Dell Command | PowerShell Provider

Version 2.3 Reference Guide

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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.

Contents

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Introduction to Dell Command | PowerShell Provider 2.3

Dell Command | PowerShell Provider is a module that makes BIOS configuration easily manageable through the Windows PowerShell interface. It works for local and remote systems, and in a Windows Preinstallation Environment (WinPE).

This document describes the supported attributes, and error reporting in Dell Command | PowerShell Provider.

Dell Command | PowerShell Provider works for local and remote systems, and even in Windows preinstallation environment. This module, with it is native configuration capability, makes BIOS configuration easily manageable.

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Attributes supported in Dell Command | PowerShell Provider 2.3

The following are categories in Dell Command PowerShell Provider and contains BIOS attributes.

Table 1. Attributes supported in Dell Command | PowerShell Provider

Category Name	Description
AdvancedBootOptions	Displays the attributes to configure advanced boot settings.
AdvancedConfigurations	Displays the attributes to configure various advanced settings.
BatteryInformation	Displays information about each battery with the percent charged information.
BIOSSetupAdvancedMode	Displays the attributes to configure various BIOS setups advanced mode settings.
BootSequence	Displays the attributes to configure the system boot settings.
Intel Software Guard Extensions	Displays the attributes to configure Intel Software Guard Extensions settings.
Manageability	Displays the attributes to configure various manageability settings.
Maintenance	Displays the attributes to configure maintenance-related settings.
MemoryInformation	Displays noneditable information about memory.
MiscellaneousDevices	Displays the attributes to configure various miscellaneous onboard devices.
Passwords	Displays the attributes to configure performance-related settings.
Performance	Displays the attributes to configure performance-related settings.
POSTBehavior	Displays the attributes to configure system's behavior after POST.
PowerManagement	Displays the attributes to configure power management settings.
PreEnabled	Displays the attributes to configure various preenabled settings. **NOTE:** This category describes the miscellaneous BIOS settings.
ProcesserInformation	Displays noneditable information about processors.
SecureBoot	Displays the attributes to configure Secure Boot settings.
Security	Displays the attributes to configure the security feature of the system.
StealthModeControl	Displays the attributes to configure stealth mode settings.
SupportAssistSystemResolution	Displays the attributes to configure various SupportAssist settings.
SystemConfiguration	Displays the attributes to configure devices that are integrated on the system board.
SystemInformation	Displays information that uniquely identifies the system.
SystemLogs	Displays the attributes to configure system logs settings.
TPMSecurity	Displays the attributes to configure TPM device settings.
Thermal Configuration	Displays the attributes to configure thermal configuration settings.
USBConfiguration	Displays the attributes to configure USB settings. **NOTE:** USB keyboard and mouse always work as defined in the BIOS setup, irrespective of these settings.
Video	Displays the attributes to configure video settings.

Table 1. Attributes supported in Dell Command | PowerShell Provider (continued)

Category Name	Description
VirtualizationSupport	Displays the attributes to configure virtualization settings.
Wireless	Displays the attributes to configure wireless devices.

Topics:

AdvancedBootOptions

Table 2. AdvancedBootOptions

Attribute Name	Description
AttemptLegacyBoot	Determines if BIOS should attempt to boot from the legacy boot list when the UEFI boot list fails. Possible values: ● Enabled - If the UEFI boot list fails, then BIOS attempts to boot from the Legacy boot list. ● Disabled - BIOS discontinues the booting process if the UEFI boot list fails.
LegacyOrom	If enabled, allows legacy option ROMs to load. Without this option, only UEFI option ROMs loads. This option is required for Legacy boot mode. This mode cannot be enabled with Secure Boot. Possible values:

Table 2. AdvancedBootOptions (continued)

Attribute Name	Description
	• Enabled • Disabled
UefiBootPathSecurity	Determines whether the system should prompt the user to enter the Admin password, if set, while booting from a UEFI boot path from the F12 Boot Menu. Possible values: • AlwaysExceptInternalHdd — All UEFI boot paths require the user to enter the Admin password, except for the boot paths that are hosted on an internal hard disk drives. • Always — Booting from any UEFI boot path requires the user to enter the Admin password. • Never — The Admin password is not required for booting from UEFI boot paths. • AlwaysExceptInternalHddPxe — All UEFI boot paths require the Admin password, except for boot paths hosted on internal hard disk drives or PXE Boot.

AdvancedConfigurations

Table 3. AdvancedConfigurations

Attribute Name	Description
Aspm	Set the ASPM (Active State Power Management) level. Possible values: • Auto — There is handshaking between the device and PCI Express hub to determine the best ASPM mode supported by the device. • Disabled — ASPM power management is turned off always. • L1 — ASPM power management is set to use L1.
OneTBSystemMemoryLimitEnable	Confines the system memory to less than 1 TB when more than 1TB memory is installed in the computer. Possible values: • Enabled • Disabled

BatteryInformation

Table 4. BatteryInformation

Attribute Name	Description
PercentCharged	Displays the charged percentage of the battery. Possible values: Read-only

BIOSSetupAdvancedMode

Table 5. BIOSSetupAdvancedMode

Attribute Name	Description
AdvancedMode	Enabling BIOS Setup Advanced Mode makes all BIOS settings visible. Possible values:

Table 5. BIOSSetupAdvancedMode

Attribute Name	Description
	• Enabled • Disabled

BootSequence

Table 6. BootSequence

Attribute Name	Description
BootList	Determines the system's boot mode. Possible values: • Uefi — Enables booting to Unified Extensible Firmware Interface (UEFI) capable operating systems. • Legacy — (the default) Ensures compatibility with operating systems that do not support UEFI. **NOTE:** Legacy boot mode is not allowed when secure boot is enabled or legacy option ROM is disabled.
BootSequence	Specifies the order in which a system searches for devices when trying to find an operating system to boot. The BootSequence option allows users to customize the boot order and boot ability of boot devices. The UEFI BIOS allows the selection of **UEFI** boot paths or **Legacy** boot devices.

IntelSoftwareGuardExtensions

Table 7. IntelSoftwareGuardExtensions

Attribute Name	Description
EnclaveSize	Displays the memory allocation size for the Intel Software Guard Extension (SGX) processor reserved memory. Possible values: • 32MB • 64MB • 128MB • 256MB **NOTE:** You cannot set the Enclave Reserve Memory Size using the Dell Command | PowerShell Provider. One of the methods of setting Enclave Reserve Memory Size is from the BIOS setup screen.
SgxLaunchControl	Sets the Intel Software Guard Extensions Launch Control Policy. Possible values: • **IntelLocked** - Locks SGX to support Intel Enclave Launch Provider. • **RuntimeSelectable** - Allows operating system or hypervisor control of Enclave Launch Provider.
SoftGuardEn	Configures Software Guard Extensions (SGX) feature. You can select **Enabled** or **SoftControlled** if this option is disabled. Possible values: • Enabled

Table 7. IntelSoftwareGuardExtensions (continued)

Attribute Name	Description
	• Disabled • SoftControlled **NOTE:** Using the Dell Command | PowerShell Provider, you cannot do the following: • Disable this feature if the current state is Enabled or SoftControlled • Enable this feature if the current state is SoftControlled • Change this feature to SoftControlled if the current state is Enabled **NOTE:** One of the methods of configuring Software Guard Extensions (SGX) feature is from the BIOS setup screen.

Manageability

Table 8. Manageability

Attribute	Description
AmtCap	Set the intel active management technology (AMT) capability. Possible Values: • **Enabled** - If Intel Active Management Technology is enabled, MEBx is available through the F12 menu and you can provision AMT. MEBx may not be not accessible if OROM Keyboard Access is disabled. • **Disabled** - If Intel Active Management Technology is disabled, MEBx is not available in pre-boot. Once disabled, Intel Active Management Technology can only be enabled through the BIOS interface. If the Intel AMT is already provisioned, AMT cannot be disabled. Un-provisioning AMT is required to disable AMT. • **Restrict MEBx Access** - If Intel Active Management Technology is enabled, MEBx is not available in pre-boot, but you can provision AMT from the operating systems.
PostMebxKey	MEBx stands for Intel Management Engine BIOS Extension. Enables or disables the MEBx hotkey function when the system boots. • Enabled • Disabled
UsbProvision	Enables or disables provisioning of Intel AMT from a USB storage device. Possible values: • Enabled — Intel AMT can be provisioned using the local provisioning file via a USB storage device. • Disabled — Provisioning of Intel AMT from a USB storage device is blocked.

Maintenance

Table 9. Maintenance

Attribute Name	Description
AllowBIOSDowngrade	Allows or restricts downgrading of the system BIOS. **NOTE:** You cannot enable the Allow BIOS Downgrade feature using the Dell Command | PowerShell Provider.

Table 9. Maintenance (continued)

Attribute Name	Description
	NOTE: One of the methods of enabling the Allow BIOS Downgrade feature is from the BIOS setup screen. Possible values: • Enabled — Allows the system to downgrade the system BIOS. • Disabled — Restricts the system to downgrade the system BIOS.
BiosAutoRcvr	Enables or disables BIOS auto recovery feature. Possible values: • Enabled — If BIOS corruption is detected, the system automatically recovers BIOS without any user interaction. • Disabled — Disables BIOS auto recovery feature. **NOTE:** You can enable this option only if BiosRcvrFrmHdd option is enabled.
BiosIntegrityCheck	Enables or disables the BIOS integrity check during the booting process. Possible values: • Enabled — BIOS checks the BIOS image integrity during every booting process. • Disabled — BIOS checks the BIOS image integrity only if the previous booting process did not complete. **NOTE:** BIOS checks the BIOS image integrity only if the BiosAutoRcvr option is enabled.
BiosRcvrFrmHdd	Enables or disables the system BIOS Recovery option. This feature saves a recovery image to a primary hard disk drive storage, or to an external USB, and uses this recovery image to recover the BIOS image when system BIOS fails. Possible values: • Enabled — BIOS stores the recovery image on a primary hard disk drive storage. So the BIOS recovery image is available both from the primary hard disk drive permanent storage and via an external USB. • Disabled — BIOS does not store the recovery image on primary hard disk drive storage. So the BIOS recovery image is available only via an external USB.
Serr	Enables or disables the SERR on the DRAM controller and the PEG controller in the north bridge. Possible values: • Disabled — Disable the SERR DMI messaging mechanism. • Enabled — Allows SERR messages to be generated.

MemoryInformation

Table 10. MemoryInformation

Attribute Name	Description
DIMMASize	Displays the amount of main memory physically installed in the DIMM slot A. Possible Values: Read-only
DIMMBSize	Displays the amount of main memory physically installed in the DIMM slot B. Possible Values: Read-only
DIMMCSize	Displays the amount of main memory physically installed in the DIMM slot C. Possible Values: Read-only

Table 10. MemoryInformation (continued)

Attribute Name	Description
DIMMDSize	Displays the amount of main memory physically installed in the DIMM slot D. Possible Values: Read-only
MemoryAvailable	Displays the amount of main memory available to the operating system. **NOTE:** Due to an amount of memory allocated for the system use, MemoryAvailable is less than MemoryInstalled. Certain operating systems may not be able to use all the available memory. Possible Values: Read-only
MemoryInstalled	Displays the amount of main memory physically installed in the system. Possible Values: Read-only
MemorySpeed	Displays the clock frequency of the main memory. Possible Values: Read-only
MemoryTechnology	Displays the technology of the main memory installed in the system. Possible Values: Read-only

MiscellaneousDevices

Table 11. MiscellaneousDevices

Attribute Name	Description
BroadComTruManage	Enables or disables Broadcom TruManage technology. Possible values: • Enabled • Disabled
Camera	Enables or disables the camera. Possible values: • Enabled • Disabled
Camera2	Enable or disables the backward-facing camera. Possible values: • Enabled • Disabled
DediGPSRadio	Enables or disables the internal GPS radio. Possible values: • Enabled • Disabled
EsataPorts	Enables or disables all e-SATA ports. If the system supports a dock, all e-SATA ports into the dock are also enabled or disabled. Possible values: • Enabled • Disabled

Table 11. MiscellaneousDevices (continued)

Attribute Name	Description
ExpressCard	Enables or disables the ExpressCard. Possible values: ● Enabled ● Disabled
HdFreeFallProtect	Enables or disables hard drive free fall protection. Possible values: ● Enabled ● Disabled
MediaCard	Enables or disables the media card. If disabled, the media card is hidden from the OS and not seen in the Device Manager. Possible values: ● Enabled ● Disabled
MediaCardand1394	Enables or disables the media card and 1394. Possible values: ● Enabled ● Disabled
MiniCardSSDDevice	Enables or disables the mini card Solid State Drive (SSD) module. Possible values: ● Enabled ● Disabled
ModuleBayDevice	Enables or disables the module bay. The module bay is a hot-pluggable bay where storage and media devices such as HDDs, CDs or DVDs can be installed. Possible values: ● Enabled ● Disabled
OnboardModem	Enables or disables the onboard internal modem. Possible values: ● Enabled ● Disabled
PcCard	Enables or disables the PC card. Possible values: ● Enabled ● Disabled
PciSlots	Enables or disables the various on-board PCI slots. Possible values: ● Enabled ● Disabled
PCMCIA	Enables or disables the PCMCIA device slot. Possible values: ● Enabled

Table 11. MiscellaneousDevices (continued)

Attribute Name	Description
	• Disabled
SdCard	Enables or disables the SD card slot. Possible values: • Enabled • Disabled
SdCardBoot	Enables or disables booting the system from an SD card. Possible values: • Enabled — Allows the system to boot from an SD card. • Disabled — Prevents the system from detecting or boot from the SD card.
SdCardReadOnly	Enables or disables the read-only mode for SD card. Possible values: • Enabled • Disabled

Passwords

Table 12. Passwords

Attribute Name	Description
NOTE: If the criteria PwdMinLen >=8, PwdLowerCaseRqd=Enabled, and PwdUpperCaseRqd=Enabled is followed, then StrongPassword is Enabled. If this criteria is not followed, then StrongPassword is Disabled. Vice-versa is also applicable.	
PwdMinLen	This feature controls the minimum number of characters that are mandatory for a password. Possible values: 4 - 32
PwdLowerCaseRqd	This feature reinforces that the password must contain one lower case letter. Possible values: • Enabled • Disabled
PwdUpperCaseRqd	This feature reinforces that the password must contain one upper case letter. Possible values: • Enabled • Disabled
PwdDigitRqd	This feature reinforces that the password must contain one digit number. Possible values: • Enabled • Disabled
PwdSpecialCharRqd	This feature reinforces password must contain one special character. Possible values: • Enabled • Disabled

Performance

Table 13. Performance

Attribute Name	Description
AdaptiveCStates	Adaptive C-States allow the system to dynamically detect high usage of a discrete graphics and adjust system parameters for higher performance during that time period. This feature requires an AC adapter due to higher energy consumption and dynamically it is not possible to activate higher performance without an appropriate AC adapter. Other settings that conserve power may block the utilization of this feature. Possible values: • Enabled • Disabled
AdjCachePrefetch	Enables or disables the AdjacentCacheLinePrefetch feature. Possible values: • Enabled - CPU fetches the adjacent cache line in the other half of the sector. • Disabled - CPU only fetches the cache line that contains the data currently required by the CPU.
CPUCore	This field specifies whether the processor has one or more cores enabled. The performance of some applications improve with additional cores. Possible values: • CoresAll— All cores are enabled. • Cores1 — Only one core is enabled. • Cores2 — Two cores are enabled. • Cores3 — Three cores are enabled. • Cores4 — Four cores are enabled. • Cores5 — Five cores are enabled. • Cores6 — Six cores are enabled. • Cores7 — Seven cores are enabled. • Cores8 — Eight cores are enabled. • Cores9 — Nine cores are enabled. • Cores10 — Ten cores are enabled. • Cores11 — Eleven cores are enabled. • Cores12 — Twelve cores are enabled. • Cores13 — Thirteen cores are enabled. • Cores14 — Fourteen cores are enabled. • Cores15 — Fifteen cores are enabled. • Cores16 — Sixteen cores are enabled. • Cores17 — Seventeen cores are enabled. • Cores18 — Eighteen cores are enabled. • Cores19 — Nineteen cores are enabled. • Cores20 — Twenty cores are enabled. • Cores21 — Twenty one cores are enabled. • Cores22 — Twenty two cores are enabled. • Cores23 — Twenty three cores are enabled. • Cores24 — Twenty four cores are enabled. • Cores25 — Twenty five cores are enabled. • Cores26 — Twenty six cores are enabled. • Cores27 — Twenty seven cores are enabled. • Cores28 — Twenty eight cores are enabled.
CpuSnoopMode	Configures the CPU snoop mode.

Table 13. Performance (continued)

Attribute Name	Description
	Possible values: ● Early — Enables early snoop mode. Use this mode for latency-sensitive applications that do not require high remote bandwidth. ● Home — Enables home snoop mode. Use this mode for applications that require high memory bandwidth. ● ClusterOnDie — Enables cluster on die mode. Dell recommends this mode for NUMA-optimized applications to achieve lowest local memory latency, and highest local memory bandwidth. ● OppSnoop — Enables opportunistic snoop mode. Directory with Opportunistic Snoop Broadcast (OSB) offers a good balance of latency and bandwidth. ● NoSnoop — Enables no snoop mode.
CStatesCtrl	Enables or disables additional processor sleep states. The operating system may optionally use these states for additional power savings when idle. Possible values: ● Enabled ● Disabled
DRmt	The Dell Reliable Memory Technology (RMT) feature identifies and filters out defective regions of the memory modules before they are consumed by the BIOS or OS. When enabled, the system automatically identifies errors, record their locations, and exclude bad location on reboot. Possible values: ● Enabled ● Disabled
DynTunML	Enables operating system capability to enhance dynamic power tuning capabilities based on detected workloads. Protections for exposure: The `-Admin` password restricts editing the command `-Removed` in case when you are using command line interface. Possible values: ● Enabled ● Disabled
EnableMultiCoreSupport	Enables or disables multiple CPU cores. Possible values: ● Enabled — The operating system is allowed to access additional cores present on a single CPU package. ● Disabled — The operating system is prevented to access additional cores present on a single CPU package.
HwPrefetcher	Enables or disables the CPU's hardware prefetcher. If enabled, the processor's Hardware Prefetcher will automatically prefetch data and code for the processor. Possible values: ● Enabled ● Disabled
IntelRapidStart	Enables or disables the Intel Rapid Start feature. The Intel Rapid Start feature reduces power consumption by putting the system into a low-power state during sleep mode after the specified amount of time (minutes). The resume time may be slightly more than resuming the system from a sleep mode, but less than resuming from a hibernate mode. Intel Rapid Start Technology is automatically be disabled due to configuration changes, such as:

Table 13. Performance (continued)

Attribute Name	Description
	• Hard disk configuration or partition changes • Memory capacity over 8GB is installed. • System or HDD password is enabled. • A Dell Encryption Accelerator card is installed. • The BlockSleep setting is enabled.
IntelRapidStartInstantOnDisplay	Enables or disables displaying the system logo from cache during system resume using Intel Rapid Start Technology. Possible values: • Enabled — Displays the system logo from cache during system resume using Intel Rapid Start Technology. • Disabled — Does not display the system logo from cache during system resume using Intel Rapid Start Technology.
IntelSpdSelTech	Intel Speed Select Technology allows you to choose up to two additional base frequency conditions. Cfg 1: TDP Level 3 Cfg 2: TDP Level 4 Possible values: • Configuration 1 • Configuration 2
IrstTimer	Sets the Intel Rapid Start Timer. The value can be specified in minutes ranging from 0 to 999. Specify the Rapid Start timer value as 0 to put the system into a low-power state immediately after the system transition to a sleep mode. Possible values: Integer ranging from 0 to 999
LimitCpuidValue	Restricts the maximum CPUID functions supported by the processor. Some operating system does not complete the installation when more than three CPUID functions are supported. Possible values: • Enabled • Disabled
LogicProc	Enables or disables HyperThreading in the processor. Possible values: • Enabled • Disabled
MultiCoreSupport	Specifies whether the processor has one or more cores enabled. The performances of some applications improve with additional cores. Possible values: • CoresAll — All cores are enabled. • Cores1 — Only one core is enabled. • Cores2 — Two cores are enabled. • Cores4— Four cores are enabled. • Cores6— Six cores are enabled. • Cores8— Eight cores are enabled. • Cores10 — Ten cores are enabled. • Cores12 — Twelve cores are enabled. • Cores14 — Fourteen cores are enabled. • Cores16 — Sixteen cores are enabled.

Table 13. Performance (continued)

Attribute Name	Description
NodeInterleave	Enables or disables memory interleave mode. Possible values: • Enabled • Disabled
Speedstep	Intel SpeedStep technology that allows the processor to operate at two or more operating speeds called P-states in ACPI terminology. When disabled, the processor operates at its maximum frequency. Possible values: • Disabled • Enabled • MaximumPerformance • MaximumBattery
IsochronousMode	Enables or disables System Isochronous mode. **NOTE:** Isochronous mode may be best for audio and video streaming applications. Possible values: • Enabled - Enable this mode to reduce the latency of memory transactions at the expense of bandwidth. • Disabled - Disable this mode for applications that need high memory bandwidth.
TurboMode	Enables or disables the Intel TurboBoost mode of the processor. • Disabled — Does not allow the TurboBoost driver to increase the performance state of the processor preceding the standard performance. • Enabled — Allows the Intel Turbo driver to increase the performance of the CPU or graphics processor.
AmdCpuCore	This field specifies whether the processor has one or more cores enabled. Possible values: • CoreAll • Core1p0 • Core1p1 • Core2p0 • Core3p0 • Core2p2 • Core4p0 • Core3p3
AmdThreadControl	Each processor core contains two threads. Each thread appears as a separate processor to the operating system. However, the threads share part of the processor core with one another. Possible values: • Enabled • Disabled
AmdTurboCore	Enables or disables the AMD Turbo Core Technology in the processor. When enabled, AMD Turbo Core Technology dynamically adjusts processor frequency to provide a performance boost at the operating system's request. Possible values: • Enabled • Disabled

Table 13. Performance (continued)

Attribute Name	Description
MemRSA	Enables or disables the Reliability Availability Serviceability (RSA) support on memory module. Possible values: ● Enabled ● Disabled
PcieRSA	Enables or disables the Reliability Availability Serviceability (RSA) support on PCIe devices. Possible values: ● Enabled ● Disabled
CpuRSA	Enables or disables the Reliability Availability Serviceability (RSA) support on CPUs. Possible values: ● Enabled ● Disabled

POSTBehavior

Table 14. POSTBehavior

Attribute Name	Description
DockWarningsEnMsg	Enables or disables dock warning messages. Possible values: ● Enabled ● Disabled
ExternalHotKey	Enables or disables Fn key emulation. Possible values: ● Enabled—The Scroll Lock key on external keyboards emulate the Fn key only when running in a non-ACPI operating system. ● Disabled—The Scroll Lock key behaves normally.
ExtPostTime	Creates an extra preboot delay for specified seconds to allow the user to see POST status messages. Possible values: ● 0s—Does not delay. ● 5s—Delays for 5 seconds. ● 10s—Delays for 10 seconds.
Fastboot	Controls specific steps that are performed during boot to decrease boot time or increase boot checks. This option can speed up the boot process by bypassing some compatibility steps. Possible values: ● Minimal—Reduces boot time by skipping certain hardware and configuration initialization during boot. ● Thorough—Performs complete hardware and configuration initialization during boot. ● Auto—Allows the BIOS to decide configuration initialization to be performed during boot.

Table 14. POSTBehavior (continued)

Attribute Name	Description
FnLock	This option controls the behavior of the dual function keys, when Fn key is pressed and when it is not. Possible values: ● Enabled—Fn+Esc key combination toggles the primary behavior of F1 to F12 keys between their normal and secondary functions. ● Disabled—You cannot toggle the primary behavior of these keys.
FnLockMode	If Enabled, F1 to F12 keys behave as function keys holding Fn key is required to access their secondary functions. Without holding Fn key, the dual function keys behave as normally labeled. Possible values: ● EnableSecondary ● DisableStandard
FullScreenLogo	Enables or disables the full screen logo that appears during BIOS POST. Possible values: ● Enabled ● Disabled
Keypad	Activates the internal keyboard's embedded keypad either when Numlock LED is on or when the Fn key is pressed. **NOTE:** When Setup is running, this option has no effect, Setup works in the **EnabledByFnKey** mode. Possible values: ● EnabledByFnKey—The keypad is enabled only when you hold the Fn key. ● EnabledByNumLock—The keypad is enabled when, the Numlock LED is On and no external keyboard is attached.
MacAddrPassThru	This feature replaces the external NIC MAC address (in a supported dock or dongle) with the selected MAC address from the system. The default value is the System Unique MAC Address. Possible values: ● SystemUnique ● IntegratedNic1 ● Disabled
NumLock	Enables or disables the NumLock function when the system boots. Possible values: ● Enabled ● Disabled
NumLockLed	Enables or disables the NumLockLed function when the system boots. Possible values: ● Enabled ● Disabled
PntDevice	Defines how the system handles mouse and touchpad input. Possible values: ● SerialMouse—Uses a serial mouse and disables the internal touchpad. ● Ps2Mouse—Disables the integrated touchpad when an external PS2 mouse is present.

Table 14. POSTBehavior (continued)

Attribute Name	Description
	• Touchpad—Leave the integrated touchpad enabled when an external PS2 mouse is present. • SwitchToExternalPS2—Sets the pointing device to switch to external ps2.
PostF12Key	Enables or disables <F12> Boot Menu on POST boot screen. Possible values: • Enabled—Enables F12 Boot Option Menu. • Disabled—Disables F12 Boot Option Menu.
PostF2Key	Enables or disables <F2> boot menu on POST boot screen. Possible values: • Enabled • Disabled
PostHelpDeskKey	Enables or disables display of the (ctrl+h) help Desktop hotkey message on the POST screen if Management Engine (ME) is alive and Client Initiated Remote Access (CIRA) is supported. Possible values: • Enabled • Disabled
PowerWarn	Enables or disables display of warning messages when you use certain power adapters. The system displays these messages when you attempt to use a power adapter that has too little capacity for your configuration. Possible values: • Enabled • Disabled
RptKeyErr	Enables or disables reporting of keyboard-related errors when the system boots. Possible values: • Enabled • Disabled
SignOfLifeByKbdBacklight	This option allows the system to indicate that the power button has been pressed during POST by turning on the keyboard backlight. Possible values: • Enabled • Disabled
SignOfLifeByDisplay	This option allows the system to indicate that the power button has been pressed during POST by displaying the Dell Logo. Possible values: • Enabled • Disabled
SignOfLifeByAudio	This option allows the system to indicate that the power button has been pressed during POST with an audible tone. Possible values: • Enabled • Disabled
SignOfLifeIndication	During POST, system acknowledges that the power button has been pressed in a manner that the user can either hear or feel.

Table 14. POSTBehavior (continued)

Attribute Name	Description
	Possible values: • Enabled • Disabled
WarningsAndErr	During POST the system continues to boot, or pauses when warnings or errors are detected. This feature can be used for the remotely managed systems that does not have a keyboard or a console for the user to respond. Possible values: • PromptWrnErr—System pauses for the user to respond when warnings or errors are detected. • ContWrn—System continues to boot when warnings are detected, but pauses for the user to respond when errors are detected. • ContWrnErr—System continues to boot when warnings or errors are detected. **NOTE:** Errors deemed critical to the operation of the system hardware always pause the system.
WyseP25Access	Enables or disables the WyseP25Access feature. Possible values: • Enabled—Allows remote access to BIOS setup through Dell Wyse P25, Dell Wyse P45, or through any other compatible portal. • Disabled—Restricts remote access to BIOS setup through Dell Wyse P25, Dell Wyse P45, or through any other compatible portal. **CAUTION: If Dell Wyse P25 BIOS Access feature is disabled, it cannot be enabled remotely through the Dell Wyse P25, Dell Wyse P45, or through any other compatible portal. Disabling this feature prevents keyboard access to Diagnostics, Safe Mode, Boot Options, and other Pre-OS functionalities.** **NOTE:** This feature is enabled by default.

PowerManagement

Table 15. PowerManagement

Attribute Name	Description
AcPwrRcvry	Controls the system's behavior when AC power is restored after AC power has been lost. Possible values: • Off — System stays off after AC power is restored. • On — System powers on after AC power is restored. • Last — System returns to the previous state after AC power recovery.
AdvancedBatteryChargeConfiguration	Configures the days settings based on BeginningOfDay and workperiod. Advanced Battery charge mode uses standard charging algorithm and other methods during working hours to maximize battery health. During working hours, express charge is used to charge the batteries faster. You can configure the days and the work period during which the battery has to be charged. To enable advanced battery charging, provide the day, and set the following: Possible values: • BeginningOfDay — To configure the AdvanceBatteryCharge start time in 24 hours format. The value of hour must be in the range 0–23 and minute must be 0, 15, 30, or 45. • Workperiod — To configure the duration of charging.

Table 15. PowerManagement (continued)

Attribute Name	Description
AdvBatteryChargeCfg	Enables or disables the Advanced Battery Charge configuration. During working hours, with the Advanced Battery Charge configuration, the batteries can be charged faster using ExpressCharge. Possible values: ● Enabled ● Disabled
AutoOn	Configures the days when the system has to turn on automatically at the time specified in AutoOnHr and AutoOnMn. This function can turn on the system either every day, on weekdays, or on selected days. If AutoOnHr is set to 23, and AutoOnTime is set to 53, then setting AutoOntime to Weekdays turns on the system automatically on weekdays (Monday to Friday) at 11:53 p.m.. To turn on the system on particular days, set AutoOnTime as Select Days, and then enable or disable individual days by setting AutoOnSun -enabled, AutoOnMon -disabled, etc. Possible values: ● Disabled ● EveryDay ● SelectDays ● Weekdays
AutoOnHr	Configures the hour when the system has to turn on automatically. Provide the value ranging from 0 to 23. To set the time 11:59 p.m., provide the value as 23. Possible values: Integers ranging from 0 to 23
AutoOnMn	Configures the minute when the system has to turn on automatically. Provide the value ranging from 0 to 59. To set the time 11:59 p.m., provide the value as 59. Possible values: Integers ranging from 0 to 59
AutoOnSun	Enables or disables the AutoOn functionality at the specified time on Sundays. Possible values: ● Enabled ● Disabled
AutoOnMon	Enables or disables the AutoOn functionality at the specified time on Mondays. Possible values: ● Enabled ● Disabled
AutoOnTue	Enables or disables the AutoOn functionality at the specified time on Tuesdays. Possible values: ● Enabled ● Disabled
AutoOnWed	Enables or disables the AutoOn functionality at the specified time on Wednesdays Possible values: ● Enabled ● Disabled
AutoOnThur	Enables or disables the AutoOn functionality at the specified time on Thursdays. Possible values: ● Enabled ● Disabled

Table 15. PowerManagement (continued)

Attribute Name	Description
AutoOnFri	Enables or disables the AutoOn functionality at the specified time on Fridays. Possible values: • Enabled • Disabled
AutoOnSat	Enables or disables the AutoOn functionality at the specified time on Saturdays. Possible values: • Enabled • Disabled
AutoWakePeriod	Defines the time in minutes after which the system should automatically wake up from Standby, Hibernate, or Switched off mode. Possible values: integers ranging from 0 to 254 **NOTE:** The system wakes up from Sleep, Hibernate, or Switched off mode only if the AutoOn option is enabled for everyday of the week.
BlinkPowerSupply1LED	Normally, the status LEDs on the back of the Power Supply Unit (PSU) displays solid green color. Possible values: • Enabled — The first power supply (PSU 1) status LED blinks for few seconds. **NOTE:** There is no need for disabling the LEDs manually. When the Embedded Controller (EC) gives the control back to PSU, the LED turns off automatically.
BlinkPowerSupply2LED	Normally, the status LEDs on the back of the Power Supply Unit (PSU) displays solid green color. Possible values: • Enabled — The second power supply (PSU 2) status LED blinks for few seconds. **NOTE:** There is no need for disabling the LEDs manually. When the Embedded Controller (EC) gives the control back to PSU, the LED turns off automatically.
BlockSleep	Blocks the system entering sleep (S3 state) mode in an OS environment. If enabled, the system does not go into sleep mode, Intel Rapid Start is disabled automatically, and OS Power option is blank if it was set to Sleep earlier. Possible values: • Enabled • Disabled
CustomChargeStart	Sets the percentage value ranging from 50 to 95 at which custom battery charging should start. **NOTE:** Primary Battery Custom Charge Start percent must be less than the Primary Battery Custom Charge End percent and the minimum difference between the two must be 5 percent. Possible values: Integers ranging from 50 to 95
CustomChargeStop	Sets the percentage value ranging from 55 to 100 at which the custom battery charging should stop. **NOTE:** Primary Battery Custom Charge Start percentage must be less than the Primary Battery Custom Charge End percent and the minimum difference between the two must be 5 percent. Possible values: Integers ranging from 55 to 100

Table 15. PowerManagement (continued)

Attribute Name	Description
DeepSleepCtrl	Controls when Deep Sleep is enabled. Possible values: • Disabled • S5Only • S4AndS5
DockBatteryChargeConfiguration	Configures the dock battery charge mode. Possible values: • Standard — Charges the battery over a long period of time. • Express — Charges the battery in Express Charge mode using Dell's fast charging technology.
FanCtrlOvrd	Runs the system fan at full speed. Possible values: • Enabled • Disabled
FanSpeed	Sets the speed of the fan to Auto, High, Medium, Low, Medium High, or Medium Low. When set to Auto, the system run time automatically sets the speed. Possible values: • Auto • High • Med • Low • MedHigh • MedLow
FanSpeed	Sets the speed of the fan to Auto, High, Medium, Low, Medium High, or Medium Low. When set to Auto, the system run time automatically sets the speed. Possible values: • Auto • High • Med • Low • MedHigh • MedLow
FanSpeedLvl	Configures the fan speed control if the fan speed is set to Auto using FanSpeed attribute. 0 sets the fan speed to the optimal speed level, and a higher percentage provides enhanced cooling. Possible values: Integers ranging from 0 to 100
IntelReadyModeEn	This option enables or disables Intel Ready Mode Technology (iRMT). Possible values: • Enabled • Disabled
IntlSmartConnect	Intel Smart Connect Technology (ISCT) identifies the nearby wireless connections while system is in a sleeping state. SmartConnect Synchronizes email or social media applications that were open when the system entered the sleep state. Possible values:

Table 15. PowerManagement (continued)

Attribute Name	Description
	• Enabled • Disabled
LidSwitch	Enables or disables the lid switch functions. Possible values: • Enabled — OS setting determines the display behavior when lid is closed. • Disabled — Display will not be affected when lid is closed.
ModBattChargeCfg	Configures the module bay battery charge mode. Possible values: • Standard — Charges the battery at a standard rate. • Express — Charges the battery faster using the express charging algorithm, Dell's fast charging technology
PeakShiftBatteryThreshold	Sets the value of the Peak Shift battery threshold. The acceptable value range is from 15 to 100 percent. When the Peak Shift battery threshold level is reached, the system starts using AC power. Possible values: Integers ranging from 15 to 100
PeakShiftCfg	Enables or disables Peak Shift configuration. Using Peak Shift, you can minimize the consumption of AC power during the peak power usage period of the day. Possible values: • Enabled • Disabled
PeakShiftDayConfiguration	Configures the days settings based on StartTime, EndTime, and ChargeStartTime. Using Peak Shift configuration, you can minimize the consumption of AC power during the peak power usage period of the day. You can set a start and end times for the Peak Shift period. During this period, the system runs on battery if the battery charge is preceding the set battery threshold value. After the Peak Shift period, the system runs on AC power without charging the battery. The system functions normally using AC power and recharging the battery after the specified ChargeStartTime. Possible values: • Enabled • Disabled
PowerOnLidOpen	Set the PowerOnLidOpen feature. Possible values: • **Enabled** - If the feature is set to enabled, the system powers up from the off state whenever the lid is opened. This system powers on when powered either by the AC adapter or the system battery. • **Disabled** - If the feature is set to disabled, the system does not power up from the off state whenever the lid is opened.
PowerUsageMode	Sets the system power usage modes. Possible values: • **PowerSaver** - This mode reduces processor sustained power to enhance battery life depending on the use case. This mode may impact system performance. • **Balanced** - This mode balances performance, noise, temperature, and battery life. The default option is set to Balanced Mode. • **Performance** - This mode uses the processor's typical power and utilizes discrete graphics.

Table 15. PowerManagement (continued)

Attribute Name	Description
	• **HighPerformance** - This mode increases processor sustained power to produce higher system performance, but produces more noise, increases system surface temperature, and reduces the battery life.
PrimaryBattChargeCfg	Configures the primary battery charge mode. The selected charging mode applies to all batteries installed in the system. Possible values: • Adaptive — Battery settings are adoptively optimized based on your typical battery usage pattern. • Standard — Charges the battery at a standard rate. • Express — Charges the battery faster using the express charging algorithm, Dell's fast charging technology. • PrimAcUse — Charges the battery while plugged in, a mode preferred by the users who operate their systems while plugged in to an external power source. • Custom — The battery charging starts and stops based on user settings specified in Primary Battery Custom Charge Start and Primary Battery Custom Charge End.
SfpwakeOnLan	Enables the system to power on by a special LAN signal, or by a special SFP signal. Possible values: • SFP - Allows the system to be powered on by special SFP signals. • LANSFP - Allows the system to be powered on by either by LAN, or by SFP signals. • SFPPXE - Allows the system to be powered on by SFP signals, and immediately boot to PXE. **NOTE:** This feature works only if the system is connected to AC power.
SleepMode	Determines which sleep mode to be used by the operating system. **NOTE:** The BIOS can only support either Modern Standby sleep mode (connected or disconnected), or S3 sleep mode. Possible values: • OSAutoSelection — Allows the operating system to select the appropriate sleep mode automatically. • ForceS3 — Forces the operating system to use the S3 sleep mode only.
SliceBattChargeCfg	Configures the battery slice charging feature. Possible values: • Standard — The battery is charged over a long period of time. • Express — Charges the battery in Express Charge mode using the express charging algorithm, Dell's fast charging technology. • PrimAcUse — Recommended setting for a user who primarily operates battery while plugged in. • Adaptive — Charges the battery in Express Charge mode using the express charging algorithm, Dell's fast charging technology. • Custom — Charges the battery in Express Charge mode using the express charging algorithm, Dell's fast charging technology.
Speedshift	Enables or disables the Intel Speed Shift Technology support. Setting this option to Enabled allows the operating system to select the appropriate processor performance automatically. Possible values: • Enabled • Disabled
TypeCPower	Configures the maximum power for type-C connector.

Table 15. PowerManagement (continued)

Attribute Name	Description
	Possible values: • 7.5W • 15W
UsbWake	Enables USB devices to wake the system from Standby. **NOTE:** This feature is functional only when the AC power adapter is connected. Possible values: • Enabled • Disabled
WakeOnAc	Controls the system's behavior when AC power is restored after AC power was lost. Possible values: • Disabled — System stays off after AC power is restored. • Enabled — System powers on after AC power is restored.
WakeOnDock	Enables or disables waking the system when a docking connection is made. Possible values: • Enabled • Disabled
WakeOnLan	Configures the wake-on-LAN feature. Possible values: • LanOnly — The system wake-on-LAN feature is enabled; either an onboard or an add-in NIC can wake the system up. • Disabled — Does not allow the system to power on when it receives a wakeup signal from the LAN or wireless LAN. • AddInCard — Enables NICs, plugged into the power connector, as the source of any wake-on-LAN signal. • WlanOnly — Allows the system to be powered on by special WLAN signal. • LanWlan — Allows the system to be powered on by special LAN or wireless LAN signal. • AddInCard — Allows the system to be powered on by NICs plugged into the special power connector. • Onboard — Allows the system to be powered on by Onboard NIC. • LanWithPxeBoot — Enables the network controller and wakes up the system to boot the PXE when a wake packet is sent to the system in the S4 or S5 state. • SfpNic — Allows the system to wake-up by certain SFP signals. • LanOrSfpNic — Allows the system to wake-up either by LAN, or by SFP signals. • SfpNicWithPxeBoot — Allows the system to wake-up by SFP signals, and immediately boot to PXE.
WakeOnLan2	Defines the wake-on-LAN2 feature. • **LanOnly** — The system wake-on-LAN feature is enabled; either an onboard or an add-in NIC can wake up the system. • **Disabled** — The system does not respond to magic packets or other means of wake-on-LAN. The NIC chip section that looks for packets will not be powered. • **LanWithPxeBoot** — Enables the network controller and causes the system to wake up and immediately boot to PXE when a wake packet is sent to the system in the S4 or S5 state.
WlanAutoSense	Enables or disables the WLAN radio when the system is connected to a wired network. When disconnected from the wired network, WLAN radio is re-enabled. Possible values:

Table 15. PowerManagement (continued)

Attribute Name	Description
	• Enabled • Disabled
WwanAutoSense	Enables or disables the WWAN radio when the system is connected to a wired network. When disconnected from the wired network, WWAN radio is re-enabled. Possible values: • Enabled • Disabled

PreEnabled

Table 16. PreEnabled

Attribute	Description
AmdSmartShift	Sets the AmdSmartShift. Possible values: • Enabled - On a discrete GPU system, AMD SmartShift allows the system's CPU and discrete GPU to share the power limits. This allows the potential performance that increases within the systems power or thermal limitation, • Disabled - AmdSmartShift feature disabled. .
BiosConnectActivation	Configures the state of the available BiosConnect boot paths. Possible values: • Deactivate — BIOS setup options are not available and all BiosConnect boot paths are disabled. • FullActivation — BIOS Setup options are enabled and all BiosConnect boot paths are enabled. • LaunchpadActivationOnly — BIOS setup options are enabled and only launchpad code path is enabled.
DashSupport	Enables and disables the support for Desktop and Mobile Architecture for System Hardware (DASH) management through Platform Level Data Model (PLDM) exchanges. Possible values: • Enabled • Disabled
DisGpuExtDisplay	Enables or disables the platform external displays. Possible values: • Enabled — Allows discrete Graphics Processing Unit (dGPU) to enable the platform external displays such as HDMI, NB DP and Type-C, etc. with the purpose of enabling discrete graphic features such as Eyefinity, Mosaic, 10bit DP displays, etc.. **NOTE:** Embedded Display Port (eDP) will be enabled by Integrated Graphics Processing Unit (iGPU). • Disabled — The normal hybrid graphics mode is enabled. **NOTE:** This feature is used in hybrid graphics mode only.
ExpansionBay 1	Enables or disables Expansion Bay 1.

Table 16. PreEnabled (continued)

Attribute	Description
	Possible values: • Enabled • Disabled
ExpansionBay 2	Enables or disables Expansion Bay 2. Possible values: • Enabled • Disabled
ExpansionBay 3	Enables or disables Expansion Bay 3. Possible values: • Enabled • Disabled
FaultTolerantMemLogClear	Enables or disables the Fault Tolerant Memory Log Clear option. Possible values: • Enabled — System clears fault tolerant memory log during the next boot. • Disabled — Fault Tolerant Memory Log Clear option will be disabled, and no action will be taken during the next boot. **NOTE:** Fault Tolerant Memory Log Clear option will be reset to disabled state after log gets cleared.
GpsWwan	Enables or disables GPS WWAN Radio. Possible values: • Enabled • Disabled
GraphicSpecMode	Enables or disables the modes. Possible values: • Enabled — Allows discrete Graphics Processing Unit (dGPU) to enable the platform external displays such as HDMI, NB DP and Type-C, etc. with the purpose of enabling modes graphic features. **NOTE:** Embedded Display Port (eDP) will be enabled by Integrated Graphics Processing Unit (iGPU). • Disabled — The normal hybrid graphics mode is enabled. **NOTE:** This feature is used in hybrid graphics mode only.
MemPerMonitor	Enables or disables the memory performance monitor feature. Possible values: • Enabled • Disabled
PcieBusAllocation	This feature controls the PCIe bus resources allocation among the PCIe SLOTs. Possible values: • Default • OptimizeforThunderbolt • Option1 • Option2 • Option3
RecoveryTool	Enables or disables the Dell recovery tool.

Table 16. PreEnabled (continued)

Attribute	Description
	Possible values: • Enabled — Enables the Dell recovery tool. • Disabled — Disables the Dell recovery tool.
ReportLogoType	Reports the type of splash screen logo (Dell or custom) that is passed from BIOS to user. Possible values: • 0 and 1 **NOTE:** You cannot enable or disable this feature using Dell Command | PowerShell Provider.
RuggedDeskDockNicPxe	Enables or disables the support for PXE Boot from Rugged Desk Dock NIC device. Possible values: • Enabled • Disabled
ServiceOSClear	Deletes the service OS non-volatile region. Possible values: • Enabled — Deletes the service OS non-volatile region and changes the token status to Disabled. • Disabled — Does not delete the service OS non-volatile region.
TelemetryAccessLvl	This feature controls the type of telemetry for data support. Possible values: • Disabled — No telemetry • Basic — Flash and Diags only • Enhanced — Flash, Diags, and Boot Event • Full — All telemetry
UsbWakeS4En	Enables or disables the USB wake from s4 power state of the system. Possible values: • Enabled — Enables the USB wake from s4 power state of the system. • Disabled — Disables the USB wake from s4 power state of the system.

ProcessorInformation

Table 17. ProcessorInformation

Attribute Name	Description
64-BitTechnology	Specifies whether the installed processors support 64-bit extensions. Possible values: Read-only
CoreCount	Displays the number of cores in each processor. By default, the maximum number of cores per processor are enabled. Possible values: Read-only
CurrentClockSpeed	Displays the current speed of the processor. Possible values: Read-only
HTCapable	Specifies whether the system supports Hyper Threading (HT).

Table 17. ProcessorInformation (continued)

Attribute Name	Description
	Possible values: Read-only
MaximumClockSpeed	Displays the maximum speed supported by the processor. Possible values: Read-only
ProcessorID	Displays the processor ID that contains the processor-specific information that describes the features of the processor. Possible values: Read-only
ProcessorL2Cache	Displays the L2 cache size. Possible values: Read-only
ProcessorL3Cache	Displays the L3 cache size. Possible values: Read-only
ProcessorType	Displays the brand information of the processor installed on the system. Possible values: Read-only

SecureBoot

Table 18. SecureBoot

Attribute Name	Description
SecureBoot	Enables or disables the SecureBoot feature. For SecureBoot to be enabled, the system needs to be in UEFI boot mode, and the Enable Legacy Option ROMs option needs to be turned off. **CAUTION: You cannot disable the SecureBoot feature using the Dell Command | PowerShell Provider.** Possible values: • Enabled • Disabled **NOTE:** One of the methods to disable SecureBoot feature is from the BIOS setup screen.
SecureBootMode	Allows the modification of secure boot operational mode. Possible values: • **Deployed mode** is the normal mode of operation for measuring the UEFI executable images. **Audit Mode** enables the evaluation of changes to the Secure Boot key database. **NOTE:** In Secure Boot Mode, **Audit Mode** can be changed to **Deployed Mode**, but changing from **Deployed Mode** to **Audit Mode** is not supported.

Security

Table 19. Security

Attribute Name	Description
Absolute	Sets the value to the Absolute interface, and control the Absolute service.

Table 19. Security (continued)

Attribute Name	Description
	Possible values: • **Enabled** - If enabled, then the Absolute service is activated or deactivated. • **Disabled** - If disabled, then the Absolute service does not run. • **PermanentlyDisabled** - If the Absolute interface is permanently disabled, then the Absolute feature can be enabled by using the factory reset feature.
AdminPassword	Sets, changes, or clears the administrator (admin) password (also called the setup password). If you delete the admin password, the system password, if set, is also deleted. Possible values: String containing minimum 4 and maximum 32 characters including whitespace.
AdminSetupLockout	Enables or disables admin setup lockout. Possible values: • Enabled • Disabled
AmdTSME	Possible values: • **Enabled** - AMD Transparent Secure Memory Encryption (TSME) allows encryption of contents on the memory DIMMS. **NOTE:** For best results while diagnosing potential memory DIMM issues, turn off this feature prior to running diagnostic functions or tools. • **Disabled** - AMD Transparent Secure Memory Encryption (TSME) does not allow encryption on the memory DIMMS.
CapsuleFirmwareUpdate	Enables or disables BIOS updates via UEFI capsule update packages. Possible values: • Enabled • Disabled
ChasIntrusion	The chassis intrusion switch is a physical switch which triggers an event when the chassis is opened. Possible values: • Enabled — The system detects and reports chassis intrusion events to the system display on boot-up. • Disabled — The system does not detect and report the Chassis Intrusion events to the system display on boot-up. • SilentEnable — The system detects, but does not report the Chassis Intrusion events to the system display on boot-up.
ChassisIntrusionStatus	Displays the status of chassis intrusion. **NOTE:** Except TripReset, all values are read-only. Possible values: • DoorOpen — Indicates that chassis door is open. • Tripped — Indicates that the chassis door was opened since the last time the sensor-detection logic was reset. • DoorClosed — Indicates that chassis door is closed. • TripReset — Resets the sensor-detection logic to detect the next closed-to-open transition on the chassis door.
Computrace	This feature allows the users to enable or disable Absolute Software's Computrace security software BIOS ROM. After this token is written, the state is permanently

Table 19. Security (continued)

Attribute Name	Description
	maintained (this is a write-once field). This token is for Factory use only. Application and management software must ignore this token. Write-once permanent is different from write-once. Write-once is reset on a power cycle and/or chipset reset. Write-once permanent cannot be reset or change once it is set. Possible values: • Disable • Activate **NOTE:** You cannot enable or disable this feature using Dell Command | Configure.
CpuXdSupport	Enables or disables the run disable mode of the processor. The operating system can use this feature to hinder software that exploits buffer overflows. Possible values: • Enabled • Disabled
GeneralPurposeEncryption	Enables or disables general-purpose encryption. Possible values: • Enabled • Disabled
HDDInfo	Displays the details of each HDD. The following information is displayed: • **HDDName** — The name of the HDD. • **Present** — Whether the HDD is physically present. • **PwdProtected** — Whether a password exists for the HDD. • **PendingRestart** — Whether a reboot is pending to set the password. • **AdminOnlyChange** — Whether the changes to the password can be made only by an administrator. • **SecureEraseSupported** — Whether HDD Secure Erase is supported. • **SecureEraseEnabled** — Whether HDD Secure Erase is enabled. Possible values: Read-only
HDDPassword	Sets, changes, or clears the HDD password. Enter the HDD password, if set, when the system is powered on. **NOTE:** After setting the HDD password, restart the system. Possible values: String containing minimum 1 and maximum 32 characters including whitespace.
HddProtection	Lets the user choose loading of HDD Protection OPROM.
IntlPlatformTrust	Enables or disables IntlPlatformTrust feature. Possible values: • Enabled — Displays the Intel Platform Trust Technology (PTT) device from the operating system on the next boot. • Disabled — Hides the Intel Platform Trust Technology (PTT) device from the operating system on the next boot. **NOTE:** When disabled, the PTT device is not displayed to the operating system, and no changes can be made to the PTT device or its content.
IsAdminPasswordSet	Specifies if an admin password has been set. Possible values: True, false (Read-only)

Table 19. Security (continued)

Attribute Name	Description
IsSystemPasswordSet	Specifies if a system password has been set. Possible values: True, false (Read-only)

MasterPasswordLockout	Enables or disables master password settings.
	CAUTION: Using the Dell Command | PowerShell Provider, you cannot disable this feature.
	Possible values:
	• Enabled — The master password cannot be used to:
	  ○ clear other passwords
	  ○ unlock and access Hard Disk Drive
	  ○ erase data from Hard Disk Drive.
	• Disabled — The master password can be used to:
	  ○ clear other passwords
	  ○ unlock and access Hard Disk Drive
	  ○ erase data from Hard Disk Drive.
	NOTE: One of the methods of configuring this feature is from the BIOS setup screen.
	NOTE: You cannot enable MasterPasswordLockout while setting up with Hdd or Owner's password.

OromKeyboardAccess	Determines whether users are able to enter Option ROM Configuration screens using hotkeys during boot. Possible values: • Enabled — Users are able to enter OROM configuration screens using hotkeys during boot. • OneTimeEnable — Users will be able to enter OROM configuration screens using hotkeys during next boot only. After next boot, the settings will revert to disabled. • Disabled — Users are able to enter OROM configuration screens using hotkeys during boot.
PasswordBypass	Allows users to skip the entry of the system password, HDD password, fingerprint scan, or smartcard on either/both reboot (warm boot) or S3 resume (resume from standby). Possible values: • Disabled • RebootBypass • ResumeBypass • RebootAndResumeBypass
PasswordLock	Determines whether the changes to the system and HDD passwords are permitted or restricted if an admin password is set. Possible values: • Disabled — If disabled, then the system and HDD passwords are locked by admin password and cannot be set, modified, or deleted unless admin password is provided. • Enabled — If enabled, then the system and the HDD passwords can be set, modified, or deleted.
Ppibypassforblocksid	When there is no drive ownership and the ppibypassforblocksid is enabled, the BIOS requires user input while sending the Block SID authentication command to SED drives. When disabled, BIOS does not require user input while sending the Block SID command.

Table 19. Security (continued)

Attribute Name	Description
	Possible values: • Enabled • Disabled
SedBlockSidAuthentication	When there is no drive ownership and the SedBlockSidAuthentication is enabled, BIOS sends the Block SID authentication command to SED drives. When disabled, BIOS does not send the Block SID command. Possible values: • Enabled • Disabled **NOTE:** You can disable SedBlockSidAuthentication in manufacturing mode or while setting up the BIOS Setup Administrator password.
Smmsecuritymitigation	Enables or disables the additional UEFI SMM Security Mitigation protections. The operating system uses this feature to protect the secure environment created by virtualization-based security. Enabling this feature provides the additional UEFI SMM Security Mitigation protections support. However, this feature may cause compatibility or functionality issues with some legacy tools and applications. Possible values: • Enabled • Disabled **NOTE:** You can disable Smmsecuritymitigation in manufacturing mode.
StrongPassword	Enables or disables the enforced use of a strong password. If enabled, the admin and system passwords must contain at least one upper case character, at least one lowercase character, and minimum eight characters. Possible values: • Enabled • Disabled
SystemPassword	Sets, changes, or clears the system password (also known as the user password). Enter the system password, if set, when the system is powered on. Possible values: String containing minimum 4 and maximum 32 characters including whitespace.
WirelessSwitchChanges	Determines if changes to the wireless switch setting are permitted or restricted when an administrator password is set. Possible values: • Enabled — Permits the changes to the wireless switch setting when an administrator password is set. • Disabled — Restricts the changes to the wireless switch setting when an administrator password is set. **NOTE:** Provide the administrator password to be able to change the wireless switch setting. If the Administrator password is not set, this setting has no effect.

StealthModeControl

Table 20. StealthModeControl

Attribute	Description
StealthMode	Sets the behavior of system elements.

Table 20. StealthModeControl (continued)

Attribute	Description
	Possible values: ● Enabled — The system elements operate in the preprogrammed stealth mode. ● Disabled — The system elements operate in normal mode.
StealthModeBluetoothRadio	Enables or disables Stealth Mode behavior for bluetooth radio if the StealthMode attribute is enabled. Possible values: ● Enabled ● Disabled
StealthModeFans	Enables or disables Stealth Mode behavior for fans if the StealthMode attribute is enabled. Possible values: ● Enabled ● Disabled
StealthModeGPSReceiver	Enables or disables Stealth Mode behavior for GPS receiver if the StealthMode attribute is enabled. Possible values: ● Enabled ● Disabled
StealthModeLCD	Enables or disables Stealth Mode behavior for the LCD if the StealthMode attribute is enabled. Possible values: ● Enabled ● Disabled
StealthModeLEDs	Enables or disables Stealth Mode behavior for LEDs if the StealthMode attribute is enabled. Possible values: ● Enabled ● Disabled
StealthModeSpeakers	Enables or disables Stealth Mode behavior for speakers if the StealthMode attribute is enabled. Possible values: ● Enabled ● Disabled
StealthModeWiGigRadio	Enables or disables Stealth Mode behavior for WiGig radio if the StealthMode attribute is enabled. Possible values: ● Enabled ● Disabled
StealthModeWLANRadio	Enables or disables Stealth Mode behavior for WLAN radio if the StealthMode attribute is enabled. Possible values: ● Enabled ● Disabled

Table 20. StealthModeControl (continued)

Attribute	Description
StealthModeWWANRadio	Enables or disables Stealth Mode behavior for WWAN radio if the StealthMode attribute is enabled. Possible values: • Enabled • Disabled

SupportAssistSystemResolution

Table 21.

Attribute	Description
AutoOSRecoveryThreshold	Sets the threshold value for auto OS recovery. Possible values: 0 to 3 Controls the automatic boot flow for SupportAssist System Resolution console and for Dell OS Recovery Tool. The system boots to the SupportAssist System Resolution console and for Dell OS Recovery Tool if; • the primary operating system fails to boot consecutively • the count of boot failure is greater than or equal to the value of the Auto OS Recovery threshold setup option • SupportAssist OS Recovery option is enabled **NOTE:** If Auto OS Recovery threshold is set to 0, then all automatic boot flow for SupportAssist System Resolution console and for Dell OS Recovery Tool will be disabled.
BiosConnect	Enables or Disables BIOS Connect feature. Possible values: • Enabled • Disabled
SupportAssistOSRecovery	Enables or disables the boot flow for SupportAssist OS recovery tool in the event of certain system errors. Possible values: • Enabled • Disabled
MpmCfg	This feature controls the level of monitoring of Memory Performance Monitor (MPM). MPM monitors the memory for faults and perform fault recovery when possible. Possible values: • OFF • Low • Med • High

SystemConfiguration

Table 22. SystemConfiguration

Attribute Name	Description
AnalogDigitalInterfaceModeChannel1	Sets the defined Analog or Digital Interface mode for channel 1. Possible values: • Unused—Channel is unused. • ADCInput—Sets the channel mode as Analog-to-Digital Converter (ADC) input. • DACOutput—Sets the channel mode as Digital-to-Analog Converter (DAC) output. • DACAndADC—Sets the channel mode as DAC output, but can be monitored through ADC input. • GPIO—Sets the channel mode as General Purpose Input or Output.
AnalogDigitalInterfaceModeChannel2	Sets the defined Analog or Digital Interface mode for channel 2. Possible values: • Unused—Channel is unused. • ADCInput—Sets the channel mode as Analog-to-Digital Converter (ADC) input. • DACOutput—Sets the channel mode as Digital-to-Analog Converter (DAC) output. • DACAndADC—Sets the channel mode as DAC output, but can be monitored through ADC input. • GPIO—Sets the channel mode as General Purpose Input or Output.
AnalogDigitalInterfaceModeChannel3	Sets the defined Analog or Digital Interface mode for channel 3. Possible values: • Unused—Channel is unused. • ADCInput—Sets the channel mode as Analog-to-Digital Converter (ADC) input. • DACOutput—Sets the channel mode as Digital-to-Analog Converter (DAC) output. • DACAndADC—Sets the channel mode as DAC output, but can be monitored through ADC input. • GPIO—Sets the channel mode as General Purpose Input or Output.
AnalogDigitalInterfaceModeChannel4	Sets the defined Analog or Digital Interface mode for channel 4. Possible values: • Unused—Channel is unused. • ADCInput — Sets the channel mode as Analog-to-Digital Converter (ADC) input. • DACOutput—Sets the channel mode as Digital-to-Analog Converter (DAC) output. • DACAndADC—Sets the channel mode as DAC output, but can be monitored through ADC input. • GPIO—Sets the channel mode as General Purpose Input or Output.
AnalogDigitalInterfaceModeChannel5	Sets the defined Analog or Digital Interface mode for channel 5. Possible values: • Unused — Channel is unused. • ADCInput — Sets the channel mode as Analog-to-Digital Converter (ADC) input. • DACOutput — Sets the channel mode as Digital-to-Analog Converter (DAC) output. • DACAndADC — Sets the channel mode as DAC output, but can be monitored through ADC input. • GPIO — Sets the channel mode as General Purpose Input or Output.
AnalogDigitalInterfaceModeChannel6	Sets the defined Analog or Digital Interface mode for channel 6. Possible values: • Unused — Channel is unused.

Table 22. SystemConfiguration (continued)

Attribute Name	Description
	• ADCInput — Sets the channel mode as Analog-to-Digital Converter (ADC) input. • DACOutput — Sets the channel mode as Digital-to-Analog Converter (DAC) output. • DACAndADC — Sets the channel mode as DAC output, but can be monitored through ADC input. • GPIO — Sets the channel mode as General Purpose Input or Output.
AnalogDigitalInterfaceModeChannel7	Sets the defined Analog or Digital Interface mode for channel 7. Possible values: • Unused — Channel is unused. • ADCInput — Sets the channel mode as Analog-to-Digital Converter (ADC) input. • DACOutput — Sets the channel mode as Digital-to-Analog Converter (DAC) output. • DACAndADC — Sets the channel mode as DAC output, but can be monitored through ADC input. • GPIO — Sets the channel mode as General Purpose Input or Output.
AnalogDigitalInterfaceModeChannel8	Sets the defined Analog or Digital Interface mode for channel 8. Possible values: • Unused — Channel is unused. • ADCInput — Sets the channel mode as Analog-to-Digital Converter (ADC) input. • DACOutput — Sets the channel mode as Digital-to-Analog Converter (DAC) output. • DACAndADC — Sets the channel mode as DAC output, but can be monitored through ADC input. • GPIO — Sets the channel mode as General Purpose Input or Output.
BatteryFuelGauge	This feature controls the battery fuel gauge. Possible values: • Enabled—Enabling this feature allows the battery fuel gauge to be activated on touch or swipe. • Disabled—Disabling this feature prevents the battery fuel gauge from being activated on touch or swipe.
CanBus	Enables or disables the Controller Area Network (CAN) Bus. Possible values: • Enabled • Disabled
DisBluetoothRadio	Bluetooth radio stops functioning when stealth mode is enabled. Possible values: • Enabled • Disabled
DisOnboardFans	Onboard fans stop functioning when stealth mode is enabled. Possible values: • Enabled • Disabled
DisGPSReceiver	GPS receiver stops functioning when stealth mode is enabled. Possible values: • Enabled • Disabled
DisOnboardLCDScreen	Onboard LCD screen stops functioning when stealth mode is enabled.

Table 22. SystemConfiguration (continued)

Attribute Name	Description
	Possible values: • Enabled • Disabled
DisOnboardLEDs	Onboard LEDs stop functioning when stealth mode is enabled. Possible values: • Enabled • Disabled
DisOnboardSpeakers	Onboard speakers stop functioning when stealth mode is enabled. Possible values: • Enabled • Disabled
DisOsdBtn	Enables or disables the On-screen Display (OSD) buttons on All-In-One system. Possible values: • Enabled • Disabled
DisWLANRadio	WLAN radio stops functioning when stealth mode is enabled. Possible values: • Enabled • Disabled
DisWWANRadio	WWAN radio stops functioning when stealth mode is enabled. Possible values: • Enabled • Disabled
DockSupportOnBattery	Enabling DockSupportOnBattery allows you to use the docking station, when AC power is absent, but only when the battery is preceding a certain charge percentage. The percentage may change per battery and per platform. For example, the dock may only be powered when the battery is at 60 percent charge or higher, and when the battery drops below this level (without AC power) the dock loses power. Possible values: • Enabled • Disabled
DustFilter	Enables or disables the BIOS messages for maintaining the optional dust filter installed in the computer. BIOS generates a pre-boot reminder to clean or replace the dust filter based on the interval settings. Valid Arguments: Disabled, 15days, 30days, 60days, 90days, 120days, 150days, 180days.
EmbNic1	Controls the state of on-board LAN controller 1. Possible values: • Disabled • Enabled • EnabledPxe • OnWithImageServerBoot • EnabledwithRPLBoot

Table 22. SystemConfiguration (continued)

Attribute Name	Description
	• EnabledwithISCSIBoot
EmbNic2	Controls the state of on-board LAN controller 2. Possible values: • Disabled • EnabledPXE • Enabled • EnabledwithImageServerBoot • EnabledwithRPLBoot • EnabledwithISCSIBoot
EmbSataRaid	Configures the operating mode of the integrated SATA hard drive controller. Possible values: • Disabled — The SATA controllers are hidden. • Ata — SATA is configured for ATA mode. • Ahci — SATA is configured for AHCI mode. • Raid — SATA is configured to support RAID mode (Intel Rapid Restore Technology).
Emmcdevice	Enables or disables the eMMC drive. Possible values: • Enabled • Disabled
FrontBezelLEDIntensity	Controls the light intensity of system's front bezel LED. Possible values: • Disabled • Low • Medium • Full
FrontFan	Possible values: • Enabled—When enabled, the front fan utilizes the thermal solution of the system. • Disabled—When disabled, thermal solution of the system utilizes only the fan from the back panel.
FingerprintReader	Enables or disables the Fingerprint Reader device. Possible values: • Enabled - Fingerprint Reader device is enabled. • Disabled - Fingerprint Reader device is disabled.
FingerprintReaderSingleSignOn	Enables or disables the FingerprintReaderSingleSignOn. Possible values: • Enabled - FingerprintReaderSingleSignOn is enabled. • Disabled - FingerprintReaderSingleSignOn is disabled.
ForcePXEasFirstBootDevice	Enables or disables Preboot Execution Environment (PXE) as the first boot device for all subsequent boots. Possible values: • Enabled • Disabled

Table 22. SystemConfiguration (continued)

Attribute Name	Description
ForcePxeNextBoot	Enables or disables Force PXE on next boot in BIOS. Possible values: • Enabled — If enabled, when the BIOS boots next time, the first PXE-capable device is inserted as the first device in the boot sequence. Enabling this value causes this operation on the next boot only, and does not cause a change in the defined boot sequence of the system. The BIOS chooses the first PXE-capable device as the onboard network controller of the system, if present and enabled, or the first bootable network device found in the standard PCI search order of the system, whichever comes first. • Disabled — If disabled, the boot override feature is disabled and the system boot sequence is in effect.
FrontPowerButton	Enables or disables the front power button. Possible values: • Enabled • Disabled
Hdd1FanEnable	Enables or disables the automatic fan controller, an error check of a fan. If a fan is detected, this function is automatically enabled. Disabling the fan requires physical removal of the HDD fan. Possible values: • Enabled • Disabled
Hdd2FanEnable	Enables or disables the automatic fan controller, an error check of a fan. If a fan is detected, this function is automatically enabled. Disabling the fan requires physical removal of the HDD2 fan. Possible values: • Enabled • Disabled
Hdd3FanEnable	Enables or disables the automatic fan controller, an error check of a fan. If a fan is detected, this function is automatically enabled. Disabling the fan requires physical removal of the HDD3 fan. Possible values: • Enabled • Disabled
IgnitionSwitchEnable	Enables or disables the external ignition pin. Disabled by default. Possible values: • Enabled • Disabled
IgnitionSwitchOnDelay	The delay is displayed in seconds when the power button event is passed to the OS to initiate a boot of the system. Possible values are from (0 - 21600). By default the value is 5s.
IgnitionSwitchOffDelay	The delay is displayed in seconds untill the power button event is passed to the OS for shutting down the system. Possible values are from (0 - 21600). By default the value is 5s.
IgnitionSwitchDebounceCycle	De-Bounce Ignition Power Switch cycle time is displayed in milli-seconds. Possible values are from (50 - 5000). By default the value is 50ms.

Table 22. SystemConfiguration (continued)

Attribute Name	Description
IntegratedAudio	Enables or disables the integrated audio controller. Possible values: • Enabled • Disabled • Auto
IntegratedSas	Enables or disables the integrated Serial Attached SCSI (SAS) controller. **NOTE:** This option affects the SAS RAID controller Only. This controller operates the connectors on the motherboard that are marked SASA and SASB. Possible values: • Enabled • Disabled
InternalSpeaker	Enables or disables the built-in speaker. Possible values: • Enabled • Disabled • Low • Medium • High
IoModule	Enables or disables I/O module. Possible values: • Enabled • Disabled
IoModule 2	Enables or disables I/O module 2. Possible values: • Enabled • Disabled
IoModule 3	Enables or disables I/O module 3. Possible values: • Enabled • Disabled
IoModule 4	Enables or disables I/O module 4. Possible values: • Enabled • Disabled
KbdBacklightTimeoutAc	Configures the time-out value for the keyboard backlight when an AC adapter is plugged into the system. Possible values: • 5s — Keyboard backlight stays on for 5 seconds. • 10s — Keyboard backlight stays on for 10 seconds. • 15s — Keyboard backlight stays on for 15 seconds. • 30s — Keyboard backlight stays on for 30 seconds. • 1m — Keyboard backlight stays on for 1 minute. • 5m — Keyboard backlight stays on for 5 minutes.

Table 22. SystemConfiguration (continued)

Attribute Name	Description
	• 15m — Keyboard backlight stays on for 15 minutes. • Never — Keyboard backlight always stays on.
KbdBacklightTimeoutBatt	Configures the time-out value for the keyboard backlight when the system is running only on battery power. Possible values: • 5s — Keyboard backlight stays on for 5 seconds. • 10s — Keyboard backlight stays on for 10 seconds. • 15s — Keyboard backlight stays on for 15 seconds. • 30s — Keyboard backlight stays on for 30 seconds. • 1m — Keyboard backlight stays on for 1 minute. • 5m — Keyboard backlight stays on for 5 minutes. • 15m — Keyboard backlight stays on for 15 minutes. • Never — Keyboard backlight always stays on.
KeyboardBacklightActiveColor	Displays or sets an active color for the keyboard backlight in a rugged system. 6 colors are available: four predefined colors (white, red, green, blue), and two user configurable colors (custom1 and custom2). Active color indicates the color used on startup. Any one of the 6 colors can be chosen as an active color. Possible value: • White • Red • Green • Blue • Custom1 • Custom2
KeyboardBacklightCustom1Color	Configures the Custom1 color by specifying the RGB values by mentioning it in 'R:G:B' format. Each color component value ranges from 0 to 255. Possible values: [0-255]:[0-255]:[0-255]
KeyboardBacklightCustom2Color	Configures the Custom2 color by specifying the RGB values by mentioning it in 'R:G:B' format. Each color component value ranges from 0 to 255. Possible values: [0-255]:[0-255]:[0-255]
KeyboardBacklightEnabledColors	Displays or enables the supported colors for the keyboard backlight in the rugged systems. 6 colors are available: 4 predefined colors (white, red, green, blue), and 2 user-configurable colors (custom1 and custom2). Multiple colors out of the 6 colors can be enabled at the same time. After enabling colors, you can switch among the enabled colors by pressing <Fn+C> keys. Enabling **NoColor** means that the keyboard backlight is turned off. Possible values: Either combination of, • White • Red • Green • Blue • Custom1 • Custom2 Or • NoColor **NOTE:** If value **NoColor** is selected, you cannot use <Fn+C> to switch to another keyboard backlight color. The value **NoColor** cannot be combined with any other color.

Table 22. SystemConfiguration (continued)

Attribute Name	Description
KeyboardBacklightOnAc	Disables the fade if an AC adapter is plugged in. For example, if you have set the back light to 25 percent using KeyboardIllumination, and the system is on AC power, then the keyboard backlight remains at 25 percent regardless of internal keyboard or touch pad activity. This feature is in effect only if the Keyboard backlight is enabled. Possible values: • Enabled — Keyboard backlight fades after 10 seconds of inactivity. • Disabled — Disables the timer that fades the backlight after 10 seconds of inactivity if the system is running on AC power.
KeyboardIllumination	This field lets you configure the keyboard illumination brightness percentage. The keyboard automatically illuminates when the internal keyboard, touchpad, or pointstick are used. Possible values: • Auto — Sets the illumination based on ambient light level. • Disabled — Turns off keyboard illumination. • 25 — Sets the brightness level to 25 percent. • Dim — Sets the brightness level to 50 percent. • 75– Sets the brightness level to 75 percent. • Bright — Sets the brightness level to 100 percent.
LiquidCooler1	Enables or disables the liquid cooler 1. Possible values: • Enabled - Enables the liquid cooler 1. • Disabled - Disables the liquid cooler 1.
LiquidCooler2	Enables or disables the liquid cooler 2. Possible values: • Enabled - Enables the liquid cooler 2. • Disabled - Disables the liquid cooler 2.
LptMode	Determines how the parallel port on the docking station operates. Possible values: • Disabled — Port is disabled. • At — Port is configured for IBM AT compatibility. • Ps2 — Port is configured for IBM PS2 compatibility. • Ecp — Extended Capability Port protocol.
M2PcieSsd0	Enables or disables M2 PCIE SSD 0. Possible values: • Enabled • Disabled
M2PcieSsd1	Enables or disables M2 PCIE SSD 1. Possible values: • Enabled • Disabled
M2PcieSsd2	Enables or disables M2 PCIE SSD 2. Possible values: • Enabled • Disabled

Table 22. SystemConfiguration (continued)

Attribute Name	Description
M2PcieSsd3	Enables or disables M2 PCIE SSD 3. Possible values: ● Enabled ● Disabled
Microphone	Enables or disables the internal or external microphone. Possible values: ● Enabled ● Disabled
MEMSSensors	Enables or disables the Micro Electro Mechanical Sensors. Possible values: ● Enabled ● Disabled
MmioAbove4Gb	Enables or disables decoding of 64-bit capable devices in more than 4 GB address space only if the system supports 64-bit PCI decoding. Possible values: ● Enabled ● Disabled
Minisas0	Enables or disables the Minisas drive 0. Possible values: ● Enabled ● Disabled
Minisas1	Enables or disables the Minisas drive 1. Possible values: ● Enabled ● Disabled
Minisas2	Enables or disables the Minisas drive 2. Possible values: ● Enabled ● Disabled
Minisas3	Enables or disables the Minisas drive 3. Possible values: ● Enabled ● Disabled
Nfc	Enables or disables the Near Field Computing (Nfc) device. Possible values: ● Enabled ● Disabled
OnboardUSBNIC	Configures the state of the onboard secondary, unmanaged Network Interface Card (NIC). Possible values: ● Enabled

Table 22. SystemConfiguration (continued)

Attribute Name	Description
	• Disabled • Enabled with PXE
OptionalBootSequence	Allows or prevents the installation of the Windows operating system on client systems with more than one operating system volume. Possible values: • Enabled — Allows the installation of the Windows operating system on client systems with more than one operating system volume. • Disabled — Prevents the installation of the Windows operating system on client systems with more than one operating system volume. **NOTE:** By default, this option is disabled to maintain compatibility with existing installation tools; however, this option can be changed if more than one operating system volume is present on the client system.
PciAllocationPriority	Allocates PCI resources, buses, memory-mapped I/O (MMIO) space, and I/O space. Possible values: • Equal — Allocates equal amount of memory to all the resources when two CPUs are installed. • CPU1 — Allocates larger amount of device-specific memory, which reduces the usable memory in 32-bit operating systems.
PciMmioSpaceSize	Allocates a part of the memory to the PCI Memory Mapped I/O (MMIO). It allows reserving large or small device-specific memory regions to decrease or increase the usable memory on systems with a 32-bit operating system. Possible values: • Small — Allocates a small region of memory to PCI memory mapped I/O. • Large — Allocates a large region of memory to PCI memory mapped I/O. This reserves the large device-specific memory regions, but reduces the amount of usable memory in 32-bit operating system.
PcibusCount	Sets the maximum number of PCI bus counts for the system. Possible values: • 64 • 128 • 256
PowerButton	Enables, disables, or partially disables the power button. Possible values: • Enabled • Disabled • Partial disable
SfpNic	Enables or disables Small Formfactor Pluggable (SFP) device. Possible values: • Disabled — Disables the SFP device. • Enabled — Enables the SFP device. • EnabledPxe - Enables the SFP device with PXE support.
Sata0	Enables or disables the first SATA drive controller. Possible values: • Enabled • Disabled

Table 22. SystemConfiguration (continued)

Attribute Name	Description
Sata1	Enables or disables the second SATA drive controller. Possible values: ● Enabled ● Disabled
Sata2	Enables or disables the third SATA drive controller. Possible values: ● Enabled ● Disabled
Sata3	Enables or disables the fourth SATA drive controller. Possible values: ● Enabled ● Disabled
Sata4	Enables or disables the fifth SATA drive controller. Possible values: ● Enabled ● Disabled
Sata5	Enables or disables the sixth SATA drive controller. Possible values: ● Enabled ● Disabled
Sata6	Enables or disables the seventh SATA drive controller. Possible values: ● Enabled ● Disabled
Sata7	Enables or disables the eighth SATA drive controller. Possible values: ● Enabled ● Disabled
Sata8	Sets SATA port 8 to off or auto. Possible values: ● Enabled ● Disabled
Serial1	Configures the first (or only) built-in serial port. Possible values: ● Disabled ● Com1 ● Com2 ● Com3 ● Com4 ● COM1_BMC ● BMCSERIAL ● BMCLAN

Table 22. SystemConfiguration (continued)

Attribute Name	Description
	• RAC • RS232 • RS422 • RS485 • Auto
Serial2	Configures the second (if available) built-in serial port. Possible values: • Disabled • COM2 • COM4 • RS232 • RS422 • RS485 • Auto
Serial3	Configures the third (if available) built-in serial port. Possible values: • Disabled • RS232 • RS422 • RS485 • Auto
Serial4	Configures the fourth (if available) built-in serial port. Possible values: • Disable • RS232 • RS422 • RS485 • Auto
Serial5	Configures the fifth (if available) built-in serial port. Possible values: • Disabled • Auto
Serial6	Configures the sixth (if available) built-in serial port. Possible values: • Disabled • Auto
SignOfLifeByLogo	This option indicates that, during POST the power button has been pressed by displaying the customized logo. Possible values: • Enabled • Disabled
SmartErrors	Controls whether hard drive errors for integrated drives are reported during system startup. Possible values:

Table 22. SystemConfiguration (continued)

Attribute Name	Description
	• Enabled • Disabled
StealthMode	Configures the Dell Stealth Mode features. Sets the operation mode of the system elements. If enabled, the system elements operate in the pre-programmed stealth mode. If disabled, the system elements operate in the normal mode. Possible values: • Enabled • Disabled Following are the system elements that have effect of stealth mode on them: • DisOnboardLEDs • DisOnboardLCDScreen • DisOnboardSpeakers • DisOnboardFans • DisBluetoothRadio • DisGPSReceiver • DisWLANRadio • DisWWANRadio • DisOnboardLEDs
TabletButtonIllumination	Sets the Tablet Button illumination level. Possible values: • Off • 25pct • 50pct • 75pct • 100pct
TabletButtonsTimeoutAc	This feature defines the illumination timeout value for the tablet buttons when an AC adapter is connected to the system. The buttons are illuminated when they are pressed, and remains illuminated for that specified timeout period. The tablet button illumination timeout value works when button illumination is enabled. If you select Never, the buttons remain illuminated whenever the system is connected to the AC adapter. Possible values: • Never • 5s • 10s • 15s • 30s • 1m • 5m • 15m
TabletButtonsTimeoutBatt	This feature defines the illumination timeout value for the tablet buttons when the system is running on battery power. The buttons are illuminated when they are pressed, and remains illuminated for that specified timeout period. The tablet button illumination timeout value works when button illumination is enabled. If you select Never, the buttons remain illuminated whenever the system is running on battery power. Possible values: • Never • 5s • 10s

Table 22. SystemConfiguration (continued)

Attribute Name	Description
	• 15s • 30s • 1m • 5m • 15m
TbtPcieModeAutoSwitch	Possible values: • Enabled • Disabled
TelemetryAccessLvl	This feature controls the type of telemetry for data support. Possible values: • Disabled—No telemetry • Basic—Flash and diagnostics only • Enhanced—Flash, diagnostics, and boot event • Full—All telemetry
Touchscreen	Enables or disables the touchscreen. Possible values: • Enabled • Disabled
UefiNwStack	This option is disabled by default. If enabled, UEFI Networking protocols are installed/ available, allowing pre-OS and early OS networking features to use the enabled NICs. This option may be used without turning on PXE. Possible values: • Enabled • Disabled
UnobtrusiveMode	Enables or disables the toggling of light emissions using hotkey Fn+B. Possible values: • Enabled — Pressing Fn+B will toggle light emissions from the system. • Disabled — Pressing Fn+B keys has no effect and will not toggle light emissions from the system.

UsbPowerShare	Configures the USB PowerShare feature behavior.
	Possible values:
	• Enabled — Charges the external devices, such as phones and laptop music players, using the stored system battery when the system is turned off or in sleep mode. This feature works only if:
	  ○ The device is connected through the USB PowerShare port on the laptop.
	  ○ The system is connected to an AC power source.
	  ○ The battery charge is less than 50 percent.
	• Disabled — Turns off this feature, and devices attached to the USB PowerShare port will not be charged when the system is in a sleep mode or turned off.

Vmdnvmepcie0	Enables or disables the VMD for Front NVMe Port (PCIE0). Possible values: • Enabled • Disabled
Vmdnvmepcie1	Enables or disables the VMD for Front NVMe Port (PCIE1). Possible values:

Table 22. SystemConfiguration (continued)

Attribute Name	Description
	• Enabled • Disabled
Vmdnvmepcie0cpu1	Enables or disables the VMD for Front NVMe Port (PCIE0-CPU1). Possible values: • Enabled • Disabled
Vmdnvmepcie1cpu1	Enables or disables the VMD for Front NVMe Port (PCIE1-CPU1). Possible values: • Enabled • Disabled
Vmdpcieslot	Enables or disables the VMD for PCIe Slot. Possible values: • Enabled • Disabled
WatchdogTimer	Enables or disables the system to reboot or reset when the watchdog time expires. Possible values: • Enabled • Disabled
WdtOsBootProtection	Enables or disables Watchdog OS Boot Protection. Possible values: • Enabled - The application configures a chipset-based timer to reset or shutdown the system. • Disabled - The application cannot configure a chipset-based timer to reset or shutdown the system. By default the Application Watchdog Timer is disabled.
WlanRegionCode	Sets the WLAN code for specific region. Possible values: • rtw — (Rest of the World) Sets the WLAN region code for the rest of the world. This option is selected by default. • na — (North America (FCC)) Sets the WLAN region code for Canada and the United States. • eur — (Europe) Sets the WLAN region code for Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, and United Kingdom. • jpn — (Japan) Sets the WLAN region code for Japan only. • aus — (Australia) Sets the WLAN region code for Australia, New Zealand, Saudi Arabia, South Africa, UAE, and Vietnam. • chn — (China, South Asia) Sets the WLAN region code for China and India. • twn — (Taiwan) Sets the WLAN region code for Colombia, Peru, and Taiwan. • idn — (Indonesia) Sets the WLAN region code for Indonesia only.

SystemInformation

Table 23. SystemInformation

Attribute Name	Description
Asset	An asset tag is a string that can be used by an IT administrator to uniquely identify a particular system. Possible values: String containing 0 to 14 characters.
BIOSVersion	Displays the current version of the system BIOS firmware. Possible values: Read-only
ExpressServiceCode	The express service code is a mathematical hash applied to the service tag. The express service code is seen in BIOS Setup and on an exterior sticker. Possible values: Read-only
ManufatureDate	Displays the system manufacture date (mm/dd/yyyy). Possible values: Read-only
OwnershipTag	The ownership tag is a string that can be used to display a system-specific message on the BIOS start-up and setup screens. Possible values: String containing 0 to 80 characters
OwnershipDate	Displays the date (mm/dd/yyyy) the system was first powered on after leaving the factory. Possible values: Read-only
SvcTag	The service tag is the system's serial number that uniquely identifies the Dell system. Possible values: Read-only

SystemLogs

Table 24. SystemLogs

Attribute Name	Description
BiosLogClear	Prevents or allows the system event log to be cleared on the next boot. Possible values: • Keep — Does not clear the system event log on the next boot. • Clear — Clears the system event log on the next boot.
PowerLogClear	Prevents or allows the power event log to be cleared on the next boot. Possible values: • Keep — Does not clear the power event log on the next boot. • Clear — Clears the power event log on the next boot.
ThermalLogClear	Prevents or allows the thermal event log to be cleared on the next boot. Possible values: • Keep — Does not clear the thermal event log on the next boot. • Clear — Clears the thermal event log on the next boot.

ThermalConfiguration

Table 25. ThermalConfiguration

Attribute Name	Description
FanSpdAutoLvlonCpuZone	Sets the speed of the fan on CPU zone Possible values: • 0 to 100
FanSpdAutoLvlonPsuZone	Sets the speed of the fan on PSU zone Possible values: • 0 to 100
FanSpdAutoLvlonCpuMemZone	Sets the speed of the fan on CPU memory zone Possible values: • 0 to 100
FanSpdAutoLvlonPcieZone	Sets the speed of the fan on PCIe zone Possible values: • 0 to 100
FanSpdAutoLvlonFlexBayZone	Sets the speed of the fan on Flex Bay zone Possible values: • 0 to 100
FanSpdAutoLvlonUpperPcieZone	Sets the speed of the fan on Upper PCIe zone Possible values: • 0 to 100

TPMSecurity

Table 26. TPMSecurity

Attribute Name	Description
PpibypassSedBlockSidCommand	When there is no drive ownership and the PpibypassSedBlockSidCommand is enabled, the BIOS requires user input while sending the Block SID authentication command to SED drives. When PpibypassSedBlockSidCommand is disabled, BIOS does not require user input while sending the Block SID command. Possible values: • Disabled • Enabled **NOTE:** You can enable PpibypassSedBlockSidCommand in manufacturing mode or while setting up the BIOS Setup Administrator password.
SHA256	Sets the hash algorithm used for TPM 2.0 measurements. Possible values: • Disabled — Sets hash algorithm to SHA-1. • Enabled — Sets hash algorithm to SHA-256. • SHA384 — Sets hash algorithm to SHA-384. • SHA512 — Sets hash algorithm to SHA-512. **NOTE:** This value cannot be changed if TPM is already owned.

Table 26. TPMSecurity (continued)

Attribute Name	Description
TpmActivation	Activates and enables the TPM normal state for TPM use. Possible values: • Enabled — Activates the TPM. • Disabled — Displays the current activation state of TPM. **NOTE:** Deactivate is a read-only possible value. TPM can be deactivated only from the BIOS setup screen. **NOTE:** Make sure admin password is set before enabling TpmActivation (on specific platforms).
TpmClear	When you enable the TpmClear attribute, TPM ownership is cleared during the next boot, and the system firmware sets the value of the attribute to disabled. When you disable the TpmClear attribute, TPM ownership remains unchanged. Possible values: • Enabled • Disabled **NOTE:** You cannot enable or disable this feature using Dell Command | Configure.
TpmPpiAcpi	Controls whether the system accept ACPI physical presence commands from the OS. • Enabled — System accepts ACPI physical presence commands from the OS. • Disabled — System does not accept ACPI physical presence commands from the OS.
Tpmppiclearoverride	When enabled tpmppiclearoverride performing the TPM clear command within operating system does not require user interaction. When disabled, performing the TPM clear command within the operating system does require user interaction. • Enabled • Disabled **NOTE:** You can enable Tpmppiclearoverride in manufacturing mode or while setting up the BIOS Setup Administrator password.
TpmPpiDpo	Controls the physical presence requirement for the following operations: Disable, Deactivate, and SetOwnerInstall_False. Possible values: • Enabled • Disabled
TpmPpiPo	Controls the physical presence requirement for the following operations: Enable, Activate, and SetOwnerInstall_True. Possible values: • Enabled — Physical presence is not required to perform any of these operations. • Disabled — Physical presence is required to perform these operations.
TpmSecurity	Controls whether the Trusted Platform Module (TPM) in the system is enabled and visible to the operating system. Possible values: • Enabled — BIOS turns on the TPM during POST, and can be used by the operating system. • Disabled — BIOS does not on the TPM during POST, and the TPM is nonfunctional and invisible to the operating system. **NOTE:** Disabling this option does not change any TPM settings that you may have configured nor does it delete or change any information or keys you may have stored

Table 26. TPMSecurity (continued)

Attribute Name	Description
	there. It simply turns off the TPM so that it cannot be used. When you re-enable this option, TPM works exactly as it did before it was disabled.

USBConfiguration

Table 27. USBConfiguration

Attribute Name	Description
AlwaysAllowDellDocks	Allows or restricts the Dell Type-C Thunderbolt docks to function when the Thunderbolt is disabled. Possible values: ● Enabled—Allows the Dell Type-C Thunderbolt docks to function even when the Thunderbolt is disabled. ● Disabled—Restricts the Dell Type-C Thunderbolt docks to function when the Thunderbolt is disabled.
BIOSEnumMode	Thunderbolt PCIe Enumeration Mode controls when the operating system or BIOS performs the enumeration of Thunderbolt PCIe devices. Possible values: ● BIOSAssistEnum ● NativeEnum
DisableDockDevicesexceptvideo	Enables or disables all devices such as serial, audio, LAN, and USB ports in the docking station. Possible values: ● Enabled ● Disabled **NOTE:** This option works only when UsbPortsExternal is enabled.
FrontUSB3.0Ports	Enables or disables the front USB 3.0 ports. Possible values: ● Enabled ● Disabled
RearUSB3.0Ports	Enables or disables the rear USB 3.0 ports. Possible values: ● Enabled ● Disabled
ThunderboltBoot	Enables or disables booting from the Thunderbolt device. Possible values: ● Enabled ● Disabled
ThunderboltPorts	Enables or disables the thunderbolt ports controller in the system. Possible values: ● Enabled ● Disabled
Thunderbolt	Enables or disables the thunderbolt controller in the system.

Table 27. USBConfiguration (continued)

Attribute Name	Description
	Possible values: • Enabled • Disabled
ThunderboltPreboot	Enables OROMs and preboot UEFI drivers that are provided by Thunderbolt devices or PCIe devices. Possible values: • Enabled • Disabled
ThunderboltSecLvl	Configures the thunderbolt security level. Possible values: • NoSec—Disables the thunderbolt security. • UserAuth—Allows minimum user notification. Connection manager requests connection approval from the host software, based on the unique ID of the connecting device, auto approval might or might not be given. • SecConn—Allows one-time saved key device. Connection manager requests connection approval from the host software; approval is given only if the host challenge to device is acceptable. • DpUsbOnly—Allows to connect only display port.
UsbGpsCoexistence	This feature optimizes the system for maximum performance of either USB devices or the dedicated GPS radio. Possible values: • OptiUsb • OptiGps
USbPortsRear7	Enables or disables USbPortsRear7. Possible values: • Enabled • Disabled
USBPort07	Enables or disables USB port 07. Possible values: • Enabled • Disabled
USBPort08	Enables or disables USB port 8. Possible values: • Enabled • Disabled
USBPort09	Enables or disables USB port 9. Possible values: • Enabled • Disabled
USBPort12	Enables or disables USB port 12. Possible values: • Enabled • Disabled

Table 27. USBConfiguration (continued)

Attribute Name	Description
USBPort13	Enables or disables USB port 13. Possible values: ● Enabled ● Disabled
USBPort14	Enables or disables USB port 14. Possible values: ● Enabled ● Disabled
USBPort15	Enables or disables USB port 15. Possible values: ● Enabled ● Disabled
USBPort16	Enables or disables USB port 16. Possible values: ● Enabled ● Disabled
USBPort17	Enables or disables USB port 17. Possible values: ● Enabled ● Disabled
USBPort18	Enables or disables USB port 18. Possible values: ● Enabled ● Disabled
USBPort19	Enables or disables USB port 19. Possible values: ● Enabled ● Disabled
USBPort24	Enables or disables USB port 24. Possible values: ● Enabled ● Disabled
USBPort25	Enables or disables USB port 25. Possible values: ● Enabled ● Disabled
USBPort26	Enables or disables USB port 26. Possible values: ● Enabled ● Disabled
USBPort27	Enables or disables USB port 27.

Table 27. USBConfiguration (continued)

Attribute Name	Description
	Possible values: • Enabled • Disabled
USBPort28	Enables or disables USB port 28. Possible values: • Enabled • Disabled
USBPort29	Enables or disables USB port 29. Possible values: • Enabled • Disabled
Usb30	Enables or disables USB 3.0. Possible values: • Enabled • Disabled
UsbEmu	If Boot Support is enabled, the system allows to boot any type of USB Mass Storage devices such as hard drive, memory key, floppy, so on **NOTE:** USB-aware operating system always see USB Mass Storage devices irrespective of this setting if the port is enabled. Possible values: • Enabled • Disabled • EnabledWithNoUSBBoot
UsbPortsExternal	Enables or disables the device that is attached to this USB port. Possible values: • Enabled—Devices attached to this USB port are enabled and available in the operating system. • Disabled—Devices attached to this USB port are disabled and not visible in the operating system. **NOTE:** USB mouse and keyboard work even if the external USB port is disabled.
UsbPortsFront	Enables or disables all front USB Ports in the systems. Possible values: • Enabled • Disabled
UsbPortsFront1	Enables or disables USB front port 1. Possible values: • Enabled • Disabled
UsbPortsFront2	Enables or disables USB front port 2. Possible values: • Enabled • Disabled

Table 27. USBConfiguration (continued)

Attribute Name	Description
UsbPortsFront3	Enables or disables USB front port 3. Possible values: ● Enabled ● Disabled
UsbPortsFront4	Enables or disables USB front port 4. Possible values: ● Enabled ● Disabled
UsbPortsInternal	Enables or disables all front USB Ports in the system. Possible values: ● Enabled ● Disabled
UsbPortsRear	Enables or disables all back USB Ports. Possible values: ● Enabled ● Disabled
UsbPortsRear1	Enables or disables USB rear port 1. Possible values: ● Enabled ● Disabled
UsbPortsRear2	Enables or disables USB rear port 2. Possible values: ● Enabled ● Disabled
UsbPortsRear3	Enables or disables USB rear port 3. Possible values: ● Enabled ● Disabled
UsbPortsRear4	Enables or disables USB rear port 4. Possible values: ● Enabled ● Disabled
UsbPortsRear5	Enables or disables USB Ports Rear 5. Possible values: ● Enabled ● Disabled
UsbPortsRear6	Enables or disables USB Ports Rear 6. Possible values: ● Enabled ● Disabled
UsbPortsSide	Enables or disables all side USB Ports in the system.

Table 27. USBConfiguration (continued)

Attribute Name	Description
	Possible values: • Enabled • Disabled
UsbPortsSide1	Enables or disables USB side port 1. Possible values: • Enabled • Disabled
UsbPortsSide2	Enables or disables USB side port 2. Possible values: • Enabled • Disabled
UsbRearDual	Enables or disables the rear left dual USB ports. Possible values: • Enabled • Disabled
UsbRearDual2Stack	Enables or disables the rear right dual USB ports. Possible values: • Enabled • Disabled
UsbRearQuad	Enables or disables the rear quad USB ports. Possible values: • Enabled • Disabled
UsbPortsInternal2	Enables or disables the internal USB port. Possible values: • Enabled - Enables the internal USB port • Disabled - Disables the internal USB port 2

Video

Table 28. Video

Attribute Name	Description
AmbLightSen	Enables or disables the ambient light sensor. Possible values: • Enabled • Disabled
BootTimeVideo	Sets the onboard or the first video controller for boot time messages. Possible values: • Onboard — The onboard video controller is used for boot-time messages. • Addin — The first add-in video controller is used for boot-time messages.

Table 28. Video (continued)

Attribute Name	Description
	NOTE: Depending on the BIOS search and system slot layout, the first add-in device changes.
BrightnessAc	Sets the panel brightness in effect when the system is using AC power. Possible values: Integers ranging from 0 to 15
BrightnessBattery	Sets the panel brightness in effect when the system is using battery power only. Possible values: Integers ranging from 0 to 15
DockDisplayThruIntGfx	The Dock Display Port Through Integrated Graphics feature enables the docking station DVI no1 or Display Port no1 interface to drive an external video display when Switchable Graphics is enabled and running from the integrated graphics controller. Possible values: • Enabled — Uses the integrated video controller as video source. • Disabled — Uses the external video controller as video source.
DynBacklightCtrl	Enables or disables the Dynamic Backlight Control (DBC) feature within the BIOS. Possible values: • Enabled • Disabled
MultiDisplay	Enables or disables MultiDisplay. Possible values: • Enabled • Disabled
Optimus	Enables or disables the Optimus feature. Possible values: • Enabled — This feature automatically turns off the power of the Graphics Processing Unit (GPU) when not required, and turns it on when required. • Disabled — This feature does not automatically turn on or off the power of the GPU. In mobile PCs, when the GPU power is off the driver redirects graphics commands to the integrated graphics chip.
PrimaryVideoSlot	Selects which PCI Express slot contains the primary boot video device. A monitor connected to the primary video device displays BIOS setup and initial operating system text and graphics. Possible values: • Slot0 — Sets the 1st slot as the primary video device slot. • Slot1 — Sets the 2nd slot as the primary video device slot. • Slot2 — Sets the 3rd slot as the primary video device slot. • Slot3 — Sets the 4th slot as the primary video device slot. • Slot4 — Sets the 5th slot as the primary video device slot. • Slot5 — Sets the 6th slot as the primary video device slot. • Slot6 — Sets the 7th slot as the primary video device slot. • Slot7 — Sets the 8th slot as the primary video device slot. • Slot8 — Sets the 9th slot as the primary video device slot. • Slot9 — Sets the 10th slot as the primary video device slot. • Slot10 — Sets the 11th slot as the primary video device slot. • Slot11 — Sets the 12th slot as the primary video device slot. • Slot12 — Sets the 13th slot as the primary video device slot. • Slot13 — Sets the 14th slot as the primary video device slot.

Table 28. Video (continued)

Attribute Name	Description
	• Slot14 — Sets the 15th slot as the primary video device slot. • Auto — Automatically scans the slots and selects the first video device slot found with video card as a primary video device slot. • Onboard - Sets the onboard video device slot as primary video device slot. **NOTE:** • This option has no effect if only one video device is present in the system. • If the selected slot does not contain a video device, the system BIOS scans the slots and selects the primary video device.
PrivacyScreen	AlwaysOn, enables, or disables the privacy screen. Possible values: • **Enabled** - The PrivacyScreen is applied to the embedded display panel and can be toggled between public mode and privacy mode using the Fn+F9 key combination on the embedded keyboard. • **Disabled** - The PrivacyScreen is not applied to the embedded display panel. • **AlwaysOn** - The PrivacyScreen is always on and cannot be turned off.
SwitchableGraphics	Enables or disables switchable graphics technologies such as NVIDIA, Optimus, and AMD PowerExpress. Possible values: • Enabled • Disabled

VirtualizationSupport

Table 29. VirtualizationSupport

Attribute	Description
AmdVtEnable	This field specifies whether the Virtual Machine Monitor (VMM) utilizes the additional hardware capabilities provided by AMD-V Technology. Possible values: • Enabled • Disabled
AmdViEnable	This field specifies whether the Virtual Machine Monitor (VMM) utilizes the additional hardware capabilities provided by AMD-Vi Technology. Possible values: • Enabled • Disabled
IntelVMDTechnology	Enables or disables the Intel Volume Management Device (VMD) technology. Selecting Auto Enables VMD for any PCIe SSD connected to PCIe root ports. If the Auto option is not selected, then it disables VMD for all ports. SSD works only as native NVMe device. Possible values: • Auto • Disabled
VmdPcieSlot	Enables or disables the Intel Volume Management Device (VMD) technology Pcie slot. Selecting Auto Enables VMD for any PCIe SSD connected to PCIe root ports. If the Auto option is not selected, then it disables VMD for all ports. SSD works only as native NVMe device.

Table 29. VirtualizationSupport (continued)

Attribute	Description
	Possible values: • Auto • Disabled
TrustExecution	Determines whether a Measured Virtual Machine Monitor (MVVM) can utilize the additional hardware capabilities provided by the Intel Trusted Execution Technology. **NOTE:** TPM has to be enabled and activated. Also, Virtualization Technology and VT for Direct I/O must be enabled to use this feature. Possible values: • Enabled • Disabled
Virtualization	Enables or disables the VT technology in applicable CPUs. Trusted execution required for Virtualization technology to be enabled. Possible values: • Enabled • Disabled
VtForDirectIo	Determines whether a Virtual Machine Monitor (VMM) can utilize the additional hardware capabilities provided by Intel Virtualization Technology for Direct IO. Possible values: • Enabled • Disabled
PcieLinkSpeed	Configures PCIe LinkSpeed. Possible values: • auto - PCIe link speed is configured based on the maximum speed supported by both upstream and downstream devices. • gen1 - The PCIe link speed is configured in Gen1. • gen2 - The maximum PCIe link speed that allows to be configured is limited to Gen2.

Wireless

Table 30. Wireless

Attribute Name	Description
AntennaSwitch	This setting determines the antenna usage when the system is connected to a docking station. The option designates which wireless radio is connected to which dock antenna. The System Antennas Only option indicates the system antennas that are used, and the dock antennas that are not used, even when the system is docked. When the system is undocked, the system antennas are used and this setting has no effect. Ant A indicates dock antenna A, and Ant B indicates dock antenna B. **NOTE:** This setting applies to rugged docking stations and does not apply to USB Type-C docking stations. Possible values: • AllInternal • WlanWwanExt • WlanGpsExt

Table 30. Wireless (continued)

Attribute Name	Description
	• WwanGpsExt • WlanExt • WwanExt • GpsExt
BluetoothDevice	Enables or disables the internal Bluetooth device. Possible values: • Enabled • Disabled
DynamicWirelessTransmitPower	When enabled, the system increases the power transmission capability of the WLAN device. This improves the performance in the system configurations within the regulatory validated guidelines. Possible values: • Enabled • Disabled

LidMountedWirelessActivityLED	This additional LED is mounted in the lid in a visible position.
	Possible values:
	• Always Off—The LED always stays off irrespective of network activity.
	• LED Indicates Wireless Activity Status—The LED becomes active whenever any of the wireless devices are capable of connecting to a wireless network. Wireless activity is defined as the following three inputs:
	  ○ WWAN activity
	  ○ Bluetooth activity
	  ○ Wi-Fi activity

WirelessLan	Enables or disables the internal wireless LAN device. Possible values: • Enabled • Disabled
WirelessSwitchBluetoothCtrl	Determines that bluetooth is controlled by the wireless On-Off switch. Possible values: • Enabled—Physical wireless On-Off switch can turn the bluetooth On-Off. • Disabled—Physical wireless On-Off switch cannot turn the bluetooth On-Off.
WirelessSwitchGps	Determines that GPS radio of WWAN device is controlled by the wireless On-Off switch. Possible values: • Enabled—Physical wireless On-Off switch can turn the GPS On or Off. • Disabled—Physical wireless On-Off switch cannot turn the GPS On or Off.
WirelessSwitchCellularCtrl	Determines that WWAN is controlled by the wireless On-Off switch. Possible values: • Enabled—Physical wireless On-Off switch can turn the WWAN On-Off. • Disabled—Physical wireless On-Off switch cannot turn the WWAN On-Off.
WirelessSwitchUwb	Determines that UWB (Ultra Wide Band) Radio will be controlled by the wireless On-Off switch. Possible values: • Enabled—Physical wireless On-Off switch can turn the UWB Radio On-Off. • Disabled—Physical wireless On-Off switch cannot turn the UWB Radio On-Off.

Table 30. Wireless (continued)

Attribute Name	Description
WirelessSwitchWiGigCtrl	Determines that Wireless Gigabit Alliance (WiGig) radio can be controlled by the physical wireless On/Off switch. Possible values: ● Enabled—Physical wireless On/Off switch turns the WiGig radio On/Off. ● Disabled—Physical wireless On/Off switch does not turn the WiGig radio On-Off.
WirelessSwitchWlanOnlyCtrl	Determines that WLAN is controlled by the wireless On-Off switch. Possible values: ● Enabled—Physical wireless On-Off switch can turn the WLAN On-Off. ● Disabled—Physical wireless On-Off switch cannot turn the WLAN On-Off.
WirelessWwan	Enables or disables the internal wireless WAN device. Possible values: ● Enabled ● Disabled
WirelessSwitchWlanCtrl	Determines that WLAN and WiGig Radio is controlled by the wireless On-Off switch. Possible values: ● Enabled—Physical wireless On-Off switch can turn the WLAN and WiGig Radio On-Off. ● Disabled—Physical wireless On-Off switch cannot turn the WLAN and WiGig Radio On-Off.
WirelessUwb	Enable or disables Ultra Wide Band (UWB) radio. Possible values: ● Enabled ● Disabled
WWanBusMode	WWanBusMode sets the interface type of the Wireless Wan (WWAN) card. It is recommended that the system running Windows must set this field to PCIe, while all the other systems must set this field to USB. Possible values: ● PcieMode ● UsbMode
ZigBee	Enables or disables the ZigBee feature. Possible values: ● Enabled ● Disabled

3

Error reporting in Dell Command | PowerShell Provider 2.3

Dell Command | PowerShell Provider provides an Error Reporting feature. Dell Command | PowerShell Provider uses the PowerShell ErrorVariable parameter to capture the ErrorRecord. This ErrorVariable can be used to get more information such as exception, error id, error category, and recommended action, and so on, about an error.

NOTE: If the system does not have a WMI-ACPI compliant BIOS. Update the BIOS with a compatible version, if available.

Example: To set the error variable.

```
gi .\POSTBehavior\numl -ErrorVariable ev
```

Example: To see more information about the error.

```
$ev.ErrorDetails
```

The table below describes all the possible Error IDs generated by Dell Command | PowerShell Provider that are categorized by error categories.

Table 31. Error reporting in Dell Command | PowerShell Provider

Error Category	Error ID	Scenarios	Example
InvalidArgument	InvalidPath	Path is not complete while doing set operation.	
	PasswordProvidedIncorrecly	Trying to provide both plain text password and secure password.	
	NullDrive	Newly created drive is null. Or Trying to remove drive which is already null.	
	NoRoot	Drive root is empty or null.	
InvalidData	InvalidPossibleValue	Using set-item cmdlet for an attribute with Invalid possible value.	si .\POSTBehavior\Numlock “on”
	NumberNotInRange	Doing set operation by giving out of range integer value for an attribute which accepts integer value in a particular range.	si .\PowerManagement\AutoOnHr “54” si .\PowerManagement\AutoOnMn “67” si .\PeakShiftBatteryThreshold “13”
	ReadOnlyValue	Trying to set read-only value for chassis intrusion status.	si .\Security\ChassisIntrusionStatus "DoorClosed"
	SetNotAllowed	Set operation is not enabled using Dell Command | PowerShell Provider but enabled using BIOS Setup Menu.	si .\Security\MasterPasswordLockout "Disabled"

Table 31. Error reporting in Dell Command | PowerShell Provider (continued)

Error Category	Error ID	Scenarios	Example
	NotValidNumber	Doing set operation by giving noninteger value for an attribute accepts integer value.	si .\PowerManagement\AutoOnHr “on” si .\PowerManagement\AutoOnMn “43.67”
	StringLengthNotInRange	Doing set operation by giving string which has out of range length for an attribute which accepts a string having length within a range.	si .\SystemInformation\Asset “thisismorethan10characters”
	InvalidTimeFormat	Doing set operation by giving invalid time format.	si .\PeakShiftDayConfiguration Sunday -StartTime "34:34"
	InvalidPrimaryBatteryCustomChargeDifference	Not keeping the minimum difference between CustomChargeStart and CustomChargeStop.	si .\PowerManagement \CustomChargeStart “55” si \PowerManagement \CustomChargeStop “58”
	NewPasswordNotInRange	Trying to set a password that is not in supported range by system.	si .\Security\AdminPassword “12” si .\Security\SystemPassword “del”
	InvalidPeakShiftTimes	Not maintaining the time dependency between PeakShift StartTime, EndTime, and ChargeStartTime.	si .\PowerManagement \PeakShiftDayConfiguration Sunday -StartTime "14:30" -EndTime “12:30” -ChargeStartTime “14:45”
	InvalidDayOfWeek	Providing invalid day.	si .\PowerManagement \PeakShiftDayConfiguration Sun -StartTime "14:30" -EndTime “12:30” -ChargeStartTime “14:45”
	InCorrectBootOrder	Trying to provide duplicate boot device number.	si .\BootSequence\BootSequence “1,2,1”
	UnsupportedColorName	Trying to set unsupported color for KeyboardBacklightEnabledColors or KeyboardBacklightActiveColor.	si .\SystemConfiguration \KeyboardBacklightEnabledColors “Red,White,Purple”
	NotPrintableChar	Trying to configure non-ascii character for string based features.	si .\SystemInformation\Asset "XY 的 Z"
	InvalidCombinationOfNoColorAndSupportedColors	Trying to set colors for KeyboardBacklightEnabledColors with NoColor Value.	si .\SystemConfiguration \KeyboardBacklightEnabledColros “Red,White,Custom1,NoColor”
	DuplicateColorName	Trying to provide same color more than once for KeyboardBacklightEnabledColors.	si .\SystemConfiguration \KeyboardBacklightEnabledColros “Red,White,Custom1,Custom1”
	OnlyOneColorAllowedForActiveColor	Trying to set multiple colors for KeyboardBacklightActiveColor.	si .\SystemConfiguration \KeyboardBacklightActiveColor “Red, White”
	InvalidRGBFormat	Trying to provide RGB values in an incorrect format for KeyboardBacklightCustom1Color or KeyboardBacklightCustom2Color.	si .\SystemConfiguration \KeyboardBacklightCustom1Color “234:34”

Table 31. Error reporting in Dell Command | PowerShell Provider (continued)

Error Category	Error ID	Scenarios	Example
	NotValidNumberForRGB	Trying to provide invalid number for R, G or B components for KeyboardBacklightCustom1Color or KeyboardBacklightCustom2Color.	si .\SystemConfiguration \KeyboardBacklightCustom1Color “234:34:567”
InvalidOperation	SetItemForReadOnlyError	Attempt to set read-only attribute,	si .\SystemInformation \ExpressServiceCode dsdasfjskfjskfskjd si .\SystemInformation\SvcTag sdwadnakjsd
	NewDriveNotSupported	If newly created drive name is not equal to DellSmbios,	
ObjectNotFound	DellSmbiosPathNotFound	Path is correct but either attribute name or category name is wrong. Or Category does not have any supported attribute for local system and trying to get or set some attributes.	dir .\PowerManagement\ gi .\PowerManagement\Numlck si .\PowerManagement\Numlck “enabled” si .\POSTBehaviord\Numlock “enabled”
OpenError	DefaultDriveInitFailed	DellSMBIOS Drive creation fails in system.	
SecurityError	PasswordSetButNotProvided	Doing set operation for any attribute without providing password if set on your system.	si .\POSTBehavior\Numlock “enabled”
	FailedToSetAdminPassword	Trying to set admin password if system and/or HDD password is already set.	si .\Security\AdminPassword “12345”
	SecureBootEnabledOrLegacyOromDisabled	Trying to Configure BootList as Legacy	si .\BootConfiguration\BootList "Legacy"
WriteError	SMBIOSWriteFailed	Provided incorrect password while doing set operation if password is already set.	si .\POSTBehavior\numlock “enabled” –Password <wrong password>

4

Accessing documents from the Dell EMC support site

You can access the required documents by selecting your product.

1. Go to www.dell.com/manuals.
2. Click **Browse all products**, click **Software**, and then click Client Systems Management.
3. To view the required documents, click the required product name and version number.