Drive not found HBA issue

Description

The HBA (Host Bus Adapter) can get damaged by the HBA clamp. Specifically the SATA 3 port capacitor can get damaged.

Note: The damage to the HBA does not affect all units. This has been seen in a very limited number. The clamp is there for shipping purposes only can may be removed. The card can become damaged only during shipping.

Platform

A-Series systems with more than 4 drives (non raid)

Note: A-Series IP only systems do not use a hold down bracket for the HBA after 11/01/2016.

Note: A-Series Hybrid systems use a modified hold down bracket for the HBA after 11/01/2016.

How to determine if the HBA is bad

1. The 4 drives connected to the HBA will be labeled with /dev/sdx. The motherboard drives will have /dev/csmi in the path.
   - Note: If the drives labeled /dev/csmi (motherboard drives) show offline on the Storage ==> Hardware tab, see KB https://exacq.com/kb/#loadAnswer~d8c08cb4-94a7-431c-1e9c-57f3bb7b7600

2. The broken capacitor on the HBA may only affect SATA port 3 on the HBA. This 'should' be the 2nd drive (numbered 0-3)(drive E: or SDC). So only one of the first 4 drives which should be drive 2 will show not found or drive errors.
3. In some cases all 4 drives will show offline
4. Windows servers typically will not boot at all. Linux servers will boot but will either have drive missing or drive I/O errors.

If you suspect a bad HBA

Windows

1. Un-clamp and pull the HBA card leaving drives attached
2. Try to boot the computer
3. If it boots, then the HBA is bad

Note: they should leave the HBA clamp off whether we replace the HBA or not unless it is an hybrid system with the modified HBA clamp.

Linux

1. Open up the system
2. Examine the HBA card for a broken SATA 3 capacitor and/or swap SATA 3 with another port to see if it comes online after powering up.