dev/sda1: clean, 532/30976 files, 110737/123904 blocks
e2fsck 1.42.2 (9-Apr-2012)
/dev/sda8: clean, 84759/8749056 files, 9898200/34978816 blocks
e2fsck 1.42.2 (9-Apr-2012)
/dev/sda5: clean, 24/249984 files, 40711/999680 blocks

```

```
e2fsck 1.42.2 (9-Apr-2012)
/dev/sda6: clean, 25028/249984 files, 154997/999680 blocks
e2fsck 1.42.2 (9-Apr-2012)
/dev/sda7: clean, 3147/249984 files, 116863/999680 blocks
done.
Mounting local filesystems...mount: unknown filesystem type 'ext3'
[ 36.541189] EXT4-fs (sda8): mounted filesystem with ordered data mode. Opts: (null)
[ 36.676353] EXT4-fs (sda5): mounted filesystem with ordered data mode. Opts: (null)
[ 36.816769] EXT4-fs (sda6): mounted filesystem with ordered data mode. Opts: (null)
[ 36.964455] EXT4-fs (sda7): mounted filesystem with ordered data mode. Opts: (null)
failed.
Activating swapfile swap...done.
[....] Cleaning up temporary files.... ok
[....] Configuring network interfaces...done.
[....] Setting kernel variables ...done.
[....] Starting rpcbind daemon...rpcbind: cannot create socket for udp6
rpcbind: cannot create socket for tcp6
. ok
[....] Starting NFS common utilities: statd. ok
[....] Cleaning up temporary files.... ok
INIT: Entering runlevel: 2
[info] Using makefile-style concurrent boot in runlevel 2.
[....] Starting NFS common utilities: statd. ok
[....] Starting rpcbind daemon...[....] Already running.. ok
[ 40.602419] mv643xx_eth_port mv643xx_eth_port.0: eth0: link up, 100 Mb/s, full duplex, flow control disab
[....] Starting enhanced syslogd: rsyslogd. ok
[....] Starting deferred execution scheduler: atd. ok
[....] Starting periodic command scheduler: cron. ok
[....] Starting system message bus: dbus. ok
Starting nginx: nginx.
[....] Starting NTP server: ntpd. ok
[....] Starting Mail Transport Agent (MTA): sendmailmake: Warning: File 'Makefile' has modification time 1.3e
make: warning: Clock skew detected. Your build may be incomplete.
. ok
[....] Starting OpenBSD Secure Shell server: sshd. ok

Debian GNU/Linux wheezy/sid proxy tty50

proxy login: root
Password:
Last login: Wed Jun 13 20:29:12 CEST 2012 on tty50
Linux proxy 3.4.2 #1 Wed Jun 13 02:11:05 CEST 2012 armv5tel

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
root@proxy:~# uname -a
Linux proxy 3.4.2 #1 Wed Jun 13 02:11:05 CEST 2012 armv5tel GNU/Linux
```

Again rough build and no testing applied ...

WzL

Re: Howto create an initrd image

June 13, 2012 05:14PM

Registered: 2 years ago

Posts: 13

Just continued with the 3.5.0 rc2 kernel.

config

```
U-Boot 2011.12-00447-gfca94c3-dirty (Mar 04 2012 - 21:39:45)
Pogoplug E02

SoC: Kirkwood 88F6281_A0
DRAM: 256 MiB
WARNING: Caches not enabled
NAND: 128 MiB
In: serial
Out: serial
Err: serial
Net: egiga0
Hit any key to stop autoboot: 0
(Re)start USB...
USB: Register 10011 NbrPorts 1
USB EHCI 1.00
Scanning bus for devices... 3 USB Device(s) found
Scanning bus for storage devices... 1 Storage Device(s) found
Loading file "/uImage" from usb device 0:1 (usb0a1)
2300920 bytes read
Loading file "/uInitrd" from usb device 0:1 (usb0a1)
7400358 bytes read
## Booting kernel from Legacy Image at 00800000 ...
Image Name: Linux-3.5.0-rc2
Image Type: ARM Linux Kernel Image (uncompressed)
Data Size: 2300856 Bytes = 2.2 MiB
Load Address: 00000000
Entry Point: 00000000
Verifying Checksum ... OK
## Loading init Ramdisk from Legacy Image at 01100000 ...
Image Name: Pogoplug Ramdisk
Image Type: ARM Linux RAMDisk Image (gzip compressed)
Data Size: 7400294 Bytes = 7.1 MiB
Load Address: 00000000
Entry Point: 00000000
Verifying Checksum ... OK
Loading Kernel Image ... OK
OK
Using machid 0x831 from environment

Starting kernel ...

Uncompressing Linux... done, booting the kernel.
```

and there it stalls, as expected.

Edited 2 time(s). Last edit at 06/13/2012 05:33PM by WzL.

rayvt

Re: Howto create an initrd image

January 06, 2013 07:18PM

Registered: 1 year ago

Posts: 1

I've been fighting with doing cross-compile on my Debain desktop system this all day. Everything goes ok -- and it's a lot faster than building the kernel on the pogoplug -- but it just won't boot.

I discovered that mkinitramps pulls binaries and libraries from the *host* system, even though it (correctly) pulls modules from the cross-compiled target. Beats me how anybody is able to create a uinitrd on their 386 system, like they seem to. Maybe there's an extra step that I'm just not seeing?

Anyway ... I going to see if I can hack up a copy of mkinitramfs that will do the right thing. If that fails, my fallback position is to build on the desktop and then copy the binaries to the **pogoplug** and do the **mkinitramfs** on it.

Eddie

Re: Howto create an initrd image

February 09, 2013 03:12PM

rayvt Wrote:

```
-----
> I've been fighting with doing cross-compile on my
> Debain desktop system this all day. Everything
> goes ok -- and it's a lot faster than building the
> kernel on the pogoplug -- but it just won't boot.
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> of mkinitramfs that will do the right thing. If
> that fails, my fallback position is to build on
> the desktop and then copy the binaries to the
> pogoplug and do the mkinitramfs on it.
```

Any luck??