

Releasenotes-qedrntv
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R E L E A S E N O T E S

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QLogic qedrntv VMware ESX RoCE Driver for 579xx controllers

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Version 3.40.9.1 (Feb 21, 2020)

Internal FW 8.50.12.0

Fixes:

1. Cont00108269: PSOD while running V2-L2-VRDMA-Perftest

Change: Do not compare QPs within same namespace while detecting duplicates.

Relevance: VRMDA.

2. DCPN 00060314: NVMeoRDMA::Stress::VirtualReset_VM ESX_PSOD

Change: Synchronize CQ destroy and pending CNQ interrupts

Relevance: NVMeoRDMA.

3. Cont00108344: ESX 7.0 RC3 Namespace not enabled - bundle 5.0.184

Change: Change the data type of the module parameter ns_en and num_ns to u32.

Relevance: NameSpace

Version 3.40.9.0 (Feb 07, 2020)

Internal FW 8.50.12.0

Fixes:

1. Cont00108158: RDMA stats counters are showing on non-traffic port

Change: Make RDMA stats per PF

Relevance: esxcli rdma stats

2. Cont00107735: PSOD while doing SvMotion from local disk to NFS server.

Change: Implement a workaround to destroy resources from old namespace.

Relevance: Fast suspend resume with namespaces enabled.

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Version 3.40.8.0 (Jan 27, 2020)

Internal FW 8.50.12.0

Fixes:

1. Cont00108033: PSOD - Usage error in dlmalloc - eeprom reset in SF mode.

Change: Add workaround to allocate the db_entry heap in qedrntv driver context instead of qedrntv to avoid heap access violation.

Relevance: All.

2. Cont00107993: Unable to run RDMA traffic with QPs more than 350

Change: Increase Heap size to accommodate for new requirement.

Relevance: ESXi 7.0

3. Cont00108028: Unable to connect to NVME controller when PVRDMA namespaces are enabled.

Change: Add module param to control the number of namespaces enabled.

Relevance: NVME over RDMA.

Version 3.40.6.0 (Jan 14, 2020)

Internal FW 8.50.12.0

Fixes:

1. Cont00107876: ESXi 6.5 PSOD on RoCE driver load.

Change: Disable namespaces for 6.5 driver.

2. DCPN 00059330: PSOD seen during device reset test.

Change: Synchronize MR dereg and GSI Rx threads to avoid a race condition.

3. Cont00107767: RoCE traffic stops after vMotion with 3 Host config.

Change: Initialize per namespace QP bitmap before using it.

4. DCPN 60314: Polling a CQ with destroyed RC QP causes PSOD.

Change: Track & validate the RC QP during poll.

Version 3.40.3.0 (Dec 10, 2019)

Internal FW 8.50.10.0

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Fixes:

1. Cont00107813: E4 RoCE NameSpace: VM to VM roce traffc is not running.

Change: Reduce the number of namespaces from 256 to 128.

Enhancement:

1. Enable namespaces by default.

Version 3.40.1.0 (Nov 29, 2019)

Internal FW 8.50.10.0

Enhancement:

1. Add support for RDMA loopback.

Version 3.40.0.0 (Nov 21, 2019)

Internal FW 8.42.4.0

Fixes:

1. Cont00106932, Cont00106659: Failed to get RDMA Driver Version from
Get OS Driver Version command.
Cont00107605: properties is showing incorrect RDMA driver version on ESX7.0

Change: Send RDMA driver version to MFW.

2. Update driver version to 3.40.x.x to sync with VMware requirements.

Enhancement:

1. Add support for PVRDMA namespaces.

Version 3.12.18.0 (Nov 05, 2019)

Internal FW 8.42.3.0

Fixes:

1. Updating driver version to get to be inline with qedentv driver version.

Version 3.12.17.0 (Oct 18, 2019)

Internal FW 8.42.3.0

Enhancement:

1. Updating driver version as ecore is updated.

Version 3.12.16.0 (Oct 02, 2019)

Internal FW 8.42.1.0

Fixes:

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1. DCPN 00057622: The GSI consumer index size is incorrect.
Change: The GSI consumer size is updated to 32bit.

Version 3.12.14.0 (Aug 26, 2019)

Internal FW 8.42.1.0

Fixes:

1. DCPN 00054524: PSOD seen while running UD VRDMA traffic.

Change: Allow posting request with DMA MR only for UD QP.
2. DCPN 00057095: PSOD seen while running UD traffic using SRDMA tool.

Change: Prevent CQ sharing with UD QP. Add ERR state handling to UD QP.

Version 3.12.12.0 (Aug 02, 2019)

Internal FW 8.42.0.0

Fixes:

1. DCPN 00056033: Host is not responding in idle state.

Change: System hanged because of messages flooding in qedrntv_ll2_rx_cb.
Change the verbosity level to ECORE_MSG_PKTDATA.
2. DCPN 00056490: VMK_ASSERT(RDMAFindDeviceBinding(device, &tmpAddr, instance, vlanID, 0)
== (void *)0)
Change: In qedrntv_dev_create_bind(), iterate all over the cm_bind_props array and
match with requested GID. If GID is already in use return VMK_EXISTS.
3. Remove unnecessary vmkapi_2_2_0_0 dependency from VIB properties.

Version 3.12.11.0 (July 01, 2019)

Internal FW 8.40.32.0

Fixes:

1. Problem Cont00100299: Logs are flooding with RDMA stats prints.
Change: Changed the prints verbosity level to ECORE_MSG_RDMA.
2. Problem: Cont00103006: iSER rescan hangs after removal of target
Change: Enable posting to the Receive Queue, unless the QP is in RESET state.
3. Problem: The WC opcode is not updated in case of FAST_REG_MR completion.
Change: The opcode is filled in completion entry for FAST_REG_MR.
4. Problem: Cont00103827: vSphere Auto Deploy shows error, as stateless-ready flag

is False.

Change: The stateless-ready flag is set to True.

5. Problem: Cont00102805: Observed disconnects on starting traffic with LIO target.

Change: Return updated lkey and rkey for query_mr callback on FMR.

6. Problem: Cont00104218: PSOD is seen when MTU is changed with UD traffic running on VM

Change: Avoid error log message flooding to avoid PSOD.

7. Problem: The QP & CQ events are not passed to upper layer.

Change: Notify QP & CQ events to vmkernel.

8. Problem: DCPN00051615: PSOD while running DDV ei_loading test.

Change: Fix several error handling found with DDV.

9. Problem: SRQ pingpong test causes PSOD.

Change: Avoid freeing NULL Rx queue when SRQ is used.

10. Problem: Cont00104082: System crashes with PSOD while running Uplink reset using vsish with RDMA devices clamied in the first iteration.

Change: Re-implement uplinkReset callback to reset only uplink device in nic driver. Set RDMA port state to down/up if nic link goes down/up.

11. Problem: PSOD in RDMA driver during QP/CQ/MR/PD free.

Change: Skip ecore APIs as part of destroy APIs, to avoid PSOD.

12. Problem: Unloading RDMA driver after successful NIC/RDMA recovery, causes ramrod stuck.

Change: Skip destroy for GSI QP, post recovery.

13. Problem: RDMA unload causes PSOD, if NIC driver recovery fails.

Change: Perform start/stop RDMA conditionally, based on current state.

Enhancements:

1. Implemented osal function - OSAL_CALLOC.

2. Added two new OSAL OSAL_IOV_DB_REC_HANDLER & OSAL_IOV_BULLETIN_UPDATE and moved the roce_edpm_mode

initialization to qedentv_ecore_probe from qedentv_slowpath_start as this paramter is moved to

ecore_hw_prepare_params from ecore_rdma_pf_params.

3. Add support for RDMA recovery on error.

4. VMK_DMA_ENGINE_FLAGS_NONE has been deprecated in VMKAPI 2.6 onwards.

Replace it with VMK_DMA_ENGINE_FLAGS_COHERENT.

Version 3.9.18.0 (Apr 20, 2018)

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Internal FW 8.33.14.0

Fixes:

1. Problem Cont00100264: RoCE traffic fails to run with katomic
Change: Return both QP state & QP current state, when QP state is requested.
2. Problem: Ether type is incorrectly set to IBOE, for VLAN tagged v2 packet.
Change: Use correct ether type, irrespective of VLAN.
3. Problem: WC is not generated on flush error, if WR is Unsignaled.
Change: Always generate WC flush error, even for Unsignaled WRs.
4. Problem: Cont00099408: Fixes related to UD.
Change: i) Use NIC max MTU instead of RoCE max MTU to satisfy IOVP requirements.
ii) Optimize locking between send queue and receive queue.
iii) Do all ll2 tx processing atomically.

Version 3.9.13.0 (Mar 16, 2018)

Internal FW 8.33.13.0

Enhancements:

1. Update the driver version since FW has been updated.

Version 3.9.12.0 (Mar 08, 2018)

Internal FW 8.33.12.0

Fixes:

1. Problem Cont00099406: Ramrod is stuck while running RoCE v1 change mtu test with krdma tool.
Change: Set LL2 MTU to max RoCE MTU and filter packets in the driver.
2. Problem Cont00099408: RoCE traffic fails to run with ud connection type
Change: Reset GSI consumer during QP reset sequence.
3. Problem: DCPN 00048348: UD traffic doesn't work after changing VLAN.
Change: Get VLAN information from the binding while building UD header.
4. Problem: Cont00099757: Incorrect speed display of RDMA devices in device list for 50 Gbps.
Change: Advertise correct RDMA link speed for 50G NIC link, in 6.7 & above.

Enhancements:

1. Add support for SRQ.
2. Add osal OSAL_BW_UPDATE.

Version 3.9.11.0 (Feb 20, 2017)

Internal FW 8.33.11.0

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Fixes:

1. Problem: Cont00099066: RoCE:Incorrect description shown under esxcli for rdma devices in ESXi6.5U1.
Change: Fixed the device desription string.
2. Removed ETH_HLEN definition from qedrntv.h. Already defined in ecore_tcp_ip.h.

Version 3.0.9.8 (Jan 18, 2017)

Internal FW 8.33.8.0

1. Upgrade driver version as ecore has been upgraded.

Version 3.0.9.6 (Jan 09, 2017)

Internal FW 8.33.8.0

Enhancemnts:

1. Enable CONFIG_ECORE_LOCK_ALLOC flag and move osal_[spinlock/mutex]_init code to osal_[spinlock/mutex]_alloc similar to NIC driver.
2. Initialize input parameters before sending QP create ramrod to ecore.

Version 3.0.8.6 (Oct 06, 2017)

Internal FW 8.30.16.0

Fixes:

1. Problem: Cont00096439: PSOD see while running rdma_cm related tests.
Change: Fixed error path after GSI QP was not found.
2. Problem: QP state table does not include GSI entry.
Change: Update QP state table for GSI type.

Version 3.0.8.5 (SEP 15, 2017)

Internal FW 8.30.16.0

Fixes:

Enhancemnts:

1. Internel FW version has changed in NIC driver.

Version 3.0.8.4 (SEP 01, 2017)

Internal FW 8.30.15.0

Fixes:

Enhancemnts:

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1. Internal FW version has changed in NIC driver.

Version 3.0.8.2 (Aug 25, 2017)

Internal FW 8.30.13.0

Fixes:

Enhancemnts:

1. Internal FW version has changed in NIC driver.

Version 3.0.8.1 (Aug 02, 2017)

Internal FW 8.30.11.0

Fixes:

1. Problem: NMI PSOD with Atomic Operations on unsupported servers.
Change: Add a module parameter to disable Atomic capability.
2. Problem: Cont00094023: The ib_send_bw test with -R(rdma_cm) option fails.
Change: Added multiple fixes required to include support for UD QP.
3. Problem: The PostSend WRs are not posted in SQE/Error State.
Change: Fixed by allowing PostSend in error state.

Enhancements:

1. Added QP and CQ doorbell addresses to ecore doorbell recovery list.

Version 3.0.8.0 (July 17, 2017)

Internal FW 8.30.10.0

Enhancements:

1. Enabled RoCEv2 IPv6 support for UD QP.
2. Add support for Atomic Verbs - FETCH_AND_ADD / CMP_AND_SWP.
3. Add driver version dependency check again NIC driver.

Fixes:

1. Problem: Cont00090182: Rping command fails.

Change: Added support for UD QP to enable RDMA CM.

Relevane: Applications using RDMA CM.

2. Problem: Cont00090684: PSOD seen in rest mode without any action after installing NIC, FCOE and ROCE driver on one machine.

Change: Avoid data structure corruption by reducing the number of CNQs

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to keep them with in the limit given by MFW.

Relevance: RoCE driver load-unload.

3. Problem: Rank lock violation seen on BETA build.

Change: Ecore is modified to acquire link_lock prior to calling OSAL_LINK_UPDATE where we again try to acquire another lock os same Rank. Use UNRANKED lock in ecore.

Relevance: All.

4. Problem: Cont00091498: PSOD seen with rescan of target using ESXi6.5 GA-Beta build.

Change: Fixed helper thread usage while scheduling helper thread on GSI Rx side.

Relevance: GSI QP.

5. Problem: RoCE driver failed to load with unresolved symbols error.

Change: API's from files ecore_rdma.c and ecore_iwarp.c were used which were not getting compiled. Added these files to .sc file.
Defined two OSAL's in qedrntv_osal.c file.

6. Problem: Cont00094509: IB tests with multiple QPs fail.

Change: Allocate memory required for DMA ops using a mempool, instead of a heap.

Relevance: IB tests with multiple QPs.

7. For memory allocation from mempool, change creationTimeoutMS flag from VMK_TIMEOUT_UNLIMITED_MS to VMK_TIMEOUT_NONBLOCKING as it crashes on BETA build.

Version 3.0.6.4 (Jan 12, 2017)
Internal FW 8.18.9.0

Enhancements:

1. Support for - Alloc FRMR, Alloc/Free PageList, Register FMR.

Version 3.0.6.3 (Dec 30, 2016)
Internal FW 8.18.9.0

Enhancements:

1. LL2 Transmit path rework.

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2. LL2 Receive path rework.
3. Export RoCE information through NIC management interface.

Fixes:

1. Problem: GRH header added on RoCE v2 header of UD packet.

Change: Remove GRH header for RoCE v2.

Relevance: GSI QP Tx path.

2. Problem: RDMA CM packet drop due to CRC errors.

Change: Enable GSI offload and also fix source MAC address of UD packet.

Relevance: GSI QP Tx path.

Version 3.0.6.2 (Nov 23, 2016)

Internal FW 8.18.4.0

1. Update the driver version since FW has been updated.

Version 3.0.6.1 (Nov 21, 2016)

Internal FW 8.18.3.0

Enhancements:

1. Added support for physical memory region.

Fixes:

1. Problem: Cont00089658: The ib tests fail if run on multiple VMs.

Change: Get source GID correctly in modify QP.

Relevance: Use of multiple GIDs.

Version 3.0.5.2 (Sep 21, 2016)

Internal FW 8.14.7.0

1. Change the driver version to since ecore and storm has changed.

Version 3.0.4.9 (August 02, 2016)

Internal FW 8.14.0.0

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Fixes:

1. Problem: Cont00087687: Interrupt mode is not working for RDMA on 100G.

Change: Fix the status block & MSIX vector reservation for RoCE.

Relevance: RDMA operations with interrupt mode on 100G ports.

Version 3.0.4.8 (July 28, 2016)

Internal FW 8.14.0.0

Fixes:

1. Problem: Cont00087030: RDMA operations fail with all NPARs, except PF 0.

Change: Add RDMA bind MAC address to LLH to allow RDMA traffic.

Relevance: RDMA operations with NPAR enabled.

Version 3.0.4.7 (July 04, 2016)

Internal FW 8.10.7.0

Fixes:

1. Problem: Cont00087179: [ESX-E4-RoCE]: PSOD on installation of latest RoCE driver.

Change: The additional fields of debugfs are included in RoCE to avoid structure mismatch.

Relevance: Driver load.

2. Problem: Cont00087064: PSOD during driver load with Baffin bay 1 x 100 GB adapter.

Change: Initialize interrupt status blocks only for engine 0.

Relevance: Driver load.

Version 3.0.4.6 (June 22, 2016)

Internal FW 8.10.7.0

Fixes:

1. Problem: Cont00086898: FW attention & PSOD with RDMA SEND / WRITE operations.

Change: The bit 'dif_on_host_flg' is cleared in 'DMA_RAMROD_REGISTER_MR' ramrod request.

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Relevance: RDMA Send/Write operations.

Enhancements:

1. Support for multiple CNQs.
2. Support for DPM & Inline data for SEND / WRITE operations.
3. Enhanced debug support.
4. Enhance error handling.

Version 3.0.4.5 (May 18, 2016)

Internal FW 8.10.4.0

Enhancements:

1. Dynamic RoCE mode(v1/v2) support.

Version 3.0.4.4 (May 3, 2016)

Internal FW 8.10.4.0

Enhancements:

1. Support 32 bit chains for CQ / SQ / RQ.
2. Support GSI QP.
3. Support RoCE v2.

Version 2.0.0.4 (Sept 30, 2015)

Internal FW 8.5.6.0

Enhancement:

1. Fixed the driver to match recent HSI changes from FW 8.5.4.0 onwards and other compilation errors.

Fixes:

1. Problem: Cont00082850: E4 RoCE B0 Testing: Send_bw test is failing

Change: Using correct WQE for RDMA Send operation.

Relevance: RDMA Send operations.

Version 1.0.0.3 (Jun 30, 2015)

Internal FW 8.4.2.0

Fixes:

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1. Problem: Cont00079307: The RDMA write operation with > 64K iterations fails in event mode.

Change: Modified the CQ consumer index counter to 32 bit.

Relevance: RDMA write operations with > 64 iterations in event mode.

Version 1.0.0.2 (April 23, 2015)

Internal FW 8.3.5.0

Fixes:

1. Problem: Post receive failes when post list size is greater than 1.

Change: Correctly update receive producer doorbell in post receive.

Relevance: Post receive wr.

Version 1.0.0.1 (April 16, 2015)

Internal FW 8.3.5.0

Enhancement:

1. Initial driver for RoCE support.