

Petalinux Auto Login / Autorun

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<Pmod CAN>

-PeatLinux Tools Documentation Reference Guide UG1144(v2019.1) 참조

[구현 기능]

- Zybo z7 10 PetaLinux에서 Auto Login / Autorun 기능을 구현함.

[준비물]

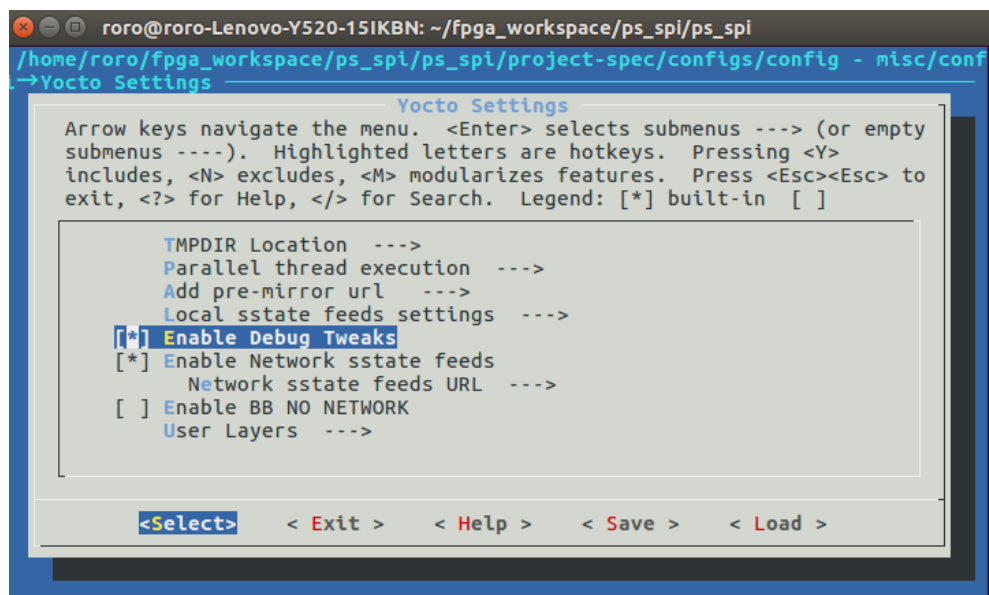
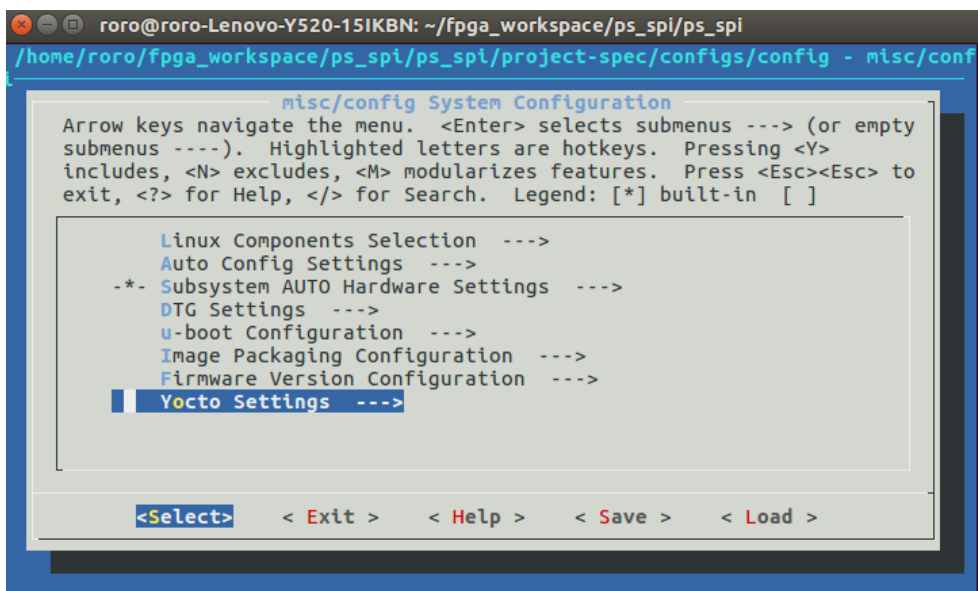
- Zybo z7 10
- Pmod CAN

[Petalinux Auto Login]

1) petalinux-config 시 Yocto Setting → Enable Debug Tweaks 활성화

- 명령어 : petalinux-config - --get-hw-description=<.hdf 나 .sda 파일이 있는 디렉터리>

```
roro@roro-Lenovo-Y520-15IKBN: ~/fpga_workspace/ps_spi_i2c/ps_spi_i2c$ petalinux-config --get-hw-description=/home/roro/fpga_workspace/ps_spi_i2c/ps_spi_i2c.sdk
```



2) 동작 확인

```
Starting syslogd/klogd: done
Starting tcf-agent: OK

/bin/autologin: line 1: -e: command not found

[[24;80Rroot@ps-spi-i2c:~#
```

[Petalinux Autorun]

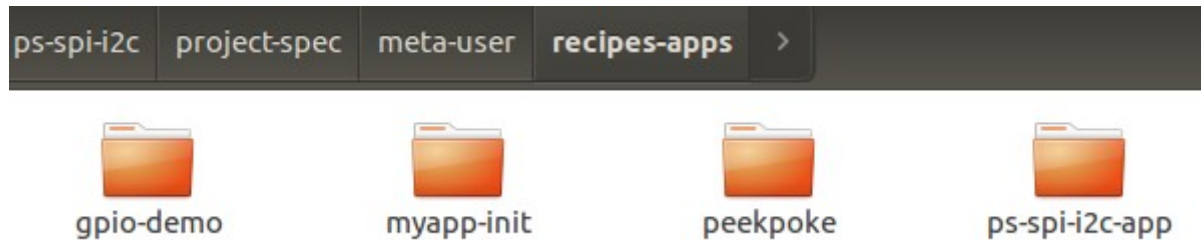
- 시스템 부트 시 실행되는 shell script 작성

1) install 형식의 app 생성

```
cd <plnx-proj-proot>/petalinux-create -t apps --template install -n  
myapp-init --enable
```

```
roro@roro-Lenovo-Y520-15IKBN:~/fpga_workspace/ps_spi_i2c/ps-spi-i2c$ petalinux-c  
reate -t apps --template install -n myapp-init --enable
```

- <petalinux project 디렉터리>/project-spec/meta-user/recipes-apps 디렉터리에 myapp-init 폴더가 생성된 것을 확인



2) bb 파일 수정

- project-spec/meta-user/recipes-apps/myapp-init/myappinit.bb 파일 수정
- do_install() 함수에서 myapp-init을 init.d에 등록함.

```
#  
# This file is the myapp-init recipe.  
#  
SUMMARY = "Simple myapp-init application"  
SECTION = "PETALINUX/apps"  
LICENSE = "MIT"  
LIC_FILES_CHKSUM =  
"file://${COMMON_LICENSE_DIR}/MIT;md5=0835ade698e0bcf8506ecda2f7b4f302"  
  
SRC_URI = "file://myapp-init \  
"  
S = "${WORKDIR}"  
  
FILESEXTRAPATHS_prepend := "${THISDIR}/files:"  
  
inherit update-rc.d  
  
INITSCRIPT_NAME = "myapp-init"  
INITSCRIPT_PARAMS = "start 99 S ."  
  
do_install() {  
    install -d ${D}${sysconfdir}/init.d  
    install -m 0755 ${S}/myapp-init ${D}${sysconfdir}/init.d/myapp-  
init  
}  
FILES_${PN} += "${sysconfdir}/*"
```

3) shell script 작성

- project-spec/meta-user/recipes-apps/ myapp-init/files/myapp-init 수정
- DAEMON 변수로 자동으로 실행시킬 프로그램의 파일을 설정함.
- start() 함수 실행 시 “Starting myapp”이 출력
- stop() 함수 실행 시 “Stoping myapp”출력

```
3 DAEMON=/usr/bin/ps-spi-i2c-app

#!/bin/sh
DAEMON=/usr/bin/myapp
start ()
{
    echo " Starting myapp"
    start-stop-daemon -S -o --background -x $DAEMON
}
stop ()
{
    echo " Stoping myapp"
    start-stop-daemon -K -x $DAEMON
}
restart()
{
    stop
    start
}
[ -e $DAEMON ] || exit 1

case "$1" in
    start)    start: ;;
    stop)     stop: ;;
    restart)  restart: ;;
    *)
        echo "Usage: $0 {start|stop|restart}"
        exit 1
    esac
exit $?

```

4) petalinux-build

```
roro@roro-Lenovo-Y520-15IKBN:~/fpga_workspace/ps_spi_i2c/ps-spi-i2c$ petalinux-build
```

5) 동작 확인

- 부팅 시 “Starting myapp” 출력 확인

```
Starting internet superserver: inetd.  
  Starting myapp  
INIT: Entering runlevel: 5  
Configuring network interfaces... IPv6: ADDRCONF(NETDEV_UP): eth0: link is not ready  
udhcpd (v1.24.1) started  
Sending discover...  
Sending discover...  
Sending discover...  
← please, forking to background  
done.  
Starting Dropbear SSH server: dropbear.  
hwclock: can't open '/dev/misc/rtc': No such file or directory  
Starting syslogd/klogd: done  
Starting tcf-agent: OK  
  
/bin/autologin: line 1: -e: command not found  
  
[[24;80Rroot@ps-spi-i2c:~#
```

- ps 명령어로 실행되는 프로세스(ps-spi-i2c) 확인

```
 697 root      0:00 [kworker/0:1H]  
 726 root      0:00 /sbin/udevd -d  
1025 root      0:00 /usr/sbin/inetd  
1029 root      0:39 /usr/bin/ps-spi-i2c-app  
1052 root      0:00 udhcpd -R -b -p /var/run/udhcpd.eth0.pid -i eth0  
1058 root      0:00 /usr/sbin/dropbear -r /etc/dropbear/dropbear_rsa_host_key  
1067 root      0:00 /sbin/syslogd -n -O /var/log/messages  
1070 root      0:00 /sbin/klogd -n  
1080 root      0:00 /usr/sbin/tcf-agent -d -L- -l0  
1085 root      0:00 {start_getty} /bin/sh /bin/start_getty 115200 ttyPS0  
1086 root      0:00 /sbin/getty 38400 tty1  
1087 root      0:00 -sh  
1096 root      0:00 ps  
root@ps-spi-i2c:~#
```