



OVS

Open vSwitch

December 2020

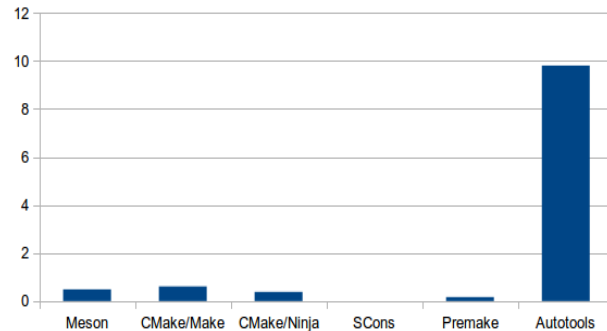
**DPDK Meson build for OVS**

Sunil Pai G  
Intel

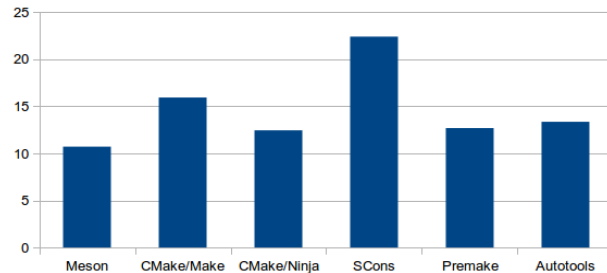
# Make to Meson transition in DPDK

- DPDK17.11 – Meson introduced
  - More parallel , builds faster
- DPDK 20.05 – Make deprecated
- DPDK 20.11 – Make removed

Configuration time



Build time



# Make to Meson transition in DPKDK

`pip3 install meson ninja`



GNU Make



version 0.47.1+

Ninja

Build system

pkg-config

# Make to Meson transition in DPDK

static



GNU Make



```
1 #configure DPDK target
2 make config T=x86_64-native-linuxapp-gcc
3
```



```
1 #configure DPDK build using Meson
2 CC=gcc meson --prefix=$(pwd)/build -Dtests=false build
3
```

```
12 #build DPDK
13 make -j4 EXTRA_CFLAGS='-fPIC'
```



```
4 #build and install DPDK using ninja
5 ninja -C build
6 ninja -C build install
7
8 # Update the library paths.
9 sudo ldconfig
```

```
14 # Export the following path for pkg-config to find the .pc file.
15 export PKG_CONFIG_PATH=$DPDK_LIB/pkgconfig/:$PKG_CONFIG_PATH
```

# Make to Meson transition in DPDK

shared



GNU Make



```
1 #configure DPDK target
2 make config T=x86_64-native-linuxapp-gcc
3
```



```
1 #configure DPDK build using Meson
2 CC=gcc meson --prefix=$(pwd)/build -Dtests=false build
3
```



```
6 #for Shared libraries:
7 sed -i '/CONFIG RTE_BUILD_SHARED_LIB=n/s/=n/=y/' build/.config
```



```
12 #build DPDK
13 make -j4 EXTRA_CFLAGS='-fPIC'
```

```
4 #build and install DPDK using ninja
5 ninja -C build
6 ninja -C build install
7
8 # Update the library paths.
9 sudo ldconfig
```



```
14 export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$(pwd)/$TARGET/lib
```



```
11 DPDK_LIB=$(pwd)/dpdk-dir/build/lib/x86_64-linux-gnu
12 export LD_LIBRARY_PATH=$DPDK_LIB/:$LD_LIBRARY_PATH
```

```
14 # Export the following path for pkg-config to find the .pc file.
15 export PKG_CONFIG_PATH=$DPDK_LIB/pkgconfig/:$PKG_CONFIG_PATH
```

# Impact on OVS

Full support for DPDK Meson build in OVS(master) from DPDK 20.11

Only change in “--with-dpdk” configuration option:

\$ ./configure --with-dpdk=**\$DPDK\_BUILD**  \$ ./configure --with-dpdk=**shared/static**

Also possible:

\$ ./configure --with-dpdk=**yes**

Assumes DPDK static libraries must be consumed.

Note: Full support for DPDK Meson build in OVS(dpkg-latest) from DPDK 20.08

# Reference

- [https://doc.dpdk.org/guides/prog\\_guide/build-sdk-meson.html](https://doc.dpdk.org/guides/prog_guide/build-sdk-meson.html)
- [https://doc.dpdk.org/guides/linux\\_gsg/build\\_dpdk.html](https://doc.dpdk.org/guides/linux_gsg/build_dpdk.html)
- <https://www.youtube.com/watch?v=bQU3LhYOFTw>
- <https://dpdkuserspace2020.sched.com/event/e47F/cheat-sheet-to-migrate-from-gnu-make-to-meson-vipin-varghese-siva-tummala-intel>
- <http://patchwork.ozlabs.org/project/openvswitch/patch/20200902180629.29573-1-sunil.pai.g@intel.com/>
- <http://patchwork.ozlabs.org/project/openvswitch/patch/20201111113401.66709-1-sunil.pai.g@intel.com/>

The header features a dark grey background with various technical and geometric elements. On the left, there are vertical bars of varying heights. In the center, there are overlapping circles and lines. On the right, there are circular icons with arrows pointing right, and some rectangular shapes with internal patterns.

Thank You!

?Questions?

e-mail: [sunil.pai.g@intel.com](mailto:sunil.pai.g@intel.com)