RDK exclusive command usage

1. hrut_boardid

hrut_boardid command is used to get the number of the current development board (different development boards have different numbers).

> ⚠ boardid will affect the initialization of the hardware at startup, please set it with caution.

- ### Syntax

```
hrut_boardid -h
Usage:
        hrut_boardid: prints current boardid
        -h: Print this message
```

2. hrut_ps

hrut_ps command prints process status information including process number, parent process number, priority, memory, virtual memory, etc. which are not supported by busybox's ps command.

- ### Syntax

```
hrut_ps
```

- ### Supported information

- **pid**: Process ID. Each process has a unique identification number in the operating system, called the process ID (pid). It is used to uniquely identify and identify a process in the system.
- **ppid**: Parent process ID. It indicates the parent process that created the process.
- state

  : Running state.

- `I`: Idle.
- `R`: Running.
- `S`: Sleeping.
- `D`: Disk Sleeping.
- `T`: Stopped.
- `X`: Dead.
- `Z`: Zombie.

- `t`: Tracing stop.
- `P`: Parked.
- **prio**: Priority. Indicates the scheduling priority of the process, usually a numerical value. A higher value indicates a higher priority, and the process may be more likely to obtain CPU time slices.
- **nice**: Scheduling priority. Indicates the scheduling priority of the process, usually an integer value. A lower nice value indicates a higher priority, allowing the process to obtain CPU time more frequently.
- **rt_prio**: Real-time priority. Indicates the priority of the real-time process, and a lower value indicates a higher real-time priority.
- **policy**: Scheduling policy. Indicates the scheduling policy of the process, usually a scheduling algorithm, such as first-come, first-served (FIFO), round-robin, etc.
- **vsize**: Virtual memory size. Indicates the virtual memory size of the process, that is, the size of the virtual address space that the process can access.
- **rss**: Physical memory usage. Indicates the physical memory size currently occupied by the process, that is, the physical RAM size actually allocated to the process.
- **comm**: Command name. Contains the command name of the process or the name of the executable file, used to identify the type or purpose of the process.

3. rdk-miniboot-update

rdk-miniboot-update command is used to update the minimal boot image (miniboot) of the RDK hardware.

Syntax

```
sudo rdk-miniboot-update [options]... [FILE]
```

Option Description

Options are optional and not required. If run without any option parameters, `rdk-miniboot-update` will use the latest version of the `miniboot` image to complete the upgrade.

- `-f`: Install the specified file instead of installing the latest applicable update.
- `-h`: Display help text and exit.
- `-l`: Return the full path to the latest available `miniboot` image according to the FIRMWARE_RELEASE_STATUS and FIRMWARE_IMAGE_DIR settings. You can see what image file is used for the update without option parameters.
- `-s`: Do not display progress messages.

Common commands

Update the `miniboot` image to the latest version

```
sudo rdk-miniboot-update
```

Update to use the specified `miniboot` image

```
sudo rdk-miniboot-update -f /userdata/miniboot.img
```

Check which image file will be used for update without option parameters

```
sunrise@ubuntu:~$ rdk-miniboot-update -l
/lib/firmware/rdk/miniboot/default/disk_nand_minimum_boot_2GB_3V3_20230413.img
```

4. rdkos_info

rdkos_info command is used to collect the software and hardware versions, driver loading list, RDK software package installation list and the latest system log of the `RDK` system at one time, so that users can quickly obtain the current system status information.

- ## Syntax

```
sudo rdkos_info [options]
```

- ## Option Description

All options are optional, not required. If run without any option parameters, `rdkos_info` will install the simple mode output information by default.

- `-b`: Basic output mode, no system logs will be collected.
- `-s`: Simple output mode (default), output 30 lines of the latest system log.
- `-d`: Detailed output mode, output 300 lines of the latest system log.
- `-v`: Display version information.
- `-h`: Display help information.

- ## Common commands

Default usage

```
sudo rdkos_info
```

Part of the output is as follows:

```
================ RDK System Information Collection ================

[Hardware Model]:
        D-Robotics RDK X5 V1.0 (Board Id = 302)

bash: hrut_somstatus: No such file or directory
[CPU And BPU Status]:


[Total Memory]:         3.0Gi
[Used Memory]:          596Mi
[Free Memory]:          1.4Gi
[ION Memory Size]:      128MB
[ION Reserved Memory Size]:     320MB
[ION Carveout Memory Size]:     320MB


[RDK OS Version]:
        3.0.0
```

```
[RDK Kernel Version]:
        Linux ubuntu 6.1.83 #6 SMP PREEMPT Wed Sep 18 11:44:41 CST 2024 aarch64
aarch64 aarch64 GNU/Linux

[RDK Miniboot Version]:
        U-Boot 2022.10-gc224213d-dirty (Sep 06 2024 - 17:17:44 +0800)
```