

CMN Script – N1 only

arm_cmn/hnf frontend script

Go to Path: `cd (YOUR_HOME_DIR)/Frontend_Backend_Tool/CMN/`

`./hnf_capture2.sh` is the command and you can see the output files as below.

```
Usage

root@armradisys:/home/ubuntu/Frontend_Backend_Tool/CMN# ./hnf_capture2.sh

root@armradisys:/home/ubuntu/Frontend_Backend_Tool/CMN# ls
brd_snoops_sent.txt      pocq_reqs_recvd.txt      sf_evictions.txt
cache_fill.txt           pocq_retry.txt           sf_hit.txt
cache_miss.txt           qos_hh_retry.txt         slc_eviction.txt
cmp_adq_full.txt         qos_pocq_occupancy_all.txt slc_fill_invalid_way
.txt
dir_snoops_sent.txt      qos_pocq_occupancy_atomic.txt slc_sf_cache_access.
txt
hnf_capture2.sh          qos_pocq_occupancy_read.txt snp_fwded.txt
intv_dirty.txt           qos_pocq_occupancy_stash.txt snp_sent.txt
ld_st_swp_adq_full.txt   qos_pocq_occupancy_write.txt snp_sent_untrk.txt
mc_reqs.txt              seq_full.txt             stash_data_pull.txt
mc_retries.txt           seq_hit.txt              stash_snp_sent.txt
pocq_addrhaz.txt         sfbi_brd_snp_sent.txt    txdat_stall.txt
pocq_atomic_addrhaz.txt  sfbi_dir_snp_sent.txt    txrsp_stall.txt
```

arm_cmn/hnf backend script

Go to Path: `cd (YOUR_HOME_DIR)/Frontend_Backend_Tool/CMN/`

For every CMN metric, `process_cmn.py` script helps to add up all the data from 32 nodes and generates a CSV for all 35 hnf metrics with total value calculated using calculate sum function.

```
Usage: python3 process_cmn.py

Enter the directory containing the hnf text files:.

Enter the CSV filename to store the sums:hnf_sum

Sums have been written to 'hnf_sum.csv'.
```

Explanation:

The below brd snoops sent data runs on 32 nodes. The CMN tool adds up all the data from 32 nodes and generates a CSV for all 35 hnf metrics with total value instead of 32 individual values.

2 26228,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x01e5,bynodeid=1/,481309520,24.00,,

3 23850,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x01e4,bynodeid=1/,485309840,24.00,,

4 20448,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x01dd,bynodeid=1/,489306840,24.00,,

5 13708,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x01dc,bynodeid=1/,493302160,25.00,,

6 10391,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x01d5,bynodeid=1/,497300280,25.00,,

7 10001,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x01d4,bynodeid=1/,501301880,25.00,,

8 12044,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x01cd,bynodeid=1/,505299840,25.00,,

9 10870,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x01cc,bynodeid=1/,509297040,25.00,,

10 13870,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x0165,bynodeid=1/,512002440,25.00,,

11 14474,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x0164,bynodeid=1/,511998240,25.00,,

12 12622,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x015d,bynodeid=1/,511996720,25.00,,

13 17747,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x015c,bynodeid=1/,511998920,25.00,,

14 12653,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x0155,bynodeid=1/,511999880,25.00,,

15 10262,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x0154,bynodeid=1/,510273880,25.00,,

16 10148,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x014d,bynodeid=1/,506274800,25.00,,

17 8615,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x014c,bynodeid=1/,502275480,25.00,,

18 4716,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x00a5,bynodeid=1/,498276240,25.00,,

19 3545,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x00a4,bynodeid=1/,494277240,25.00,,

20 2042,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x009d,bynodeid=1/,490280600,24.00,,

21 2400,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x009c,bynodeid=1/,486280600,24.00,,

22 1107,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x0095,bynodeid=1/,482281320,24.00,,

23 1959,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x0094,bynodeid=1/,479999320,24.00,,

24 673,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x008d,bynodeid=1/,479996720,24.00,,

25 488,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x008c,bynodeid=1/,479998040,24.00,,

26 258,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x0025,bynodeid=1/,479998600,24.00,,

27 2287,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x0024,bynodeid=1/,480000120,24.00,,

28 3975,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x001d,bynodeid=1/,480000640,24.00,,

29 13356,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x001c,bynodeid=1/,480002280,24.00,,

30 20018,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x0015,bynodeid=1/,480001520,24.00,,

31 21025,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x0014,bynodeid=1/,479998840,24.00,,

32 23370,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x000d,bynodeid=1/,480001160,24.00,,

33 24869,,arm_cmn/hnf_brd_snoops_sent,nodeid=0x000c,bynodeid=1/,480000040,24.00,,

CSV with all CMN HNF events

```
1 Filename,Sum
2 snp_fwded,0
3 seq_full,0
4 slc_eviction,0
5 cmp_adq_full,0
6 qos_pocq_occupancy_all,312862
7 snp_sent,0
8 snp_sent_untrk,0
9 cache_miss,88480
10 intv_dirty,0
11 qos_pocq_occupancy_write,572
12 pocq_atomic_addrhaz,0
13 mc_retries,8
14 txrsp_stall,0
15 seq_hit,0
16 slc_sf_cache_access,0
17 txdat_stall,0
18 mc_reqs,738429
19 dir_snoops_sent,7449
20 brd_snoops_sent,354019
21 pocq_addrhaz,9248
22 cache_fill,268499
23 qos_pocq_occupancy_atomic,0
24 sf_hit,2066153
25 ld_st_swp_adq_full,0
26 qos_pocq_occupancy_stash,0
27 sfbi_dir_snp_sent,0
28 slc_fill_invalid_way,0
29 sfbi_brd_snp_sent,0
30 sf_evictions,0
31 pocq_reqs_recvd,4140681
32 stash_data_pull,0
33 qos_hh_retry,0
34 qos_pocq_occupancy_read,5489
35 stash_snp_sent,0
36 pocq_retry,0
```

