

Draft

Open

Draft: Integration of 7.2 FHI split use_msgg_new_fhidriver_bui... into develop

10 unresolved threads

10 unresolved threads

Me and @defosseu tried to improve the tutorial quality. It will be great if we can get more feedback from the community.

8✓

Approval is optional


⊖

Merge blocked: Users who can write to the source or target branches can resolve the conflicts.

Merge details

- The source branch is [736 commits behind](#) the target branch.
- 143 commits and 1 merge commit will be added to develop.
- Source branch will be deleted.

Activity




thamizhselvan kumaresan @thamizh_k

Developer

commented on commit 786cdd83 8 months ago


@schmidtr , please check, i have updated the scope of some variables and modified the variable name of ii,jj



Robert Schmidt @schmidtr · 8 months ago

Maintainer


ok. The formatting does not correspond to OAI formatting at all



thamizhselvan kumaresan @thamizh_k · 8 months ago

Developer

I'm not sure, But i followed intendation/other coding styles, i will check doc again and will use the astyle tool




Robert Schmidt @schmidtr · 8 months ago

Maintainer

There is no astyle, please use clang-format. There is some documentation under doc

"does not correspond at all" was a bit too harsh. It is ok, but there are blocks that are suddenly indented further right when they should be left, etc

Edited 8 months ago by Robert Schmidt




Robert Schmidt @schmidtr · 8 months ago

Maintainer

I received a message/notification that you wrote, but don't see it. Anyway, clang-format is described here

<https://gitlab.eurecom.fr/oai/openairinterface5g/-/blob/develop/doc/clang-format.md>




Manish @manish · 7 months ago

Developer

While going through the above link for clang reformatting Files/changes were already checked-in and we need staged code for clang reformatting.

Do we need to reset HEAD to initial check-in of integration branch and then follow the steps mentioned in the link. If some other process is followed for clang formatting of already checked-in code, kindly let us know.



Robert Schmidt @schmidtr · 7 months ago

Maintainer

You can simply provide a range of commits to `git clang-format` , and it will reformat whatever has been modified in that range.

I would generally encourage you, though, to rewrite the history and make clean commits, in which the code is already properly formatted.



Manish

@manish · 7 months ago

Developer

Open

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- Sagar Arora added [documentation](#) label 1 month ago
 - Sagar Arora requested review from [@schmidtr](#) 1 month ago
 - Sagar Arora assigned to [@defosseu](#) 1 month ago
 - Sagar Arora added 1 commit 1 month ago
 - [29dcf07c](#) - doc(oran 7.2fhi) disable HT on servers
- [Compare with previous version](#)



Robert Schmidt @schmidtr started a thread on commit [9e4ddd13](#) 1 month ago

```
65 +
66 + ### 1.1.1 RHEL 9.2
67 +
68 + Below is the output of `/proc/cmdline` of a two numa node server,
69 +
70 + ```
71 + NUMA:
72 +   NUMA node(s):          2
73 +   NUMA node0 CPU(s):
74 +     0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34
75 +   NUMA node1 CPU(s):
76 +     1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35
77 + ```
30 76
31 - We always set our servers to maximum performance mode.
32 77   ```bash
33 - tuned-adm profile realtime
78 + mitigations=off usbcore.autosuspend=-1 intel_iommu=on
   intel_iommu=pt selinux=0 enforcing=0 nmi_watchdog=0
   softlockup_panic=0 audit=0 skew_tick=1
   isolcpus=managed_irq,domain,0,2,4,6,8,10,12,14,16
   nohz_full=0,2,4,6,8,10,12,14,16 rcu_nocbs=0,2,4,6,8,10,12,14,16
   rcu_nocb_poll intel_pstate=disable nosoftlockup tsc=nowatchdog
   cgroup_disable=memory mce=off hugepagesz=1G hugepages=40
   hugepagesz=2M hugepages=0 default_hugepagesz=1G skew_tick=1
   isolcpus=managed_irq,domain,0,2,4,6,8,10,12,14 intel_pstate=disable
   nosoftlockup tsc=reliable
```



Robert Schmidt @schmidtr · 1 month ago

Maintainer

above you say: "Below is the output of `/proc/cmdline` " but proceed with some excerpt for NUMA nodes.

it would be better to have:

for an example RHEL9.2 config, we consider a two-NUMA-node machine

for which you can see below the output of `/proc/cmdline` (command line configuration)

doc/ORAN_FHI7.2_Tutorial.md



Robert Schmidt @schmidtr started a thread on commit [9e4ddd13](#) 1 month ago

```
80 + ### 1.1.2 Ubuntu 22.04.3 LTS
35 81
36 - For PTP grandmaster we have used Fibrolan Falcon-RX. The 0-RU which
   we have used for this tutorial is VVDN LPRU.
82 + Below is the output of `/proc/cmdline` of a single numa node server,
37 83
```

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- ## 1.1 DPDK(Data Plane Development Kit)

+ ```

+ . . .

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- Download DPDK version 20.05.0

``bash

- wget http://fast.dpdk.org/rel/dpdk-20.05.tar.xz


+ isolcpus=0-2,8-17 nohz_full=0-2,8-17 rcu_nocbs=0-2,8-17

rcu_nocb_poll nosoftlockup default_hugepagesz=1GB hugepagesz=1G

hugepages=20 amd_iommu=on iommu=pt mitigations=off skew_tick=1

selinux=0 enforcing=0 tsc=nowatchdog nmi_watchdog=0

softlockup_panic=0 audit=0 vt.handoff=7




Robert Schmidt @schmidtr · 1 month ago

Maintainer

as above

doc/ORAN_FHI7.2_Tutorial.md



Robert Schmidt @schmidtr started a thread on commit [9e4ddd13](#) 1 month ago

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``bash

- wget http://fast.dpdk.org/rel/dpdk-20.05.tar.xz

+ isolcpus=0-2,8-17 nohz_full=0-2,8-17 rcu_nocbs=0-2,8-17

rcu_nocb_poll nosoftlockup default_hugepagesz=1GB hugepagesz=1G

hugepages=20 amd_iommu=on iommu=pt mitigations=off skew_tick=1

selinux=0 enforcing=0 tsc=nowatchdog nmi_watchdog=0

softlockup_panic=0 audit=0 vt.handoff=7

``

- DPDK Compilation

- ``bash

- tar -xvf dpdk-20.05.tar.xz

- cd dpdk-20.05

+ ### 1.1.3 Common

- meson build

- cd build

- ninja

- sudo ninja install

+ Configure your servers to maximum performance mode either via OS or

in BIOS. If you want to disable CPU sleep state then use the below

command:



Robert Schmidt @schmidtr · 1 month ago

Maintainer

Suggested change ?

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- Configure your servers to maximum performance mode either

via OS or in BIOS. If you want to disable CPU sleep state


then use the below command:

+ Configure your servers to maximum performance mode either

via OS or in BIOS. If you want to disable CPU sleep

states then use the below command:

doc/ORAN_FHI7.2_Tutorial.md



Robert Schmidt @schmidtr started a thread on an outdated change in commit [9e4ddd13](#) 1 month ago

Last updated 1 month ago by [Raphael Defosseux](#)

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+ ``bash

+ sudo cpupower idle-set -D 0

+ #to enable

+ sudo cpupower idle-set -E

``

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- You can also use a more recent version of DPDK: ``wget``
`https://fast.dash.oregonstate.edu/dpdk-20.11.0.tar.gz``

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- **## 1.2 Setup**
+ ```bash`
+ `tuned-adm profile realtime`
+ ````
- We have mentioned the information for our setup but if you want more information then you can refer to below links,
+ The above information we have gathered either from O-RAN documents or via our own experiments. In case you would like to read the O-RAN documents then here are the links:



Robert Schmidt

@schmidtr

· 1 month ago

Maintainer

why not put this at the beginning of the document?

-
- Raphael Defosseux
- changed this line in
- version 3 of the diff
- 1 month ago
-

doc/ORAN_FHI7.2_Tutorial.md



Robert Schmidt

@schmidtr

started a thread on commit

9e4ddd13

1 month ago

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+ Description=Synchronize system clock or PTP hardware clock (PHC)
+ After=ntpd.service ptp4l.service
+
+ [Service]
+ Type=simple
+ EnvironmentFile=-/etc/sysconfig/phc2sys
+ ExecStart=/usr/sbin/phc2sys \$OPTIONS
+
+ [Install]
+ WantedBy=multi-user.target
+ ````
- **## 1.3 PTP configuration**
- You can refer to the [following o-ran link](https://docs.o-ran-sc.org/projects/o-ran-sc-o-du-phy/en/latest/PTP-configuration_fh.html) for PTP configuration. In our setup we used Fibrolan Falcon-RX for PTP grandmaster.
+ **## 1.4 DPDK(Data Plane Development Kit)**



Robert Schmidt

@schmidtr

· 1 month ago

Maintainer

Suggested change

?

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- ## 1.4 DPDK(Data Plane Development Kit)

205

+ ## 1.4 DPDK (Data Plane Development Kit)

doc/ORAN_FHI7.2_Tutorial.md



Robert Schmidt

@schmidtr

started a thread on commit

9e4ddd13

1 month ago

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- You can refer to the [following o-ran link](https://docs.o-ran-sc.org/projects/o-ran-sc-o-du-phy/en/latest/PTP-configuration_fh.html) for PTP configuration. In our setup we used Fibrolan Falcon-RX for PTP grandmaster.
+ **## 1.4 DPDK(Data Plane Development Kit)**
+
+ Download DPDK version 20.11.7
+ ```bash`
- `git clone http://git.code.sf.net/p/linuxptp/code linuxptp`

88- git checkout v2.0

89- make && make `install`

202- `# on debian`

Open

Draft: Integration of 7.2 FHI split

[use_msgg_new_fhidriver_bui...](#)

into

[develop](#)

10 unresolved threads

206+ `cd`

207+ `wget http://fast.dpdk.org/rel/dpdk-20.11.7.tar.xz`

Comment on lines +202 to +207



Robert Schmidt

@schmidtr · 1 month ago

Maintainer

make it simple:

Suggested change

?

210- # on debian

211- sudo apt install wget xz-utils

212- # on fedora

213- sudo dnf install wget xz

214- cd

215- wget http://fast.dpdk.org/rel/dpdk-20.11.7.tar.xz

210+ cd

211+ wget http://fast.dpdk.org/rel/dpdk-20.11.7.tar.gz

doc/ORAN_FHI7.2_Tutorial.md



Robert Schmidt

@schmidtr started a thread on commit [9e4ddd13](#) 1 month ago

88- git checkout v2.0

89- make && make `install`

202+ `# on debian`

203+ `sudo apt install wget xz-utils`

204+ `# on fedora`

205+ `sudo dnf install wget xz`

206+ `cd`

207+ `wget http://fast.dpdk.org/rel/dpdk-20.11.7.tar.xz`

208+ ````

90209

91- `./ptp4l -i ens1f1 -m -H -2 -s -f configs/default.cfg`

92- `./phc2sys -w -m -s ens1f1 -R 8 -f configs/default.cfg`

210+ DPDK Compilation

211+

212+ ```bash`

213+ `# Installing meson : it should pull ninja-build and compiler packages`



Robert Schmidt

@schmidtr · 1 month ago

Maintainer

is ninja a required for meson? it's not for cmake.

I would make `ninja-build` an explicit dependency, would even save text

doc/ORAN_FHI7.2_Tutorial.md



Robert Schmidt

@schmidtr started a thread on commit [9e4ddd13](#) 1 month ago

368+ `physical-interface --> Physical interface through which you can`

369+ `access the RU`

369+ `vlan --> vlan is defined in the RU configuration`

370+ `mtu --> mtu is specified by the RU vendor`

371+ `lspci-address-c-plane-vf --> Bus address for c plane vf`

372+ `lspci-address-u-plane-vf --> Bus address for u plane vf`

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165- `## 3.2 Copy Fronthaul Configuration File`

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+ For both the mac-addresses you can use mac-address which is pre-configured in the RUs (not valid for all the RUs)

`00:11:00:77:11:11`

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configure the vlan as access vlan. In case the mtu is different than 1500. Then you have to update the mtu and similarly on the switch interface.

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```bash

- cd ran\_build/build

- # no longer in use

- # for the moment a dat file replaces this json file

- # cp ../../../../targets/PROJECTS/GENERIC-NR-5GC/CONF/oran.fhi.json .

+ sudo sh -c echo "2" > /sys/class/net/<physical-interface>/device/sriov\_numvfs



Robert Schmidt

@schmidtr

· 1 month ago

Maintainer

please add `set -x` so people see what is going on when running the script.

[like here](#)

I think it is a pretty bad habit to create scripts that don't document what they do

doc/ORAN\_FHI7.2\_Tutorial.md



Robert Schmidt

@schmidtr

started a thread on an outdated change in commit [f1d8c652](#)

1 month ago

Last updated 1 month ago by [Raphael Defosseux](#)

doc/ORAN\_FHI7.2\_Tutorial.md

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sudo ./nr-softmodem -0 ../../../../targets/PROJECTS/GENERIC-NR-5GC/CONF/oran.fh.band78.fr1.273PRB.conf --sa --reorder-thread-disable --thread-pool <list of non isolated cpus>

```

- For example if you have two numa nodes (for example 18 CPU per socket) in your system and odd cores are non isolated then you can put the thread-pool on ``1,3,5,7,9,11,13,15``. Else if you have 1 numa node either you can use isolated cores or non isolated. Just make sure that isolated cores are not the ones defined earlier.

+ For example if you have two numa nodes (for example 18 CPU per socket) in your system and odd cores are non isolated then you can put the thread-pool on ``1,3,5,7,9,11,13,15``. Else if you have 1 numa node either you can use isolated cores or non isolated. Just make sure that isolated cores are not the ones defined earlier.



Robert Schmidt

@schmidtr

· 1 month ago

Maintainer

missing newline at end of file, check with

cat doc/ORAN_FHI7.2_Tutorial.md

and add it

- [Raphael Defosseux](#) changed this line in [version 3 of the diff](#) 1 month ago ·

Please [register](#) or [sign in](#) to reply

[Raphael Defosseux](#) added 1 commit 1 month ago

- [ed039a0d](#) - doc(oran-integration): adding local/lib trick for Fedora-based OS. Also...

[Compare with previous version](#)

[Raphael Defosseux](#) added 1 commit 4 weeks ago

- [81c8ea7a](#) - doc(oran-integration): adding another pkg-config trick.

[Compare with previous version](#)

- **Robert Schmidt** changed title from **Draft: doc(oran 7.2fhi) Just to get review on the document** to **Draft: Integration of 7.2 FHI split** [3 weeks ago](#)




Draft: Integration of 7.2 FHI split [use_msgg_new_fhidriver_bui...](#) into [develop](#)

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[@schmidt](#) I am not sure if we will merge this MR or not. I guess we will wait for Raymond to test with E release and then we will upgrade it to E release and merge. As we discussed on 13th September.

Edited 3 weeks ago by [Sagar Arora](#)

**Robert Schmidt** [@schmidt](#) · [3 weeks ago](#)

Maintainer

Sure, I renamed so external people start using this branch and not [!1907 \(closed\)](#). Also, [!1907 \(closed\)](#) has a couple of remarks that might be taken into account here.

Please [register](#) or [sign in](#) to reply

- **Robert Schmidt** mentioned in merge request [!1907 \(closed\)](#) [2 weeks ago](#)



Robert Schmidt [@schmidt](#) · [2 weeks ago](#)

Maintainer

there were some comments in [!1907 \(closed\)](#) by [@kden](#) that should be checked for in here:

- [!1907 \(comment 92799\)](#)
- [!1907 \(comment 92801\)](#)
- [!1907 \(comment 92859\)](#)

Please [register](#) or [sign in](#) to reply