Release Notes

Dell Technologies VEP4600 DIAG OS and Tools Release Notes

Rev. A08
July 2022

DELL EMC

Document revision history

Table 1. Revision history

Revision	Date	Description
A09	2022-04	BIOS version - 3.41.0.9-21, DIAG version - 3.43.3.81-9, DIAG tools version - 3.43.4.81-20, CPLD version - 07, and Firmware updater version - 3.5.
A08	2021-11	DIAG Tools 3.41.4.81-20. DIAG Recovery 3.41.3.81-9.
A07	2021-01	DIAG OS 3.41.3.81-8
A06	2020-06	DIAG OS 3.41.3.81-7
A05	2019-05	DIAG OS 3.41.3.81-6, DIAGS Tools 3.41.4.81-17
A04	2019-04	Fixed issues
A03	2019-02	WIFI/BT expansion cards, DIAG_OS_3.41.3.81-5, DIAGS Tools 3.41.4.81-16
A02	2018-10	Updated Software requirements
A01	2018-09	DIAG Recovery additional content
A00	2018–05	Initial release

Software requirements

Table 2. Software requirements

Software	Minimum Release Requirement
DIAG OS	v3.41.3.81-2
DIAG Tools	v3.41.4.81-6
DIAG Recovery	v3.41.3.81-4

For more information

For information about using the VEP4600, see the following documents at www.dell.com/support:

- *VEP4600 Installation Guide*
- *VEP4600 Set-Up Guide*
- *VEP4600 Release Notes*
- *VEP4600 BMC Guide*
- *VEP4600 BIOS Guide*

New and changed features

The following lists the new features and version history.

DIAG OS 3.41.3.81-9 || DIAG Tools VEP4600-DIAG OS 3.41.4.81-17-20

Table 3. DIAG OS 3.41.3.81-9 changes

DIAG OS 3.43.3.81-9 changes
Update i40e driver from 2.10.19 to 2.14.13

Table 3. DIAG OS 3.41.3.81-9 changes (continued)

DIAG OS 3.43.3.81-9 changes
Update DPDK from 19.05 to 21.02
`eltt2` for TPM (inventec) support. To check the TPM module, use the `%eltt2 -g` command.
`EDATool` 1. Fix `memtool` --test core dump issue 2. Modify DPDK script to fix throughput low issue

Table 4. DIAG OS 3.41.3.81-8 changes

DIAG OS 3.41.3.81-8 changes
Update i40e driver to 2.10.19.82
Update DPDK to 21.02
`EDATool` 1. Remove MC and BT wifi card version in updatetool 2. `psutool` voltage in show issue

Table 5. DIAG OS 3.41.3.81-7 changes

DIAG OS 3.41.3.81-7 changes
VEP4600 supports installation of DiagOS in USB

DIAG OS VEP4600_DIAG_OS_3.41.3.81-6 || DIAG Tools VEP4600-DiagOS-3.41.4.81-17

New features:

1. Support for the scriptable command line utility AMI Firmware Update (AFU) tool in VEP4600.
2. Core dump issue for --modify option in `eepromtool` fixed.
3. Driver patch added for controlling WIFI, LED, and modified open-source-kernel-diag/Makefile for VEP4600 build and created kernel config file for VEP4600.

DIAG OS VEP4600_DIAG_OS_3.41.3.81-5 || DIAG Tools VEP4600-DiagOS-3.41.4.81-16

New features:

1. Support for MC1/MC2 BT firmware update.
2. Support for LED of WiFI/BT. Can turn off/on using iwconfig wlan0 txpower off/on.
3. Support for eprom WIFI/BT card.
4. Support for WIFI BT diagnostics.

DIAG OS VEP4600_DIAG_OS_3.41.3.81-4

New features:

1. Support for rNDC diagnostics.
2. Support for `eepromtool` for rNDC Carrier Card FRU (Field-replaceable unit).

Important information

The following is important information you must know when working with your platform:

Functional area	Description
Software or firmware images	**NOTE:** Before deploying your switch, Dell Technologies recommends that you check and install the latest firmware or software images available for upgrade. This upgrade ensures that you get access to the most complete feature set.
EDATool log	To verify VEP hardware, use the following `EDAtool` and expect to see a similar output verifying operation of sub-system components.

```
root@dellemc-diag-os:~# edatool
****************************
*  Diagnostics Application  *
****************************
DellEmc Diag edatool version x.x, package x.xx.x.x-x 2018/04/09
DellEmc Diag cputool - version x.x package x.xx.x.x-x 2018/04/09
DellEmc Diag eepromtool - version x.x package x.xx.x.x-x 2018/04/09
DellEmc Diag gpiotool - version x.x package x.xx.x.x-x 2018/04/09
DellEmc Diag i2ctool - version x.x package x.xx.x.x-x 2018/04/09
DellEmc Diag ledtool - version x.x package x.xx.x.x-x 2018/04/09
DellEmc Diag lpctool - version x.x package x.xx.x.x-x 2018/04/09
DellEmc Diag memtool - version x.x package x.xx.x.x-x 2018/04/09
DellEmc Diag nvramtool - version x.x package x.xx.x.x-x 2018/04/09
DellEmc Diag pcitool - version x.x package x.xx.x.x-x 2018/04/09
DellEmc Diag pltool - version x.x package x.xx.x.x-x 2018/04/09
DellEmc Diag rtctool - version x.x package x.xx.x.x-x 2018/04/09
DellEmc Diag storagetool - version x.x package x.xx.x.x-x 2018/04/09
DellEmc Diag temptool - version x.x package x.xx.x.x-x 2018/04/09
Testing I2C devices:

Checking IPMI I2C devices on bus 0:

+ Checking max6699 temp 0x34  ..... Passed

Checking IPMI I2C devices on bus 1:

+ Checking emc2305 fan controller 0x9a  ..... Passed

Checking IPMI I2C devices on bus 2:

+ Checking cpld 0x1a  ..... Passed

Checking IPMI I2C devices on bus 11:


+ Checking SYS eeprom 0xa6  ..... Passed

I2C Devices: Overall test results ---------- >>> Passed
PL Tool test:


CPLD1: SW_SCRATCH Reg Addr: 0x602 ..........Passed


Overall Test Results:  Passed

Testing Memory Regions:
Testing Memory Region 0:
Address Read Test ........................... Passed
Address Write Test .......................... Passed
Address Walking 1's Test .................... Passed
Address Walking 0's Test .................... Passed
Data Read Test .............................. Passed
Data Write Test ............................. Passed
Data Walking 1's Test ....................... Passed
Data Walking 0's Test ....................... Passed
```

Functional area	Description
	Data Sliding 1's Test ..... Passed Data Sliding 0's Test ..... Passed Data Pattern Test ..... Passed Memory: Overall test results ---------- >>> Passed Mounted Filesystem Devices: /dev/sda2 on / type ext4 (rw,relatime,data=ordered) EDA: Overall test results ---------- >>> Passed root@dellemc-diag-os:~#
edatool tests	edatool --testrun=all Testing I2C devices: Checking IPMI I2C devices on bus 0: + Checking max6699 temp 0x34 ..... Passed Checking IPMI I2C devices on bus 1: + Checking emc2305 fan controller 0x9a ..... Passed Checking IPMI I2C devices on bus 2: + Checking cpld 0x1a ..... Passed Checking IPMI I2C devices on bus 11: + Checking SYS eeprom 0xa6 ..... Passed I2C Devices: Overall test results ---------- >>> Passed Testing PCI devices: + Checking PCI 00:00.0, ID=20208086 ..... Passed + Checking PCI 00:04.0, ID=20218086 ..... Passed + Checking PCI 00:04.1, ID=20218086 ..... Passed + Checking PCI 00:04.2, ID=20218086 ..... Passed + Checking PCI 00:04.3, ID=20218086 ..... Passed . . . + Checking PCI b3:00.0, ID=37c08086 ..... Passed + Checking PCI b4:03.0, ID=37c58086 ..... Passed + Checking PCI b5:00.0, ID=37c88086 ..... Passed + Checking PCI b5:00.1, ID=37d38086 ..... Passed + Checking PCI b5:00.2, ID=37ce8086 ..... Passed + Checking PCI b5:00.3, ID=37ce8086 ..... Passed PCI devices: Overall test results ---------- >>> Passed Acquiring PCI device name database Device#01: bus:dev.fn 00:00.0 - ID=0x20208086, Skylake DMI3 Registers Device#02: bus:dev.fn 00:04.0 - ID=0x20218086, Skylake CBDMA Registers Device#03: bus:dev.fn 00:04.1 - ID=0x20218086, Skylake CBDMA Registers Device#04: bus:dev.fn 00:04.2 - ID=0x20218086, Skylake CBDMA Registers Device#05: bus:dev.fn 00:04.3 - ID=0x20218086, Skylake CBDMA Registers Device#06: bus:dev.fn 00:04.4 - ID=0x20218086, Skylake CBDMA Registers Device#07: bus:dev.fn 00:04.5 - ID=0x20218086, Skylake CBDMA Registers Device#08: bus:dev.fn 00:04.6 - ID=0x20218086, Skylake CBDMA Registers Device#09: bus:dev.fn 00:04.7 - ID=0x20218086, Skylake CBDMA Registers Device#10: bus:dev.fn 00:05.0 - ID=0x20248086, Skylake MM/Vt-d Configuration Registers

Functional area	Description
	Device#11: bus:dev.fn 00:05.2 - ID=0x20258086, System peripheral: Intel Corporation Device 0x2025 Device#12: bus:dev.fn 00:05.4 - ID=0x20268086, PIC: Intel Corporation Device 0x2026 Device#13: bus:dev.fn 00:08.0 - ID=0x20148086, Framegrabber Device#14: bus:dev.fn 00:08.1 - ID=0x20158086, Skylake Ubox Registers Device#15: bus:dev.fn 00:08.2 - ID=0x20168086, Skylake Ubox Registers Device#16: bus:dev.fn 00:11.0 - ID=0xa1ec8086, Lewisburg PCI Express Root Port #22 Device#17: bus:dev.fn 00:11.5 - ID=0xa1d28086, Lewisburg SSATA Controller [AHCI mode] Device#18: bus:dev.fn 00:14.0 - ID=0xa1af8086, Lewisburg USB 3.0 xHCI Controller Device#19: bus:dev.fn 00:14.2 - ID=0xa1b18086, Lewisburg Thermal Subsystem Device#20: bus:dev.fn 00:16.0 - ID=0xa1ba8086, Lewisburg CSME: HECI #1 Device#21: bus:dev.fn 00:16.1 - ID=0xa1bb8086, Lewisburg CSME: HECI #2 Device#22: bus:dev.fn 00:16.4 - ID=0xa1be8086, Lewisburg CSME: HECI #3 Device#23: bus:dev.fn 00:1c.0 - ID=0xa1908086, Lewisburg PCI Express Root Port #1 Device#24: bus:dev.fn 00:1c.4 - ID=0xa1948086, Lewisburg PCI Express Root Port #5 Device#25: bus:dev.fn 00:1d.0 - ID=0xa1988086, Lewisburg PCI Express Root Port #9 Device#26: bus:dev.fn 00:1d.3 - ID=0xa19b8086, Lewisburg PCI Express Root Port #12 Device#27: bus:dev.fn 00:1f.0 - ID=0xa1c88086, Lewisburg LPC Controller Device#28: bus:dev.fn 00:1f.2 - ID=0xa1a18086, Lewisburg PMC Device#29: bus:dev.fn 00:1f.4 - ID=0xa1a38086, Lewisburg SMBus Device#30: bus:dev.fn 00:1f.5 - ID=0xa1a48086, Lewisburg SPI Controller Device#31: bus:dev.fn 02:00.0 - ID=0x15218086, i350 Gigabit Network Connection Device#32: bus:dev.fn 02:00.1 - ID=0x15218086, i350 Gigabit Network Connection Device#33: bus:dev.fn 02:00.2 - ID=0x15218086, i350 Gigabit Network Connection Device#34: bus:dev.fn 02:00.3 - ID=0x15218086, i350 Gigabit Network Connection Device#35: bus:dev.fn 04:00.0 - ID=0x15338086, Intel I210 Gigabit Network Connection Device#36: bus:dev.fn 16:00.0 - ID=0x20308086, Skylake PCI Express Root Port A Device#37: bus:dev.fn 16:05.0 - ID=0x20348086, System peripheral: Intel Corporation Device 0x2034 Device#38: bus:dev.fn 16:05.2 - ID=0x20358086, Skylake RAS Configuration Registers Device#39: bus:dev.fn 16:05.4 - ID=0x20368086, PIC: Intel Corporation Device 0x2036 Device#40: bus:dev.fn 16:08.0 - ID=0x208d8086, Skylake CHA Registers Device#41: bus:dev.fn 16:08.1 - ID=0x208d8086, Skylake CHA Registers . . . Device#86: bus:dev.fn 16:1e.6 - ID=0x20868086, Skylake PCU Registers Device#87: bus:dev.fn 17:00.0 - ID=0x874910b5, PCI Express Gen 3 (8 GT/s) Switch Device#88: bus:dev.fn 17:00.1 - ID=0x87d010b5, System peripheral: PLX Technolog Device#89: bus:dev.fn 17:00.2 - ID=0x87d010b5, System peripheral: PLX Technolog Device#90: bus:dev.fn 17:00.3 - ID=0x87d010b5, System peripheral: PLX Technolog Device#91: bus:dev.fn 17:00.4 - ID=0x87d010b5, System peripheral: PLX Technolog Device#92: bus:dev.fn 18:08.0 - ID=0x874910b5, PCI Express Gen 3 (8

Functional area	Description
	GT/s) Switch Device#93: bus:dev.fn 18:09.0 - ID=0x874910b5, PCI Express Gen 3 (8 GT/s) Switch Device#94: bus:dev.fn 18:0a.0 - ID=0x874910b5, PCI Express Gen 3 (8 GT/s) Switch Device#95: bus:dev.fn 18:0b.0 - ID=0x874910b5, PCI Express Gen 3 (8 GT/s) Switch Device#96: bus:dev.fn 18:10.0 - ID=0x874910b5, PCI Express Gen 3 (8 GT/s) Switch Device#97: bus:dev.fn 18:11.0 - ID=0x874910b5, PCI Express Gen 3 (8 GT/s) Switch Device#98: bus:dev.fn 18:12.0 - ID=0x874910b5, PCI Express Gen 3 (8 GT/s) Switch Device#99: bus:dev.fn 18:13.0 - ID=0x874910b5, PCI Express Gen 3 (8 GT/s) Switch Device#100: bus:dev.fn 19:00.0 - ID=0xf1a58086, Non-Volatile memory controller: Intel Corporation Device 0xf1a5 Device#101: bus:dev.fn 64:00.0 - ID=0x20308086, Skylake PCI Express Root Port A Device#102: bus:dev.fn 64:05.0 - ID=0x20348086, System peripheral: Intel Corporation Device 0x2034 Device#103: bus:dev.fn 64:05.2 - ID=0x20358086, Skylake RAS Configuration Registers Device#104: bus:dev.fn 64:05.4 - ID=0x20368086, PIC: Intel Corporation Device 0x2036 Device#105: bus:dev.fn 64:08.0 - ID=0x20668086, System peripheral: Intel Corporation Device 0x2066 Device#106: bus:dev.fn 64:09.0 - ID=0x20668086, System peripheral: Intel Corporation Device 0x2066 Device#107: bus:dev.fn 64:0a.0 - ID=0x20408086, System peripheral: Intel Corporation Device 0x2040 Device#108: bus:dev.fn 64:0a.1 - ID=0x20418086, System peripheral: Intel Corporation Device 0x2041 Device#109: bus:dev.fn 64:0a.2 - ID=0x20428086, System peripheral: Intel Corporation Device 0x2042 Device#110: bus:dev.fn 64:0a.3 - ID=0x20438086, System peripheral: Intel Corporation Device 0x2043 Device#111: bus:dev.fn 64:0a.4 - ID=0x20448086, System peripheral: Intel Corporation Device 0x2044 Device#112: bus:dev.fn 64:0a.5 - ID=0x20458086, System peripheral: Intel Corporation Device 0x2045 Device#113: bus:dev.fn 64:0a.6 - ID=0x20468086, System peripheral: Intel Corporation Device 0x2046 Device#114: bus:dev.fn 64:0a.7 - ID=0x20478086, System peripheral: Intel Corporation Device 0x2047 Device#115: bus:dev.fn 64:0b.0 - ID=0x20488086, Fast Ethernet 10/100 Base-T Controller Device#116: bus:dev.fn 64:0b.1 - ID=0x20498086, System peripheral: Intel Corporation Device 0x2049 Device#117: bus:dev.fn 64:0b.2 - ID=0x204a8086, System peripheral: Intel Corporation Device 0x204a Device#118: bus:dev.fn 64:0b.3 - ID=0x204b8086, System peripheral: Intel Corporation Device 0x204b Device#119: bus:dev.fn 64:0c.0 - ID=0x20408086, System peripheral: Intel Corporation Device 0x2040 Device#120: bus:dev.fn 64:0c.1 - ID=0x20418086, System peripheral: Intel Corporation Device 0x2041 Device#121: bus:dev.fn 64:0c.2 - ID=0x20428086, System peripheral: Intel Corporation Device 0x2042 Device#122: bus:dev.fn 64:0c.3 - ID=0x20438086, System peripheral: Intel Corporation Device 0x2043 Device#123: bus:dev.fn 64:0c.4 - ID=0x20448086, System peripheral: Intel Corporation Device 0x2044 Device#124: bus:dev.fn 64:0c.5 - ID=0x20458086, System peripheral: Intel Corporation Device 0x2045 Device#125: bus:dev.fn 64:0c.6 - ID=0x20468086, System peripheral: Intel Corporation Device 0x2046 Device#126: bus:dev.fn 64:0c.7 - ID=0x20478086, System peripheral: Intel Corporation Device 0x2047 Device#127: bus:dev.fn 64:0d.0 - ID=0x20488086, Fast Ethernet 10/100

Functional area	Description
	Base-T Controller Device#128: bus:dev.fn 64:0d.1 - ID=0x20498086, System peripheral: Intel Corporation Device 0x2049 Device#129: bus:dev.fn 64:0d.2 - ID=0x204a8086, System peripheral: Intel Corporation Device 0x204a Device#130: bus:dev.fn 64:0d.3 - ID=0x204b8086, System peripheral: Intel Corporation Device 0x204b Device#131: bus:dev.fn b2:00.0 - ID=0x20308086, Skylake PCI Express Root Port A Device#132: bus:dev.fn b2:05.0 - ID=0x20348086, System peripheral: Intel Corporation Device 0x2034 Device#133: bus:dev.fn b2:05.2 - ID=0x20358086, Skylake RAS Configuration Registers Device#134: bus:dev.fn b2:05.4 - ID=0x20368086, PIC: Intel Corporation Device 0x2036 Device#135: bus:dev.fn b2:12.0 - ID=0x204c8086, Skylake M3KTI Registers Device#136: bus:dev.fn b2:12.1 - ID=0x204d8086, Skylake M3KTI Registers Device#137: bus:dev.fn b2:12.2 - ID=0x204e8086, Skylake M3KTI Registers Device#138: bus:dev.fn b2:15.0 - ID=0x20188086, Skylake M2PCI Registers Device#139: bus:dev.fn b2:16.0 - ID=0x20188086, Skylake M2PCI Registers Device#140: bus:dev.fn b2:16.4 - ID=0x20188086, Skylake M2PCI Registers Device#141: bus:dev.fn b2:17.0 - ID=0x20188086, Skylake M2PCI Registers Device#142: bus:dev.fn b3:00.0 - ID=0x37c08086, PCI bridge: Intel Corporation Device 0x37c0 Device#143: bus:dev.fn b4:00.0 - ID=0x37c28086, PCI bridge: Intel Corporation Device 0x37c2 Device#144: bus:dev.fn b4:01.0 - ID=0x37c38086, PCI bridge: Intel Corporation Device 0x37c3 Device#145: bus:dev.fn b4:02.0 - ID=0x37c48086, PCI bridge: Intel Corporation Device 0x37c4 Device#146: bus:dev.fn b4:03.0 - ID=0x37c58086, PCI bridge: Intel Corporation Device 0x37c5 Device#147: bus:dev.fn b5:00.0 - ID=0x37c88086, Co-processor: Intel Corporation Device 0x37c8 Device#148: bus:dev.fn b6:00.0 - ID=0x37c88086, Co-processor: Intel Corporation Device 0x37c8 Device#149: bus:dev.fn b7:00.0 - ID=0x37c88086, Co-processor: Intel Corporation Device 0x37c8 Device#150: bus:dev.fn b8:00.0 - ID=0x37d38086, Ethernet Connection X722 for 10GbE SFP+ Device#151: bus:dev.fn b8:00.1 - ID=0x37d38086, Ethernet Connection X722 for 10GbE SFP+ Device#152: bus:dev.fn b8:00.2 - ID=0x37ce8086, Co-processor: Intel Corporation Device 0x37ce Device#153: bus:dev.fn b8:00.3 - ID=0x37ce8086, Co-processor: Intel Corporation Device 0x37ce PL Tool test: CPLD1: SW_SCRATCH Reg Addr: 0x602 .....Passed Overall Test Results: Passed Testing Memory Regions: Testing Memory Region 0: Address Read Test ..... Passed Address Write Test ..... Passed Address Walking 1's Test ..... Passed Address Walking 0's Test ..... Passed Data Read Test ..... Passed Data Write Test ..... Passed Data Walking 1's Test ..... Passed

Functional area	Description
	Data Walking 0's Test ..... Passed Data Sliding 1's Test ..... Passed Data Sliding 0's Test ..... Passed Data Pattern Test ..... Passed Memory: Overall test results ---------- >>> Passed Power Supply Test all DELL PSU FAN Speed 17728 RPM DELL PSU Current IN 0.8(A) DELL PSU Current OUT 12.1(A) DELL PSU Voltage IN 252.8(V) DELL PSU Voltage Out 12.2(V) DELL PSU Power IN 163.0(W) DELL PSU Power Out 149.0(W) DELL PSU Temperature 29.0(C) Power Supply 1 ..... Passed Set FAN SPEED 100 percent DELL PSU FAN Speed was 17728 RPM DELL PSU FAN Speed is 17728 RPM Power Supply 1 ..... Passed Set FAN SPEED 50 percent DELL PSU FAN Speed was 17760 RPM DELL PSU FAN Speed is 17760 RPM Power Supply 1 ..... Passed Set FAN SPEED 20 percent DELL PSU FAN Speed was 17728 RPM DELL PSU FAN Speed is 17312 RPM Power Supply 1 ..... Passed Current RTC date/time is 5/3/2018, 21:01:08. Testing RTC Devices ..... Testing RTC Device for rollover ..... Set Current RTC date to 1/1/2000, RTC time to 00:00:59. Set Current RTC date to 1/1/2000, RTC time to 00:59:59. Set Current RTC date to 1/1/2000, RTC time to 23:59:59. Set Current RTC date to 1/31/2000, RTC time to 23:59:59. Set Current RTC date to 12/31/2000, RTC time to 23:59:59. Set Current RTC date to 5/3/2018, RTC time to 21:01:08. Passed Testing RTC Device with user interrupts ..... Counting 5 update (1/sec) interrupts from reading /dev/rtc0: 1 2 3 4 5 Again, from using select(2) on /dev/rtc: 1 2 3 4 5 Passed Testing RTC Device with periodic interrupts ..... Periodic IRQ rate is 64Hz. Counting 20 interrupts at: 2Hz: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 4Hz: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 8Hz: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 16Hz: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 32Hz: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 64Hz: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 Passed Testing RTC Device with alarm interrupts ..... Current RTC date/time is 3-5-2018, 21:01:37. Alarm time now set to 21:01:42. Waiting 5 seconds for alarm... okay. Alarm rang. Passed

Functional area	Description
	x86info v1.30. Dave Jones 2001-2011 Feedback to <davej@redhat.com>. Found 32 identical CPUs Extended Family: 0 Extended Model: 5 Family: 6 Model: 85 Stepping: 4 Type: 0 (Original OEM) CPU Model (x86info's best guess): Unknown model. Processor name string (BIOS programmed): Intel(R) Xeon(R) D-2187NT CPU @ 2.00GHz Total processor threads: 32 This system has 1 16-core processor with hyper-threading (2 threads per core) running at an estimated 2.00GHz processor: 0 vendor_id: GenuineIntel cpu family: 6 model: 85 model name: Intel(R) Xeon(R) D-2187NT CPU @ 2.00GHz stepping: 4 microcode: 0x2000043 cpu MHz: 2000.000 cache size: 22528 KB physical id: 0 siblings: 32 core id: 0 cpu cores: 16 apicid: 0 initial apicid: 0 fpu: yes fpu_exception: yes cpuid level: 22 wp: yes flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc aperfmperf eagerfpu pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch epb intel_pt tpr_shadow vnmi flexpriority ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx avx512f avx512dq rdseed adx smap clflushopt clwb avx512cd avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local dtherm arat pln pts pku bugs: bogomips: 4000.00 clflush size: 64 cache_alignment: 64 address sizes: 46 bits physical, 48 bits virtual power management: . . . processor: 31 vendor_id: GenuineIntel cpu family: 6 model: 85 model name: Intel(R) Xeon(R) D-2187NT CPU @ 2.00GHz stepping: 4 microcode: 0x2000043 cpu MHz: 2000.000 cache size: 22528 KB physical id: 0 siblings: 32 core id: 15 cpu cores: 16 apicid: 31 initial apicid: 31 fpu: yes fpu_exception: yes

Functional area	Description
	cpuid level: 22 wp: yes flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc aperfmperf eagerfpu pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch epb intel_pt tpr_shadow vnmi flexpriority ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx avx512f avx512dq rdseed adx smap clflushopt clwb avx512cd avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local dtherm arat pln pts pku bugs: bogomips: 4004.30 clflush size: 64 cache_alignment: 64 address sizes: 46 bits physical, 48 bits virtual power management: Testing Storage Devices ..... Passed Testing UEFI mode Checking UEFI sysfs ..... Passed Checking ESP Presence..... Passed Validating Bootnum ..... Passed mount: special device /dev/sdb1 does not exist mount: special device /dev/sdc1 does not exist umount: /dev/sdb1: mountpoint not found umount: /dev/sdc1: mountpoint not found Using uid:0, gid:0. Writing with putc()...done Writing intelligently...done Rewriting...done Reading with getc()...done Reading intelligently...done start 'em...done...done...done... Create files in sequential order...done. Stat files in sequential order...done. Delete files in sequential order...done. Create files in random order...done. Stat files in random order...done. Delete files in random order...done. Version 1.03 ------Sequential Output------ --Sequential Input- --Random- -Per Chr- --Block-- -Rewrite- -Per Chr- --Block-- --Seeks-- Machine Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP /sec %CP dellemc-diag-o 250M 80782 99 +++++ +++ +++++ +++ 96895 99 +++++ +++ +++++ +++ ------Sequential Create------ --------Random Create-------- -Create-- --Read--- -Delete-- -Create-- --Read--- -Delete-- files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP 32 +++++ +++ +++++ +++ +++++ +++ +++++ +++ +++++ +++ +++++ +++ dellemc-diag-os,250M,80782,99,+++++,+++,+++++,+++,96895,99,+++++,+++,++++,+++,32,+++++,+++,+++++,+++,+++++,+++,+++++,+++,+++++,+++ BIOS version: 0ACJF020 CPLD version: CPLD_VERSION : offset 0x600 = 0x6 7: 4 MAJOR_VER = 0 3: 0 MINOR_VER = 6

Functional area	Description
	MAIN-BMC version: 01.01 BACKUP-BMC version: 00.14 Fan Controller Test ..... Setting speed for fan2 to 12000 Setting speed for fan3 to 12000 Setting speed for fan4 to 12000 Setting speed for fan5 to 12000 Checking Fan Speeds fan1 Speed: 26390 (12000) fan1 Speed: 17022 (12000) fan1 Speed: 11599 (12000) fan2 Speed: 11397 (12000) fan3 Speed: 11531 (12000) fan4 Speed: 11702 (12000) fan5 Speed: 11951 (12000) Setting speed for fan1 to 25000 Setting speed for fan2 to 25000 Setting speed for fan3 to 25000 Setting speed for fan4 to 25000 Setting speed for fan5 to 25000 Checking Fan Speeds fan1 Speed: 11808 (25000) fan1 Speed: 20062 (25000) fan1 Speed: 23267 (25000) fan2 Speed: 23130 (25000) fan3 Speed: 23267 (25000) fan4 Speed: 23267 (25000) fan5 Speed: 23130 (25000) Setting speed for fan1 to 19000 Setting speed for fan2 to 19000 Setting speed for fan3 to 19000 Setting speed for fan4 to 19000 Setting speed for fan5 to 19000 Checking Fan Speeds fan1 Speed: 23405 (19000) fan1 Speed: 21027 (19000) fan2 Speed: 21254 (19000) fan3 Speed: 21140 (19000) fan4 Speed: 21140 (19000) fan5 Speed: 21140 (19000) Setting speed for fan1 to 12000 Setting speed for fan2 to 12000 Setting speed for fan3 to 12000 Setting speed for fan4 to 12000 Setting speed for fan5 to 12000

Functional area	Description
	Checking Fan Speeds fan1 Speed: 20695 (12000) fan1 Speed: 13329 (12000) fan2 Speed: 12404 (12000) fan3 Speed: 12404 (12000) fan4 Speed: 12483 (12000) fan5 Speed: 12643 (12000) Fan Controller Test ..... Passed Board Mfg Date : Fri Dec 12 15:22:00 2014 Board Mfg : Dell Board Product : VEP-4600 Board Serial : Board Part Number : Product Manufacturer : Dell Product Name : VEP-4600 Product Version : 01 Product Serial : x1 Product Asset Tag : Board Mfg Date : Mon Feb 12 16:47:00 2018 Board Mfg : Dell Board Product : VEP-4600 Board Serial : CNCES008260052 Board Part Number : 07CRC9X01 Product Manufacturer : Dell Product Name : VEP-4600 Product Version : Product Serial : Product Asset Tag : D4TRG02 Board Mfg Date : Mon Feb 12 16:47:00 2018 Board Mfg : Dell Board Product : VEP-4600 Board Serial : CNCES008260124 Board Part Number : 07CRC9X01 Product Manufacturer : Dell Product Name : VEP-4600 Product Version : Product Serial : Product Asset Tag : D4TRG02 Board Mfg Date : Mon Feb 12 16:48:00 2018 Board Mfg : Dell Board Product : VEP-4600 Board Serial : CNCES008260121 Board Part Number : 07CRC9X01 Product Manufacturer : Dell Product Name : VEP-4600 Product Version : Product Serial : Product Asset Tag : D4TRG02 Board Mfg Date : Mon Feb 12 16:48:00 2018 Board Mfg : Dell Board Product : VEP-4600 Board Serial : CNCES008260104 Board Part Number : 07CRC9X01 Product Manufacturer : Dell Product Name : VEP-4600 Product Version : Product Serial : Product Asset Tag : D4TRG02 Board Mfg Date : Mon Feb 12 16:48:00 2018 Board Mfg : Dell Board Product : VEP-4600

Functional area	Description

```
 Board Serial          : CNCES008260131
 Board Part Number     : 07CRC9X01
 Product Manufacturer  : Dell
 Product Name          : VEP-4600
 Product Version       :
 Product Serial        :
 Product Asset Tag     : D4TRG02
Testing Temp sensor  devices:
+ Checking [Sensor 1]= 24.0 C ..................... Passed
+ Checking [Sensor 2]= 27.5 C ..................... Passed
+ Checking [Sensor 3]= 22.0 C ..................... Passed
+ Checking [Sensor 4]= 20.0 C ..................... Passed
+ Checking [Sensor 5]= 26.0 C ..................... Passed
Temp Sensors: Overall test results ------------- >>> Passed
Show Temperature Sensors:
Checking sensor: [Sensor 1]
 MAX6699 sensor temperature 24.0 C [-5.0, 50.0]
Checking sensor: [Sensor 2]
 MAX6699 sensor temperature 27.4 C [-5.0, 50.0]
Checking sensor: [Sensor 3]
 MAX6699 sensor temperature 22.0 C [-5.0, 50.0]
Checking sensor: [Sensor 4]
 MAX6699 sensor temperature 20.0 C [-5.0, 50.0]
Checking sensor: [Sensor 5]
 MAX6699 sensor temperature 26.0 C [-5.0, 50.0]
LED Test Started... Will take few mins to complete.


Overall LED test result ====>> Passed
Chip 0 CORE-GPIO bits: 256 CORE gpiochip0
========================================
Bit             Name    Dir  AC  Value
========================================
15                GP15 IN   LOW    0
16                GP16 IN   LOW    0
17                GP17 IN   LOW    0
194             GPP_G15 OUT  LOW    0
96              GPP_D0 IN   LOW    0
97              GPP_D1 IN   LOW    0
98              GPP_D2 IN   LOW    0
99              GPP_D3 IN   LOW    0
100              GPP_D4 IN   LOW    0
101              GPP_D5 IN   LOW    0
102              GPP_D6 IN   LOW    0
103              GPP_D7 IN   LOW    0
118           SATA_LEDN OUT  LOW    0

========================================
Bit             Name    Dir  AC  Value
========================================

Chip 0 CORE-GPIO bits: 256 CORE gpiochip0
==================================
Bit             Name    Dir  Value
==================================
15                GP15 IN    1
16                GP16 IN    0
17                GP17 IN    1
194             GPP_G15 OUT   0
96              GPP_D0 IN    0
97              GPP_D1 IN    0
98              GPP_D2 IN    0
99              GPP_D3 IN    0
100              GPP_D4 IN    0
101              GPP_D5 IN    0
102              GPP_D6 IN    0
103              GPP_D7 IN    0
118           SATA_LEDN OUT   0

Test ID|Command line                          | Total runs| Passed
```

Functional area	Description

```
| Failed
0    i2ctool --test                                1           1
   0
10   pcitool --test                                1           1
   0
11   pcitool --scan                                1           1
   0
20   pltool --test                                 1           1
   0
30   memtool --test                                1           1
   0
40   psutool --test                                1           0
   1
41   psutool --fanspeed=100                        1           0
   1
42   psutool --fanspeed=50                         1           0
   1
43   psutool --fanspeed=20                         1           0
   1
50   rtctool --readrtc                             1           1
   0
51   rtctool --test                                1           1
   0
52   rtctool --testuie                             1           1
   0
53   rtctool --testpie                             1           1
   0
54   rtctool --testaie                             1           1
   0
60   cputool --x86info                             1           1
   0
61   cputool --cpuinfo                             1           1
   0
70   storagetool --test                            1           1
   0
71   storagetool --mountusb --dev=/dev/sdb1        1           1
 0
72   storagetool --mountusb --dev=/dev/sdc1        1           1
 0
73   storagetool --unmountusb --dev=/dev/sdb1      1           1
 0
74   storagetool --unmountusb --dev=/dev/sdc1      1           1
 0
75   storagetool --bonnie                          1           1
   0
80   updatetool --dev=ALL --device_version         1           1
 0
90   fantool --test                                1           1
   0
100  eepromtool --show --eeprom=ideeprom           1           1
 0
101  eepromtool --show --eeprom=fan1eeprom         1           1
 0
102  eepromtool --show --eeprom=fan2eeprom         1           1
 0
103  eepromtool --show --eeprom=fan3eeprom         1           1
 0
104  eepromtool --show --eeprom=fan4eeprom         1           1
 0
105  eepromtool --show --eeprom=fan5eeprom         1           1
 0
110  temptool --test                               1           1
   0
111  temptool --show                               1           1
   0
120  ledtool --test                                1           1
   0
130  gpiotool --list                               1           1
   0
```

Functional area	Description
	131 gpiotool --get 1 1 0

Known hardware behavior

This section provides details on the known hardware behavior corresponding to the VEP platforms.

LED blink behavior

The network ports corresponding to the VEP platforms continue to glow even after shutting the ports down using the following ESXi command: `esxcli network vmnicX port down`

In the `esxcli network vmnicX port down` command, `X` denotes the physical NIC number.

This LED blink issue is a cosmetic issue, and you can safely ignore it.

You can observe this LED blink hardware behavior in the following VEP platforms: VEP4600 and VEP1400

You can observe this LED blink hardware behavior in the following ESXi versions: ESXi 6.7U3 and ESXi 7.0U3

Resolved issues

The following tables list the resolved issues in this release and in previous releases, if applicable.

Resolved issues in this release

PR number	Description	Work around	Severity
None	--	--	--

Resolved issues in previous releases

PR number	Description	Work around	Severity
None	--	--	--

Known issues

The following tables list the known issues in this release and in previous releases, if applicable.

Known issues in this release

PR number	Description	Work around	Severity
None.	--	--	--

Known issues in previous releases

PR number	Description	Work around	Severity
None.	--	--	--

DIAG OS installation

Manufacture DIAG OS recovery for the VEP4600 platform.

Configure BIOS to install DIAG OS from USB

1. Boot into `BIOS` setting, goto `Advanced`, set `CSM` to `UEFI only`

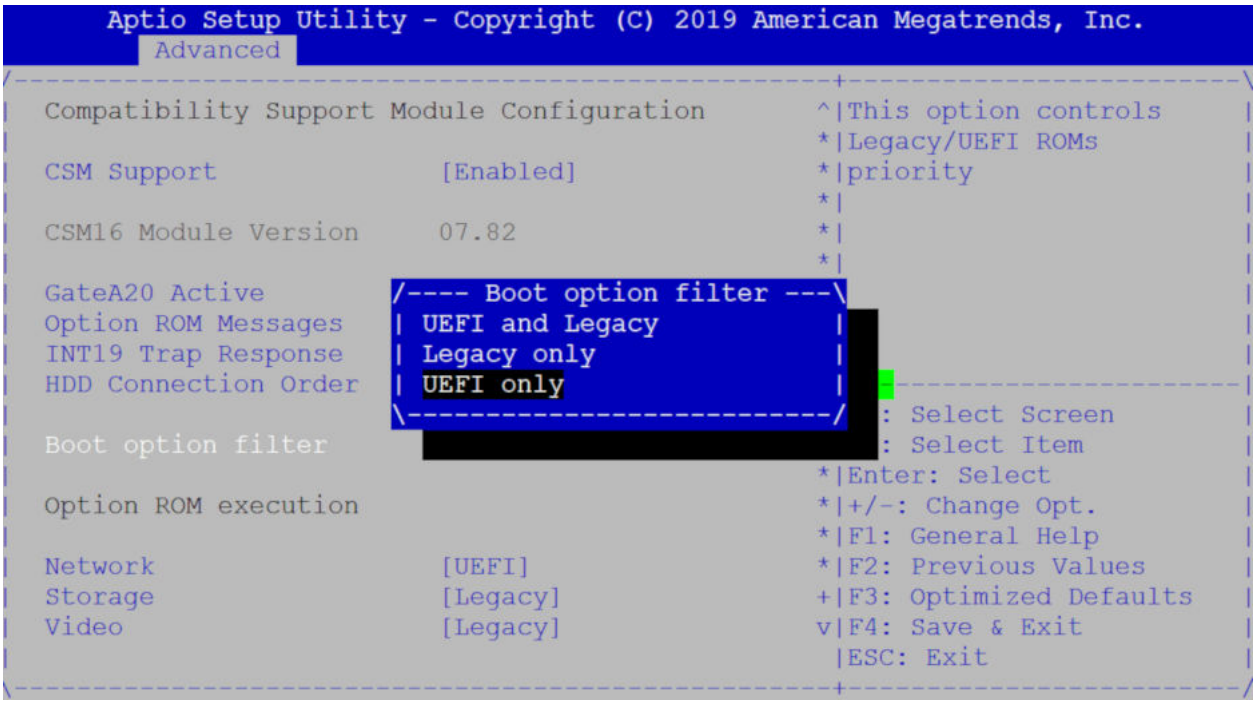


Figure 1. Boot BIOS setting

2. Select the **Boot** menu tab.

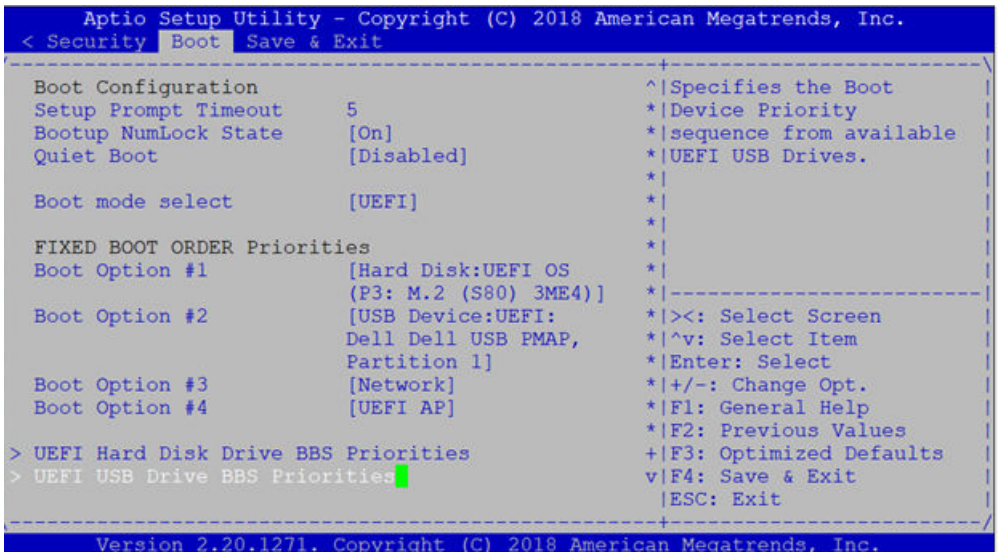


Figure 2. Boot menu tab

3. Select **UEFI:** then **USB Device:** to boot the DIAG OS from a USB drive.

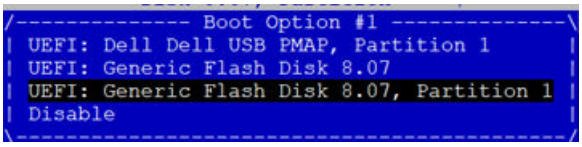


Figure 3. DIAG OS USB to boot UEFI

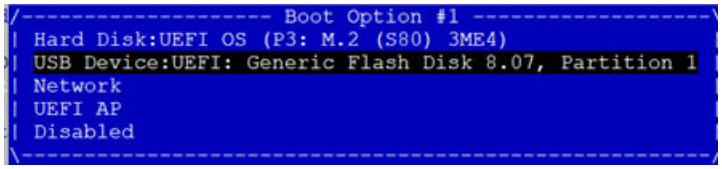


Figure 4. DIAG OS USB to boot USB device

4. Verify that **Boot Option #1** lists the DIAG OS USB as the boot option.

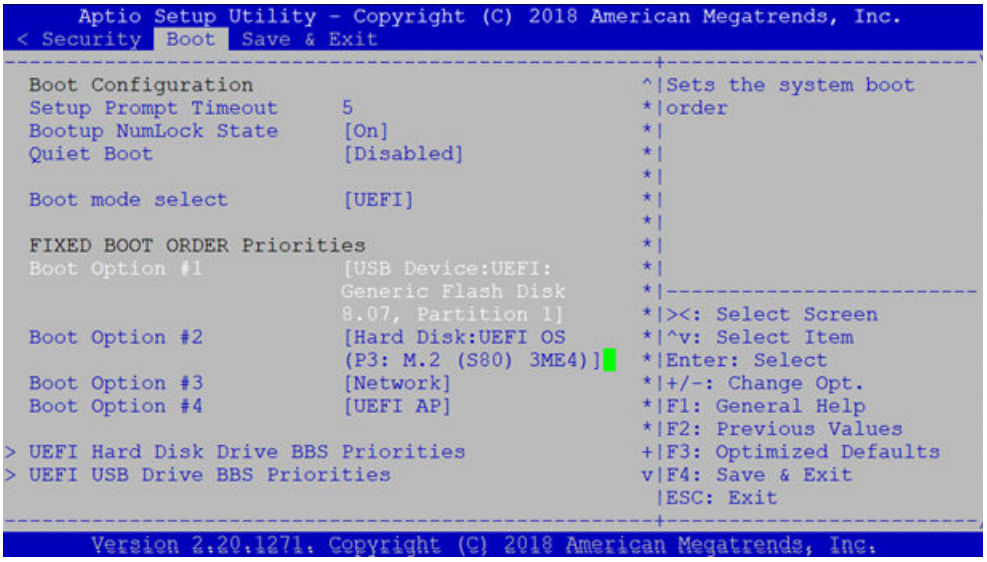
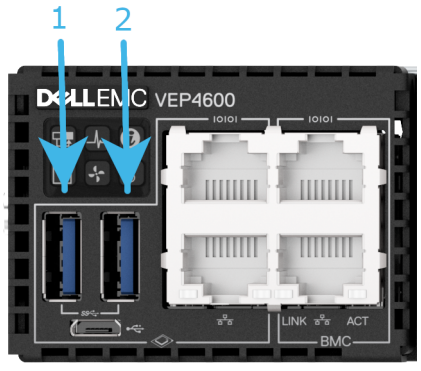


Figure 5. Boot Option #1

5. Press **F4** to save and exit the utility and to start the installation.
6. Select 1 to install DIAG to a SSD or select 2 to install to a USB.

NOTE: The left side (1) is `sdb`, the right side (2) is `sdc` on the front panel.



CAUTION: Installing DIAG OS to the SSD will overwrite existing data in the SSD.

NOTE: User can choose to install the DIAG OS to the second USB and boot DIAG OS from the second USB.

NOTE: Two separate USB storage drives required.

NOTE: x is a place marker for the current version.

```
Booting `VEP4600 DiagOS Install'

Platform  :
Version   : x.xx.x.xx-x
Build Date: 2020-07-22T00:30-0700
?Info: Mounting kernel filesystems... done.
Info: BIOS mode: UEFI
Info: Using eth0 MAC address: 54:bf:64:af:24:40
Info: eth0:  Checking link... down.
ONIE: eth0: link down.  Skipping configuration.
ONIE: Failed to configure eth0 interface
Starting: klogd... done.
+ cat /DiagOS_version.cfg
+ version_packed=x.xx.x.xx-x-2020-07-21
+ ls
+ grep x.xx.x.xx-x-2020-07-21
+ image_packed=diag-installer-x86_64-dellemc_vep4600_d21xyt-r0-x.xx.x.xx-
x-2020-07-21.bin
+ [ -z diag-installer-x86_64-dellemc_vep4600_d21xyt-r0-x.xx.x.xx-x-2020-07-21.bin ]
+ echo starting to install vep4600 DiagOS
starting to install vep4600 DiagOS
+ onie-nos-install /diag-installer-x86_64-dellemc_vep4600_d21xyt-r0--2020-07-21.bin
discover: Rescue mode detected. No discover stopped.
ONIE: Executing installer: /diag-installer-x86_64-dellemc_vep4600_d21xyt-r0-x.xx.x.xx-
x-2020-07-21.bin
Ignoring Verifying image checksum ... OK.
cur_dir / archive_path /var/tmp/installer tmp_dir /tmp/tmp.wtcUEt
Preparing image archive ...sed -e '1,/^exit_marker$/d' /var/tmp/installer | tar xf -
OK.
Diag-OS Installer: platform: x86_64-dellemc_vep4600_d21xyt-r0

****************************
Select Installation Device
****************************
1.SSD
2.USB Disk
0.Quit
----------------------------
Please select the device type that DIAG OS will be install on : 2
USB Storage List: sdb sdc s0 s1 s2 s3
Please input the device name : sdc
```

DIAG OS installation failure and resolution

If ESXi was previously installed, it may have created a disk partition that is not compatible with the DIAG OS. This causes the DIAG OS installation to fail and display the following error message:

```
ONIE: Rescue Mode ...
Platform  : x86_64-dellemc_vep4600_d21xyt-r0
Version   : x.xx.x.xx-x
Build Date: 2018-04-24T03:20-0700
▒[   13.793445] ata4.00: failed to set xfermode (err_mask=0x40)
Info: Mounting kernel filesystems... done.
Info: Using eth0 MAC address: d8:9e:f3:bc:6a:a0
Info: eth0:  Checking link... up.
Info: Trying DHCPv4 on interface: eth0
Warning: Unable to configure interface using DHCPv4: eth0
ONIE: Using link-local IPv4 addr: eth0: xxx.xxx.x.xxx/xx
+ cat /DiagOS_version.cfg
+ version_packed=x.xx.x.xx-x
+ ls
+ grep x.xx.x.xx-x
+ image_packed=diag-installer-x86_64-dellemc_vep4600_d21xyt-r0-x.xx.x.xx-x-2018-04-24.bin
+ [ -z diag-installer-x86_64-dellemc_vep4600_d21xyt-r0-x.xx.x.xx-x-2018-04-24.bin ]
+ echo starting to install vep4600 DiagOS
starting to install vep4600 DiagOS
```

```
+ onie-nos-install /diag-installer-x86_64-dellemc_vep4600_d21xyt-r0-x.xx.x.xx-
x-2018-04-24.bin
discover: Rescue mode detected. No discover stopped.
ONIE: Executing installer: /diag-installer-x86_64-dellemc_vep4600_d21xyt-r0-x.xx.x.xx-
x-2018-04-24.bin
Ignoring Verifying image checksum ... OK.
cur_dir / archive_path /var/tmp/installer tmp_dir /tmp/tmp.XeWxoj
Preparing image archive ...sed -e '1,/^exit_marker$/d' /var/tmp/installer | tar xf - OK.
Diag-OS Installer: platform: x86_64-dellemc_vep4600_d21xyt-r0

EDA-DIAG Partiton not found.
Diag OS Installer Mode : INSTALL

Deleting partition at /dev/sdc1...
The operation has completed successfully.
Deleting partition at /dev/sdc2...
The operation has completed successfully.
Deleting partition at /dev/sdc3...
The operation has completed successfully.
Deleting partition at /dev/sdc4...
Partition number 4 out of range!
Error 0 deleting partition!
Error encountered; not saving changes.
Error: Unable to delete partition 4 on /dev/sdc
Removing /tmp/tmp.XeWxoj
Failure: Unable to install image: /diag-installer-x86_64-dellemc_vep4600_d21xyt-r0-
x.xx.x.xx-x-2018-04-24.bin
+ echo This should be not reachable unless something wrong is there!!!!!
This should be not reachable unless something wrong is there!!!!!
Starting: dropbear ssh daemon... done.
Starting: telnetd... done.
discover: Rescue mode detected.  Installer disabled.

Please press Enter to activate this console.
To check the install status inspect /var/log/onie.log.
Try this:  tail -f /var/log/onie.log
```

CAUTION: Do not resolve this issue, unless it is desired to delete the current Operating system.

1. Press **Enter** from the error message to get to ONIE Recovery mode.
   NOTE: WARNING: Deleting the partition causes all data and the OS to be lost.
2. Type the following then click **Enter**.

```
gdisk /dev/sdc
```

```
** Rescue Mode Enabled **
ONIE-RECOVERY:/ #

gdisk /dev/sdc
GPT fdisk (gdisk) version 0.8.8
Partition table scan:
  MBR: protective
  BSD: not present
  APM: not present
  GPT: present
Found valid GPT with protective MBR; using GPT.
```

3. Type o to delete the partition.

```
Command (? for help):

Command (? for help): o
This option deletes all partitions and creates a new protective MBR.
Proceed? (Y/N): y

Type w to write the new partition into the disk

Command (? for help): w
```

```
Final checks complete. About to write GPT data. THIS WILL OVERWRITE EXISTING
PARTITIONS!!

Do you want to proceed? (Y/N): y
OK; writing new GUID partition table (GPT) to /dev/sdc.
The operation has completed successfully.
ONIE-RECOVERY:/ #
```

4. Type `reboot` at the command prompt and restart the DIAG OS installation. A successful installation displays the following:

```
ONIE: Rescue Mode ...
Platform  : x86_64-dellemc_vep4600_d21xyt-r0
Version   : x.xx.x.xx-x
Build Date: 2018-04-24T03:20-0700
[   12.771519] ata4.00: failed to set xfermode (err_mask=0x40)
Info: Mounting kernel filesystems... done.
Info: Using eth0 MAC address: d8:9e:f3:bc:6a:a0
Info: eth0:  Checking link... up.
Info: Trying DHCPv4 on interface: eth0
Warning: Unable to configure interface using DHCPv4: eth0
ONIE: Using link-local IPv4 addr: eth0: 169.254.195.48/16
+ cat /DiagOS_version.cfg
+ version_packed=x.xx.x.xx-x
+ ls
+ grep x.xx.x.xx-x
+ image_packed=diag-installer-x86_64-dellemc_vep4600_d21xyt-r0-x.xx.x.xx-
x-2018-04-24.bin
+ [ -z diag-installer-x86_64-dellemc_vep4600_d21xyt-r0-x.xx.x.xx-x-2018-04-24.bin ]
+ echo starting to install vep4600 DiagOS
starting to install vep4600 DiagOS
+ onie-nos-install /diag-installer-x86_64-dellemc_vep4600_d21xyt-r0-x.xx.x.xx-
x-2018-04-24.bin
discover: Rescue mode detected. No discover stopped.
ONIE: Executing installer: /diag-installer-x86_64-dellemc_vep4600_d21xyt-r0-x.xx.x.xx-
x-2018-04-24.bin
Ignoring Verifying image checksum ... OK.
cur_dir / archive_path /var/tmp/installer tmp_dir /tmp/tmp.yb6fIB
Preparing image archive ...sed -e '1,/^exit_marker$/d' /var/tmp/installer | tar xf -
OK.
Diag-OS Installer: platform: x86_64-dellemc_vep4600_d21xyt-r0

EDA-DIAG Partiton not found.
Diag OS Installer Mode : INSTALL

partprobe in remove all partitions
GPT data structures destroyed! You may now partition the disk using fdisk or
other utilities.
Creating new GPT entries.
GPT data structures destroyed! You may now partition the disk using fdisk or
other utilities.
Creating new GPT entries.
The operation has completed successfully.
The operation has completed successfully.
mkfs.fat 3.0.26 (2014-03-07)
create_grub_boot_partition finished !
Creating new diag-os partition /dev/sdc2 ...
Warning: The kernel is still using the old partition table.
The new table will be used at the next reboot.
The operation has completed successfully.

EDA-DIAG dev is /dev/sdc2
mke2fs 1.42.13 (17-May-2015)
Discarding device blocks: done
Creating filesystem with 262144 4k blocks and 65536 inodes
Filesystem UUID: c7971d6a-acb1-46be-84a2-a8d2d758139b
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376

Allocating group tables: done
Writing inode tables: done
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information: done
```

```
Created filesystem on /dev/sdc2 with label EDA-DIAG

Mounted /dev/sdc2 on  /tmp/tmp.iK7Bg3

Preparing /dev/sdc2 EDA-DIAG for rootfs install
untaring into /tmp/tmp.iK7Bg3

rootfs copy done
Success: Support tarball created: /tmp/tmp.iK7Bg3/onie-support.tar.bz2
Updating Grub Cfg /dev/sdc2 EDA-DIAG
```

Configure BIOS and boot into DIAG OS

After the DIAG OS installation completes, configure the BIOS then boot into the DIAG OS.

1. Boot into the BIOS setting.
2. Configure **Boot Option #1** from the **Boot Configuration** screen.

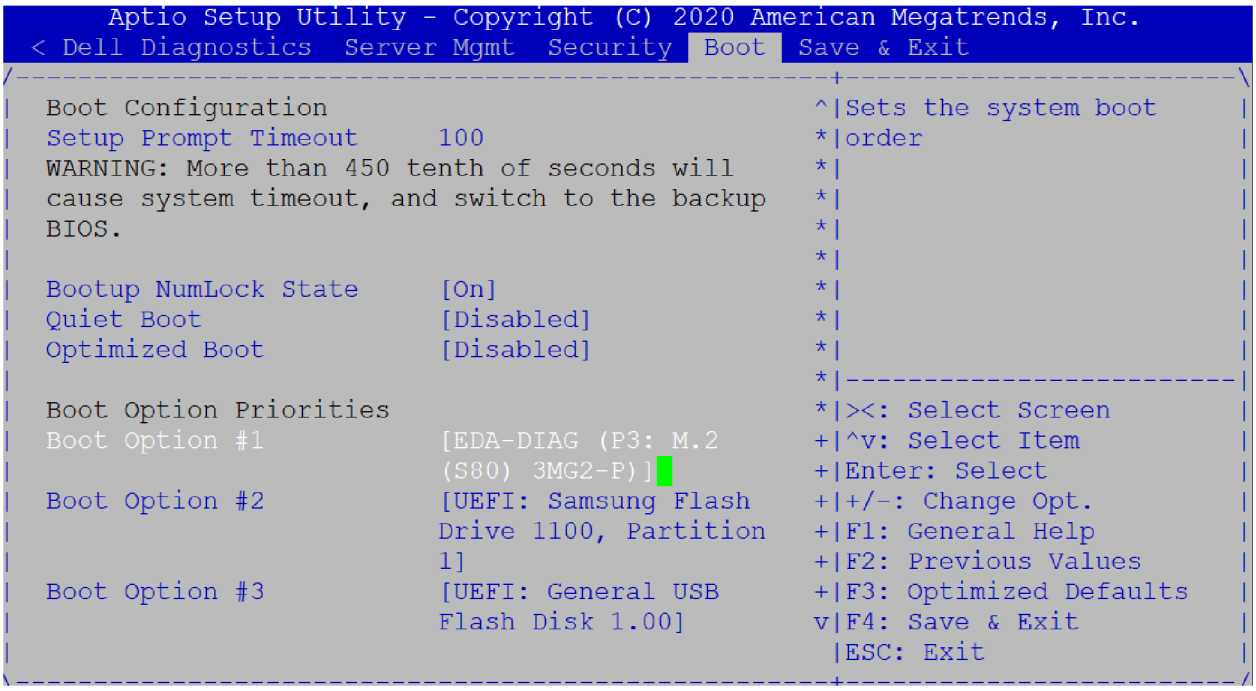


Figure 6. Boot configuration screen

3. Press the **F4** key to save the changes and exit the utility.
4. Confirm saving the configuration using the left and right arrow keys, and exit from the utility. Select **Yes** and press **Enter**.

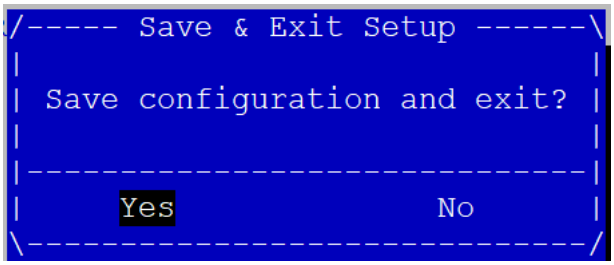


Figure 7. Save & exit

After you save the changes the log in command prompt displays:

```
Loading DIAG-OS on USB...
[    5.000464] sd 6:0:0:0: [sdc] No Caching mode page found
[    5.005787] sd 6:0:0:0: [sdc] Assuming drive cache: write through
[  OK  ] Started LSB: NFS support files common to client and server.
```

```
[  OK  ] Reached target System Initialization.
[  OK  ] Listening on D-Bus System Message Bus Socket.
[  OK  ] Reached target Sockets.
[  OK  ] Reached target Timers.
[  OK  ] Reached target Basic System.
         Starting OpenBSD Secure Shell server...
[  OK  ] Started OpenBSD Secure Shell server.
         Starting Regular background program processing daemon...
[  OK  ] Started Regular background program processing daemon.
         Starting /etc/rc.local Compatibility...
         Starting Login Service...
         Starting D-Bus System Message Bus...
[  OK  ] Started D-Bus System Message Bus.
         Starting System Logging Service...
         Starting Permit User Sessions...
[  OK  ] Started Login Service.
[  OK  ] Started Permit User Sessions.
[  OK  ] Started System Logging Service.
[  OK  ] Started /etc/rc.local Compatibility.
         Starting Getty on tty1...
[  OK  ] Started Getty on tty1.
         Starting Serial Getty on ttyS0...
[  OK  ] Started Serial Getty on ttyS0.
[  OK  ] Reached target Login Prompts.
[  OK  ] Reached target Multi-User System.
[  OK  ] Reached target Graphical Interface.
         Starting Update UTMP about System Runlevel Changes...
[  OK  ] Started Update UTMP about System Runlevel Changes.

Debian GNU/Linux 8 dellemc-diag-os ttyS0

dellemc-diag-os login:
```

5. Type to log in.

```
 root/calvin
```

DIAG OS Verification

Manufacture DIAG OS recovery for the VEP4600 platform.

NOTE: The system shows the current version.

After DIAG OS installation, to verify the DIAG OS version, boot into the DIAG OS by running the following commands.

1. Log in into the DIAG OS using `root` as the `username` and `calvin` as the password.
2. Enter the `sh_ver` command.

```
root@dellemc-diag-os:~#sh_ver
Diag OS version VEP4600_DIAG_OS_x.xx.x.xx-x
Build date/time Tue Apr 24 00:15:20 PDT 2018
Build server    netLogin-eqx-03
Build by        cwang3
Kernel Info:
Linux 4.9.30 #1 SMP PREEMPT Tue Apr 24 00:12:19 PDT 2018 x86_64 GNU/Linux
Debian GNU/Linux 8 \n \l
root@dellemc-diag-os:~#
```

Fixed issues

Fixed issues are reported using the following definitions:

Category	Description
PR#	Problem Report number that identifies the issue.

Category	Description
Synopsis	Synopsis is the title or short description of the issue.
Release Notes	Release Notes description contains more detailed information about the issue.
Workaround	Workaround describes a mechanism for circumventing, avoiding, or recovering from the issue. It might not be a permanent solution.
Severity	`S1`—fail: A software fail occurs in the kernel or a running process that requires a restart of AFM, the router, platform, or process. `S2`—Critical: An issue that renders the system or a major feature unusable. An issue that has a pervasive impact on the system or network, and for which there is no workaround acceptable to the customer. `S3`—Major: An issue that affects the functionality of a major feature or negatively effects the network. However, there exists a workaround that is acceptable to the customer. `S4`—Minor: A cosmetic issue or an issue in a minor feature with little or no network impact for which there might be a workaround.

Fixed issues in this release

Fixed issues in previous releases

Category	Description
PR#	DI-1413
Synopsis	The CPLD version of the rNDC card does not display using "updatetool -D ALL -V" command.
Release Notes	`updatetool` does not show the version of CPLD on the rNDC cards. **NOTE:** updatetool can update all MC card types including the rNDC card, but it cannot display the CPLD version.
Workaround	Update to Unified firmware update tool v2.6.
Severity	S3

Category	Description
PR#	DI-1169
Synopsis	No region information found for `BACKUP-BMC` and `MAIN-BMC` region. Could not change to backup after a hard reboot.
Release Notes	Added a region Information for `updatetool` on VEP4600 config.
Workaround	This issue is fixed in VEP4600-DiagOS-3.41.4.81-17.
Severity	S3

Category	Description
PR#	DI-1211
Synopsis	"memtool -i" and "edatool -Y" slow to respond.
Release Notes	The "edatool -Y" and "memtool -i" respond slowly from the DIAG OS prompt.
Workaround	This issue is fixed in VEP4600-DiagOS-3.41.4.81-17.
Severity	S3

Category	Description
PR#	DI-1306

Category	Description
Synopsis	A new UUID is generated each time the following command is run: `eepromtool -P IDEEPROM -w sys_fru.bin`
Release Notes	Add autogenuuid option to gen `uuid` individually.
Workaround	This issue is fixed in VEP4600-DiagOS-3.41.4.81-17.
Severity	S3

Category	Description
PR#	DI-1308
Synopsis	The eepromtool --help command show options in TLV format, while Azul uses FRU format. - eepromtool --help: shows options as per TLV format. Environment: ● DIAG OS version: 3.41.3.81-4 ● DIAG OS TOOLS version: 3.41.4.81-14 ● BIOS Version: 3.41.0.9-13 ● MAIN-BMC Version: 1.23 ● BACKUP-BMC Version: 1.23 ● CPLD: v0E
Release Notes	Add Fru options in Help
Workaround	This issue is fixed in VEP4600-DiagOS-3.41.4.81-17.
Severity	S3

Category	Description
PR#	DI-1341
Synopsis	Running the `eepromtool` to modify contents should pickup the current values from the eeprom device and populate the config file values. But if DIAG OS is reinstalled the config file will be returned to default values.
Release Notes	Added restore option for eepromtool.
Workaround	This issue is fixed in VEP4600-DiagOS-3.41.4.81-17.
Severity	S3

Category	Description
PR#	DI-1363
Synopsis	A BMC power-down event triggers a series events that shuts down all the services and issues an IPMI shutdown signal to BMC.
Release Notes	IPMI power cycle failure.
Workaround	This issue is fixed in VEP4600-DiagOS-3.41.4.81-17.
Severity	S3

Category	Description
PR#	DI-1418
Synopsis	Unified firmware update file from Dell downloads inside eda-diag-os requires libraries that are not available inside the diag-os.
Release Notes	The library requests an external IP.

Category	Description
Workaround	Set the sources point to correct external site. Fixed with Unified firmware update tool version 2.6.
Severity	S3

Contacting Dell Technologies

Dell Technologies provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell Technologies for sales, technical support, or customer service issues, go to https://www.dell.com/support/ .

Notes, cautions, and warnings

NOTE: A NOTE indicates important information that helps you make better use of your product.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.