MLE NPAP
Remote Evaluation Guide
for PST FPGA Cloud

Version 1.2

Objectives

This document explains how to evaluate MLE NPAP via remote access to the MLE's FPGA Cloud at partner VMAccel.

No need to obtain FPGA hardware or run FPGA synthesis!

1. MLE NPAP - Network Protocol Accelerator Platform

MLE's Network Protocol Accelerator Platform (NPAP) for 1/2.5/5/10/25/40/50/100 Gigabit Ethernet is a TCP/UDP/IP network protocol Full-Accelerator subsystem which instantiates the standalone 128 bit TCP/IP Stack technology from German Fraunhofer Heinrich-Hertz-Institute (HHI). This Fraunhofer HHI 10 GbE TCP/IP Stack was designed for embeddable FPGA and ASIC system solutions and offers the following features:

- Interface to 1 / 2.5 / 5 / 10 / 25 / 40 / 50 / 100 Gigabit Ethernet
- Full-duplex with 128 bit wide bidirectional datapath
- Full line rate up to 70 Gbps per NPAP instance
- Full line rate >100 Gbps per individual TCP session in ASIC
- Low round trip time NPAP-to-NPAP 700 nanoseconds for 100 Bytes RTT

For more information on MLE NPAP, including links to datasheets and application notes please visit http://MLEcorp.com/NPAP

2. Evaluating MLE NPAP in the MLE FPGA Cloud

Implementing distributed systems using TCP/IP and/or UDP/IP is a complex task, especially when it comes to performance (as in throughput and/or latency). MLE NPAP is a highly parameterizable TCP/UDP/IPv4 stack for FPGA which has many features.

At MLE we Integrate 3rd party IP cores ourselves, so we fully understand the need to try, evaluate and benchmark NPAP whether it is suitable for your project needs.

To make things easy, Team MLE came up with a fine tuned approach for evaluating MLE NPAP quickly and efficiently. Here are the many choices Team MLE offers to you:

1. Discuss your system requirements and constraints with Team MLE. This may help understand TCP/IP and/or UDP/IP related aspects such as performance, implications of the bandwidth-delay-product, for example, etc.
2. Quickly evaluate and benchmark MLE NPAP using the remote evaluation. No need to obtain FPGA hardware or run FPGA synthesis!
3. Obtain one of the many Evaluation Reference Designs (ERD) for MLE NPAP. Most ERDs are provided free-of-charge so you can try MLE NPAP in your lab. However, you do need physical access to one of the FPGA Development Kits supported.
4. If you wish to try MLE NPAP on your custom FPGA hardware, you can define an engineering project with MLE. You will then receive a binary or netlist implementation that runs on your custom FPGA hardware.
5. Sometimes, we suggest that you purchase a so-called Developers License. This is an extended evaluation license which gives you full access to the HDL source code (and the many helper files) to integrate MLE NPAP into your FPGA system.

This document explains what the MLE NPAP Remote Evaluation allows you to do and how to do it.

2.1. Benefits

Immediately, and without the need for any FPGA design work you can learn about TCP/UDP offloading and acceleration, and experience the many benefits of MLE NPAP.

2.2. Approach

We use Netperf, the open source network performance analysis tool[1]. Netperf is a benchmark that can be used to measure various aspects of networking performance. The primary focus is bulk (aka unidirectional) data transfer and request/response performance using either TCP or UDP.

The Remote Evaluation runs Netperf on both sides of the TCP/IP or UDP/IP connection: A Linux server and NPAP on the FPGA card. Yes, for testing and benchmarking purposes we have implemented a fully accelerated instance of Netperf running in FPGA logic!

This allows you to test and experience MLE NPAP, for TCP and/or for UDP, in different combinations:

- MLE NPAP vs the open source Linux TCP/UDP/IP stack - a common use case where the FPGA transports and/or receives data from a Linux server
- MLE NPAP vs MLE NPAP - a use case for high performance as FPGA Full Accelerators on both sides deliver highest throughput and lowest Round-Trip Times

This point-to-point Ethernet network is dedicated to our NPAP remote evaluation.

For administrative purposes, and fully transparent to you, we run a separate network. We also use open source Labgrid as administrative infrastructure.

You then log in into one of the servers in the FPGA cloud and, using Linux commandline perform your tests. Technically this all runs on a virtual machine which will be erased once you are finished.

2.3. System Setup

MLE NPAP runs "bare metal" on FPGA cards in the VMAccel cloud. The FPGA card of current choice is the AMD Alveo U200[2]. The Ethernet interface of the FPGA cards is connected via a dedicated 10/25/40/100G Ethernet switch to another FPGA card (for so-called NPAP-to-NPAP tests) as well as to a Mellanox ConnectX-3 Pro NIC (for NPAP-to-Linux tests).
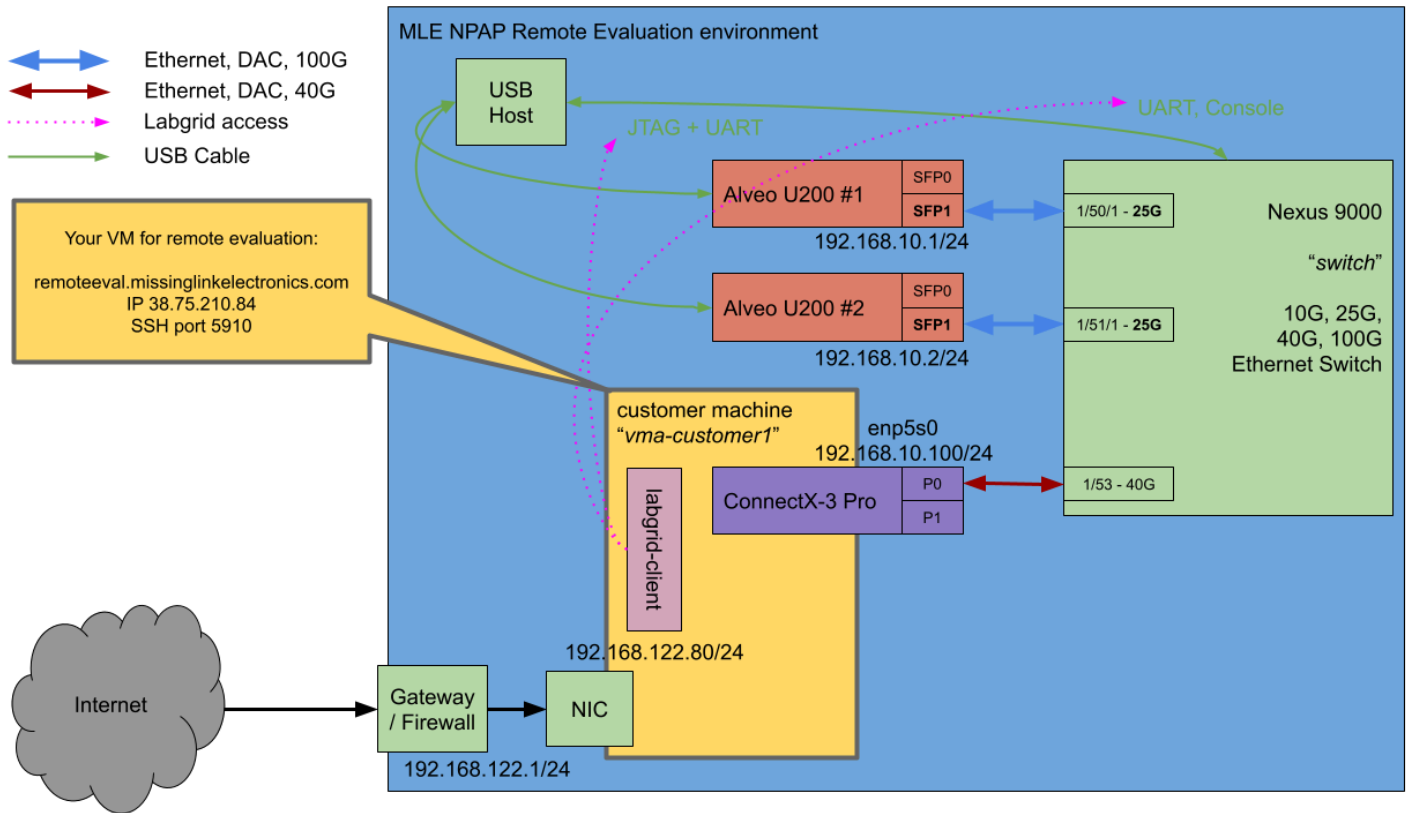
The MLE NPAP Remote Evaluation environment looks like this:

---

[1] https://github.com/HewlettPackard/netperf
[2] https://www.amd.com/en/products/accelerators/alveo/u200/a-u200-a64g-pq-g.html

Hardware and Network Overview

Once you have been granted access to the MLE NPAP Remote Evaluation environment, you will be in charge of what is called "Customer Machine" in the diagram above. This machine is a fully virtualized machine with access to the following components:

1. one Mellanox ConnectX-3 Pro NIC,
2. two AMD Alveo U200 FPGA boards,
3. and one Cisco Nexus 9000 switch, forming a small 25G Ethernet LAN with the previously mentioned three components.

The two AMD Alveo U200 FPGA boards are pre-configured with the MLE NPAP ERD bitstream before access to the MLE NPAP Remote Evaluation environment is granted, thus loading any bitstream is not needed.

The MLE NPAP ERD on an AMD Alveo U200 board is controlled via a UART connection through labgrid. Labgrid also allows access to the JTAG interface of both boards.

In terms of management network connectivity, the Customer Machine cannot access any Internet resource, except for the standard Ubuntu software package repositories. Other than that, only incoming SSH connections on a dedicated TCP port (5910) are allowed.

In terms of Ubuntu software packages on the Customer Machine, this is a rather minimal Ubuntu Server installation with few additional tools like `netperf` pre-installed.

Next to standard Ubuntu software packages, you'll find our MLE NPAP Test Environment checked out and ready for use. It is based on pytest. Various individual sets of tests exist to set up and to test out board-to-board ("b2b" - as in NPAP-to-NPAP) and board-to-software ("b2s" - as in NPAP to Linux) performance - regarding throughput, latency and data integrity. "board-to-software" refers to running traffic between a board and the Customer machine.

The Mellanox ConnectX-3 Pro NIC is connected to the Nexus switch with its first port (Linux network interface `enp5s0`). This first port is automatically configured with the IPv4 address 192.168.10.100/24:

```
(venv) customer@vma-customer1:~$ ip addr show dev enp5s0
3: enp5s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP group default qlen 1000
    link/ether e4:1d:2d:71:81:a0 brd ff:ff:ff:ff:ff:ff
    inet 192.168.10.100/24 brd 192.168.10.255 scope global enp5s0
       valid_lft forever preferred_lft forever
```

When later setting up and running tests, the MLE NPAP ERD bitstream of each FPGA board is also configured with an IPv4 address within that range (192.168.10.1/24 and 192.168.10.2/24 respectively).

3. Step-By-Step Instructions

Below you will find detailed step-by-step instructions and examples how to run your evaluation.

3.1. Getting FPGA Cloud Access

Follow these steps get access to the MLE NPAP Remote Evaluation environment:

1. Generate a dedicated SSH key pair, using a strong password
    (12 characters, letters (capital and non-capital), numbers, non-letter/numbers characters):
    a. `ssh-keygen -t rsa -b 4096 -a 100 -f $HOME/.ssh/id_rsa_mleremoteeval`
    b. Also see, for example, [best-practice for SSH key generation](#).
2. Send your newly generated SSH public key (`$HOME/.ssh/id_rsa_mleremoteeval.pub`) to your MLE contact.
3. Wait for a reply by your MLE contact to inform you about the MLE NPAP Remote Evaluation environment being ready for you.
4. Login to the MLE NPAP Remote Evaluation environment using your SSH private key:
    a. `ssh -i $HOME/.ssh/id_rsa_mleremoteeval -p 5910 \`
        `customer@remoteeval.missinglinkelectronics.com`
    b. You should get a typical Ubuntu shell prompt, as highlighted in pink:

```
Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 5.15.0-125-generic x86_64)

**************************************************
*                                                *
* Welcome to Missing Link Electronics            *
* Remote Evaluation for the                      *
* Network Protocol Accelerator Platform (NPAP)   *
*                                                *
* http://MLEcorp.com/NPAP                        *
*                                                *
**************************************************


    System information as of Mon Jan 13 10:13:43 AM UTC 2025

    System load:  0.515625          Processes:               262
    Usage of /:   37.1% of 31.32GB  Users logged in:         0
    Memory usage: 0%                IPv4 address for enp1s0: 192.168.122.80
    Swap usage:   0%                IPv4 address for enp5s0: 192.168.10.100


    The programs included with the Ubuntu system are free software;
    the exact distribution terms for each program are described in the
    individual files in /usr/share/doc/*/copyright.

    Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
    applicable law.
```

```
Last login: Tue Nov 26 17:34:36 2024 from <IP>
already acquired place mle-npap-vma-u200-1
already acquired place mle-npap-vma-u200-2
(venv) customer@vma-customer1:~$
```

The `(venv)` prefix signals that the shell automatically entered the appropriate Python virtual environment for conducting MLE NPAP Tests.

5. **IMPORTANT:** Note that your user account has full administrative privileges via `sudo` - <u>without any password</u>! Any kind of local OS modification is possible and it is of course possible to lock one out of the system or break it - be it accidentally or not!

6. **NOTE:** Accessing the Internet is not possible and blocked by the Firewall. However installing Ubuntu software packages via `sudo apt install` from standard Ubuntu software package repositories is possible.

3.2. Conducting Tests - Basic

Once you have access and are logged in to the MLE Remote Evaluation environment via SSH, you may run tests employing the two AMD Alveo U200 board (board-to-board, b2b tests) or employing one AMD Alveo U200 board and the Customer Machine you are logged in on using the Mellanox ConnectX-3 Pro NIC (board-to-software, b2s tests).

Use the command `npap-run-test` to easily start one of multiple tests. Here is the usage output:

```
(venv) customer@vma-customer1:~$ npap-run-test
usage: npap-run-test [-h] [<testid> [<testid>]*]

This script is a wrapper around a dedicated set of MLE NPAP test scenarios.
One or more test scenarios can be chosen and executed by using the following test ids
as argument(s) (integer numbers, space separated):

        0)
                # board-to-board, netperf, TCP_{STREAM,MAERTS,RR}
                pytest test_netperf_b2b.py --testconfig \
                        testconfig/b2b_tests/vma-u200-1_vma-u200-2.cfg
                ;;
        1)
                # board-to-board, latency
                pytest test_latency_b2b_tcp.py --testconfig \
                        testconfig/b2b_tests/vma-u200-1_vma-u200-2.cfg
                ;;
        2)
                # board-to-board, streaming w/ explicit data generation and checking
                pytest test_tcp_b2b.py --testconfig \
                        testconfig/b2b_tests/vma-u200-1_vma-u200-2.cfg
                ;;
        3)
                # board-to-software, netperf, TCP_{STREAM,MAERTS,RR}
                pytest test_b2s_setup_only.py --testconfig \
                        testconfig/b2s_tests/vma-u200-1_vma-u200-2.cfg
                ping -c 4 192.168.10.1
                ping -c 4 192.168.10.2
                netperf -H 192.168.10.1 -p 12865 -l 10 -t TCP_STREAM
                netperf -H 192.168.10.1 -p 12865 -l 10 -t TCP_MAERTS
                netperf -H 192.168.10.1 -p 12865 -l 10 -t TCP_RR
                ;;

Example - to run scenarios 0) and 1):

        npap-run-test 0 1
```

3.2.1 test 0: board-to-board, netperf

This test conducts `netperf`-based TCP_STREAM, TCP_MAERTS, TCP_RR tests between two boards, by default with a TCP payload size of 1460 bytes and a duration of 5 seconds (3 individual tests).

To invoke this test:

```
(venv) customer@vma-customer1:~$ npap-run-test 0
```

The test results, for example for the TCP_STREAM test looks like this:

```
[INFO] 2024-11-29 15:06:16.638 [test_netperf_b2b]   ******** TCP_STREAM ********
[INFO] 2024-11-29 15:06:16.639 [test_netperf_b2b]
[INFO] 2024-11-29 15:06:16.639 [test_netperf_b2b] Doing Netperf TCP_STREAM board to board Test with the
following parameters:
[INFO] 2024-11-29 15:06:16.640 [test_netperf_b2b]   Test length: 5 s
[INFO] 2024-11-29 15:06:16.640 [test_netperf_b2b]   Packet size: 1460 bytes
[INFO] 2024-11-29 15:06:16.661 [test_netperf_b2b] Setting up net server on NPAP instance 1:
[INFO] 2024-11-29 15:06:16.662 [test_netperf_b2b]   local_ip: 192.168.10.1
[INFO] 2024-11-29 15:06:16.663 [test_netperf_b2b]   remote_ip: 192.168.10.2
[INFO] 2024-11-29 15:06:16.663 [test_netperf_b2b]   local_control_session_port: 12865
[INFO] 2024-11-29 15:06:16.664 [test_netperf_b2b]   test_session_port: 12866
[INFO] 2024-11-29 15:06:16.798 [test_netperf_b2b] Setting up net client for NPAP instance 2:
[INFO] 2024-11-29 15:06:16.799 [test_netperf_b2b]   local_ip: 192.168.10.2
[INFO] 2024-11-29 15:06:16.800 [test_netperf_b2b]   remote_ip: 192.168.10.1
[INFO] 2024-11-29 15:06:16.800 [test_netperf_b2b]   remote_control_session_port: 12865
[INFO] 2024-11-29 15:06:16.800 [test_netperf_b2b]   test_session_port: 12866
[INFO] 2024-11-29 15:06:16.893 [test_netperf_b2b] Starting test
[INFO] 2024-11-29 15:06:16.988 [test_netperf_b2b] Waiting for test to finish. Should finish in a maximum of
5 s.
[INFO] 2024-11-29 15:06:22.140 [test_netperf_b2b] TCP_STREAM test successful:
[INFO] 2024-11-29 15:06:22.219 [test_netperf_b2b]   Payload size:  1460 bytes
[INFO] 2024-11-29 15:06:22.220 [test_netperf_b2b]   Test time:     5.0 s
[INFO] 2024-11-29 15:06:22.220 [test_netperf_b2b]   Received:      13.9048575 GByte
[INFO] 2024-11-29 15:06:22.221 [test_netperf_b2b]   Throughput RX: 22247.772 MBit/s
[INFO] 2024-11-29 15:06:22.221 [test_netperf_b2b]   Sent:          13.9048575 GByte
[INFO] 2024-11-29 15:06:22.223 [test_netperf_b2b]   Throughput TX: 22247.772 MBit/s
```

3.2.2 test 1: board-to-board, latency

This test conducts latency tests between two boards, by default with a series of different TCP payload sizes (1, 2, 5, 10, 30, 50, 70, 90, 150, 300, 450, 600, 750, 900, 1000, 1200, 1400 Bytes), first just 1 packet per payload size, then 100,001 packets per payload size (34 individual tests).

To invoke this test:

```
(venv) customer@vma-customer1:~$ npap-run-test 1
```

The test results, for example for a TCP payload size of 300 Bytes using 100,001 packets looks like this:

```
[INFO] 2024-11-29 15:07:44.200 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 300
[INFO] 2024-11-29 15:07:45.436 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:45.467 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:46.040 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:46.136 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 300: 16016.355 us.
```

3.2.3 test 2: board-to-board, data integrity

This test employs a data pattern generation on one board and a data pattern checker on the other board, by default with a series of different TCP payload sizes (1, 2, 5, 10, 30, 50, 70, 90, 150, 300, 450, 600, 750, 900, 1000, 1200, 1400 Bytes) and a single number of packets of 10,000,000 plus using just one TCP session (17 individual tests).

To invoke this test:

```
(venv) customer@vma-customer1:~$ npap-run-test 2
```

The test results, for example for a TCP payload size of 600 Bytes using 10,000,000 packets looks like this:

```
[INFO] 2024-11-29 15:09:04.929 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and
packet size: 600
[INFO] 2024-11-29 15:09:04.929 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:06.194 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:09:06.228 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:09:06.228 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:08.544 [test_tcp_b2b]   Session 0: Count: 4339021912 byte, current throughput:
16688.818 MBit/s
[INFO] 2024-11-29 15:09:08.544 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:08.545 [test_tcp_b2b]       Total Throughput: 16688.818 MBit/s
[INFO] 2024-11-29 15:09:08.545 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:10.368 [test_tcp_b2b] Throughput for 10000000 frames with packet size 600:
[INFO] 2024-11-29 15:09:10.368 [test_tcp_b2b]   Session 0 average throughput: 17080.61 MBit/s.
```

3.2.4 test 3: board-to-software, netperf

This test is about running the netperf client program on the Customer machine itself, targeting mainly the first board (AMD Alveo U200 #1, at 192.168.10.1), which is set up to run a netperf server via `pytest`, to then invoke `netperf` client program to do TCP_STREAM, TCP_MAERTS and TCP_RR tests for 10 seconds each. The effective TCP payload size will typically be around 1460 Bytes (due to MTU 1500) for TCP_STREAM and TCP_MARTS tests (test specific options `-m <local-send-msg-size>,<remote-send-msg-size>` and `-M <local-recv-msg-size>,<remote-recv-msg-size>` not set), and just 1 Byte for the TCP_RR test (test specific option `-r <request-size>[,<response-size>]` not set).

To invoke this test:

```
(venv) customer@vma-customer1:~$ npap-run-test 3
```

The output of the netperf client for the TCP_STREAM, TCP_MAERTS and TCP_RR tests might look like this:

```
MIGRATED TCP STREAM TEST from 0.0.0.0 (0.0.0.0) port 0 AF_INET to 192.168.10.1 () port 0 AF_INET : demo
Recv    Send    Send
Socket  Socket  Message  Elapsed
Size    Size    Size     Time      Throughput
bytes   bytes   bytes    secs.     10^6bits/sec

 87380  16384   16384    10.00     10498.10


MIGRATED TCP MAERTS TEST from 0.0.0.0 (0.0.0.0) port 0 AF_INET to 192.168.10.1 () port 0 AF_INET : demo
Recv    Send    Send
Socket  Socket  Message  Elapsed
Size    Size    Size     Time      Throughput
bytes   bytes   bytes    secs.     10^6bits/sec

131072  16384   16384    10.00     10118.79


MIGRATED TCP REQUEST/RESPONSE TEST from 0.0.0.0 (0.0.0.0) port 0 AF_INET to 192.168.10.1 () port 0 AF_INET
: demo : first burst 0
Local /Remote
Socket Size   Request  Resp.    Elapsed  Trans.
Send   Recv   Size     Size     Time     Rate
bytes  Bytes  bytes    bytes    secs.    per sec

16384  131072 1        1        10.00    56368.39
16384  87380
```

3.2.5 test report files

After test 0, 1 or 2 has been run, corresponding report files are generated, which can be found in a separate subdirectory per test:

```
~/npapdemo-test/pytest/reports/report-<date-YYYYMMDD>-<time-HHMMSS>/
```

The exact location is reported at the end of what's printed to the terminal:

```
[...]
----------------------- live log teardown -----------------------
[...]

[INFO] 2024-11-29 15:06:33.353 [WORKSPACE] Log-Files copied to:
/home/customer/npapdemo-test/pytest/reports/report-20241129-150559

[...]
```

Note that test 3 also has such a report directory, however relevant test results are obviously just what the manual `netperf` invocation print on the terminal.

See the [Appendix for examples of the full output of all tests](#).

3.3. Conducting Tests - Advanced

Of course you may always directly call `pytest` and experiment with test configurations. To do that, you need to move into the MLE NPAP Test environment `pytest/` subdirectory:

```
(venv) customer@vma-customer1:~$ cd npapdemo-test/pytest/
(venv) customer@vma-customer1:~/npapdemo-test/pytest$
```

From there you can call `pytest` as shown by the `npap-run-test` script shown in the previous section, like this:

```
(venv) customer@vma-customer1:~/npapdemo-test/pytest$ \
    pytest test_netperf_b2b.py --testconfig testconfig/b2b_tests/vma-u200-1_vma-u200-2.cfg
```

The arguments to `pytest` are:

1. `test_<name>.py` (like `test_netperf_b2b.py`)

   This is the test filename (in `~/npapdemo-test/pytest/`), potentially comprising a set of multiple individual tests.

2. `--testconfig <file>`

   This is the filename (relative to `~/npapdemo-test/pytest/`) comprising test configuration(s). Test configuration also determines whether certain individual tests of a set are executed and with which parameters.

For the MLE Remote Evaluation environment and its FPGA boards, the following test configuration files are applicable:

1. board-to-board tests:

   `~/npapdemo-test/pytest/testconfig/b2b_tests/vma-u200-1_vma-u200-2.cfg`

2. board-to-software tests:

   `~/npapdemo-test/pytest/testconfig/b2s_tests/vma-u200-1_vma-u200-2.cfg`

The following test files are meant to be executed in the MLE Remote Evaluation environment. The most important test parameters as found in test configuration files above are mentioned in parentheses, e.g. (`latencyNumFramesTcp`).

1. board-to-board, b2b tests

   a. `test_netperf_b2b.py`

      This test file conducts `netperf`-based TCP_STREAM, TCP_MAERTS, TCP_RR tests between two boards, given a configurable constant TCP payload length

(`netperf_TCP_{STREAM,MAERTS,RR}_PacketSize`) and configurable duration (`netperf_TCP_{STREAM,MAERTS,RR}_Length`).

    b. `test_latency_b2b_tcp.py`

This test file conducts latency tests between two boards, given a configurable constant amount of packets (`latencyNumFramesTcp`) and their configurable constant TCP payload length (`latencyPacketSizeTcp`).

    c. `test_tcp_b2b.py`

This test file employs a data pattern generation on one board and a data pattern checker on the other board, given a configurable constant amount of packets (`dgcNumFramesTcp`) and their configurable constant TCP payload length (`dgcPacketSizeTcp`). A third parameter determines the number of TCP sessions to run in parallel (`dgcNumParallelSessionsTcp`).

2. board-to-software, b2s tests

    a. `test_b2s_setup_only.py`

This test file sets up all FPGA boards in terms of the IP Stack (MAC and IPv4 address assignment) and enables the netperf server on all boards (on port 12865), in order to then conduct tests from the Customer machine using the `netperf` client program manually.

3.4. Yielding FPGA Cloud Access

As soon as you are done, you may just shut down the machine as a sign to your MLE contact. Once you have shut down the machine, any data you might have stored on that machine has to be considered deleted. The machine will not boot up again.

1. ```
   (venv) customer@vma-customer1:~$ sudo poweroff && exit
   ```

Appendix - Test Output Examples

Below some exemplary outputs from one of the runs we did at MLE. May be helpful for you to determine what you may see during your evaluation.

Usage output of test script wrapper

```
(venv) customer@vma-customer1:~$ npap-run-test
usage: /home/customer/.local/bin/npap-run-test [-h] [<testid> [<testid>]*]

This script is a wrapper around a dedicated set of MLE NPAP test scenarios.
One or more test scenarios can be chosen and executed by using the following test ids
as argument(s) (integer numbers, space separated):

        0)
                # board-to-board, netperf, TCP_{STREAM,MAERTS,RR}
                pytest test_netperf_b2b.py --testconfig testconfig/b2b_tests/vma-u200-1_vma-u200-2.cfg
                ;;
        1)
                # board-to-board, latency
                pytest test_latency_b2b_tcp.py --testconfig testconfig/b2b_tests/vma-u200-1_vma-u200-2.cfg
                ;;
        2)
                # board-to-board, streaming w/ explicit data generation and checking
                pytest test_tcp_b2b.py --testconfig testconfig/b2b_tests/vma-u200-1_vma-u200-2.cfg
                ;;
        3)
                # board-to-software (software == x86 machine w/ NIC), netperf,
TCP_{STREAM,MAERTS,RR}
                pytest test_b2s_setup_only.py --testconfig testconfig/b2s_tests/vma-u200-1_vma-u200-2.cfg
                ping -c 4 192.168.10.1
                ping -c 4 192.168.10.2
                netperf -H 192.168.10.1 -p 12865 -l 10 -t TCP_STREAM
                netperf -H 192.168.10.1 -p 12865 -l 10 -t TCP_MAERTS
                netperf -H 192.168.10.1 -p 12865 -l 10 -t TCP_RR
                ;;

Example - to run scenarios 0) and 1):

        /home/customer/.local/bin/npap-run-test 0 1
```

test 0: board-to-board, netperf

```
(venv) customer@vma-customer1:~$ npap-run-test 0
~/npapdemo-test/pytest ~
already acquired place mle-npap-vma-u200-1
already acquired place mle-npap-vma-u200-2
[INFO] 2024-11-29 15:06:00,373 [BRINGUP::acquirePlaces()] labgrid-client: place mle-npap-vma-u200-1 is already acquired by
vma-customer1/customer
[INFO] 2024-11-29 15:06:00,421 [BRINGUP::acquirePlaces()] labgrid-client: place mle-npap-vma-u200-2 is already acquired by
vma-customer1/customer
[INFO] 2024-11-29 15:06:00,603 [BRINGUP::pytest_configure()] Using Environment Version: 1.2.0
[INFO] 2024-11-29 15:06:00,603 [BRINGUP::pytest_configure()] Installed Plugin Versions: {'PluginTemplate': '0.0.0', 'XFCP':
'1.0.1'}
[INFO] 2024-11-29 15:06:00,603 [BRINGUP::pytest_configure()] Deactivated Plugins: ['ScapyTcpSession', 'Demo', 'PvLoopback']
[INFO] 2024-11-29 15:06:00,603 [BRINGUP::pytest_configure()] Activated Plugins: ['PluginTemplate', 'TcpMonitor', 'XFCP',
'Netperf']
=================================================== test session starts
==========================================================
platform linux -- Python 3.10.12, pytest-6.2.5, py-1.11.0, pluggy-1.5.0
rootdir: /home/customer/npapdemo-test/pytest, configfile: pytest.ini
plugins: cocotb-test-0.2.4, dependency-0.6.0, metadata-2.0.4, env-0.6.2, logger-1.1.1, rng-1.0.0, ordering-0.6, html-3.2.0,
json-report-1.5.0, labgrid-0.3.4.dev4+gbe4d713f
collecting ... ['setupBoards', 'npap', 'env', 'XFCP_BOARDS', 'npap_session', 'pytestconfig', 'record_testsuite_property',
'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig', 'SETUP_BitfileDict',
'request']
['setupBoards', 'npap', 'env', 'XFCP_BOARDS', 'npap_session', 'pytestconfig', 'record_testsuite_property',
'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig', 'SETUP_BitfileDict',
'request']
['setupBoards', 'TESTCONFIG', 'npap', 'env', 'XFCP_BOARDS', 'TESTCONFIG_TestConfig', 'npap_session', 'pytestconfig',
'record_testsuite_property', 'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig',
'SETUP_BitfileDict', 'request']
['setupBoards', 'TESTCONFIG', 'npap', 'env', 'XFCP_BOARDS', 'TESTCONFIG_TestConfig', 'npap_session', 'pytestconfig',
'record_testsuite_property', 'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig',
'SETUP_BitfileDict', 'request']
['setupBoards', 'TESTCONFIG', 'npap', 'env', 'XFCP_BOARDS', 'TESTCONFIG_TestConfig', 'npap_session', 'pytestconfig',
'record_testsuite_property', 'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig',
'SETUP_BitfileDict', 'request']
collected 2 items

test_netperf_b2b.py::TestB2B::test_enumBoard[SETUP_SetupConfig0-SETUP_BitfileDict0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_mlenpa
pvmau20020]
---------------------------------------------------------- live log setup
----------------------------------------------------------
[INFO] 2024-11-29 15:06:00.682 [base.NpapWorkspace] Setup Configuration: load bitfiles: False, turn off boards: False, turn off
clients: False, skip release stage: False
[INFO] 2024-11-29 15:06:01.286 [mle-npap-vma-u200-1] Name: mle-npap-vma-u200-1, Bitfile:
/home/release/npapdemo/npap_2x/ci_default/amd_au200_source_full_25g_async.bit, Boot Time: 0
[INFO] 2024-11-29 15:06:01.890 [mle-npap-vma-u200-2] Name: mle-npap-vma-u200-2, Bitfile:
/home/release/npapdemo/npap_2x/ci_default/amd_au200_source_full_25g_async.bit, Boot Time: 0
[INFO] 2024-11-29 15:06:01.890 [mle-npap-vma-switch-1] Ping 192.168.122.1, to check if it's online
[INFO] 2024-11-29 15:06:01.898 [mle-npap-vma-switch-1] Switch is online
[INFO] 2024-11-29 15:06:01.898 [mle-npap-vma-switch-1] Name: mle-npap-vma-switch-1, IP: 192.168.122.1, Boot Time: 0
[INFO] 2024-11-29 15:06:01.899 [mle-npap-vma-u200-1] Powering board
[INFO] 2024-11-29 15:06:02.911 [mle-npap-vma-u200-1] Board powered on
[INFO] 2024-11-29 15:06:02.911 [mle-npap-vma-u200-2] Powering board
[INFO] 2024-11-29 15:06:03.919 [mle-npap-vma-u200-2] Board powered on
[INFO] 2024-11-29 15:06:03.924 [Agent-localhost[0]] Connecting to agent service, localhost:58467
[INFO] 2024-11-29 15:06:04.474 [Agent-localhost[0]]  -stdout- Spawned new Local Agent on Port: 58467
[INFO] 2024-11-29 15:06:04.967 [Agent-localhost[0]] Installed Agent on host [vma-customer1] Running Python Version: Python 3.10.12
[INFO] 2024-11-29 15:06:04.972 [Agent-localhost[0]] Registering Plugin Function ['TcpMonitor', 'activate']
[INFO] 2024-11-29 15:06:04.978 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'getBoard']
[INFO] 2024-11-29 15:06:04.983 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'getNPAPinstance']
[INFO] 2024-11-29 15:06:04.986 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'initialize']
[INFO] 2024-11-29 15:06:04.990 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'readRegister']
[INFO] 2024-11-29 15:06:04.994 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'writeRegister']
[INFO] 2024-11-29 15:06:04.997 [Agent-localhost[0]] Registering Plugin Function ['Netperf', 'setupTest']
[INFO] 2024-11-29 15:06:05.051 [Agent-localhost[0].Plugin[XFCP]] Connecting to Board: mle-npap-vma-u200-1
[INFO] 2024-11-29 15:06:06.495 [Agent-localhost[0].Plugin[XFCP]] Found base wrapper: erd_info_block
[INFO] 2024-11-29 15:06:06.659 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 15:06:06.688 [Agent-localhost[0].Plugin[XFCP]] Found 1 NPAP instances
[INFO] 2024-11-29 15:06:06.832 [Agent-localhost[0].Plugin[XFCP]] Found base wrapper: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 15:06:06.979 [Agent-localhost[0].Plugin[XFCP]] Found block: npap_support_wrapper
[INFO] 2024-11-29 15:06:07.011 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_udp_support_wrapper
[INFO] 2024-11-29 15:06:07.043 [Agent-localhost[0].Plugin[XFCP]] Found block: netperf_support_wrapper
[INFO] 2024-11-29 15:06:07.230 [Agent-localhost[0].Plugin[XFCP]] Found block: netperf_control_application
[INFO] 2024-11-29 15:06:07.346 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_gen_support_wrapper
[INFO] 2024-11-29 15:06:07.407 [Agent-localhost[0].Plugin[XFCP]] Found block: udp_gen_support_wrapper_0
```

```
[INFO] 2024-11-29 15:06:07.523 [Agent-localhost[0].Plugin[XFCP]] Found block: udp_support_wrapper_0
[INFO] 2024-11-29 15:06:07.700 [Agent-localhost[0].Plugin[XFCP]] Found block: udp_demo_application_0
[INFO] 2024-11-29 15:06:07.779 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 15:06:07.907 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_0
[INFO] 2024-11-29 15:06:07.939 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_1
[INFO] 2024-11-29 15:06:07.971 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_2
[INFO] 2024-11-29 15:06:08.003 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_3
[INFO] 2024-11-29 15:06:08.035 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_4
[INFO] 2024-11-29 15:06:08.202 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_4
[INFO] 2024-11-29 15:06:08.253 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_4
[INFO] 2024-11-29 15:06:08.323 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_4
[INFO] 2024-11-29 15:06:08.489 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_3
[INFO] 2024-11-29 15:06:08.549 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_3
[INFO] 2024-11-29 15:06:08.629 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_3
[INFO] 2024-11-29 15:06:08.794 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_2
[INFO] 2024-11-29 15:06:08.845 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_2
[INFO] 2024-11-29 15:06:08.915 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_2
[INFO] 2024-11-29 15:06:09.082 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_1
[INFO] 2024-11-29 15:06:09.153 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_1
[INFO] 2024-11-29 15:06:09.273 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_1
[INFO] 2024-11-29 15:06:09.433 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_0
[INFO] 2024-11-29 15:06:09.486 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_0
[INFO] 2024-11-29 15:06:09.555 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 15:06:09.713 [Agent-localhost[0].Plugin[XFCP]] Found block: npap_configuration_block
[INFO] 2024-11-29 15:06:09.781 [Agent-localhost[0].Plugin[XFCP]] Found block: priority_manager_configuration_block
[INFO] 2024-11-29 15:06:10.249 [Agent-localhost[1]] Connecting to agent service, localhost:40343
[INFO] 2024-11-29 15:06:10.810 [Agent-localhost[1]]  -stdout- Spawned new Local Agent on Port: 40343
[INFO] 2024-11-29 15:06:11.292 [Agent-localhost[1]] Installed Agent on host [vma-customer1] Running Python Version: Python 3.10.12
[INFO] 2024-11-29 15:06:11.297 [Agent-localhost[1]] Registering Plugin Function ['TcpMonitor', 'activate']
[INFO] 2024-11-29 15:06:11.303 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'getBoard']
[INFO] 2024-11-29 15:06:11.308 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'getNPAPinstance']
[INFO] 2024-11-29 15:06:11.316 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'initialize']
[INFO] 2024-11-29 15:06:11.321 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'readRegister']
[INFO] 2024-11-29 15:06:11.325 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'writeRegister']
[INFO] 2024-11-29 15:06:11.328 [Agent-localhost[1]] Registering Plugin Function ['Netperf', 'setupTest']
[INFO] 2024-11-29 15:06:11.383 [Agent-localhost[1].Plugin[XFCP]] Connecting to Board: mle-npap-vma-u200-2
[INFO] 2024-11-29 15:06:12.797 [Agent-localhost[1].Plugin[XFCP]] Found base wrapper: erd_info_block
[INFO] 2024-11-29 15:06:12.961 [Agent-localhost[1].Plugin[XFCP]] Found base wrapper: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 15:06:12.990 [Agent-localhost[1].Plugin[XFCP]] Found 1 NPAP instances
[INFO] 2024-11-29 15:06:13.181 [Agent-localhost[1].Plugin[XFCP]] Found base wrapper: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 15:06:13.328 [Agent-localhost[1].Plugin[XFCP]] Found block: npap_support_wrapper
[INFO] 2024-11-29 15:06:13.386 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_udp_support_wrapper
[INFO] 2024-11-29 15:06:13.408 [Agent-localhost[1].Plugin[XFCP]] Found block: netperf_support_wrapper
[INFO] 2024-11-29 15:06:13.576 [Agent-localhost[1].Plugin[XFCP]] Found block: netperf_control_application
[INFO] 2024-11-29 15:06:13.696 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_gen_support_wrapper
[INFO] 2024-11-29 15:06:13.729 [Agent-localhost[1].Plugin[XFCP]] Found block: udp_gen_support_wrapper_0
[INFO] 2024-11-29 15:06:13.856 [Agent-localhost[1].Plugin[XFCP]] Found block: udp_support_wrapper_0
[INFO] 2024-11-29 15:06:14.032 [Agent-localhost[1].Plugin[XFCP]] Found block: udp_demo_application_0
[INFO] 2024-11-29 15:06:14.143 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 15:06:14.272 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_0
[INFO] 2024-11-29 15:06:14.305 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_1
[INFO] 2024-11-29 15:06:14.337 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_2
[INFO] 2024-11-29 15:06:14.369 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_3
[INFO] 2024-11-29 15:06:14.400 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_4
[INFO] 2024-11-29 15:06:14.566 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_4
[INFO] 2024-11-29 15:06:14.618 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_4
[INFO] 2024-11-29 15:06:14.686 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_4
[INFO] 2024-11-29 15:06:14.854 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_3
[INFO] 2024-11-29 15:06:14.905 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_3
[INFO] 2024-11-29 15:06:14.974 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_3
[INFO] 2024-11-29 15:06:15.142 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_2
[INFO] 2024-11-29 15:06:15.193 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_2
[INFO] 2024-11-29 15:06:15.262 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_2
[INFO] 2024-11-29 15:06:15.430 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_1
[INFO] 2024-11-29 15:06:15.482 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_1
[INFO] 2024-11-29 15:06:15.565 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_1
[INFO] 2024-11-29 15:06:15.715 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_0
[INFO] 2024-11-29 15:06:15.769 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_0
[INFO] 2024-11-29 15:06:15.838 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 15:06:16.029 [Agent-localhost[1].Plugin[XFCP]] Found block: npap_configuration_block
[INFO] 2024-11-29 15:06:16.054 [Agent-localhost[1].Plugin[XFCP]] Found block: priority_manager_configuration_block
--------------------------------------------------------- live log call
----------------------------------------------------------
[INFO] 2024-11-29 15:06:16.537 [test_netperf_b2b] Board: mle-npap-vma-u200-1
------------------
NPAP Instance 0 on mle-npap-vma-u200-1:
IP : 192.168.10.1
MAC: 0x20a35080101
```

```
[INFO] 2024-11-29 15:06:16.616 [test_netperf_b2b] Board: mle-npap-vma-u200-2
-------------------
NPAP Instance 0 on mle-npap-vma-u200-2:
IP : 192.168.10.2
MAC: 0x20a35080102

PASSED
[ 50%]
test_netperf_b2b.py::TestB2B::test_netperfB2B[SETUP_SetupConfig0-SETUP_BitfileDict0-TESTCONFIG_TestConfig0-XFCP_BOARDS_mlenpapvmau
20010-XFCP_BOARDS_mlenpapvmau20020]
------------------------------------------------------------- live log call
-----------------------------------------------------------------
[INFO] 2024-11-29 15:06:16.638 [test_netperf_b2b]
[INFO] 2024-11-29 15:06:16.638 [test_netperf_b2b]   ******** TCP_STREAM ********
[INFO] 2024-11-29 15:06:16.639 [test_netperf_b2b]

[INFO] 2024-11-29 15:06:16.639 [test_netperf_b2b] Doing Netperf TCP_STREAM board to board Test with the following parameters:
[INFO] 2024-11-29 15:06:16.640 [test_netperf_b2b]   Test length: 5 s
[INFO] 2024-11-29 15:06:16.640 [test_netperf_b2b]   Packet size: 1460 bytes
[INFO] 2024-11-29 15:06:16.661 [test_netperf_b2b] Setting up net server on NPAP instance 1:
[INFO] 2024-11-29 15:06:16.662 [test_netperf_b2b]   local_ip: 192.168.10.1
[INFO] 2024-11-29 15:06:16.663 [test_netperf_b2b]   remote_ip: 192.168.10.2
[INFO] 2024-11-29 15:06:16.663 [test_netperf_b2b]   local_control_session_port: 12865
[INFO] 2024-11-29 15:06:16.664 [test_netperf_b2b]   test_session_port: 12866
[INFO] 2024-11-29 15:06:16.798 [test_netperf_b2b] Setting up net client for NPAP instance 2:
[INFO] 2024-11-29 15:06:16.799 [test_netperf_b2b]   local_ip: 192.168.10.2
[INFO] 2024-11-29 15:06:16.800 [test_netperf_b2b]   remote_ip: 192.168.10.1
[INFO] 2024-11-29 15:06:16.800 [test_netperf_b2b]   remote_control_session_port: 12865
[INFO] 2024-11-29 15:06:16.800 [test_netperf_b2b]   test_session_port: 12866
[INFO] 2024-11-29 15:06:16.893 [test_netperf_b2b] Starting test
[INFO] 2024-11-29 15:06:16.988 [test_netperf_b2b] Waiting for test to finish. Should finish in a maximum of 5 s.
[INFO] 2024-11-29 15:06:22.140 [test_netperf_b2b] TCP_STREAM test successful:
[INFO] 2024-11-29 15:06:22.219 [test_netperf_b2b]   Payload size:  1460 bytes
[INFO] 2024-11-29 15:06:22.220 [test_netperf_b2b]   Test time:     5.0 s
[INFO] 2024-11-29 15:06:22.220 [test_netperf_b2b]   Received:      13.9048575 GByte
[INFO] 2024-11-29 15:06:22.221 [test_netperf_b2b]   Throughput RX: 22247.772 MBit/s
[INFO] 2024-11-29 15:06:22.221 [test_netperf_b2b]   Sent:          13.9048575 GByte
[INFO] 2024-11-29 15:06:22.223 [test_netperf_b2b]   Throughput TX: 22247.772 MBit/s

[INFO] 2024-11-29 15:06:22.223 [test_netperf_b2b]
[INFO] 2024-11-29 15:06:22.224 [test_netperf_b2b]   ******** TCP_MAERTS ********
[INFO] 2024-11-29 15:06:22.224 [test_netperf_b2b]

[INFO] 2024-11-29 15:06:22.225 [test_netperf_b2b] Doing Netperf TCP_MAERTS board to board Test with the following parameters:
[INFO] 2024-11-29 15:06:22.225 [test_netperf_b2b]   Test length: 5 s
[INFO] 2024-11-29 15:06:22.225 [test_netperf_b2b]   Packet size: 1460 bytes
[INFO] 2024-11-29 15:06:22.245 [test_netperf_b2b] Setting up net server on NPAP instance 1:
[INFO] 2024-11-29 15:06:22.246 [test_netperf_b2b]   local_ip: 192.168.10.1
[INFO] 2024-11-29 15:06:22.247 [test_netperf_b2b]   remote_ip: 192.168.10.2
[INFO] 2024-11-29 15:06:22.247 [test_netperf_b2b]   local_control_session_port: 12865
[INFO] 2024-11-29 15:06:22.248 [test_netperf_b2b]   test_session_port: 12866
[INFO] 2024-11-29 15:06:22.333 [test_netperf_b2b] Setting up net client for NPAP instance 2:
[INFO] 2024-11-29 15:06:22.335 [test_netperf_b2b]   local_ip: 192.168.10.2
[INFO] 2024-11-29 15:06:22.336 [test_netperf_b2b]   remote_ip: 192.168.10.1
[INFO] 2024-11-29 15:06:22.336 [test_netperf_b2b]   remote_control_session_port: 12865
[INFO] 2024-11-29 15:06:22.337 [test_netperf_b2b]   test_session_port: 12866
[INFO] 2024-11-29 15:06:22.427 [test_netperf_b2b] Starting test
[INFO] 2024-11-29 15:06:22.541 [test_netperf_b2b] Waiting for test to finish. Should finish in a maximum of 5 s.
[INFO] 2024-11-29 15:06:27.675 [test_netperf_b2b] TCP_MAERTS test successful:
[INFO] 2024-11-29 15:06:27.755 [test_netperf_b2b]   Payload size:  1460 bytes
[INFO] 2024-11-29 15:06:27.756 [test_netperf_b2b]   Test time:     5.0 s
[INFO] 2024-11-29 15:06:27.756 [test_netperf_b2b]   Received:      13.90485896 GByte
[INFO] 2024-11-29 15:06:27.756 [test_netperf_b2b]   Throughput RX: 22247.774336 MBit/s
[INFO] 2024-11-29 15:06:27.757 [test_netperf_b2b]   Sent:          13.90485896 GByte
[INFO] 2024-11-29 15:06:27.757 [test_netperf_b2b]   Throughput TX: 22247.774336 MBit/s

[INFO] 2024-11-29 15:06:27.758 [test_netperf_b2b]
[INFO] 2024-11-29 15:06:27.758 [test_netperf_b2b]   ******** TCP_RR ********
[INFO] 2024-11-29 15:06:27.758 [test_netperf_b2b]

[INFO] 2024-11-29 15:06:27.759 [test_netperf_b2b] Doing Netperf TCP_RR board to board Test with the following parameters:
[INFO] 2024-11-29 15:06:27.759 [test_netperf_b2b]   Test length: 5 s
[INFO] 2024-11-29 15:06:27.759 [test_netperf_b2b]   Packet size: 1 bytes
[INFO] 2024-11-29 15:06:27.779 [test_netperf_b2b] Setting up net server on NPAP instance 1:
[INFO] 2024-11-29 15:06:27.780 [test_netperf_b2b]   local_ip: 192.168.10.1
[INFO] 2024-11-29 15:06:27.781 [test_netperf_b2b]   remote_ip: 192.168.10.2
[INFO] 2024-11-29 15:06:27.782 [test_netperf_b2b]   local_control_session_port: 12865
[INFO] 2024-11-29 15:06:27.782 [test_netperf_b2b]   test_session_port: 12866
[INFO] 2024-11-29 15:06:27.917 [test_netperf_b2b] Setting up net client for NPAP instance 2:
```

```
[INFO] 2024-11-29 15:06:27.918 [test_netperf_b2b]   local_ip: 192.168.10.2
[INFO] 2024-11-29 15:06:27.919 [test_netperf_b2b]   remote_ip: 192.168.10.1
[INFO] 2024-11-29 15:06:27.920 [test_netperf_b2b]   remote_control_session_port: 12865
[INFO] 2024-11-29 15:06:27.920 [test_netperf_b2b]   test_session_port: 12866
[INFO] 2024-11-29 15:06:28.043 [test_netperf_b2b] Starting test
[INFO] 2024-11-29 15:06:28.139 [test_netperf_b2b] Waiting for test to finish. Should finish in a maximum of 5 s.
[INFO] 2024-11-29 15:06:33.275 [test_netperf_b2b] TCP_RR test successful:
[INFO] 2024-11-29 15:06:33.341 [test_netperf_b2b]   Received:        1981638 bytes in a time of 4.999999046325684 s
[INFO] 2024-11-29 15:06:33.341 [test_netperf_b2b]   Received:        1981638 calls in a time of 4.999999046325684 s
[INFO] 2024-11-29 15:06:33.341 [test_netperf_b2b]   Payload size:    1 bytes
[INFO] 2024-11-29 15:06:33.342 [test_netperf_b2b]   Transaction rate: 396327.67559350503 Transactions / s
[INFO] 2024-11-29 15:06:33.342 [test_netperf_b2b]   Throughput:      3.17062140474804 MBit/s

[INFO] 2024-11-29 15:06:33.343 [test_netperf_b2b]
[INFO] 2024-11-29 15:06:33.343 [test_netperf_b2b]   ******** UDP_STREAM ********
[INFO] 2024-11-29 15:06:33.343 [test_netperf_b2b]

[INFO] 2024-11-29 15:06:33.344 [test_netperf_b2b]
[INFO] 2024-11-29 15:06:33.344 [test_netperf_b2b]   ******** UDP_RR ********
[INFO] 2024-11-29 15:06:33.344 [test_netperf_b2b]

PASSED
[100%]
--------------------------------------------------------- live log teardown
-------------------------------------------------------------
[INFO] 2024-11-29 15:06:33.348 [base.NpapWorkspace] Terminated Local Agent Service with pid 2995
[INFO] 2024-11-29 15:06:33.349 [base.NpapWorkspace] Terminated Local Agent Service with pid 3755
[WARNING] 2024-11-29 15:06:33.351 [WORKSPACE] Failed to copy .report.json: [Errno 2] No such file or directory: '.report.json',
try to copy .report.json via subprocess cp
[INFO] 2024-11-29 15:06:33.353 [WORKSPACE] Log-Files copied to: /home/customer/npapdemo-test/pytest/reports/report-20241129-150559


========================================================= warnings summary
=========================================================
[...]
============================================================== PASSES
=============================================================
_____ TestB2B.test_enumBoard[SETUP_SetupConfig0-SETUP_BitfileDict0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_mlenpapvmau20020]
_____
-------------------------------------------------------- Captured stdout setup
---------------------------------------------------------
PING 192.168.122.1 (192.168.122.1) 56(84) bytes of data.
64 bytes from 192.168.122.1: icmp_seq=1 ttl=64 time=0.248 ms

--- 192.168.122.1 ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 0.248/0.248/0.248/0.000 ms
_
TestB2B.test_netperfB2B[SETUP_SetupConfig0-SETUP_BitfileDict0-TESTCONFIG_TestConfig0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_mlen
papvmau20020] _
---------------------------------- generated xml file: /home/customer/npapdemo-test/pytest/junit.xml
-----------------------------------
--------------- generated html file: file:///home/customer/npapdemo-test/pytest/reports/report-20241129-150559/log.html
-----------------
------------------------------------------------------------ JSON report
-------------------------------------------------------------
report saved to: .report.json
======================================================== short test summary info
==================================================
PASSED
test_netperf_b2b.py::TestB2B::test_enumBoard[SETUP_SetupConfig0-SETUP_BitfileDict0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_mlenpa
pvmau20020]
PASSED
test_netperf_b2b.py::TestB2B::test_netperfB2B[SETUP_SetupConfig0-SETUP_BitfileDict0-TESTCONFIG_TestConfig0-XFCP_BOARDS_mlenpapvmau
20010-XFCP_BOARDS_mlenpapvmau20020]
===================================================== 2 passed, 6 warnings in 33.43s
==================================================
```

test 1: board-to-board, latency

```
(venv) customer@vma-customer1:~$ npap-run-test 1
~/npapdemo-test/pytest ~
already acquired place mle-npap-vma-u200-1
already acquired place mle-npap-vma-u200-2
[INFO] 2024-11-29 15:06:37,077 [BRINGUP::acquirePlaces()] labgrid-client: place mle-npap-vma-u200-1 is already acquired by
vma-customer1/customer
[INFO] 2024-11-29 15:06:37,079 [BRINGUP::acquirePlaces()] labgrid-client: place mle-npap-vma-u200-2 is already acquired by
vma-customer1/customer
[INFO] 2024-11-29 15:06:37,103 [BRINGUP::pytest_configure()] Using Environment Version: 1.2.0
[INFO] 2024-11-29 15:06:37,103 [BRINGUP::pytest_configure()] Installed Plugin Versions: {'PluginTemplate': '0.0.0', 'XFCP':
'1.0.1'}
[INFO] 2024-11-29 15:06:37,103 [BRINGUP::pytest_configure()] Deactivated Plugins: ['ScapyTcpSession', 'Demo', 'PvLoopback']
[INFO] 2024-11-29 15:06:37,103 [BRINGUP::pytest_configure()] Activated Plugins: ['PluginTemplate', 'TcpMonitor', 'XFCP',
'Netperf']
=========================================================== test session starts
========================================================
platform linux -- Python 3.10.12, pytest-6.2.5, py-1.11.0, pluggy-1.5.0
rootdir: /home/customer/npapdemo-test/pytest, configfile: pytest.ini
plugins: cocotb-test-0.2.4, dependency-0.6.0, metadata-2.0.4, env-0.6.2, logger-1.1.1, rng-1.0.0, ordering-0.6, html-3.2.0,
json-report-1.5.0, labgrid-0.3.4.dev4+gbe4d713f
collecting ... ['setupBoards', 'npap', 'env', 'XFCP_BOARDS', 'npap_session', 'pytestconfig', 'record_testsuite_property',
'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig', 'SETUP_BitfileDict',
'request']
['setupBoards', 'npap', 'env', 'XFCP_BOARDS', 'npap_session', 'pytestconfig', 'record_testsuite_property',
'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig', 'SETUP_BitfileDict',
'request']
['setupBoards', 'TESTCONFIG', 'npap', 'env', 'XFCP_BOARDS', 'TESTCONFIG_TestConfig', 'npap_session', 'pytestconfig',
'record_testsuite_property', 'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig',
'SETUP_BitfileDict', 'request']
['setupBoards', 'TESTCONFIG', 'npap', 'env', 'XFCP_BOARDS', 'TESTCONFIG_TestConfig', 'npap_session', 'pytestconfig',
'record_testsuite_property', 'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig',
'SETUP_BitfileDict', 'request']
['setupBoards', 'TESTCONFIG', 'npap', 'env', 'XFCP_BOARDS', 'TESTCONFIG_TestConfig', 'npap_session', 'pytestconfig',
'record_testsuite_property', 'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig',
'SETUP_BitfileDict', 'request']
collected 2 items

test_latency_b2b_tcp.py::TestB2B::test_enumBoard[SETUP_SetupConfig0-SETUP_BitfileDict0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_ml
enpapvmau20020]
------------------------------------------------------------- live log setup
-------------------------------------------------------------
[INFO] 2024-11-29 15:06:37.182 [base.NpapWorkspace] Setup Configuration: load bitfiles: False, turn off boards: False, turn off
clients: False, skip release stage: False
[INFO] 2024-11-29 15:06:37.786 [mle-npap-vma-u200-1] Name: mle-npap-vma-u200-1, Bitfile:
/home/release/npapdemo/npap_2x/ci_default/amd_au200_source_full_25g_async.bit, Boot Time: 0
[INFO] 2024-11-29 15:06:38.390 [mle-npap-vma-u200-2] Name: mle-npap-vma-u200-2, Bitfile:
/home/release/npapdemo/npap_2x/ci_default/amd_au200_source_full_25g_async.bit, Boot Time: 0
[INFO] 2024-11-29 15:06:38.391 [mle-npap-vma-switch-1] Ping 192.168.122.1, to check if it's online
[INFO] 2024-11-29 15:06:38.398 [mle-npap-vma-switch-1] Switch is online
[INFO] 2024-11-29 15:06:38.398 [mle-npap-vma-switch-1] Name: mle-npap-vma-switch-1, IP: 192.168.122.1, Boot Time: 0
[INFO] 2024-11-29 15:06:38.399 [mle-npap-vma-u200-1] Powering board
[INFO] 2024-11-29 15:06:39.412 [mle-npap-vma-u200-1] Board powered on
[INFO] 2024-11-29 15:06:39.412 [mle-npap-vma-u200-2] Powering board
[INFO] 2024-11-29 15:06:40.419 [mle-npap-vma-u200-2] Board powered on
[INFO] 2024-11-29 15:06:40.423 [Agent-localhost[0]] Connecting to agent service, localhost:60899
[INFO] 2024-11-29 15:06:40.982 [Agent-localhost[0]]  -stdout- Spawned new Local Agent on Port: 60899
[INFO] 2024-11-29 15:06:41.466 [Agent-localhost[0]] Installed Agent on host [vma-customer1] Running Python Version: Python 3.10.12
[INFO] 2024-11-29 15:06:41.471 [Agent-localhost[0]] Registering Plugin Function ['TcpMonitor', 'activate']
[INFO] 2024-11-29 15:06:41.477 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'getBoard']
[INFO] 2024-11-29 15:06:41.482 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'getNPAPinstance']
[INFO] 2024-11-29 15:06:41.486 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'initialize']
[INFO] 2024-11-29 15:06:41.490 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'readRegister']
[INFO] 2024-11-29 15:06:41.494 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'writeRegister']
[INFO] 2024-11-29 15:06:41.498 [Agent-localhost[0]] Registering Plugin Function ['Netperf', 'setupTest']
[INFO] 2024-11-29 15:06:41.550 [Agent-localhost[0].Plugin[XFCP]] Connecting to Board: mle-npap-vma-u200-1
[INFO] 2024-11-29 15:06:42.989 [Agent-localhost[0].Plugin[XFCP]] Found base wrapper: erd_info_block
[INFO] 2024-11-29 15:06:43.151 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 15:06:43.181 [Agent-localhost[0].Plugin[XFCP]] Found 1 NPAP instances
[INFO] 2024-11-29 15:06:43.374 [Agent-localhost[0].Plugin[XFCP]] Found base wrapper: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 15:06:43.568 [Agent-localhost[0].Plugin[XFCP]] Found block: npap_support_wrapper
[INFO] 2024-11-29 15:06:43.600 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_udp_support_wrapper
[INFO] 2024-11-29 15:06:43.633 [Agent-localhost[0].Plugin[XFCP]] Found block: netperf_support_wrapper
[INFO] 2024-11-29 15:06:43.802 [Agent-localhost[0].Plugin[XFCP]] Found block: netperf_control_application
[INFO] 2024-11-29 15:06:43.920 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_gen_support_wrapper
[INFO] 2024-11-29 15:06:43.953 [Agent-localhost[0].Plugin[XFCP]] Found block: udp_gen_support_wrapper_0
```

```
[INFO] 2024-11-29 15:06:44.096 [Agent-localhost[0].Plugin[XFCP]] Found block: udp_support_wrapper_0
[INFO] 2024-11-29 15:06:44.272 [Agent-localhost[0].Plugin[XFCP]] Found block: udp_demo_application_0
[INFO] 2024-11-29 15:06:44.352 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 15:06:44.480 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_0
[INFO] 2024-11-29 15:06:44.513 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_1
[INFO] 2024-11-29 15:06:44.544 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_2
[INFO] 2024-11-29 15:06:44.577 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_3
[INFO] 2024-11-29 15:06:44.608 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_4
[INFO] 2024-11-29 15:06:44.774 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_4
[INFO] 2024-11-29 15:06:44.826 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_4
[INFO] 2024-11-29 15:06:44.912 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_4
[INFO] 2024-11-29 15:06:45.077 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_3
[INFO] 2024-11-29 15:06:45.130 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_3
[INFO] 2024-11-29 15:06:45.198 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_3
[INFO] 2024-11-29 15:06:45.366 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_2
[INFO] 2024-11-29 15:06:45.418 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_2
[INFO] 2024-11-29 15:06:45.488 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_2
[INFO] 2024-11-29 15:06:45.654 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_1
[INFO] 2024-11-29 15:06:45.723 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_1
[INFO] 2024-11-29 15:06:45.789 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_1
[INFO] 2024-11-29 15:06:45.942 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_0
[INFO] 2024-11-29 15:06:45.994 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_0
[INFO] 2024-11-29 15:06:46.064 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 15:06:46.222 [Agent-localhost[0].Plugin[XFCP]] Found block: npap_configuration_block
[INFO] 2024-11-29 15:06:46.289 [Agent-localhost[0].Plugin[XFCP]] Found block: priority_manager_configuration_block
[INFO] 2024-11-29 15:06:46.774 [Agent-localhost[1]] Connecting to agent service, localhost:53359
[INFO] 2024-11-29 15:06:47.335 [Agent-localhost[1]]  -stdout- Spawned new Local Agent on Port: 53359
[INFO] 2024-11-29 15:06:47.815 [Agent-localhost[1]] Installed Agent on host [vma-customer1] Running Python Version: Python 3.10.12
[INFO] 2024-11-29 15:06:47.819 [Agent-localhost[1]] Registering Plugin Function ['TcpMonitor', 'activate']
[INFO] 2024-11-29 15:06:47.823 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'getBoard']
[INFO] 2024-11-29 15:06:47.828 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'getNPAPinstance']
[INFO] 2024-11-29 15:06:47.831 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'initialize']
[INFO] 2024-11-29 15:06:47.835 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'readRegister']
[INFO] 2024-11-29 15:06:47.839 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'writeRegister']
[INFO] 2024-11-29 15:06:47.842 [Agent-localhost[1]] Registering Plugin Function ['Netperf', 'setupTest']
[INFO] 2024-11-29 15:06:47.894 [Agent-localhost[1].Plugin[XFCP]] Connecting to Board: mle-npap-vma-u200-2
[INFO] 2024-11-29 15:06:49.308 [Agent-localhost[1].Plugin[XFCP]] Found base wrapper: erd_info_block
[INFO] 2024-11-29 15:06:49.471 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 15:06:49.500 [Agent-localhost[1].Plugin[XFCP]] Found 1 NPAP instances
[INFO] 2024-11-29 15:06:49.691 [Agent-localhost[1].Plugin[XFCP]] Found base wrapper: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 15:06:49.839 [Agent-localhost[1].Plugin[XFCP]] Found block: npap_support_wrapper
[INFO] 2024-11-29 15:06:49.871 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_udp_support_wrapper
[INFO] 2024-11-29 15:06:49.903 [Agent-localhost[1].Plugin[XFCP]] Found block: netperf_support_wrapper
[INFO] 2024-11-29 15:06:50.071 [Agent-localhost[1].Plugin[XFCP]] Found block: netperf_control_application
[INFO] 2024-11-29 15:06:50.207 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_gen_support_wrapper
[INFO] 2024-11-29 15:06:50.266 [Agent-localhost[1].Plugin[XFCP]] Found block: udp_gen_support_wrapper_0
[INFO] 2024-11-29 15:06:50.383 [Agent-localhost[1].Plugin[XFCP]] Found block: udp_support_wrapper_0
[INFO] 2024-11-29 15:06:50.559 [Agent-localhost[1].Plugin[XFCP]] Found block: udp_demo_application_0
[INFO] 2024-11-29 15:06:50.638 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 15:06:50.767 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_0
[INFO] 2024-11-29 15:06:50.799 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_1
[INFO] 2024-11-29 15:06:50.859 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_2
[INFO] 2024-11-29 15:06:50.879 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_3
[INFO] 2024-11-29 15:06:50.911 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_4
[INFO] 2024-11-29 15:06:51.077 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_4
[INFO] 2024-11-29 15:06:51.129 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_4
[INFO] 2024-11-29 15:06:51.197 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_4
[INFO] 2024-11-29 15:06:51.364 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_3
[INFO] 2024-11-29 15:06:51.417 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_3
[INFO] 2024-11-29 15:06:51.485 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_3
[INFO] 2024-11-29 15:06:51.662 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_2
[INFO] 2024-11-29 15:06:51.753 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_2
[INFO] 2024-11-29 15:06:51.822 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_2
[INFO] 2024-11-29 15:06:51.989 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_1
[INFO] 2024-11-29 15:06:52.041 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_1
[INFO] 2024-11-29 15:06:52.124 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_1
[INFO] 2024-11-29 15:06:52.277 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_0
[INFO] 2024-11-29 15:06:52.329 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_0
[INFO] 2024-11-29 15:06:52.398 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 15:06:52.555 [Agent-localhost[1].Plugin[XFCP]] Found block: npap_configuration_block
[INFO] 2024-11-29 15:06:52.581 [Agent-localhost[1].Plugin[XFCP]] Found block: priority_manager_configuration_block
------------------------------------------------------------- live log call
-------------------------------------------------------------
[INFO] 2024-11-29 15:06:53.043 [test_latency_b2b_tcp] Board: mle-npap-vma-u200-1
------------------
NPAP Instance 0 on mle-npap-vma-u200-1:
IP : 192.168.10.1
MAC: 0x20a35080101
```

```
PASSED
[ 50%]
test_latency_b2b_tcp.py::TestB2B::test_latencyB2B[SETUP_SetupConfig0-SETUP_BitfileDict0-TESTCONFIG_TestConfig0-XFCP_BOARDS_mlenpap
vmau20010-XFCP_BOARDS_mlenpapvmau20020]
--------------------------------------------------------- live log call
-------------------------------------------------------------
[INFO] 2024-11-29 15:06:53.127 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 1
[INFO] 2024-11-29 15:06:54.686 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:06:54.716 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:06:55.306 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:06:55.434 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 1: 2.505 us.

[INFO] 2024-11-29 15:06:55.435 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 2
[INFO] 2024-11-29 15:06:56.685 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:06:56.716 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:06:57.338 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:06:57.434 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 2: 2.495 us.

[INFO] 2024-11-29 15:06:57.434 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 5
[INFO] 2024-11-29 15:06:58.669 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:06:58.701 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:06:59.274 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:06:59.370 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 5: 2.505 us.

[INFO] 2024-11-29 15:06:59.370 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 10
[INFO] 2024-11-29 15:07:00.605 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:00.636 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:01.194 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:01.290 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 10: 2.505 us.

[INFO] 2024-11-29 15:07:01.290 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 30
[INFO] 2024-11-29 15:07:02.525 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:02.556 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:03.146 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:03.274 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 30: 2.55 us.

[INFO] 2024-11-29 15:07:03.274 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 50
[INFO] 2024-11-29 15:07:04.526 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:04.556 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:05.097 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:05.210 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 50: 2.595 us.

[INFO] 2024-11-29 15:07:05.210 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 70
[INFO] 2024-11-29 15:07:06.445 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:06.506 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:07.177 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:07.306 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 70: 2.635 us.

[INFO] 2024-11-29 15:07:07.306 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 90
[INFO] 2024-11-29 15:07:08.541 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:08.572 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:09.129 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:09.225 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 90: 2.725 us.

[INFO] 2024-11-29 15:07:09.226 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 150
[INFO] 2024-11-29 15:07:10.461 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:10.493 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:11.065 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:11.161 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 150: 2.82 us.

[INFO] 2024-11-29 15:07:11.162 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 300
[INFO] 2024-11-29 15:07:12.397 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:12.428 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:12.969 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:13.067 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 300: 3.05 us.

[INFO] 2024-11-29 15:07:13.067 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 450
[INFO] 2024-11-29 15:07:14.317 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:14.348 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:14.969 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:15.067 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 450: 3.305 us.

[INFO] 2024-11-29 15:07:15.072 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 600
[INFO] 2024-11-29 15:07:16.316 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:16.348 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:16.953 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:17.050 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 600: 3.53 us.

[INFO] 2024-11-29 15:07:17.051 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 750
```

```
[INFO] 2024-11-29 15:07:18.301 [test_latency_b2b_tcp]    Active session: Connection established
[INFO] 2024-11-29 15:07:18.331 [test_latency_b2b_tcp]    Passive session: Connection established
[INFO] 2024-11-29 15:07:18.873 [test_latency_b2b_tcp]    Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:18.971 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 750: 3.77 us.

[INFO] 2024-11-29 15:07:18.971 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 900
[INFO] 2024-11-29 15:07:20.220 [test_latency_b2b_tcp]    Active session: Connection established
[INFO] 2024-11-29 15:07:20.252 [test_latency_b2b_tcp]    Passive session: Connection established
[INFO] 2024-11-29 15:07:20.890 [test_latency_b2b_tcp]    Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:20.986 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 900: 4.015 us.

[INFO] 2024-11-29 15:07:20.987 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 1000
[INFO] 2024-11-29 15:07:22.236 [test_latency_b2b_tcp]    Active session: Connection established
[INFO] 2024-11-29 15:07:22.267 [test_latency_b2b_tcp]    Passive session: Connection established
[INFO] 2024-11-29 15:07:22.857 [test_latency_b2b_tcp]    Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:22.954 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 1000: 4.165 us.

[INFO] 2024-11-29 15:07:22.955 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 1200
[INFO] 2024-11-29 15:07:24.188 [test_latency_b2b_tcp]    Active session: Connection established
[INFO] 2024-11-29 15:07:24.220 [test_latency_b2b_tcp]    Passive session: Connection established
[INFO] 2024-11-29 15:07:24.778 [test_latency_b2b_tcp]    Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:24.874 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 1200: 4.48 us.

[INFO] 2024-11-29 15:07:24.875 [test_latency_b2b_tcp] Latency test with 1 number of frames and packet size: 1400
[INFO] 2024-11-29 15:07:26.108 [test_latency_b2b_tcp]    Active session: Connection established
[INFO] 2024-11-29 15:07:26.140 [test_latency_b2b_tcp]    Passive session: Connection established
[INFO] 2024-11-29 15:07:26.681 [test_latency_b2b_tcp]    Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:26.778 [test_latency_b2b_tcp] Round-Trip latency for 1 frames with packet size 1400: 4.79 us.

[INFO] 2024-11-29 15:07:26.778 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 1
[INFO] 2024-11-29 15:07:28.028 [test_latency_b2b_tcp]    Active session: Connection established
[INFO] 2024-11-29 15:07:28.060 [test_latency_b2b_tcp]    Passive session: Connection established
[INFO] 2024-11-29 15:07:28.600 [test_latency_b2b_tcp]    Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:28.697 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 1: 7041.975 us.

[INFO] 2024-11-29 15:07:28.697 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 2
[INFO] 2024-11-29 15:07:29.948 [test_latency_b2b_tcp]    Active session: Connection established
[INFO] 2024-11-29 15:07:29.979 [test_latency_b2b_tcp]    Passive session: Connection established
[INFO] 2024-11-29 15:07:30.520 [test_latency_b2b_tcp]    Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:30.617 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 2: 7042.025 us.

[INFO] 2024-11-29 15:07:30.617 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 5
[INFO] 2024-11-29 15:07:31.867 [test_latency_b2b_tcp]    Active session: Connection established
[INFO] 2024-11-29 15:07:31.899 [test_latency_b2b_tcp]    Passive session: Connection established
[INFO] 2024-11-29 15:07:32.456 [test_latency_b2b_tcp]    Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:32.552 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 5: 7042.005 us.

[INFO] 2024-11-29 15:07:32.553 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 10
[INFO] 2024-11-29 15:07:33.787 [test_latency_b2b_tcp]    Active session: Connection established
[INFO] 2024-11-29 15:07:33.819 [test_latency_b2b_tcp]    Passive session: Connection established
[INFO] 2024-11-29 15:07:34.376 [test_latency_b2b_tcp]    Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:34.472 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 10: 7041.855 us.

[INFO] 2024-11-29 15:07:34.473 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 30
[INFO] 2024-11-29 15:07:35.708 [test_latency_b2b_tcp]    Active session: Connection established
[INFO] 2024-11-29 15:07:35.738 [test_latency_b2b_tcp]    Passive session: Connection established
[INFO] 2024-11-29 15:07:36.328 [test_latency_b2b_tcp]    Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:36.424 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 30: 8033.86 us.

[INFO] 2024-11-29 15:07:36.425 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 50
[INFO] 2024-11-29 15:07:37.676 [test_latency_b2b_tcp]    Active session: Connection established
[INFO] 2024-11-29 15:07:37.706 [test_latency_b2b_tcp]    Passive session: Connection established
[INFO] 2024-11-29 15:07:38.248 [test_latency_b2b_tcp]    Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:38.344 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 50: 8536.71 us.

[INFO] 2024-11-29 15:07:38.345 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 70
[INFO] 2024-11-29 15:07:39.580 [test_latency_b2b_tcp]    Active session: Connection established
[INFO] 2024-11-29 15:07:39.611 [test_latency_b2b_tcp]    Passive session: Connection established
[INFO] 2024-11-29 15:07:40.184 [test_latency_b2b_tcp]    Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:40.322 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 70: 9029.82 us.

[INFO] 2024-11-29 15:07:40.322 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 90
[INFO] 2024-11-29 15:07:41.564 [test_latency_b2b_tcp]    Active session: Connection established
[INFO] 2024-11-29 15:07:41.595 [test_latency_b2b_tcp]    Passive session: Connection established
[INFO] 2024-11-29 15:07:42.184 [test_latency_b2b_tcp]    Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:42.280 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 90: 9533.47 us.

[INFO] 2024-11-29 15:07:42.281 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 150
[INFO] 2024-11-29 15:07:43.532 [test_latency_b2b_tcp]    Active session: Connection established
```

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[INFO] 2024-11-29 15:07:43.563 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:44.104 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:44.200 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 150: 11519.1 us.

[INFO] 2024-11-29 15:07:44.200 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 300
[INFO] 2024-11-29 15:07:45.436 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:45.467 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:46.040 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:46.136 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 300: 16016.355 us.

[INFO] 2024-11-29 15:07:46.136 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 450
[INFO] 2024-11-29 15:07:47.388 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:47.418 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:48.055 [test_latency_b2b_tcp]   Generating data. Gen Packet Counter: 100001
[INFO] 2024-11-29 15:07:48.359 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:48.456 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 450: 21014.495 us.

[INFO] 2024-11-29 15:07:48.456 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 600
[INFO] 2024-11-29 15:07:49.691 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:49.722 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:50.295 [test_latency_b2b_tcp]   Generating data. Gen Packet Counter: 100001
[INFO] 2024-11-29 15:07:50.599 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:50.696 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 600: 25513.665 us.

[INFO] 2024-11-29 15:07:50.696 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 750
[INFO] 2024-11-29 15:07:51.932 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:51.962 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:52.578 [test_latency_b2b_tcp]   Generating data. Gen Packet Counter: 100001
[INFO] 2024-11-29 15:07:52.887 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:52.983 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 750: 30513.355 us.

[INFO] 2024-11-29 15:07:52.984 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 900
[INFO] 2024-11-29 15:07:54.219 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:54.250 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:54.839 [test_latency_b2b_tcp]   Generating data. Gen Packet Counter: 100001
[INFO] 2024-11-29 15:07:55.143 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:55.239 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 900: 35013.01 us.

[INFO] 2024-11-29 15:07:55.240 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 1000
[INFO] 2024-11-29 15:07:56.475 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:56.506 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:57.079 [test_latency_b2b_tcp]   Generating data. Gen Packet Counter: 100001
[INFO] 2024-11-29 15:07:57.383 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:57.495 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 1000: 38012.67 us.

[INFO] 2024-11-29 15:07:57.496 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 1200
[INFO] 2024-11-29 15:07:58.731 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:07:58.762 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:07:59.367 [test_latency_b2b_tcp]   Generating data. Gen Packet Counter: 100001
[INFO] 2024-11-29 15:07:59.671 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:07:59.767 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 1200: 44512.95 us.

[INFO] 2024-11-29 15:07:59.768 [test_latency_b2b_tcp] Latency test with 100001 number of frames and packet size: 1400
[INFO] 2024-11-29 15:08:01.002 [test_latency_b2b_tcp]   Active session: Connection established
[INFO] 2024-11-29 15:08:01.033 [test_latency_b2b_tcp]   Passive session: Connection established
[INFO] 2024-11-29 15:08:01.607 [test_latency_b2b_tcp]   Generating data. Gen Packet Counter: 100001
[INFO] 2024-11-29 15:08:01.911 [test_latency_b2b_tcp]   Succesfully Transmitted Data
[INFO] 2024-11-29 15:08:02.007 [test_latency_b2b_tcp] Round-Trip latency for 100001 frames with packet size 1400: 50512.845 us.

PASSED
[100%]
---------------------------------------------------------- live log teardown
------------------------------------------------------------
[INFO] 2024-11-29 15:08:02.020 [base.NpapWorkspace] Terminated Local Agent Service with pid 4859
[INFO] 2024-11-29 15:08:02.021 [base.NpapWorkspace] Terminated Local Agent Service with pid 5619
[INFO] 2024-11-29 15:08:02.044 [WORKSPACE] Log-Files copied to: /home/customer/npapdemo-test/pytest/reports/report-20241129-150636


=========================================================== warnings summary
=============================================================
[...]
============================================================= PASSES
=============================================================
_____ TestB2B.test_enumBoard[SETUP_SetupConfig0-SETUP_BitfileDict0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_mlenpapvmau20020]
_____
---------------------------------------------------- Captured stdout setup
----------------------------------------------------------
PING 192.168.122.1 (192.168.122.1) 56(84) bytes of data.
64 bytes from 192.168.122.1: icmp_seq=1 ttl=64 time=0.311 ms
```

```
--- 192.168.122.1 ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 0.311/0.311/0.311/0.000 ms
_
TestB2B.test_latencyB2B[SETUP_SetupConfig0-SETUP_BitfileDict0-TESTCONFIG_TestConfig0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_mlen
papvmau20020] _
--------------------------------- generated xml file: /home/customer/npapdemo-test/pytest/junit.xml
-----------------------------------
---------------- generated html file: file:///home/customer/npapdemo-test/pytest/reports/report-20241129-150636/log.html
-----------------
------------------------------------------------------------ JSON report
------------------------------------------------------------
report saved to: .report.json
=================================================== short test summary info
===================================================
PASSED
test_latency_b2b_tcp.py::TestB2B::test_enumBoard[SETUP_SetupConfig0-SETUP_BitfileDict0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_ml
enpapvmau20020]
PASSED
test_latency_b2b_tcp.py::TestB2B::test_latencyB2B[SETUP_SetupConfig0-SETUP_BitfileDict0-TESTCONFIG_TestConfig0-XFCP_BOARDS_mlenpap
vmau20010-XFCP_BOARDS_mlenpapvmau20020]
=================================================== 2 passed, 6 warnings in 85.72s (0:01:25)
===================================================
```

test 2: board-to-board, data integrity

```
(venv) customer@vma-customer1:~$ npap-run-test 2
~/npapdemo-test/pytest ~
already acquired place mle-npap-vma-u200-1
already acquired place mle-npap-vma-u200-2
[INFO] 2024-11-29 15:08:05,581 [BRINGUP::acquirePlaces()] labgrid-client: place mle-npap-vma-u200-1 is already acquired by
vma-customer1/customer
[INFO] 2024-11-29 15:08:05,727 [BRINGUP::acquirePlaces()] labgrid-client: place mle-npap-vma-u200-2 is already acquired by
vma-customer1/customer
[INFO] 2024-11-29 15:08:05,790 [BRINGUP::pytest_configure()] Using Environment Version: 1.2.0
[INFO] 2024-11-29 15:08:05,790 [BRINGUP::pytest_configure()] Installed Plugin Versions: {'PluginTemplate': '0.0.0', 'XFCP':
'1.0.1'}
[INFO] 2024-11-29 15:08:05,790 [BRINGUP::pytest_configure()] Deactivated Plugins: ['ScapyTcpSession', 'Demo', 'PvLoopback']
[INFO] 2024-11-29 15:08:05,791 [BRINGUP::pytest_configure()] Activated Plugins: ['PluginTemplate', 'TcpMonitor', 'XFCP',
'Netperf']
======================================================== test session starts
========================================================
platform linux -- Python 3.10.12, pytest-6.2.5, py-1.11.0, pluggy-1.5.0
rootdir: /home/customer/npapdemo-test/pytest, configfile: pytest.ini
plugins: cocotb-test-0.2.4, dependency-0.6.0, metadata-2.0.4, env-0.6.2, logger-1.1.1, rng-1.0.0, ordering-0.6, html-3.2.0,
json-report-1.5.0, labgrid-0.3.4.dev4+gbe4d713f
collecting ... ['setupBoards', 'npap', 'env', 'XFCP_BOARDS', 'npap_session', 'pytestconfig', 'record_testsuite_property',
'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig', 'SETUP_BitfileDict',
'request']
['setupBoards', 'npap', 'env', 'XFCP_BOARDS', 'npap_session', 'pytestconfig', 'record_testsuite_property',
'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig', 'SETUP_BitfileDict',
'request']
['setupBoards', 'TESTCONFIG', 'npap', 'env', 'XFCP_BOARDS', 'TESTCONFIG_TestConfig', 'npap_session', 'pytestconfig',
'record_testsuite_property', 'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig',
'SETUP_BitfileDict', 'request']
['setupBoards', 'TESTCONFIG', 'npap', 'env', 'XFCP_BOARDS', 'TESTCONFIG_TestConfig', 'npap_session', 'pytestconfig',
'record_testsuite_property', 'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig',
'SETUP_BitfileDict', 'request']
['setupBoards', 'TESTCONFIG', 'npap', 'env', 'XFCP_BOARDS', 'TESTCONFIG_TestConfig', 'npap_session', 'pytestconfig',
'record_testsuite_property', 'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig',
'SETUP_BitfileDict', 'request']
collected 2 items

test_tcp_b2b.py::TestB2B::test_enumBoard[SETUP_SetupConfig0-SETUP_BitfileDict0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_mlenpapvma
u20020]
------------------------------------------------------------ live log setup
------------------------------------------------------------
[INFO] 2024-11-29 15:08:05.875 [base.NpapWorkspace] Setup Configuration: load bitfiles: False, turn off boards: False, turn off
clients: False, skip release stage: False
[INFO] 2024-11-29 15:08:06.479 [mle-npap-vma-u200-1] Name: mle-npap-vma-u200-1, Bitfile:
/home/release/npapdemo/npap_2x/ci_default/amd_au200_source_full_25g_async.bit, Boot Time: 0
[INFO] 2024-11-29 15:08:07.083 [mle-npap-vma-u200-2] Name: mle-npap-vma-u200-2, Bitfile:
/home/release/npapdemo/npap_2x/ci_default/amd_au200_source_full_25g_async.bit, Boot Time: 0
[INFO] 2024-11-29 15:08:07.084 [mle-npap-vma-switch-1] Ping 192.168.122.1, to check if it's online
[INFO] 2024-11-29 15:08:07.089 [mle-npap-vma-switch-1] Switch is online
[INFO] 2024-11-29 15:08:07.089 [mle-npap-vma-switch-1] Name: mle-npap-vma-switch-1, IP: 192.168.122.1, Boot Time: 0
[INFO] 2024-11-29 15:08:07.090 [mle-npap-vma-u200-1] Powering board
[INFO] 2024-11-29 15:08:08.101 [mle-npap-vma-u200-1] Board powered on
[INFO] 2024-11-29 15:08:08.101 [mle-npap-vma-u200-2] Powering board
[INFO] 2024-11-29 15:08:09.108 [mle-npap-vma-u200-2] Board powered on
[INFO] 2024-11-29 15:08:09.112 [Agent-localhost[0]] Connecting to agent service, localhost:43871
[INFO] 2024-11-29 15:08:09.667 [Agent-localhost[0]]  -stdout- Spawned new Local Agent on Port: 43871
[INFO] 2024-11-29 15:08:10.155 [Agent-localhost[0]] Installed Agent on host [vma-customer1] Running Python Version: Python 3.10.12
[INFO] 2024-11-29 15:08:10.161 [Agent-localhost[0]] Registering Plugin Function ['TcpMonitor', 'activate']
[INFO] 2024-11-29 15:08:10.167 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'getBoard']
[INFO] 2024-11-29 15:08:10.172 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'getNPAPinstance']
[INFO] 2024-11-29 15:08:10.176 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'initialize']
[INFO] 2024-11-29 15:08:10.181 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'readRegister']
[INFO] 2024-11-29 15:08:10.185 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'writeRegister']
[INFO] 2024-11-29 15:08:10.189 [Agent-localhost[0]] Registering Plugin Function ['Netperf', 'setupTest']
[INFO] 2024-11-29 15:08:10.255 [Agent-localhost[0].Plugin[XFCP]] Connecting to Board: mle-npap-vma-u200-1
[INFO] 2024-11-29 15:08:11.668 [Agent-localhost[0].Plugin[XFCP]] Found base wrapper: erd_info_block
[INFO] 2024-11-29 15:08:11.831 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 15:08:11.860 [Agent-localhost[0].Plugin[XFCP]] Found 1 NPAP instances
[INFO] 2024-11-29 15:08:12.052 [Agent-localhost[0].Plugin[XFCP]] Found base wrapper: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 15:08:12.295 [Agent-localhost[0].Plugin[XFCP]] Found block: npap_support_wrapper
[INFO] 2024-11-29 15:08:12.327 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_udp_support_wrapper
[INFO] 2024-11-29 15:08:12.359 [Agent-localhost[0].Plugin[XFCP]] Found block: netperf_support_wrapper
[INFO] 2024-11-29 15:08:12.529 [Agent-localhost[0].Plugin[XFCP]] Found block: netperf_control_application
[INFO] 2024-11-29 15:08:12.647 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_gen_support_wrapper
[INFO] 2024-11-29 15:08:12.680 [Agent-localhost[0].Plugin[XFCP]] Found block: udp_gen_support_wrapper_0
```

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[INFO] 2024-11-29 15:08:12.807 [Agent-localhost[0].Plugin[XFCP]] Found block: udp_support_wrapper_0
[INFO] 2024-11-29 15:08:12.984 [Agent-localhost[0].Plugin[XFCP]] Found block: udp_demo_application_0
[INFO] 2024-11-29 15:08:13.062 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 15:08:13.191 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_0
[INFO] 2024-11-29 15:08:13.223 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_1
[INFO] 2024-11-29 15:08:13.255 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_2
[INFO] 2024-11-29 15:08:13.288 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_3
[INFO] 2024-11-29 15:08:13.320 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_4
[INFO] 2024-11-29 15:08:13.485 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_4
[INFO] 2024-11-29 15:08:13.537 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_4
[INFO] 2024-11-29 15:08:13.607 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_4
[INFO] 2024-11-29 15:08:13.773 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_3
[INFO] 2024-11-29 15:08:13.825 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_3
[INFO] 2024-11-29 15:08:13.894 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_3
[INFO] 2024-11-29 15:08:14.061 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_2
[INFO] 2024-11-29 15:08:14.114 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_2
[INFO] 2024-11-29 15:08:14.182 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_2
[INFO] 2024-11-29 15:08:14.349 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_1
[INFO] 2024-11-29 15:08:14.420 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_1
[INFO] 2024-11-29 15:08:14.482 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_1
[INFO] 2024-11-29 15:08:14.636 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_0
[INFO] 2024-11-29 15:08:14.689 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_0
[INFO] 2024-11-29 15:08:14.758 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 15:08:14.913 [Agent-localhost[0].Plugin[XFCP]] Found block: npap_configuration_block
[INFO] 2024-11-29 15:08:14.944 [Agent-localhost[0].Plugin[XFCP]] Found block: priority_manager_configuration_block
[INFO] 2024-11-29 15:08:15.406 [Agent-localhost[1]] Connecting to agent service, localhost:38843
[INFO] 2024-11-29 15:08:15.956 [Agent-localhost[1]]  -stdout- Spawned new Local Agent on Port: 38843
[INFO] 2024-11-29 15:08:16.451 [Agent-localhost[1]] Installed Agent on host [vma-customer1] Running Python Version: Python 3.10.12
[INFO] 2024-11-29 15:08:16.457 [Agent-localhost[1]] Registering Plugin Function ['TcpMonitor', 'activate']
[INFO] 2024-11-29 15:08:16.463 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'getBoard']
[INFO] 2024-11-29 15:08:16.468 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'getNPAPinstance']
[INFO] 2024-11-29 15:08:16.472 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'initialize']
[INFO] 2024-11-29 15:08:16.477 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'readRegister']
[INFO] 2024-11-29 15:08:16.481 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'writeRegister']
[INFO] 2024-11-29 15:08:16.486 [Agent-localhost[1]] Registering Plugin Function ['Netperf', 'setupTest']
[INFO] 2024-11-29 15:08:16.539 [Agent-localhost[1].Plugin[XFCP]] Connecting to Board: mle-npap-vma-u200-2
[INFO] 2024-11-29 15:08:17.973 [Agent-localhost[1].Plugin[XFCP]] Found base wrapper: erd_info_block
[INFO] 2024-11-29 15:08:18.183 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 15:08:18.212 [Agent-localhost[1].Plugin[XFCP]] Found 1 NPAP instances
[INFO] 2024-11-29 15:08:18.356 [Agent-localhost[1].Plugin[XFCP]] Found base wrapper: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 15:08:18.504 [Agent-localhost[1].Plugin[XFCP]] Found block: npap_support_wrapper
[INFO] 2024-11-29 15:08:18.535 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_udp_support_wrapper
[INFO] 2024-11-29 15:08:18.568 [Agent-localhost[1].Plugin[XFCP]] Found block: netperf_support_wrapper
[INFO] 2024-11-29 15:08:18.737 [Agent-localhost[1].Plugin[XFCP]] Found block: netperf_control_application
[INFO] 2024-11-29 15:08:18.855 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_gen_support_wrapper
[INFO] 2024-11-29 15:08:18.914 [Agent-localhost[1].Plugin[XFCP]] Found block: udp_gen_support_wrapper_0
[INFO] 2024-11-29 15:08:19.032 [Agent-localhost[1].Plugin[XFCP]] Found block: udp_support_wrapper_0
[INFO] 2024-11-29 15:08:19.256 [Agent-localhost[1].Plugin[XFCP]] Found block: udp_demo_application_0
[INFO] 2024-11-29 15:08:19.335 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 15:08:19.464 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_0
[INFO] 2024-11-29 15:08:19.495 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_1
[INFO] 2024-11-29 15:08:19.528 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_2
[INFO] 2024-11-29 15:08:19.560 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_3
[INFO] 2024-11-29 15:08:19.592 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_4
[INFO] 2024-11-29 15:08:19.758 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_4
[INFO] 2024-11-29 15:08:19.809 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_4
[INFO] 2024-11-29 15:08:19.886 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_4
[INFO] 2024-11-29 15:08:20.046 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_3
[INFO] 2024-11-29 15:08:20.098 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_3
[INFO] 2024-11-29 15:08:20.167 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_3
[INFO] 2024-11-29 15:08:20.334 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_2
[INFO] 2024-11-29 15:08:20.386 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_2
[INFO] 2024-11-29 15:08:20.454 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_2
[INFO] 2024-11-29 15:08:20.630 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_1
[INFO] 2024-11-29 15:08:20.722 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_1
[INFO] 2024-11-29 15:08:20.807 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_1
[INFO] 2024-11-29 15:08:20.971 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_0
[INFO] 2024-11-29 15:08:21.026 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_0
[INFO] 2024-11-29 15:08:21.095 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 15:08:21.253 [Agent-localhost[1].Plugin[XFCP]] Found block: npap_configuration_block
[INFO] 2024-11-29 15:08:21.321 [Agent-localhost[1].Plugin[XFCP]] Found block: priority_manager_configuration_block
------------------------------------------------------------ live log call
------------------------------------------------------------
[INFO] 2024-11-29 15:08:21.793 [test_tcp_b2b] Board: mle-npap-vma-u200-1
------------------
NPAP Instance 0 on mle-npap-vma-u200-1:
IP : 192.168.10.1
MAC: 0x20a35080101
```

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PASSED
[ 50%]
test_tcp_b2b.py::TestB2B::test_tcpB2B[SETUP_SetupConfig0-SETUP_BitfileDict0-TESTCONFIG_TestConfig0-XFCP_BOARDS_mlenpapvmau20010-XF
CP_BOARDS_mlenpapvmau20020]
------------------------------------------------------------ live log call
------------------------------------------------------------
[INFO] 2024-11-29 15:08:21.881 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:21.881 [test_tcp_b2b] Testing 1 parallel sessions
[INFO] 2024-11-29 15:08:21.882 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:21.882 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 1
[INFO] 2024-11-29 15:08:21.882 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:23.461 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:08:23.495 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:08:23.495 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:25.714 [test_tcp_b2b] Throughput for 10000000 frames with packet size 1:
[INFO] 2024-11-29 15:08:25.715 [test_tcp_b2b]   Session 0 average throughput: 87.706 MBit/s.
[INFO] 2024-11-29 15:08:25.715 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 2
[INFO] 2024-11-29 15:08:25.715 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:27.044 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:08:27.077 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:08:27.078 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:29.299 [test_tcp_b2b] Throughput for 10000000 frames with packet size 2:
[INFO] 2024-11-29 15:08:29.300 [test_tcp_b2b]   Session 0 average throughput: 175.151 MBit/s.
[INFO] 2024-11-29 15:08:29.300 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 5
[INFO] 2024-11-29 15:08:29.301 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:30.597 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:08:30.629 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:08:30.630 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:32.882 [test_tcp_b2b] Throughput for 10000000 frames with packet size 5:
[INFO] 2024-11-29 15:08:32.882 [test_tcp_b2b]   Session 0 average throughput: 423.704 MBit/s.
[INFO] 2024-11-29 15:08:32.883 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 10
[INFO] 2024-11-29 15:08:32.883 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:34.165 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:08:34.197 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:08:34.198 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:36.449 [test_tcp_b2b] Throughput for 10000000 frames with packet size 10:
[INFO] 2024-11-29 15:08:36.450 [test_tcp_b2b]   Session 0 average throughput: 847.148 MBit/s.
[INFO] 2024-11-29 15:08:36.450 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 30
[INFO] 2024-11-29 15:08:36.451 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:37.716 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:08:37.749 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:08:37.750 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:40.098 [test_tcp_b2b] Throughput for 10000000 frames with packet size 30:
[INFO] 2024-11-29 15:08:40.098 [test_tcp_b2b]   Session 0 average throughput: 2307.724 MBit/s.
[INFO] 2024-11-29 15:08:40.099 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 50
[INFO] 2024-11-29 15:08:40.099 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:41.412 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:08:41.444 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:08:41.445 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:43.841 [test_tcp_b2b] Throughput for 10000000 frames with packet size 50:
[INFO] 2024-11-29 15:08:43.842 [test_tcp_b2b]   Session 0 average throughput: 3699.5 MBit/s.
[INFO] 2024-11-29 15:08:43.842 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 70
[INFO] 2024-11-29 15:08:43.842 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:45.107 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:08:45.140 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:08:45.141 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:47.617 [test_tcp_b2b] Throughput for 10000000 frames with packet size 70:
[INFO] 2024-11-29 15:08:47.617 [test_tcp_b2b]   Session 0 average throughput: 4794.722 MBit/s.
[INFO] 2024-11-29 15:08:47.618 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 90
[INFO] 2024-11-29 15:08:47.618 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:48.900 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:08:48.932 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:08:48.933 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:51.458 [test_tcp_b2b] Throughput for 10000000 frames with packet size 90:
[INFO] 2024-11-29 15:08:51.459 [test_tcp_b2b]   Session 0 average throughput: 6090.604 MBit/s.
[INFO] 2024-11-29 15:08:51.459 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 150
[INFO] 2024-11-29 15:08:51.459 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:52.788 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:08:52.830 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:08:52.830 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:55.489 [test_tcp_b2b] Throughput for 10000000 frames with packet size 150:
[INFO] 2024-11-29 15:08:55.489 [test_tcp_b2b]   Session 0 average throughput: 8812.438 MBit/s.
[INFO] 2024-11-29 15:08:55.489 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 300
[INFO] 2024-11-29 15:08:55.490 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:56.754 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:08:56.788 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:08:56.789 [test_tcp_b2b]
[INFO] 2024-11-29 15:08:59.968 [test_tcp_b2b] Throughput for 10000000 frames with packet size 300:
[INFO] 2024-11-29 15:08:59.969 [test_tcp_b2b]   Session 0 average throughput: 12863.911 MBit/s.
```

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[INFO] 2024-11-29 15:08:59.969 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 450
[INFO] 2024-11-29 15:08:59.970 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:01.234 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:09:01.268 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:09:01.269 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:03.578 [test_tcp_b2b]   Session 0: Count: 3938408550 byte, current throughput: 15075.98 MBit/s
[INFO] 2024-11-29 15:09:03.578 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:03.579 [test_tcp_b2b]       Total Throughput: 15075.98 MBit/s
[INFO] 2024-11-29 15:09:03.579 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:04.928 [test_tcp_b2b] Throughput for 10000000 frames with packet size 450:
[INFO] 2024-11-29 15:09:04.929 [test_tcp_b2b]   Session 0 average throughput: 15306.385 MBit/s.
[INFO] 2024-11-29 15:09:04.929 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 600
[INFO] 2024-11-29 15:09:04.929 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:06.194 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:09:06.228 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:09:06.228 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:08.544 [test_tcp_b2b]   Session 0: Count: 4339021912 byte, current throughput: 16688.818 MBit/s
[INFO] 2024-11-29 15:09:08.544 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:08.545 [test_tcp_b2b]       Total Throughput: 16688.818 MBit/s
[INFO] 2024-11-29 15:09:08.545 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:10.368 [test_tcp_b2b] Throughput for 10000000 frames with packet size 600:
[INFO] 2024-11-29 15:09:10.368 [test_tcp_b2b]   Session 0 average throughput: 17080.61 MBit/s.
[INFO] 2024-11-29 15:09:10.369 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 750
[INFO] 2024-11-29 15:09:10.369 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:11.634 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:09:11.668 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:09:11.668 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:14.042 [test_tcp_b2b]   Session 0: Count: 4637667448 byte, current throughput: 17349.576 MBit/s
[INFO] 2024-11-29 15:09:14.042 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:14.043 [test_tcp_b2b]       Total Throughput: 17349.576 MBit/s
[INFO] 2024-11-29 15:09:14.043 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:16.272 [test_tcp_b2b] Throughput for 10000000 frames with packet size 750:
[INFO] 2024-11-29 15:09:16.272 [test_tcp_b2b]   Session 0 average throughput: 18382.955 MBit/s.
[INFO] 2024-11-29 15:09:16.272 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 900
[INFO] 2024-11-29 15:09:16.273 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:17.538 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:09:17.571 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:09:17.571 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:19.887 [test_tcp_b2b]   Session 0: Count: 4739806652 byte, current throughput: 18091.87 MBit/s
[INFO] 2024-11-29 15:09:19.888 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:19.888 [test_tcp_b2b]       Total Throughput: 18091.87 MBit/s
[INFO] 2024-11-29 15:09:19.888 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:22.666 [test_tcp_b2b] Throughput for 10000000 frames with packet size 900:
[INFO] 2024-11-29 15:09:22.667 [test_tcp_b2b]   Session 0 average throughput: 19175.711 MBit/s.
[INFO] 2024-11-29 15:09:22.667 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 1000
[INFO] 2024-11-29 15:09:22.667 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:23.954 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:09:23.986 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:09:23.987 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:26.287 [test_tcp_b2b]   Session 0: Count: 4851109080 byte, current throughput: 18659.235 MBit/s
[INFO] 2024-11-29 15:09:26.287 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:26.288 [test_tcp_b2b]       Total Throughput: 18659.235 MBit/s
[INFO] 2024-11-29 15:09:26.288 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:29.327 [test_tcp_b2b] Throughput for 10000000 frames with packet size 1000:
[INFO] 2024-11-29 15:09:29.327 [test_tcp_b2b]   Session 0 average throughput: 19842.318 MBit/s.
[INFO] 2024-11-29 15:09:29.328 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 1200
[INFO] 2024-11-29 15:09:29.328 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:30.641 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:09:30.674 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:09:30.675 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:32.960 [test_tcp_b2b]   Session 0: Count: 4972541472 byte, current throughput: 19260.007 MBit/s
[INFO] 2024-11-29 15:09:32.961 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:32.961 [test_tcp_b2b]       Total Throughput: 19260.007 MBit/s
[INFO] 2024-11-29 15:09:32.961 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:35.082 [test_tcp_b2b]   Session 0: Count: 10610718208 byte, current throughput: 21257.025 MBit/s
[INFO] 2024-11-29 15:09:35.082 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:35.083 [test_tcp_b2b]       Total Throughput: 21257.025 MBit/s
[INFO] 2024-11-29 15:09:35.083 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:36.666 [test_tcp_b2b] Throughput for 10000000 frames with packet size 1200:
[INFO] 2024-11-29 15:09:36.667 [test_tcp_b2b]   Session 0 average throughput: 20619.321 MBit/s.
[INFO] 2024-11-29 15:09:36.667 [test_tcp_b2b] 1 TCP session B2B test with 10000000 number of frames and packet size: 1400
[INFO] 2024-11-29 15:09:36.667 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:37.937 [test_tcp_b2b]   Passive session 0: Connection established
[INFO] 2024-11-29 15:09:37.975 [test_tcp_b2b]   Active session 0: Connection established
[INFO] 2024-11-29 15:09:37.976 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:40.286 [test_tcp_b2b]   Session 0: Count: 5109191808 byte, current throughput: 19501.751 MBit/s
[INFO] 2024-11-29 15:09:40.287 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:40.287 [test_tcp_b2b]       Total Throughput: 19501.751 MBit/s
[INFO] 2024-11-29 15:09:40.288 [test_tcp_b2b]
```

```
[INFO] 2024-11-29 15:09:42.382 [test_tcp_b2b]    Session 0: Count: 10965384088 byte, current throughput: 22354.089 MBit/s
[INFO] 2024-11-29 15:09:42.383 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:42.383 [test_tcp_b2b]       Total Throughput: 22354.089 MBit/s
[INFO] 2024-11-29 15:09:42.384 [test_tcp_b2b]
[INFO] 2024-11-29 15:09:44.554 [test_tcp_b2b] Throughput for 10000000 frames with packet size 1400:
[INFO] 2024-11-29 15:09:44.555 [test_tcp_b2b]   Session 0 average throughput: 21342.771 MBit/s.
PASSED
[100%]
-------------------------------------------------------- live log teardown
------------------------------------------------------------
[INFO] 2024-11-29 15:09:44.568 [base.NpapWorkspace] Terminated Local Agent Service with pid 12952
[INFO] 2024-11-29 15:09:44.569 [base.NpapWorkspace] Terminated Local Agent Service with pid 13712
[INFO] 2024-11-29 15:09:44.603 [WORKSPACE] Log-Files copied to: /home/customer/npapdemo-test/pytest/reports/report-20241129-150805


======================================================== warnings summary
========================================================
[...]
============================================================= PASSES
===========================================================
_____ TestB2B.test_enumBoard[SETUP_SetupConfig0-SETUP_BitfileDict0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_mlenpapvmau20020]
_____
-------------------------------------------------------- Captured stdout setup
--------------------------------------------------------
PING 192.168.122.1 (192.168.122.1) 56(84) bytes of data.
64 bytes from 192.168.122.1: icmp_seq=1 ttl=64 time=0.308 ms

--- 192.168.122.1 ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 0.308/0.308/0.308/0.000 ms
_
TestB2B.test_tcpB2B[SETUP_SetupConfig0-SETUP_BitfileDict0-TESTCONFIG_TestConfig0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_mlenpapv
mau20020] _
---------------------------------- generated xml file: /home/customer/npapdemo-test/pytest/junit.xml
-----------------------------------
--------------- generated html file: file:///home/customer/npapdemo-test/pytest/reports/report-20241129-150805/log.html
-----------------
-------------------------------------------------------------- JSON report
------------------------------------------------------------
report saved to: .report.json
================================================== short test summary info
==========================================================
PASSED
test_tcp_b2b.py::TestB2B::test_enumBoard[SETUP_SetupConfig0-SETUP_BitfileDict0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_mlenpapvma
u20020]
PASSED
test_tcp_b2b.py::TestB2B::test_tcpB2B[SETUP_SetupConfig0-SETUP_BitfileDict0-TESTCONFIG_TestConfig0-XFCP_BOARDS_mlenpapvmau20010-XF
CP_BOARDS_mlenpapvmau20020]
============================================= 2 passed, 6 warnings in 99.60s (0:01:39)
============================================
```

test 3: board-to-software, netperf

```
(venv) customer@vma-customer1:~$ npap-run-test 3
~/npapdemo-test/pytest ~
already acquired place mle-npap-vma-u200-1
already acquired place mle-npap-vma-u200-2
[INFO] 2024-11-29 16:30:57,283 [BRINGUP::acquirePlaces()] labgrid-client: place mle-npap-vma-u200-1 is already acquired by
vma-customer1/customer
[INFO] 2024-11-29 16:30:57,329 [BRINGUP::acquirePlaces()] labgrid-client: place mle-npap-vma-u200-2 is already acquired by
vma-customer1/customer
[INFO] 2024-11-29 16:30:57,377 [BRINGUP::pytest_configure()] Using Environment Version: 1.2.0
[INFO] 2024-11-29 16:30:57,377 [BRINGUP::pytest_configure()] Installed Plugin Versions: {'PluginTemplate': '0.0.0', 'XFCP':
'1.0.1'}
[INFO] 2024-11-29 16:30:57,377 [BRINGUP::pytest_configure()] Deactivated Plugins: ['ScapyTcpSession', 'Demo', 'PvLoopback']
[INFO] 2024-11-29 16:30:57,377 [BRINGUP::pytest_configure()] Activated Plugins: ['PluginTemplate', 'TcpMonitor', 'XFCP',
'Netperf']
=========================================================== test session starts
========================================================
platform linux -- Python 3.10.12, pytest-6.2.5, py-1.11.0, pluggy-1.5.0
rootdir: /home/customer/npapdemo-test/pytest, configfile: pytest.ini
plugins: cocotb-test-0.2.4, dependency-0.6.0, metadata-2.0.4, env-0.6.2, logger-1.1.1, rng-1.0.0, ordering-0.6, html-3.2.0,
json-report-1.5.0, labgrid-0.3.4.dev4+gbe4d713f
collecting ... ['setupBoards', 'npap', 'env', 'XFCP_BOARDS', 'npap_session', 'pytestconfig', 'record_testsuite_property',
'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig', 'SETUP_BitfileDict',
'request']
['setupBoards', 'npap', 'env', 'XFCP_BOARDS', 'npap_session', 'pytestconfig', 'record_testsuite_property',
'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP', 'FPGA', 'SETUP_SetupConfig', 'SETUP_BitfileDict',
'request']
['npap', 'setupBoards', 'TESTCONFIG', 'npap_session', 'pytestconfig', 'env', 'XFCP_BOARDS', 'TESTCONFIG_TestConfig', 'SETUP',
'FPGA', 'record_testsuite_property', 'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP_SetupConfig',
'SETUP_BitfileDict', 'request']
['npap', 'setupBoards', 'TESTCONFIG', 'npap_session', 'pytestconfig', 'env', 'XFCP_BOARDS', 'TESTCONFIG_TestConfig', 'SETUP',
'FPGA', 'record_testsuite_property', 'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP_SetupConfig',
'SETUP_BitfileDict', 'request']
['npap', 'setupBoards', 'TESTCONFIG', 'npap_session', 'pytestconfig', 'env', 'XFCP_BOARDS', 'TESTCONFIG_TestConfig', 'SETUP',
'FPGA', 'record_testsuite_property', 'XFCP_BOARDS_mlenpapvmau2001', 'XFCP_BOARDS_mlenpapvmau2002', 'SETUP_SetupConfig',
'SETUP_BitfileDict', 'request']
collected 2 items

test_b2s_setup_only.py::TestB2S::test_enumBoard[SETUP_SetupConfig0-SETUP_BitfileDict0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_mle
npapvmau20020]
------------------------------------------------------------ live log setup
------------------------------------------------------------
[INFO] 2024-11-29 16:30:57.446 [base.NpapWorkspace] Setup Configuration: load bitfiles: False, turn off boards: False, turn off
clients: False, skip release stage: False
[INFO] 2024-11-29 16:30:58.050 [mle-npap-vma-u200-1] Name: mle-npap-vma-u200-1, Bitfile:
/home/release/npapdemo/npap_2x/ci_default/amd_au200_source_full_25g_async.bit, Boot Time: 0
[INFO] 2024-11-29 16:30:58.654 [mle-npap-vma-u200-2] Name: mle-npap-vma-u200-2, Bitfile:
/home/release/npapdemo/npap_2x/ci_default/amd_au200_source_full_25g_async.bit, Boot Time: 0
[INFO] 2024-11-29 16:30:58.655 [mle-npap-vma-switch-1] Ping 192.168.122.1, to check if it's online
[INFO] 2024-11-29 16:30:58.659 [mle-npap-vma-switch-1] Switch is online
[INFO] 2024-11-29 16:30:58.660 [mle-npap-vma-switch-1] Name: mle-npap-vma-switch-1, IP: 192.168.122.1, Boot Time: 0
[INFO] 2024-11-29 16:30:58.661 [mle-npap-vma-u200-1] Powering board
[INFO] 2024-11-29 16:30:59.671 [mle-npap-vma-u200-1] Board powered on
[INFO] 2024-11-29 16:30:59.671 [mle-npap-vma-u200-2] Powering board
[INFO] 2024-11-29 16:31:00.678 [mle-npap-vma-u200-2] Board powered on
[INFO] 2024-11-29 16:31:00.683 [Agent-localhost[0]] Connecting to agent service, localhost:40099
[INFO] 2024-11-29 16:31:01.237 [Agent-localhost[0]]  -stdout- Spawned new Local Agent on Port: 40099
[INFO] 2024-11-29 16:31:01.722 [Agent-localhost[0]] Installed Agent on host [vma-customer1] Running Python Version: Python 3.10.12
[INFO] 2024-11-29 16:31:01.727 [Agent-localhost[0]] Registering Plugin Function ['TcpMonitor', 'activate']
[INFO] 2024-11-29 16:31:01.732 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'getBoard']
[INFO] 2024-11-29 16:31:01.737 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'getNPAPinstance']
[INFO] 2024-11-29 16:31:01.741 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'initialize']
[INFO] 2024-11-29 16:31:01.745 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'readRegister']
[INFO] 2024-11-29 16:31:01.749 [Agent-localhost[0]] Registering Plugin Function ['XFCP', 'writeRegister']
[INFO] 2024-11-29 16:31:01.753 [Agent-localhost[0]] Registering Plugin Function ['Netperf', 'setupTest']
[INFO] 2024-11-29 16:31:01.805 [Agent-localhost[0].Plugin[XFCP]] Connecting to Board: mle-npap-vma-u200-1
[INFO] 2024-11-29 16:31:03.218 [Agent-localhost[0].Plugin[XFCP]] Found base wrapper: erd_info_block
[INFO] 2024-11-29 16:31:03.381 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 16:31:03.411 [Agent-localhost[0].Plugin[XFCP]] Found 1 NPAP instances
[INFO] 2024-11-29 16:31:03.651 [Agent-localhost[0].Plugin[XFCP]] Found base wrapper: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 16:31:03.845 [Agent-localhost[0].Plugin[XFCP]] Found block: npap_support_wrapper
[INFO] 2024-11-29 16:31:03.878 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_udp_support_wrapper
[INFO] 2024-11-29 16:31:03.909 [Agent-localhost[0].Plugin[XFCP]] Found block: netperf_support_wrapper
[INFO] 2024-11-29 16:31:04.079 [Agent-localhost[0].Plugin[XFCP]] Found block: netperf_control_application
[INFO] 2024-11-29 16:31:04.197 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_gen_support_wrapper
[INFO] 2024-11-29 16:31:04.255 [Agent-localhost[0].Plugin[XFCP]] Found block: udp_gen_support_wrapper_0
```

```
[INFO] 2024-11-29 16:31:04.373 [Agent-localhost[0].Plugin[XFCP]] Found block: udp_support_wrapper_0
[INFO] 2024-11-29 16:31:04.549 [Agent-localhost[0].Plugin[XFCP]] Found block: udp_demo_application_0
[INFO] 2024-11-29 16:31:04.662 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 16:31:04.789 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_0
[INFO] 2024-11-29 16:31:04.847 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_1
[INFO] 2024-11-29 16:31:04.870 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_2
[INFO] 2024-11-29 16:31:04.901 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_3
[INFO] 2024-11-29 16:31:04.933 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_support_wrapper_4
[INFO] 2024-11-29 16:31:05.099 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_4
[INFO] 2024-11-29 16:31:05.151 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_4
[INFO] 2024-11-29 16:31:05.222 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_4
[INFO] 2024-11-29 16:31:05.388 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_3
[INFO] 2024-11-29 16:31:05.439 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_3
[INFO] 2024-11-29 16:31:05.509 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_3
[INFO] 2024-11-29 16:31:05.676 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_2
[INFO] 2024-11-29 16:31:05.728 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_2
[INFO] 2024-11-29 16:31:05.797 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_2
[INFO] 2024-11-29 16:31:05.964 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_1
[INFO] 2024-11-29 16:31:06.040 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_1
[INFO] 2024-11-29 16:31:06.110 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_1
[INFO] 2024-11-29 16:31:06.266 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_command_application_0
[INFO] 2024-11-29 16:31:06.316 [Agent-localhost[0].Plugin[XFCP]] Found block: tcp_demo_application_0
[INFO] 2024-11-29 16:31:06.389 [Agent-localhost[0].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 16:31:06.546 [Agent-localhost[0].Plugin[XFCP]] Found block: npap_configuration_block
[INFO] 2024-11-29 16:31:06.572 [Agent-localhost[0].Plugin[XFCP]] Found block: priority_manager_configuration_block
[INFO] 2024-11-29 16:31:07.035 [Agent-localhost[1]] Connecting to agent service, localhost:58855
[INFO] 2024-11-29 16:31:07.589 [Agent-localhost[1]]  -stdout- Spawned new Local Agent on Port: 58855
[INFO] 2024-11-29 16:31:08.077 [Agent-localhost[1]] Installed Agent on host [vma-customer1] Running Python Version: Python 3.10.12
[INFO] 2024-11-29 16:31:08.082 [Agent-localhost[1]] Registering Plugin Function ['TcpMonitor', 'activate']
[INFO] 2024-11-29 16:31:08.087 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'getBoard']
[INFO] 2024-11-29 16:31:08.092 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'getNPAPinstance']
[INFO] 2024-11-29 16:31:08.095 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'initialize']
[INFO] 2024-11-29 16:31:08.100 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'readRegister']
[INFO] 2024-11-29 16:31:08.104 [Agent-localhost[1]] Registering Plugin Function ['XFCP', 'writeRegister']
[INFO] 2024-11-29 16:31:08.107 [Agent-localhost[1]] Registering Plugin Function ['Netperf', 'setupTest']
[INFO] 2024-11-29 16:31:08.163 [Agent-localhost[1].Plugin[XFCP]] Connecting to Board: mle-npap-vma-u200-2
[INFO] 2024-11-29 16:31:09.576 [Agent-localhost[1].Plugin[XFCP]] Found base wrapper: erd_info_block
[INFO] 2024-11-29 16:31:09.739 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 16:31:09.768 [Agent-localhost[1].Plugin[XFCP]] Found 1 NPAP instances
[INFO] 2024-11-29 16:31:09.928 [Agent-localhost[1].Plugin[XFCP]] Found base wrapper: tcp_udp_netperf_npap_support_wrapper
[INFO] 2024-11-29 16:31:10.075 [Agent-localhost[1].Plugin[XFCP]] Found block: npap_support_wrapper
[INFO] 2024-11-29 16:31:10.135 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_udp_support_wrapper
[INFO] 2024-11-29 16:31:10.155 [Agent-localhost[1].Plugin[XFCP]] Found block: netperf_support_wrapper
[INFO] 2024-11-29 16:31:10.324 [Agent-localhost[1].Plugin[XFCP]] Found block: netperf_control_application
[INFO] 2024-11-29 16:31:10.443 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_gen_support_wrapper
[INFO] 2024-11-29 16:31:10.475 [Agent-localhost[1].Plugin[XFCP]] Found block: udp_gen_support_wrapper_0
[INFO] 2024-11-29 16:31:10.603 [Agent-localhost[1].Plugin[XFCP]] Found block: udp_support_wrapper_0
[INFO] 2024-11-29 16:31:10.779 [Agent-localhost[1].Plugin[XFCP]] Found block: udp_demo_application_0
[INFO] 2024-11-29 16:31:10.859 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 16:31:10.987 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_0
[INFO] 2024-11-29 16:31:11.019 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_1
[INFO] 2024-11-29 16:31:11.051 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_2
[INFO] 2024-11-29 16:31:11.083 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_3
[INFO] 2024-11-29 16:31:11.115 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_support_wrapper_4
[INFO] 2024-11-29 16:31:11.281 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_4
[INFO] 2024-11-29 16:31:11.331 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_4
[INFO] 2024-11-29 16:31:11.402 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_4
[INFO] 2024-11-29 16:31:11.569 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_3
[INFO] 2024-11-29 16:31:11.627 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_3
[INFO] 2024-11-29 16:31:11.707 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_3
[INFO] 2024-11-29 16:31:11.873 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_2
[INFO] 2024-11-29 16:31:11.925 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_2
[INFO] 2024-11-29 16:31:11.994 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_2
[INFO] 2024-11-29 16:31:12.161 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_1
[INFO] 2024-11-29 16:31:12.213 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_1
[INFO] 2024-11-29 16:31:12.296 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_1
[INFO] 2024-11-29 16:31:12.449 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_command_application_0
[INFO] 2024-11-29 16:31:12.518 [Agent-localhost[1].Plugin[XFCP]] Found block: tcp_demo_application_0
[INFO] 2024-11-29 16:31:12.587 [Agent-localhost[1].Plugin[XFCP]] Found block: data_gen_checker_0
[INFO] 2024-11-29 16:31:12.744 [Agent-localhost[1].Plugin[XFCP]] Found block: npap_configuration_block
[INFO] 2024-11-29 16:31:12.813 [Agent-localhost[1].Plugin[XFCP]] Found block: priority_manager_configuration_block
--------------------------------------------------------- live log call
------------------------------------------------------------
[INFO] 2024-11-29 16:31:13.301 [test_b2s_setup_only] Board: mle-npap-vma-u200-1
------------------
NPAP Instance 0 on mle-npap-vma-u200-1:
IP : 192.168.10.1
MAC: 0x20a35080101
```

```
[INFO] 2024-11-29 16:31:13.380 [test_b2s_setup_only] Board: mle-npap-vma-u200-2
-------------------
NPAP Instance 0 on mle-npap-vma-u200-2:
IP : 192.168.10.2
MAC: 0x20a35080102

PASSED
[ 50%]
test_b2s_setup_only.py::TestB2S::test_setupOnly[SETUP_SetupConfig0-SETUP_BitfileDict0-TESTCONFIG_TestConfig0-XFCP_BOARDS_mlenpapvm
au20010-XFCP_BOARDS_mlenpapvmau20020]
------------------------------------------------------------- live log call
-------------------------------------------------------------
[INFO] 2024-11-29 16:31:13.428 [test_b2s_setup_only] Setting up net server on board "mle-npap-vma-u200-1", NPAP instance 0:
[INFO] 2024-11-29 16:31:13.429 [test_b2s_setup_only]   local_mac: 2242862645505
[INFO] 2024-11-29 16:31:13.430 [test_b2s_setup_only]   local_ip: 192.168.10.1
[INFO] 2024-11-29 16:31:13.431 [test_b2s_setup_only]   local_control_session_port: 12865
[INFO] 2024-11-29 16:31:13.431 [test_b2s_setup_only]   test_session_port: 12866
[INFO] 2024-11-29 16:31:13.431 [test_b2s_setup_only]   remote_ip: 192.168.10.100
[INFO] 2024-11-29 16:31:13.523 [test_b2s_setup_only] Setting up net server on board "mle-npap-vma-u200-2", NPAP instance 0:
[INFO] 2024-11-29 16:31:13.524 [test_b2s_setup_only]   local_mac: 2242862645506
[INFO] 2024-11-29 16:31:13.525 [test_b2s_setup_only]   local_ip: 192.168.10.2
[INFO] 2024-11-29 16:31:13.526 [test_b2s_setup_only]   local_control_session_port: 12865
[INFO] 2024-11-29 16:31:13.526 [test_b2s_setup_only]   test_session_port: 12866
[INFO] 2024-11-29 16:31:13.526 [test_b2s_setup_only]   remote_ip: 192.168.10.100
PASSED
[100%]
-------------------------------------------------------- live log teardown
--------------------------------------------------------
[INFO] 2024-11-29 16:31:13.610 [base.NpapWorkspace] Terminated Local Agent Service with pid 23428
[INFO] 2024-11-29 16:31:13.610 [base.NpapWorkspace] Terminated Local Agent Service with pid 24190
[INFO] 2024-11-29 16:31:13.616 [WORKSPACE] Log-Files copied to: /home/customer/npapdemo-test/pytest/reports/report-20241129-163056


======================================================== warnings summary
========================================================
[...]
============================================================ PASSES
_____ TestB2S.test_enumBoard[SETUP_SetupConfig0-SETUP_BitfileDict0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_mlenpapvmau20020]
_____
-------------------------------------------------------- Captured stdout setup
--------------------------------------------------------
PING 192.168.122.1 (192.168.122.1) 56(84) bytes of data.
64 bytes from 192.168.122.1: icmp_seq=1 ttl=64 time=0.296 ms

--- 192.168.122.1 ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 0.296/0.296/0.296/0.000 ms
_
TestB2S.test_setupOnly[SETUP_SetupConfig0-SETUP_BitfileDict0-TESTCONFIG_TestConfig0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_mlenp
apvmau20020] _
---------------------------------- generated xml file: /home/customer/npapdemo-test/pytest/junit.xml
----------------------------------
---------------- generated html file: file:///home/customer/npapdemo-test/pytest/reports/report-20241129-163056/log.html
----------------
------------------------------------------------------------- JSON report
-------------------------------------------------------------
report saved to: .report.json
=================================================== short test summary info
===================================================
PASSED
test_b2s_setup_only.py::TestB2S::test_enumBoard[SETUP_SetupConfig0-SETUP_BitfileDict0-XFCP_BOARDS_mlenpapvmau20010-XFCP_BOARDS_mle
npapvmau20020]
PASSED
test_b2s_setup_only.py::TestB2S::test_setupOnly[SETUP_SetupConfig0-SETUP_BitfileDict0-TESTCONFIG_TestConfig0-XFCP_BOARDS_mlenpapvm
au20010-XFCP_BOARDS_mlenpapvmau20020]
=============================================== 2 passed, 6 warnings in 16.91s
===============================================
PING 192.168.10.1 (192.168.10.1) 56(84) bytes of data.
64 bytes from 192.168.10.1: icmp_seq=1 ttl=255 time=127 ms
64 bytes from 192.168.10.1: icmp_seq=2 ttl=255 time=0.142 ms
64 bytes from 192.168.10.1: icmp_seq=3 ttl=255 time=0.116 ms
64 bytes from 192.168.10.1: icmp_seq=4 ttl=255 time=0.109 ms

--- 192.168.10.1 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3057ms
rtt min/avg/max/mdev = 0.109/31.860/127.074/54.971 ms
PING 192.168.10.2 (192.168.10.2) 56(84) bytes of data.
64 bytes from 192.168.10.2: icmp_seq=1 ttl=255 time=125 ms
```

```
64 bytes from 192.168.10.2: icmp_seq=2 ttl=255 time=0.128 ms
64 bytes from 192.168.10.2: icmp_seq=3 ttl=255 time=0.127 ms
64 bytes from 192.168.10.2: icmp_seq=4 ttl=255 time=0.125 ms

--- 192.168.10.2 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3037ms
rtt min/avg/max/mdev = 0.125/31.385/125.161/54.141 ms
MIGRATED TCP STREAM TEST from 0.0.0.0 (0.0.0.0) port 0 AF_INET to 192.168.10.1 () port 0 AF_INET : demo
Recv    Send    Send
Socket Socket  Message  Elapsed
Size    Size    Size      Time       Throughput
bytes  bytes   bytes     secs.    10^6bits/sec

 87380  16384  16384     10.00     10498.10
MIGRATED TCP MAERTS TEST from 0.0.0.0 (0.0.0.0) port 0 AF_INET to 192.168.10.1 () port 0 AF_INET : demo
Recv    Send    Send
Socket Socket  Message  Elapsed
Size    Size    Size      Time       Throughput
bytes  bytes   bytes     secs.    10^6bits/sec

131072  16384  16384     10.00     10118.79
MIGRATED TCP REQUEST/RESPONSE TEST from 0.0.0.0 (0.0.0.0) port 0 AF_INET to 192.168.10.1 () port 0 AF_INET : demo : first burst 0
Local /Remote
Socket Size   Request  Resp.    Elapsed  Trans.
Send    Recv    Size      Size      Time      Rate
bytes  Bytes   bytes     bytes    secs.     per sec

16384  131072 1          1         10.00     56368.39
16384  87380
```

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