**Yocto POC investigation document**

**Introduction**

This POC describes the development of test application on yocto build system on CentOS 8.4 VM and deploying the same on other CentOS/RHEL 8.4 VMs.

**Prerequisites**

1. Oracle Virtual Box
2. CentOS 8.4 ISO Image
3. Install all base packages as mentioned in below document
4. Download Yocto with version containing glibc etc packages same as CentOS 8.

Ex.: Yocto 2.6.4 works on CentOS 8.4

**Yocto Setup Steps**

1. Download Yocto 2.6.4 zip from link <https://git.yoctoproject.org/cgit/cgit.cgi/poky/refs/tags>
2. To create an image of extension tar.bz2, modify below files

IMAGE\_FSTYPES ?= "wic tar.bz2" in /poky/meta/conf/machine/include/x86-base.inc

IMAGE\_FSTYPES += "tar.bz2 wic wic.bmap" in /meta-yocto-bsp/conf/machine/include/genericx86-common.inc

1. Create meta layer for hello world application and create a hello recipe as attached below.



1. Enable machine type to generic-x86-64 in /build/conf/local.conf

MACHINE ?= "genericx86-64" and also add IMAGE\_INSTALL\_append = hello

1. Then run source oe-init-build-env in poky folder.
2. Run bitbake core-image-minimal. This creates a core-image-minimal\_genericx86\_64\_”version”.tar.bz2 in /build/tmp/deploy/images/ path.
3. Extract the tar file and Hello will be created in /usr/bin/.

Deploying the helloworld application:

1. Copy hello binary from yocto tar image created to centOS 8.4 or RHEL 8.4 VM.
2. Check ld version in deployment VM by giving below command

Ls –la | grep “ld-\*”

1. The ld version in deployment environment should match with that in development environment.
2. Create a softlink for lib64/ld-linux-x86-64.so.2 in /lib/ with below link.

Sudo ln –s /lib64/ld-linux-x86-64.so.2 /lib/ld-linux-x86-64.so.2

1. Check permissions of he ;p\./ kllo if it has execute permissions. If not, give below command

Chmod 755 hello

1. Then run the helloworld with command and check the output : ./hello