Release Notes for Cisco UCS Virtual Interface Card Drivers, Release 3.2

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Introduction

This document contains information on new features, resolved caveats, open caveats, and workarounds for Cisco UCS Virtual Interface Card (VIC) Drivers, Release 3.2 and later. This document also includes the following:

- Updated information after the documentation was originally published.

- Related firmware and BIOS on blade, rack, and modular servers and other Cisco Unified Computing System (UCS) components associated with the release.

The following table shows the online change history for this document.

Revision Date	Description
August 17, 2017	Created release notes for Cisco UCS Software Release 3.2.
October 9, 2017	Updated release notes for the UCS Software Release 3.2(2b).
November 10, 2017	Updated release notes for native ENIC Version 1.0.13.0.
March 21, 2018	Updated release notes for the UCS Software Release 3.2(3a).
October 16, 2020	Removed CSCve22603 from Resolved Caveats and created an updated Workaround for CSCve22603 in Open Caveats.

New Software Features in Release 3.2(2b)

Release 3.2(2b) adds support for the following:

- Cisco UCS Manager 3.2(2b) release now provides an ENIC combination RPM driver package for SUSE Linux Enterprise Server 12 SP1 and later releases. To install the ENIC combination RPM driver use this command at the prompt:

```
rpm -ivh cisco-enic-usnic-kmp-default-version-0.x86_64.rpm
```

VIC Driver Updates

ESX ENIC Driver Updates

Native ENIC driver versions 1.0.X.0 are for ESXi 6.5 and later releases.

Native ENIC Version 1.0.16.0

This driver update addresses the following issues:

- CSCvg19544: The native ENIC driver on ESXi 6.5 and 6.5U1 no longer sends frames greater than the MTU size.

- CSCvf71646: ESXi 6.5 and 6.5U1 vDS CoS marking is now passed through.

- CSCvh18317: VXLAN traffic is now re-established after running the command "vsish -e set /net/pNics/vmnic1/reset 1".

Native ENIC Version 1.0.11.0

This driver update addresses the following issues:

- CSCvf36545: This fix addresses the issue of a length mismatch between the VMWare packet frame length API function and the sum of the individual fragment length in cases of a single fragment. With this native ENIC driver, it now properly handles such packets.

- CSCvf74299: Under a heavy load cycle of loading and unloading the native ENIC drivers, a VMkernel warning was generated.

- CSCvf07421: In ESX 6.5, the VMNIC intermittently goes down during heavy traffic while the driver is unloaded.

- CSCve95688: In ESX 6.5, when the host VMNIC is shutdown, the MAC address is not always deleted.

Native ENIC Version 1.0.6.0

This driver update addresses the following issues:

- CSCve19544: Netqueues were not evenly populated across CPUs with ESX 6.5.

- CSCve05002: Unable to configure more than 2 VNICs with a 4096 WQ/RQ buffer size.

- CSCve09123: On ESXi 6.5, a native ENIC driver reload with parameters followed by MTU change can lead to a crash.

- CSCve34158: When RSS is enabled, the "queues supported" list value in vsish command does not return a value of 1.

ENIC Version 2.3.0.14

ENIC driver versions 2.3.0.X are for ESXi releases before ESXi 6.5.

- This driver update addresses a fail over issue on NIC teaming with ESX 6.0.

ESX FNIC Driver Updates

FNIC Version 1.6.0.33 and up

- CSCux64473: This driver update now supports Virtual Volume Support for ESXi.

- This driver update supports up to ESXi 6.5.

- An abort timeout no longer causes multiple abort retries for ESXi.

- Fixed the issue of slow I/O path fail over in the case of an I/O aborted with FCPIO_TIMEOUT. The Fnic driver did not return the I/O to ESX, causing the ESX mid-layer to retry abort continuously with the same behavior until finally freeing the I/O after some retries resulting in slow I/O path failover.

- CSCvb20147: Fixed an issue where an "out of order case" occurred when the IO completed which could cause an HBA reset.

- This driver update enhances IO statistics by adding time statistics for IO completions.

Linux ENIC Driver Updates

ENIC Version 2.3.0.43

- This driver update increased the size of devname to accommodate a 15 character netdev interface name and description.

- Added support for RHEL 7.4.

ENIC Version 2.3.0.40

- This driver update addresses an issue where after installing VIC drivers for SuSE 12.1, the new driver version doesn't appear after a reboot.

ENIC Version 2.3.0.39

- This driver update adds supports for VXLAN with Receive Side-Scaling (RSS) stateless offload on VIC adapters 1340, 1380, 1385, 1387, and SIOC on Cisco UCS C3260 for RHEL 7.0, Centos 7.0, SLES 12 SP2 and above releases. VXLAN offload is not supported for IPv6.

ENIC Version 2.3.0.35

- This driver update adds support for RHEL 7.3.

- CSCuz73711: This driver update contains missing instructions for the Ubuntu driver in the README.

ENIC Version 2.3.0.31

- This driver update adds support for Ubuntu 16.04.2.

Linux FNIC Driver Updates

FNIC Version 1.6.0.36

- Added support for displaying the timestamp in FNIC debugging statistics.

- CSCve27915: This driver update fixes incorrect reporting of vHBA speeds for FNIC drivers 1.5.0.45 in RHEL 7.4.

- FC Control Path Tracing

  - Adds check_condition accounting and output to fnic stats.

  - Changes the IO time take bucket to include more buckets at higher granularity

        • Added current max_io_time to indicated the max time take by an io so far (if >30 sec)

FNIC Version 1.6.0.31

- This driver update adds support for RHEL 7.3.

- CSCvc11335: This driver update adds support for SLES 12 SP2.

- CSCva90513: This driver enhances IO stats by adding stats for time taken for IO completions.

- CSCvb20147: Fixed an issue where an "out of order case" occurred when the IO completed which could cause an HBA reset.

XenServer ENIC Driver Updates

ENIC Version 2.3.0.41

- This driver update adds support for XenServer 7.2.

Windows Driver Updates

Windows Server 2012 and 2012 R2 FNIC Version 2.4.0.20

- CSCva02566: Windows FNIC no longer crashes from SCSI inquiry commands.

Windows Server 2012 and 2012 R2 ENIC Version 3.5.0.18

- This driver update addresses a crash that may occur while running RoCE stress tests.

Windows Server 2016 ENIC Version 4.0.0.3

- This driver update addresses a crash that may occur while running RoCE stress tests.

Resolved Caveats

The following table lists the resolved caveats in Release 3.2.

Defect ID	Description	First Bundle Affected	Resolved In
CSCvf50470	Cisco VIC no longer shows an Exchange Allocation Failure and WQ Errors with fiber channel traffic.	3.1(3a)B	3.2(2b)B

Open Caveats

The following table lists the open caveats in Release 3.2.

Defect ID	Description	Workaround	First Bundle Affected
CSCvf70114	After enabling the usnic policy in a service profile, the Linux virtual machine may not boot due to a PCI-E error.	To avoid this, do not enable the usnic from a service profile or move to a different server.	3.2(2b)C ENIC version 2.3.0.43 usNIC version 5.4.5
CSCve88672	When upgrading the VIC drivers from 2.2(7b) to 2.2(8g), the VIO installer driver update may fail with the following error: `"A later version of Cisco VIO Drivers and Utilities is already installed"`	Uninstall the current 2.2(7b) VIO installer and install the new version with the 2.2(8g) driver ISO.	2.2(8g)B

CSCvd50252	After installing VIC drivers for SuSE 12.1, the new driver version does not appear after a reboot.	Follow instructions on https://communities.cisco.com/docs/DOC-64842 to compile from source.
		
		 Manually copy the enic.ko to the new kernel and update the initramfs with the commands below.
		
		 `#cp /lib/modules/3.12.49-11-default/updates/enic.ko`
		
		 `/lib/modules/3.12.67-60.64.21-default/updates/`
		 `#depmod`
		 `#mkinitrd (follow the prompts in the output)`
			2.2(3c)C Resolved in 3.1(2f)A

CSCve95688	The **esxcli network nic down** command in ESXi 6.5 may fail to delete the MAC address table in the fabric interconnect.	To delete the static MAC entries, disable the NIC from UCS Manager manually.	Native ENIC 1.0.6.0 Resolved in Native ENIC 1.0.11.0

Defect ID	Description	Workaround	First Bundle Affected
CSCve22603	Cisco VIC 1200 and VIC 1300 series cards with firmware versions lower than 4.2(2a) can crash and generate a core file with the following error: `ecpumgr.main ERROR: ecpu 1 panic: ASSERT FAILED (Exception 2 triggered!) @ mips/ecpu_panic.c:138` **Note** Due to the age of the VIC 1240 card, MFG updates are no longer under development. If similar symptoms are encountered, escalate and have the core file reviewed to determine if card replacement is needed.	Submit the core file for analysis. If analysis of the adapter logs confirms the error, replace the VIC card.	Affects Cisco VIC 12XX and 13XX series adapter cards with firmware version lower than 4.2(2a)

Related Cisco UCS Documentation

Documentation Roadmaps

For a complete list of all B-Series documentation, see the *Cisco UCS B-Series Servers Documentation Roadmap* available at the following URL: https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/overview/guide/UCS_roadmap.html

For a complete list of all C-Series documentation, see the *Cisco UCS C-Series Servers Documentation Roadmap* available at the following URL: https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/overview/guide/ucs_rack_roadmap.html.

For information on supported firmware versions and supported UCS Manager versions for the rack servers that are integrated with the UCS Manager for management, refer to Release Bundle Contents for Cisco UCS Software.

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