How to Change i.MX8MM evk Linux Debug UART

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Debug UART on i.MX8MM EVK board

Two debug UARTs on i.MX8MM EVK

UART2 --- A53
UART4 --- M4
Switch Debug UART on i.MX8MM EVK board

1. You may need to switch UART4 (default for M4) for A53 side to use.
2. Switch i.MX8MM debug port is not simple like i.MX6. Just change the bootargs.
3. The changes include atf (Key changes), u-boot, Linux and systemd.
Switch Debug UART on i.MX8MM EVK board (Cont.)

You may face the Linux kernel crash. When you modify the code and try to use the UART4 as A53 debug uart.
Switch Debug UART on i.MX8MM EVK board(Cont.)

The cash is because the RDC configuration in default BSP assign the UART4 to the M4 domain 1. Not the domain 0 for A53.

imx-atf/plat/imx/imx8m/imx8mm/imx8mm_bl31_setup.c

static const struct imx_rdc_cfg rdc[] = {
    /* Master domain assignment */
    RDC_MDA(RDC_MDA_M4, DID1),
    /* peripherals domain permission */
    RDC_PDAP(RDC_PDAP_UART4, D1R | D1W),
    RDC_PDAP(RDC_PDAP_UART2, D0R | D0W),
    /* memory region */
    /* Sentinel */
    {0},
};

Assgin UART4 to domain 0 as UART2 does

static const struct imx_rdc_cfg rdc[] = {
    /* Master domain assignment */
    RDC_MDA(RDC_MDA_M4, DID1),
    /* peripherals domain permission */
    RDC_PDAP(RDC_PDAP_UART4, D0R | D0W),
    RDC_PDAP(RDC_PDAP_UART2, D0R | D0W),
    /* memory region */
    /* Sentinel */
    {0},
};
Test UART4(ttymxc3)

The ttymxc3 is debug uart4, so it has kernel debug output. But ttymxc1 is not debug uart anymore, it just for user login.
Disable UART2(ttymxc1) for application to use

systemctl disable serial-getty@ttymxc1
Miscellaneous

If you need to use optee, you may need to change the optee uart.

 ifndef ($(filter $(PLATFORM_FLAVOR),mx8mmevk))
 CFG_DDR_SIZE ?= 0x80000000
 #CFG_UART_BASE ?= UART2_BASE
 CFG_UART_BASE ?= UART4_BASE
 endif