

## Does the DBLv3 software support Arista timestamping?

### Model:

ARC Series C Adapter (10G-PCIE2-8C-2S)

### Software:

DBL

### Operating System:

Supports both Linux and Windows operating systems.

### Information:

#### DBL

Timestamping support with Arista 7150 series 10GbE switches is available in DBLv3 and later. Myricom DBL supports the alternate timestamping provided by the Arista 7150 Switch EOS.

The technique supported by DBL is the append (before-fcs in the Arista terminology), which will add 4 bytes at the end of each packet, as well as extra packets to describe the time references for computations to be made (key frames in the Arista terminology).

Arista timestamping support is enabled by default (**MYRI\_ARISTA\_ENABLE\_TIMESTAMPING=1**).

**MYRI\_ARISTA\_ENABLE\_TIMESTAMPING** enables the support for Arista timestamping, and is activated as soon as the process receives its first key frame. The Arista switch does not guarantee delivery of key frames when it is under heavy load. It is possible for the arrival of the first key frame which enables time stamping to begin to be delayed. Also, under these conditions, the arrival interval of key frames may be greater than the timestamp wrap time of approximately 6.1 seconds. In this case, DBL will continue to approximate timestamps until a new key frame arrives. Therefore, a lapse of time may be needed to receive the first key frame. By default, **MYRI\_ARISTA\_ENABLE\_TIMESTAMPING=1**.

On Windows, if you are using 10G-PCIE2-8C2-2S-SYNC adapters, hardware timestamping must be disabled. Create the following registry key (followed by a reboot):

```
REG ADD HKLM\SYSTEM\CurrentControlSet\services\dbl /v myri_timesource  
/t  
REG_DWORD /d 0
```

To verify that Arista timestamping has been enabled, the Windows EventViewer will then show:

```
myri_dbl: INFO: ** Arista timestamping [on] supported modes: append (before-fcs)*  
features: keyframe check min.rate [on] kf check ptp [on] kf kernel dup [off]
```

On Linux, if you are using 10G-PCIE2-8C2-2S-SYNC adapters, hardware timestamping must be disabled. Execute the following command:



```
# /opt/dbl/sbin/myri_start_stop start myri_timesource=0
```

To verify that Arista timestamping has been enabled, the following message will appear in the kernel log.

```
myri_dbl: INFO: ** Arista timestamping [on] supported modes: append (before-fcs)*  
features: keyframe check min.rate [on] kf check ptp [on] kf kernel dup [off]
```

**MYRI\_ARISTA\_PARAM\_KF\_DST\_IP** must be set to the IP address of the keyframe generator (the Arista switch). By default, the address is set to 1.1.1.0.

The following three environment variables are optional for Arista timestamping support:

**1. MYRI\_ARISTA\_PARAM\_KF\_CHECK\_PTP = 0,1**

MYRI\_ARISTA\_PARAM\_KF\_CHECK\_PTP is an optional environment variable to check if the PTP synchronization is working on the switch. By default, **MYRI\_ARISTA\_PARAM\_KF\_CHECK\_PTP =1**.

**2. MYRI\_ARISTA\_PARAM\_KF\_CHECK\_RATE= 0,1**

MYRI\_ARISTA\_PARAM\_KF\_CHECK\_RATE is an optional environment variable to check if the key frames sent are sufficient to provide accuracy. By default, **MYRI\_ARISTA\_PARAM\_KF\_CHECK\_RATE=1**.

**3. MYRI\_ARISTA\_PARAM\_KF\_KERNDUP= 0,1**

By default, MYRI\_ARISTA\_PARAM\_KF\_KERNDUP =0. If enabled, this feature will duplicate key frame packets to the host stack.

Revision	Date	Change
1	6/23/2016	Initial Draft
2	7/20/2016	Feedback