

## What does EAGAIN mean with regards to buffering in the MVA API Manual?

### Model:

ARC Series C Board (10G-PCIE2-8C2-2S) and ARC Series B Board (10G-PCIE2-8B-2S)

### Software Release:

MVA Software Release 1.3.0

### Operating System:

Linux, Centos 8.x and RHEL 8.x

### Information:

**Question:** What does EAGAIN mean in the context of queuing a buffer? The documentation says: "Max amount of queue ahead reached". Is this a limitation of the available contiguous memory in the kernel for DMA or something like that? I hit this at 63 buffers of 2MB each. Do I need to allocate more reserved memory for the kernel or something like that?

Answer: EAGAIN means you are trying to allocate more buffers than the driver is expecting.

There is a module parameter that controls the trade-off between max buffer size and number of buffers. Uses driver parameter `myri_mva_desc_count` as follows:

```
/* myri_mva_desc_count size shift max buffer size
* 512 256 8 60 MB
* 256 512 9 124 MB
* 128 1024 10 252 MB
* 64 2048 11 508 MB [default]
*/
```

This is saying that without changing the default you can allocate and queue 64 buffers of up to 508MB each. If you want more buffers you can change that when you start the driver and you can have up to 512 buffers, but the maximum size of those buffers is 60MB.

In `/etc/init.d/myri_start_stop` uncomment the line that sets this parameter and change it as desired and restart the service

```
#MYRI_MODULE_PARAMS=" myri_mva_desc_count=128 $MYRI_MODULE_PARAMS"  
MYRI_MODULE_PARAMS=" myri_mva_desc_count=512 $MYRI_MODULE_PARAMS"
```

dmesg will show:

```
[2995409.591570] myriE1: mva_desc_count 512 mva_desc_shift 8
```

As you may suspect, system memory is also a concern, If you have 16 GB you cannot allocate 64 x 508 MB buffers. You will get an error when you exceed the allowable DMA limit.

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