

Does the Sniffer10G software support Arista timestamping?

Model:

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

Software:

Sniffer

Operating System:

Linux and Windows

Information:

Sniffer10G

Timestamping support with Arista 7150 series 10GbE switches is available in Sniffer10G v3 and later. Myricom Sniffer10G supports the alternate timestamping provided by the Arista 7150 Switch EOS.

The technique supported by Sniffer10G 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).

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, Sniffer10G 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=0**.

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\snf /v myri_timesource  
/t  
REG_DWORD /d 0
```

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

```
myri_snf: 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/snf/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 key frame generator (the Arista switch). By default, the address is set to 1.1.1.0.

The following two 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 set are sufficient to provide accuracy. By default, **MYRI_ARISTA_PARAM_KF_CHECK_RATE=1**.

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