



Intel[®] Ethernet Controller Products

30.0.1 Release Notes

February 2025

Revision History

Revision	Date	Comments
2.1	February 2025	Release Note 30.0.1: <ul style="list-style-type: none"> • Introducing support for new NICs (part of Intel® Ethernet 10 Gigabit Adapters): <ul style="list-style-type: none"> – Intel® Ethernet Network Adapter E610-XT2 – Intel® Ethernet Network Adapter E610-XT4 – Intel® Ethernet Network Adapter E610-IT4
2.0	February 2025	Release Note 30.0: <ul style="list-style-type: none"> • Introducing support for new NICs (part of Intel® Ethernet 10 Gigabit Adapters): <ul style="list-style-type: none"> – Intel® Ethernet Controller E610 for 10GBASE-T – Intel® Ethernet Network Adapter E610-IT4 for OCP 3.0
1.9	December 2024	Release Note 29.5: <ul style="list-style-type: none"> • Introducing New OS support: FreeBSD 13.4 • 2024R5 Updates
1.8	November 2024	Release Note 29.4.1: <ul style="list-style-type: none"> • Introducing New OS support: Red Hat Enterprise Linux 9.5
1.7	October 2024	Release Note 29.4: <ul style="list-style-type: none"> • Introducing New OS support: Windows Server 2025 and Windows 11 24H2 OSes
1.6	August 2024	Release Note 29.3.1: <ul style="list-style-type: none"> • Introducing New OS support: Ubuntu 24.04 LTS
1.5	August 2024	Release Note 29.3: <ul style="list-style-type: none"> • Generic update for FVL, CVL and CPK NIC OEM and FreeBSD 14.1
1.4	July 2024	Release 29.2.1: <ul style="list-style-type: none"> • Introducing New OS support: SLES 15 SP6
1.3	July 2024	Release 29.2: <ul style="list-style-type: none"> • Introducing New OS support: VMware ESXi 8.0u3
1.2	June 2024	Release 29.1.2: <ul style="list-style-type: none"> • Introducing New OS Support: Red Hat Enterprise Linux 9.4 and Red Hat Enterprise Linux 8.10
1.0	May 2024	Release Note 29.1: <ul style="list-style-type: none"> • Dot release, ESXi drivers update. • Full OEM Gen container release for E810, E700 and E820.

Contents

1.0 Overview	5
1.1 New Features	5
1.1.1 Hardware Support	5
1.1.2 Software Features	5
1.1.3 Firmware Features	5
1.2 Removed Features	5
1.3 Operating Systems Supported	6
1.3.1 Linux	6
1.4 Windows Server	6
1.4.1 Windows Client	8
1.4.2 FreeBSD	9
1.4.3 ESXi Drivers	9
1.5 NVM Versions Supported	10
1.6 DDP Versions Supported	10
2.0 Fixed Issues	11
2.1 Intel® Ethernet 800 Series Network Adapters	11
2.1.1 Intel® Ethernet 810 Series	11
2.1.2 Intel® Ethernet 820 Series	11
2.2 Intel® Ethernet 700 Series Network Adapters	12
2.2.1 Firmware/NVM/NVM Update	12
2.2.2 Windows Driver	12
2.2.3 ESX Driver	12
2.3 Intel® Ethernet I211/I210 Series Network Adapters	12
2.3.1 General	12
2.4 Intel® Ethernet 610 Series Network Adapters	12
2.4.1 Firmware/NVM/NVM Update	12
3.0 Known Issues	13
3.1 Intel® Ethernet 800 Series Network Adapters	13
3.1.1 Intel® Ethernet 810 Series	13
3.1.2 Intel® Ethernet 820 Series	15
3.2 Intel® Ethernet 700 Series Network Adapters	15
3.2.1 Windows Driver	15
3.2.2 Intel® Ethernet Controller V710-AT2/X710-AT2/TM4	15
3.2.3 Linux Driver	15
3.2.4 Pre-Boot	16
3.2.5 VMware Driver	16
3.2.6 Firmware/NVM/NVM Update	16
3.3 Intel® Ethernet 600 Series Network Adapters	16
3.3.1 General	16
3.3.2 Linux Driver	16
3.3.3 Windows Driver	17
3.3.4 VMware Driver	17
3.3.5 NVM Update Tool	17
3.4 Intel® Ethernet 500 Series Network Adapters	18
3.5 Legacy Devices	18
4.0 NVM Upgrade/Downgrade 800 Series/700 Series and X550	19
5.0 Languages Supported	19
6.0 Related Documents	19
6.1 Feature Support Matrix	19
6.2 Specification Updates	20



6.3	Software Download Package	20
6.4	GitHub Ethernet Drivers and Utilities	20
6.5	Intel Product Security Center Advisories	20

1.0 Overview

This document provides an overview of the changes introduced in the latest Intel® Ethernet Controller/ Adapter family of products. References to more detailed information are provided where necessary. The information contained in this document is intended as supplemental information only; it should be used in conjunction with the documentation provided for each component.

These release notes list the features supported in this software release, known issues, and issues that were resolved during release development.

1.1 New Features

1.1.1 Hardware Support

Release	New Hardware Support
30.0.1	<ul style="list-style-type: none"> Intel® Ethernet Network Adapter E610-XT2 Intel® Ethernet Network Adapter E610-XT4 Intel® Ethernet Network Adapter E610-IT4

1.1.2 Software Features

Release	New Software Support for E610 NICs
30.0.1	<ul style="list-style-type: none"> Basic drivers support Tools, Apps (PROSet, Ethernet Cmdlet) and Pre-boot (UEFI, Legacy PXE, Bootutil) support Tx Hang detection mechanism (including check what caused the Tx Hang and function in SW drivers to restore the connection) Thermal sensor events support. Once thermal event is reported SW will report it to the system log and stop all Rx/Tx and disable all interrupts FW logging support which is the same "logger" engine like in E810 NIC series, through which E610 base drivers and software tools will be able to dump FW logs using special admin commands. FW API Version Compatibility where SW will notify the user about critical need or recommendation to update to the latest compatible software/firmware Debug Dump support which is ability to generate HW and FW configuration snapshot dump for offline debug purposes. It includes support to fetch all clusters provided by Firmware via single command. Recovery and Rollback mechanisms which allows to get back to previous FW version in case of issues related to NVM update. The first mechanism allows to recover the device if it became nonfunctional. SRIOV feature is enabled by default on Linkville adapters and option is not available in the Device Settings in HII Devlink as the interface for NVM update, with the logic for programming the NVM being directly in the driver

1.1.3 Firmware Features

Release	New Firmware Support
30.0.1	<ul style="list-style-type: none"> None for this release.

1.2 Removed Features

Release	Hardware/Feature Support
30.0.1	<ul style="list-style-type: none"> None for this release.

1.3 Operating Systems Supported

1.3.1 Linux

Operating Systems supported:

- Linux Real Time Kernel 5.x and 4.x (only on Intel Ethernet E810 Series)
- Linux, v2.4 kernel or higher
- Kyline Linux Advance Server V10 (only for Intel Ethernet E810 Series)
- Red Hat *Enterprise Linux* (RHEL) 9.5
- Red Hat Enterprise Linux (RHEL) 8.10
- SUSE Linux Enterprise Server 15 SP6
- SUSE Linux Enterprise Server 12 SP5
- Canonical Ubuntu 24.04 LTS
- Canonical *Ubuntu* 22.04 LTS
- Debian* 11 (not available for Intel Ethernet E610 Series)
- openEuler (not available for Intel Ethernet E610 Series)

Table 1. Supported Operating Systems: Linux

Product	PF Driver	VF Driver	RDMA Driver
Intel® Ethernet 810/820 Series	1.16.3	4.13.3	1.16.10
Intel® Ethernet 700 Series	2.27.8	4.13.3	1.16.10
Intel® Ethernet 10 Gigabit Adapters	6.0.6	5.0.2	Not Supported
Intel® Ethernet Gigabit Adapters	5.18.7	Not Supported	Not Supported

1.4 Windows Server

Operating Systems supported:

- Microsoft Windows Server 2025
- Microsoft Windows Server 2022
- Microsoft Windows Server 2019, Version 1903 (Not available for Intel Ethernet E610 Series)
- Microsoft Windows Server 2016 (Not available for Intel Ethernet E610 Series)
- Microsoft Azure Stack HCI

Table 2. Supported Operating Systems: Windows Server

Driver	Windows Server 2025	Windows Server 2022	Windows Server 2019	Windows Server 2016
Intel® Ethernet 800 Series				
icea	1.15.302.0	1.15.121.0	1.15.121.0	1.14.104.0
scea	1.14.307.0	1.14.222.0	1.14.222.0	Not Supported
Intel® Ethernet 700 Series				
i40ea	1.20.100.0	1.20.100.0	1.20.100.0	1.18.369.0
i40eb	1.20.100.0	1.20.100.0	1.20.100.0	1.18.369.0
Intel® Ethernet Adaptive Virtual Function				
iavf	1.16.100.0	1.16.100.0	1.16.100.0	1.14.203.0
Intel® Ethernet 10 Gigabit Adapters and Connections				
ixs	4.2.6.0	4.1.254.0	4.1.254.0	4.1.254.0
sxa	4.2.9.0	4.1.254.0	4.1.254.0	4.1.254.0
sxb	4.1.254.0	4.1.254.0	4.1.254.0	4.1.254.0
ixt	Not Supported	Not Supported	4.1.228.0	4.1.229.0
ixn	Not Supported	Not Supported	4.1.254.0	4.1.254.0
ixw	1.2.43.0	1.2.43.0	Not Supported	Not Supported
vxs	2.3.2.4	2.3.2.4	2.1.252.0	2.1.232.0
vxn	Not Supported	Not Supported	2.1.252.0	2.1.252.0
Intel® Ethernet 2.5 Gigabit Adapters and Connections				
e2f	2.1.4.3	1.1.4.43	1.1.4.43	Not Supported
Intel® Ethernet Gigabit Adapters and Connections				
e1r	14.1.5.0	14.1.5.0	14.0.5.0	14.0.6.0
v1q	Not Supported	Not Supported	1.4.7.3	1.4.7.3

1.4.1 Windows Client

Operating Systems Supported:

- Microsoft Windows 11 24H2
- Microsoft Windows 11 23H2
- Microsoft Windows 11 22H2
- Microsoft Windows 10 21H2 (Not available for Intel Ethernet E610 Series)
- Microsoft Windows 10 RS5, Version 1809 (Not available for Intel Ethernet E610 Series)

Table 3. Supported Operating Systems: Windows Client

Driver	Windows 11	Windows 10 21H2 / Windows 10 RS5
Intel® Ethernet 800 Series		
icea	1.15.208.0	1.15.208.0
Intel® Ethernet 700 Series		
i40ea	1.20.100.0	1.20.100.0
i40eb	1.20.100.0	Not Supported
Intel® Ethernet Adaptive Virtual Function		
iavf	1.16.100	1.16.100.0
Intel® Ethernet 10 Gigabit Adapters and Connections		
ixs	4.1.260.0	4.1.254.0
ixt	Not Supported	4.1.228.0
ixn	Not Supported	4.1.254.0
ixw	1.2.43.0	Not Supported
vxS	2.3.2.4	2.1.252.0
vxn	Not Supported	2.1.252.0
Intel® Ethernet 2.5 Gigabit Adapters and Connections		
e2fn	2.1.4.3	1.1.4.43
Intel® Ethernet Gigabit Adapters and Connections		
e1r	14.0.5.0	14.0.5.0
e1d	12.19.2.60	21H2: 12.19.2.60 RS5: 12.18.9.10
e1c	Not Supported	Not Supported
v1q	Not Supported	1.4.7.3

1.4.2 FreeBSD

Operating Systems supported:

- FreeBSD 14.1
- FreeBSD 13.4

Table 4. Supported Operating Systems: FreeBSD

Driver	PF Driver	VF Driver	RDMA Driver
Intel® Ethernet 810/820 Series	1.42.10	3.1.2	1.3.9
Intel® Ethernet 700 Series	1.14.2	3.1.2	1.3.9
Intel® Ethernet 10 Gigabit Adapters	3.4.29	1.6.9	Not Supported
Intel® Ethernet Gigabit Adapters	2.5.31	Not Supported	Not Supported

1.4.3 ESXi Drivers

Note: Intel® ESXi drivers are available from VMware.

- VMWare ESXi 8.0
- VMware ESXi 7.0

Refer to VMWare's download site for the latest ESXi drivers for Intel® Ethernet® devices.

1.5 NVM Versions Supported

The following table shows the NVM versions supported in this release.

Table 5. Current NVM

Product	NVM Version
810 Series	
E810	4.70
820 Series	
E822	3.42
E823-C	3.42
E823-L	3.42
700 Series	
X710	9.53
X722	6.50
600 Series	
E610	1.10
500 Series	
X550	3.70
X552NS	2.10
X552DE	2.10
X553	2.10
200 Series	
I210	1.00

1.6 DDP Versions Supported

The following table shows the versions supported in this release.

Table 6. Current DDP

Package	DDP Version
OS Package	1.3.36.0
Comms Package	1.3.46.0
Wireless Edge Package	1.3.14.0

2.0 Fixed Issues

2.1 Intel® Ethernet 800 Series Network Adapters

2.1.1 Intel® Ethernet 810 Series

2.1.1.1 General

- None in this release.

2.1.1.2 Firmware/NVM/NVM Update

- RDE: Setting property (AutoSpeedNegotiationEnabled.) not causing property value update.
- The PFA checksum won't be recalculated correspondingly when patching to certain property with RDE. Fix the RDE patching flow so that PFA checksum will be recalculated.
- The Intel® Ethernet 800 Series might have a PCIe downgrade to Gen3 problem because of Eq.Phase 2 timeout. This issue can be fixed by using NVM 4.7 or later.
- FW didn't report flow control as enabled when only asymmetric TX only is set.
- Occasionally, modified RDE settings are not applied after reboot/PCIR.

2.1.1.3 Linux

- When there was no DDP package on the filesystem, it was observed that OpenEuler system (22.03) was rebooted after ICE Linux driver went into SafeMode.
- I/O error on the network interfaces with "Transmit Balance" enabled in Linux environment. Tx Topology Option data was updated and programmed with correct data.

2.1.1.4 Windows Server

- None for this release.

2.1.1.5 ESX Driver

- VMWARE - Using Native Mode and ENS Mode ICEN driver with the latest DDP can cause queue configuration issues.

2.1.1.6 Pre-Boot

- None for this release.

2.1.2 Intel® Ethernet 820 Series

2.1.2.1 Firmware/NVM/NVM Update

- None for this release.

2.1.2.2 Linux Driver

- The system reboot was observed after bringing up the VF instance in the switchdev mode.

2.2 Intel® Ethernet 700 Series Network Adapters

2.2.1 Firmware/NVM/NVM Update

- Post reboot, Port 1 LLDP did not reset to default after "NetworkAdapter.ResetSettingsToDefault."
- 40G QSFP modules from Intel can not support NC-SI OEM command 0x4b02 to query temperature with reason code 0x5089. fixed in NVM V9.3 of XL710.
- When sending PLDM GetTerminusUID command, the last six bytes of TerminusUID are all zero. It should be same as MCTP UUID, indicating the MAC address.

2.2.2 Windows Driver

- Fix the previous implementation, the version 4.1.255.0 was introduced where DmaRemappingCompatible was set to 2 according to DCR4564 requirement.

2.2.3 ESX Driver

- None for this release.

2.3 Intel® Ethernet I211/I210 Series Network Adapters

2.3.1 General

- Driver package for PRO1000 and PROXGB missing cert tag vb.
- Driver package (PRO1000, PROXGB, PROCGB and PRO40GB), the declarative is "False".

2.4 Intel® Ethernet 610 Series Network Adapters

2.4.1 Firmware/NVM/NVM Update

- Warm reboot deadlock removal implementation added in the Firmware.

3.0 Known Issues

3.1 Intel® Ethernet 800 Series Network Adapters

3.1.1 Intel® Ethernet 810 Series

3.1.1.1 General

- Intel's validation team found issue in Windows Server 21H1. This OS version is unable to save memory dump (crash dump) on disk. It is considered to be OS defect.
- DPDK traffic is stopped after FLR reset. This issue has been documented in the `rte_eth_dev_reset` API.
Workaround: `testpmd` can be used to recover a VF after a reset.
 - When a VF reset happens, `testpmd` will print out "port reset" event to the console.
 - Use the "port reset" command to call `rte_eth_dev_reset`, and everything will go back to normal
- Running Unreliable Datagram (UD) RDMA mixed traffic with more than 2 QPs may lead to a receiver side UD application hang.
Workaround: Restart the RDMA UD application. This is not expected to impact storage (NVMeoF, iSER, VSAN) applications since they do not rely on UD communication.

3.1.1.2 Firmware/NVM/NVM Update

- When updating "ChassisIdSubtype" with the payload of "FlowControlConfiguration", the "ChassisIdSubtype" won't be updated with the annotation message of "PropertyNotUpdated".

3.1.1.3 Linux

- Support for Software Cross Timestamping - This release introduces support for software cross timestamping in the Linux ICE driver. Details about this feature will be provided in the next release of the Linux README.
NOTE: The following functionality is not yet documented in the Linux README.
- The Intel SIOV does not work on RHEL, due to backports applied by Red Hat.
- DPDK traffic is stopped after FLR reset. This issue has been documented in the `rte_eth_dev_reset` API.
Workaround: `testpmd` can be used to recover a VF after a reset.
 - When a VF reset happens, `testpmd` will print out "port reset" event to the console.
 - Use the "port reset" command to call `rte_eth_dev_reset`, and everything will go back to normal.
- In FreeBSD-13.0, iavf virtual interfaces guests may experience poor receive performance during stress.
- Changing the inner or outer VLAN tag protocols after setting the private flag "vf-true-promisc-support" disables the promiscuity on the VF's VLAN interfaces.
- When trust is enabled on VF with more than 8 VLAN filters, disabling trust makes all VLAN filters non functional.
Workaround: The workaround for this behavior is to do the power cycle of the setup to see the assigned DCB-MAP is reflecting.
- When user sets more than 8 VLANs for trusted VF, and then moves VF as untrusted, the VLAN configuration will be lost.

Workaround: To avoid losing VLAN configuration, user shall first reduce VLANs configuration allowed for untrusted VF (not more than 8 VLANs per VF), and then switched the VF to untrusted mode.

3.1.1.4 FreeBSD Driver

- During traffic in RoCEv2 mode, using large number of QPs (>64), a PE Critical Error may occur. In such circumstances the card may become inoperational, and reboot is required to restore RDMA capability.
- iavf virtual interfaces in FreeBSD-13.0 guests may experience a poor receive performance during stress.

3.1.1.5 RDMA Driver

- None for this release.

3.1.1.6 VMware Driver

- None for this release.

3.1.1.7 Windows Driver

- When Large Send Offload (LSO) V2 is enabled, the network adapter is unable to transmit frames larger than the MTU, which can impact network performance. Additionally, the incorrect incrementing of checksums `OID_INTEL_OFFLOAD_LARGE_SEND_VXLAN_COUNT` may lead to inaccurate network statistics.

Workaround: Users can temporarily disable Large Send Offload V2 on their network adapters to allow the transmission of frames larger than the MTU. However, note that this workaround may impact other aspects of network performance. We recommend using this workaround only if absolutely necessary and awaiting the software update for a comprehensive solution.

3.1.1.8 ESX Driver

- Running Unreliable Datagram (UD) RDMA mixed traffic with more than 2 QPs may lead to a receiver side UD application hang.
Workaround: Restart the RDMA UD application. This is not expected to impact storage (NVMeoF, iSER, VSAN) applications since they do not rely on UD communication.
- VMWARE - When instantiating the maximum number of VFs in NSX-T, adding a Transport Node afterwards might fail due to timeout.

3.1.1.9 Application Device Queues (ADQ)

- None for this release.

3.1.2 Intel® Ethernet 820 Series

3.1.2.1 General

- None for this release.

3.1.2.2 Firmware/NVM/NVM Update

- The incorrect PHY FW could get programmed resulting in the controller failing INIT. LANconf is showing the wrong PHY FW version for device 0x37.
- The 100 MB option, is visible in Windows Device Manager. However, when it is selected, a link cannot be established.
- Lane Reversal broken preventing proper functionality of 2x1x50g port option on quad 1. CPI opcode 0x67 PortLaneOrder does not support setting lane 1 as the autoneg lane and returns error code 1 (Configuration Error).

3.1.2.3 Linux Driver

- None for this release.

3.1.2.4 FreeBSD Driver

- None for this release.

3.1.2.5 Windows Driver

- None for this release.

3.1.2.6 VMware Driver

- None for this release.

3.2 Intel® Ethernet 700 Series Network Adapters

3.2.1 Windows Driver

- None for this release.

3.2.2 Intel® Ethernet Controller V710-AT2/X710-AT2/TM4

- None in this release.

3.2.3 Linux Driver

- In some cases ./nvmupdate64e can't initialize the XL710 card in recovery mode.

```
Intel® Ethernet NVM Update Tool  
NVMUpdate version 1.41.3.1  
Copyright © 2013 - 2024 Intel Corporation.
```

```
Config file read.
```

```
Warning: Cannot initialize port: [00:059:00:00] Intel® Ethernet Converged Network  
Adapter XL710-Q2
```

Warning: Cannot initialize port: [00:059:00:01] Intel® Ethernet Controller XL710
Generic ID

3.2.4 Pre-Boot

- The blink LED test executed from the UEFI setup menu may not work correctly for 10G speed when the link is up for the given port.

3.2.5 VMware Driver

- None for this release.

3.2.6 Firmware/NVM/NVM Update

- After updating to NVM 4.11 in some servers, one port of X557/X527 OCP adapter appears link down from Windows Device Manager after reboot. (disabling SR-IOV increases repro rate)

Workaround: Link status is restored back to normal after unplug/plug cable or disable/enable the affected port from Windows Device Manager.

- NVM content might be corrupted after nvmupdate due to old FW version generating errors. In this cases "**i40e: eeprom check failed (-5), Tx/Rx traffic disabled**" will appear.
- After patch RDE AutoSpeedNegotiationEnabled property the value will maintain current value.

3.3 Intel® Ethernet 600 Series Network Adapters

3.3.1 General

- It may be possible that invalid PCIe configuration can cause that EEUpdate will not show the adapter in OS.
- PHY Based PTP feature is not available during this release.
- Malicious driver detection and Tx Hang detection may seem to not work correctly. For example, some events may not be reported. However, the mechanism itself is working properly.
- Devlink cannot be used to exit recovery mode. NVM Update Tool is recommended to exit recovery mode. It's possible that recovery mode cannot be fixed via software tools on SLES operating systems - If such issue is observed then the recommendation is to use NVM Update Tool on EFI

3.3.2 Linux Driver

- When using Virtual Machine with Linux operating system it may be possible that for 1G and 100Mb speed, ethtool will not display that link is established at 1G or 100Mb. It may report that the negotiated speed is 10G. However, this is only issue with ethtool reporting link status - link is in fact established at the correct speed.
- SLES 15SP6 - NIC ports may not be initialized via NVM Update Tool (via inventory switch). Devlink can be used instead - which is accessible by nvmupdate - if devlink flag.
- It's possible that during blinking of NIC physical port LEDs, speed LED is blinking (not the activity LED)
- Server can be woken up via any type of Wake on LAN (WOL) magic packet despite specific ethtool configuration.

- Two “link down” events could be observed after link speed change to 1G and 10G. However, link is established correctly.
- When system has more than 128 CPU cores available it may be possible that XDP will not work. This limit is going to be removed in future releases.

3.3.3 Windows Driver

- Once event occurs like CORER, GLOBR, etc., the event log may report event ID only - without full message.
- For 2 vNICs connected via vSwitch when adapter is being surprisingly removed it may be possible that connection will be lost. Therefore, driver re-installation or reboot of the machine might be required to restore the connection. ,
- Speed and duplex values set on PF may not be properly displayed on VF. It's related only to 100MB and 1G speed.
- It's possible to create more Virtual Functions than limit allows (62). 63rd and higher Virtual Function is not operational.
- BSOD may occur on Windows Server 2025 during creation or removal of LBFO teaming. It's recommended to use Switch Embedded Teaming (SET) instead of Load Balancing/Failover. LBFO is deprecated by Microsoft on Windows Server 2022.
- It's possible that more than 31 Virtual Functions per Virtual Machine may cause that VFDataPath will become inactive. This issue is related to server/host limitations - according to guidelines from Microsoft: VFs and operating system must have access to enough RAM and CPU cores. Please refer to the Microsoft Virtualization guidelines.
- It's also possible that NIC may start resetting when attempting to run 62 Virtual Functions per Physical Function. Please refer to the previous point and Microsoft Virtualization guidelines
- When Large Send Offload (LSO) V2 is enabled, the adapter may not be able to send frames larger than the MTU. After disabling LSO frames larger than 1514 bytes may appear on the VM.
- SR-IOV enabled vNIC may not pass traffic until Intel® Ethernet Controller E610 Virtual Function (VF) Driver is installed. It's possible that traffic will stop when after disabling the VF. Re-enabling the E610 Virtual Function adapter restore the traffic.

3.3.4 VMware Driver

- Tx or Rx Pause setting status might be displayed incorrectly - for example instead of Tx enabled it may be reported that Tx is disabled.
- Speed and duplex values set on PF may not be properly displayed on VF. It's related only to 100MB and 1G speed.
- Intnet list is listed as supported for 'Available Namespaces' however Intnet support has been already removed.
- When port is down the physical port LED may not be turned ON. When port is up the LED shows the link correctly - LED is turned ON.

3.3.5 NVM Update Tool

- It may be possible that NVM Update Tool is not going to report that during rollback operation FW is in Rollback mode. However, the rollback procedure is being performed correctly.

- Once NVM is updated via NVM Update Tool, it might be possible that target image is not loaded yet. If such situation occurs then warm reset (reboot) is required, then target image will be fully loaded.

3.4 Intel® Ethernet 500 Series Network Adapters

- For X550 windows driver design, vectors 0 through 7 are enabled at driver init and all Rss queues and queues from various TCs are mapped to it. But more vectors are available to use (GetVectorsAvailableForRssQueues = 16 , NumRssQueues = 8). After getting an RSS indirection table update, a new vector outside of 0 to 7 range can be chosen for a queue while doing the queue to CPU remapping process. If that vector is outside of the 0-7 range, current design will have trouble for the queue to CPU remapping process and cause 10400 event.

Workaround: Change RSS processor count & queue count max/default value to 8 to align with max 8 queue mapping support on driver to avoid issue.

- Intermittent Traffic Delivery Failure on SLES 15 SP5/SP6 with VF Connected to SW Bridge: an issue has been identified in SLES 15 SP5/SP6 where network traffic from a Virtual Function (VF) connected to a software bridge (SW bridge) may intermittently fail to reach the intended client. This problem is impacting the reliability of network communications in virtualized environments utilizing software bridges.
Result: traffic from vf connected to SW bridge sometimes may not reach a client.

3.5 Legacy Devices

- None for this release.

4.0 NVM Upgrade/Downgrade 800 Series/700 Series and X550

Refer to the Feature Support Matrix (FSM) links listed in [Feature Support Matrix](#) for more detail. FSMs list the exact feature support provided by the NVM and software device drivers for a given release.

5.0 Languages Supported

Note: This only applies to Microsoft Windows and Windows Server Operating Systems.

This release supports the following languages:

Languages	
English French German Italian Japanese	Spanish Simplified Chinese Traditional Chinese Korean Portuguese

6.0 Related Documents

Contact your Intel representative for technical support about Intel® Ethernet Series devices/adapters.

6.1 Feature Support Matrix

These documents contain additional details of features supported, operating system support, cable/modules, and so on.

Device Series	Support Link
Intel® Ethernet 800 Series: – E810 – E820 Intel® Ethernet Controller E810 and Intel® Ethernet Connection E82X Feature Comparison Matrix	https://cdrdv2.intel.com/v1/dl/getContent/630155 https://cdrdv2.intel.com/v1/dl/getContent/739764 https://cdrdv2.intel.com/v1/dl/getContent/751546
Intel® Ethernet 700 Series: – X710/XXV710/XL710 – X722 – X710-TM4/AT2 and V710-AT2	https://cdrdv2.intel.com/v1/dl/getContent/332191 https://cdrdv2.intel.com/v1/dl/getContent/336882 https://cdrdv2.intel.com/v1/dl/getContent/619407
Intel® Ethernet 600 Series: – E610	https://cdrdv2.intel.com/v1/dl/getContent/743366
Intel® Ethernet 500 Series	https://cdrdv2.intel.com/v1/dl/getContent/335253

6.2 Specification Updates

These documents provide the latest information on hardware errata as well as device marking information, SKU information, etc.

Device Series	Support Link
Intel® Ethernet 800 Series	https://cdrdv2.intel.com/v1/dl/getContent/616943
Intel® Ethernet 700 Series: <ul style="list-style-type: none"> – X710/XXV710/XL710 – X710-TM4/AT2 and V710-AT2 	https://cdrdv2.intel.com/v1/dl/getContent/331430 https://cdrdv2.intel.com/v1/dl/getContent/615119
Intel® Ethernet 600 Series: <ul style="list-style-type: none"> – E610 	https://cdrdv2.intel.com/v1/dl/getContent/743364
Intel® Ethernet 500 Series <ul style="list-style-type: none"> – X550 – X540 	https://cdrdv2.intel.com/v1/dl/getContent/333717 https://cdrdv2.intel.com/v1/dl/getContent/334566
Intel® Ethernet 300 Series	https://cdrdv2.intel.com/v1/dl/getContent/333066
Intel® Ethernet 200 Series <ul style="list-style-type: none"> – I210 – I211 	https://cdrdv2.intel.com/v1/dl/getContent/332763 https://cdrdv2.intel.com/v1/dl/getContent/333015

6.3 Software Download Package

The release software download package can be found [here](#).

6.4 GitHub Ethernet Drivers and Utilities

For additional information regarding Linux kernel drivers, refer to the [GitHub](#) driver repositories.

6.5 Intel Product Security Center Advisories

Intel product security center advisories can be found at:

<https://www.intel.com/content/www/us/en/security-center/default.html>

NOTE: *This page intentionally left blank.*

LEGAL

No license (express or implied, by estoppel or otherwise) to any intellectual property rights is granted by this document.

This document (and any related software) is Intel copyrighted material, and your use is governed by the express license under which it is provided to you. Unless the license provides otherwise, you may not use, modify, copy, publish, distribute, disclose or transmit this document (and related materials) without Intel's prior written permission. This document (and related materials) is provided as is, with no express or implied warranties, other than those that are expressly stated in the license.

Intel disclaims all express and implied warranties, including without limitation, the implied warranties of merchantability, fitness for a particular purpose, and non-infringement, as well as any warranty arising from course of performance, course of dealing, or usage in trade.

This document contains information on products, services and/or processes in development. All information provided here is subject to change without notice. Contact your Intel representative to obtain the latest forecast, schedule, specifications and roadmaps.

The products and services described may contain defects or errors which may cause deviations from published specifications.

Copies of documents that are referenced in this document can be obtained by visiting the [Intel Resource and Documentation Center](#).

© Intel Corporation. Intel, the Intel logo, and other Intel marks are trademarks of Intel Corporation or its subsidiaries. Other names and brands may be claimed as the property of others.