

# SFA12K™ & SFA14K™

## Spontaneous Controller Reboots with InfiniBand OFED 3.1 Driver

### Issue Summary

SFA storage arrays running the Mellanox OFED 3.1 driver for Infiniband host channel adapters (HCAs) can experience spontaneous controller reboots. This occurs when a bug in the `ib_umad()` code of the OFED driver receive handler triggers a kernel panic that causes the Linux kernel in SFA OS to crash. SFA OS reboots automatically following this event.

OFED (the OpenFabrics Enterprise Distribution) is open-source driver software for RDMA (remote direct memory access) applications that read and write data directly to or from storage over a network, bypassing the operating system. This data access method is used to accelerate performance in large-scale storage arrays.

You can identify the `ib_umad()` issue from one or more of the following messages in the `dmesg` log on the crashed controller shortly after the message `Oops: 0000 [#1] PREEMPT SMP` appears:

```
Workqueue: ib_mad1 ib_mad_completion_handler [ib_mad]
```

```
Workqueue: ib_mad1 local_completions [ib_mad]
```

```
RIP: 0010:[<fffffffffa0fdb39e>] [<fffffffffa0fdb39e>]  
    recv_handler+0x1ce/0x210 [ib_umad]
```

### Affected Systems

This issue is seen most frequently on storage arrays in the SFA12K family, including both block

storage and embedded processing models. However, it has been observed in the SFA14K family as well and could in principle occur on any SFA platform running Mellanox OFED 3.1 drivers. These drivers were packaged with SFA OS versions 2.3.1 through 3.0.1.4.

## Resolution

This issue is resolved in SFA OS 3.0.1.5 (which includes a patched version of OFED 3.1) and SFA OS 3.1.0.1 (which includes OFED 3.3).

## Contacting DDN Technical Support

Please contact DDN Technical Support at any time if you have questions or require assistance. Support can be reached by phone, by email, or on the web as listed below.

### Web

*DDN Community Support Portal*  
*Portal Assistance*

<https://community.ddn.com/login>  
[webportal.support@ddn.com](mailto:webportal.support@ddn.com)

### Telephone

*DDN Support Worldwide Directory*

<http://www.ddn.com/support/contact-support>

### Email

*Support Email*

[support@ddn.com](mailto:support@ddn.com)

### Bulletins

*Support Bulletins*

*End-of-Life Notices*

*Bulletin Subscription Requests*

<http://www.ddn.com/support/technical-support-bulletins>

<http://www.ddn.com/support/end-of-life-notices>

[support-tsb@ddn.com](mailto:support-tsb@ddn.com)