# TODO

# 添加开机log帮助分析耗时

## 配置kernel/init/Kconfig

内核配置日志级别，在PRINTK之下添加配置项

config PRINTK  
 default y  
 bool "Enable support for printk" if EXPERT  
 select IRQ\_WORK

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| #ka | | | | | | | | | | | |
| config PRINTK\_ENABLE\_OUTPUT | | | | | |  |  |  |  |  |  |
| default n | |  |  |  |  |  |  |  |  |  |  |
| bool "Open or close kernel log to uart" | | | | | | | | | | | |
| depends on PRINTK | | | | |  |  |  |  |  |  |  |
| help |  |  |  |  |  |  |  |  |  |  |  |
| This option control normal printk output. | | | | | | | | | | | |
| # | | | | | | | | | | |  |

## 打印级别kernel/printk/printk.c

/use PRINTK\_ENABLE\_OUTPUT to control printk output start

int console\_printk[4] = {

#ifdef CONFIG\_PRINTK\_ENABLE\_OUTPUT

CONSOLE\_LOGLEVEL\_DEFAULT,

#else

CONSOLE\_LOGLEVEL\_SILENT, /\* console\_loglevel \*/

#endif

MESSAGE\_LOGLEVEL\_DEFAULT, /\* default\_message\_loglevel \*/

CONSOLE\_LOGLEVEL\_MIN, /\* minimum\_console\_loglevel \*/

CONSOLE\_LOGLEVEL\_DEFAULT, /\* default\_console\_loglevel \*/

};

//use PRINTK\_ENABLE\_OUTPUT to control printk output end

# HZ提升

arch\arm64\configs

arch/arm64/configs/kp001\_coredump\_defconfig

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # CONFIG\_HZ\_100 is not set | | | |  |
| # CONFIG\_HZ\_250 is not set | | | |  |
| **# CONFIG\_HZ\_300 is not set** | | | | |
| **CONFIG\_HZ\_1000=y** | |  |  |  |
| **CONFIG\_HZ=1000** |  |  |  |  |

kernel / arch/arm64/configs/XX\_defconfig

|  |  |  |  |
| --- | --- | --- | --- |
| # CONFIG\_HZ\_100 is not set | | | |
| # CONFIG\_HZ\_250 is not set | | | |
| **# CONFIG\_HZ\_300 is not set** | | | |
| **CONFIG\_HZ\_1000=y** | |  |  |
| **CONFIG\_HZ=1000** |  |  |  |

# 驱动异步加载

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **修改文件** |  |  |  |  |  |  |  |  |  |  |  |
| drivers/i2c/busses/i2c-rk3x.c | | | | | | |  |  |  |  |  |
| drivers/usb/host/ohci-platform.c | | | | | | | |  |  |  |  |
| arch/arm64/configs/rm500\_coredump\_defconfig | | | | | | | | | | |  |
| arch/arm64/configs/rm500\_defconfig | | | | | | | |  |  |  |  |
| drivers/usb/host/Kconfig | | | | | |  |  |  |  |  |  |
| drivers/usb/host/ehci-platform.c | | | | | | | |  |  |  |  |
| drivers/i2c/busses/Kconfig | | | | | |  |  |  |  |  |  |
| net/rfkill/Kconfig | | | |  |  |  |  |  |  |  |  |
| drivers/mmc/host/Kconfig | | | | | |  |  |  |  |  |  |

dji\_rk3399/rk/kernel / arch/arm64/configs/kp001\_coredump\_defconfig

**2.dji\_rk3399/rk/kernel / arch/arm64/configs/** kp001**\_defconfig**

定义开关

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **#ohci load async** | | | | | |  |  |  |  |  |  |
| **CONFIG\_PROBE\_OHCI\_ASYNC=y** | | | | | | | | |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **#load ehci async** | | | | | |  |  |  |  |  |  |
| **CONFIG\_PROBE\_EHCI\_ASYNC=y** | | | | | | | | |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **#I2C\_RK3X load async** | | | | | | |  |  |  |  |  |
| **#CONFIG\_PROBE\_I2C\_RK3X\_ASYNC=y** | | | | | | | | | | |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **#load rfkill\_bt async** | | | | | | | |  |  |  |  |
| **CONFIG\_PROBE\_RFKILL\_BT\_ASYNC=y** | | | | | | | | | | |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **CONFIG\_PROBE\_MMC\_DW\_ROCKCHIP\_ASYNC=y** | | | | | | | | | | | |

**3.dji\_rk3399/rk/kernel / drivers/usb/host/Kconfig**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **#kakazhang 2019-01-23 add load async config start** | | | | | | | | | | | | | | | | |  |  |
| **config PROBE\_OHCI\_ASYNC** | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |
| **bool "probe async choice"** | | | | | | | | | | |  |  |  |  |  |  |  |  |
| **---help---** | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Say 'Y' to enable load ohci-platform in async mode** | | | | | | | | | | | | | | | | | | |
|  | **unsure,say N.** | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
| **#kakazhang 2019-01-23 add load async config end** | | | | | | | | | | | | | | | |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **#kakazhang 2019-01-23 add ehci async config start** | | | | | | | | | | | | | | | | |  |  |
| **config PROBE\_EHCI\_ASYNC** | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |
| **bool "probe async choice"** | | | | | | | | | | |  |  |  |  |  |  |  |  |
| **---help---** | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Say 'Y' to enable load ohci-platform in async mode** | | | | | | | | | | | | | | | | | | |
|  | **unsure,say N.** | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
| **#kakazhang 2019-01-23 add ehci async config end** | | | | | | | | | | | | | | | |  |  |  |

## 4./kernel / drivers/i2c/busses/Kconfig

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **config PROBE\_I2C\_RK3X\_ASYNC** | | | | |  |  |  |  |  |  |
| **bool "i2c\_rk3x async load"** | | | | | | |  |  |  |  |
| **depends on I2C\_RK3X** | | | |  |  |  |  |  |  |  |
| **---help---** |  |  |  |  |  |  |  |  |  |  |
| **Say 'Y' to enable load I2c\_RK3X in async mode** | | | | | | | | | | |
| **unsure say N.** | | |  |  |  |  |  |  |  |  |

## 5.kernel / drivers/mmc/host/Kconfig

Df

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **config PROBE\_MMC\_DW\_ROCKCHIP\_ASYNC** | | | | | | | | | | |  |  |  |
| **bool "load mmc\_dw asynchronously"** | | | | | | | | | | | | |  |
|  | **help** |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **If mmc\_dw loaded in asynchronous,say Y,** | | | | | | | | | | | | |
|  | **unsure, say N.** | | | | |  |  |  |  |  |  |  |  |

## 6.dji\_rk3399/rk/kernel / net/rfkill/Kconfig

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **config PROBE\_RFKILL\_BT\_ASYNC** | | | | | | | | |  |  |  |  |  |  |  |  |  |
|  | **bool "load rfkill-bt asynchronously"** | | | | | | | | | | | |  |  |  |  |  |
|  | **help** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **If you want to load rfkill-bt in asynchronous way,say Y** | | | | | | | | | | | | | | | | |
|  | **unsure say N.** | | | | |  |  |  |  |  |  |  |  |  |  |  |  |

## 代码逻辑

**7.dji\_rk3399/rk/kernel / drivers/i2c/busses/i2c-rk3x.c**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| static struct platform\_driver rk3x\_i2c\_driver = { | | | | | | | | | | | | | | |
|  | .probe = rk3x\_i2c\_probe, | | | | | | | |  |  |  |  |  |  |
|  | .remove = rk3x\_i2c\_remove, | | | | | | | |  |  |  |  |  |  |
|  | .driver = { | | | |  |  |  |  |  |  |  |  |  |  |
|  |  | .name = "rk3x-i2c", | | | | | |  |  |  |  |  |  |  |
|  |  | .of\_match\_table = rk3x\_i2c\_match, | | | | | | | | | |  |  |  |
|  |  | .pm = &rk3x\_i2c\_pm\_ops, | | | | | | |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **#ifdef CONFIG\_PROBE\_I2C\_RK3X\_ASYNC** | | | | | | | | | | | |  |  |  |
|  |  | **.probe\_type = PROBE\_PREFER\_ASYNCHRONOUS,** | | | | | | | | | | | | |
| **#endif** | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | }, |  |  |  |  |  |  |  |  |  |  |  |  |  |
| }; |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| module\_platform\_driver(rk3x\_i2c\_driver); | | | | | | | | | | | |  |  |  |

**8.dji\_rk3399/rk/kernel / drivers/usb/host/ohci-platform.c**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| static struct platform\_driver ohci\_platform\_driver = { | | | | | | | | | | | | | | |
|  | .id\_table | = ohci\_platform\_table, | | | | | | |  |  |  |  |  |  |
|  | .probe | | = ohci\_platform\_probe, | | | | | | |  |  |  |  |  |
|  | .remove | | = ohci\_platform\_remove, | | | | | | |  |  |  |  |  |
|  | .shutdown | = usb\_hcd\_platform\_shutdown, | | | | | | | | |  |  |  |  |
|  | .driver | | = { | |  |  |  |  |  |  |  |  |  |  |
| **#ifdef CONFIG\_PROBE\_OHCI\_ASYNC** | | | | | | | | | | |  |  |  |  |
|  |  | **.probe\_type = PROBE\_PREFER\_ASYNCHRONOUS,** | | | | | | | | | | | | |
| **#endif** | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | .name | = "ohci-platform", | | | | | |  |  |  |  |  |  |
|  |  | .pm | = &ohci\_platform\_pm\_ops, | | | | | | | |  |  |  |  |
|  |  | .of\_match\_table = ohci\_platform\_ids, | | | | | | | | | | |  |  |
|  | } |  |  |  |  |  |  |  |  |  |  |  |  |  |
| }; |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

# 属性系统优化

原生处理时通过property\_set来将从文件中读取到的persist属性存入内存中。但是property\_set在最后会判断，如果是persist，再写一遍文件。如果此时io较慢，导致处理流程变慢。。

优化后：

加载persist时，不再写入文件。

persistent\_properties\_loaded

充分利用起来吧

# App异步扫描

其实在android8已经优化过了，*// Wait for all packages to be prepared*

*C:\k\android-8.0.0\_r1\frameworks\base\services\java\com\android\server\SystemServer.java*

Watchdog.*getInstance*().start();  
*traceEnd*();  
  
*// Wait for all packages to be prepared***mPackageManagerService**.waitForAppDataPrepared();

将最耗时的vendor文件最先扫描，防止大app在最后扫描的时候单独占用时间（其他扫描线程都完成）

# REF