



## Dump Configuration

# Table of contents

Dump Parameters (Bitmap Flag)

---

Configuration

---

This feature helps dumping driver and firmware configuration using ethtool. It creates a backup of the configuration files into a specified dump file.

## Dump Parameters (Bitmap Flag)

The following bitmap parameters are used to set the type of dump:

### Bitmap Parameters

Value	Description
1	MST dump
2	Ring dump (Software context information for SQs, EQs, RQs, CQs)
3	MST dump + Ring dump (1+2)
4	Clear this parameter

## Configuration

In order to configure this feature, follow the steps below:

1. Set the dump bitmap parameter by running `-W` (uppercase) with the desired bitmap parameter value (see Bitmap Parameters table above). In the following example, the bitmap parameter value is 3.

```
ethtool -W ens1f0 3
```

2. Dump the file by running `-w` (lowercase) with the desired configuration file name.

```
ethtool -w ens1f0 data /tmp/dump.bin
```

3. **[Optional]** To get the bitmap parameter value, version and size of the dump, run the command above without the file name.

```
ethtool -w ens1f0  
flag: 3, version: 1, length: 4312
```

4. To open the dump file, run:

```
mlnx_dump_parser -f /tmp/dump.bin -m mst_dump_demo.txt -r
ring_dump_demo.txt
Version: 1 Flag: 3 Number of blocks: 123 Length 327584
MCION module number: 0 status: | present |
DRIVER VERSION: 1-23 (03 Mar 2015)
DEVICE NAME 0000:81:00.0:ens1f0
Parsing Complete!
```

where:

-f	For the file to be parsed (the file that was just created)
-m	For the mst dump file
-r	For the ring dump file

For further information, refer to [HowTo Dump Driver Configuration \(via ethtool\) Community post](#).

### Output:

```
# mlnx_dump_parser -f /tmp/dump.bin -m mst_dump_demo.txt -r
ring_dump_demo.txt
Version: 1 Flag: 3 Number of blocks: 123 Length 327584
MCION module number: 0 status: | present |
DRIVER VERSION: 1-23 (03 Mar 2015)
DEVICE NAME 0000:81:00.0:ens1f0
Parsing Complete!
```

5. Open the files.

1. The MST dump file will look as follows. In order to analyze it, contact [NVIDIA Support](#).

```
cat mst_dump_demo.txt
```

```
0x00000000 0x01002000
0x00000004 0x00000000
0x00000008 0x00000000
0x0000000c 0x00000000
0x00000010 0x00000000
0x00000014 0x00000000
0x00000018 0x00000000
...
```

2. The Ring dump file can help developers debug ring-related issues, and it looks as follows:

```
# cat ring_dump_demo.txt
SQ TYPE: 3, WQN: 102, PI: 0, CI: 0, STRIDE: 6, SIZE: 1024...
SQ TYPE: 3, WQN: 102, PI: 0, CI: 0, STRIDE: 6, SIZE: 1024, WQE_NUM: 65536,
GROUP_IP: 0
CQ TYPE: 5, WQN: 20, PI: 0, CI: 0, STRIDE: 6, SIZE: 1024, WQE_NUM: 1024,
GROUP_IP: 0
RQ TYPE: 4, WQN: 103, PI: 15, CI: 0, STRIDE: 5, SIZE: 16, WQE_NUM: 512,
GROUP_IP: 0
CQ TYPE: 5, WQN: 21, PI: 0, CI: 0, STRIDE: 6, SIZE: 16384, WQE_NUM: 16384,
GROUP_IP: 0
EQ TYPE: 6, CI: 1, SIZE: 0, IRQN: 109, EQN: 19, NENT: 2048, MASK: 0, INDEX: 0,
GROUP_ID: 0
SQ TYPE: 3, WQN: 106, PI: 0, CI: 0, STRIDE: 6, SIZE: 1024, WQE_NUM: 65536,
GROUP_IP: 1
CQ TYPE: 5, WQN: 23, PI: 0, CI: 0, STRIDE: 6, SIZE: 1024, WQE_NUM: 1024,
GROUP_IP: 1
RQ TYPE: 4, WQN: 107, PI: 15, CI: 0, STRIDE: 5, SIZE: 16, WQE_NUM: 512,
GROUP_IP: 1
CQ TYPE: 5, WQN: 24, PI: 0, CI: 0, STRIDE: 6, SIZE: 16384, WQE_NUM: 16384,
GROUP_IP: 1
EQ TYPE: 6, CI: 1, SIZE: 0, IRQN: 110, EQN: 20, NENT: 2048, MASK: 0, INDEX: 1,
GROUP_ID: 1
```

```
SQ TYPE: 3, WQN: 110, PI: 0, CI: 0, STRIDE: 6, SIZE: 1024, WQE_NUM: 65536,  
GROUP_IP: 2  
CQ TYPE: 5, WQN: 26, PI: 0, CI: 0, STRIDE: 6, SIZE: 1024, WQE_NUM: 1024,  
GROUP_IP: 2  
RQ TYPE: 4, WQN: 111, PI: 15, CI: 0, STRIDE: 5, SIZE: 16, WQE_NUM: 512,  
GROUP_IP: 2  
CQ TYPE: 5, WQN: 27, PI: 0, CI: 0, STRIDE: 6, SIZE: 16384, WQE_NUM: 16384,  
GROUP_IP: 2  
...
```

© Copyright 2024, NVIDIA. PDF Generated on 06/06/2024