**# Title:**

\_OSC bits for OSPM to declare understanding of the CPU \_STA presence and enabled bits.

**# Status:**

Draft

**# Document:**

ACPI Specification 6.next

**# License:**

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**# Submitter:**

* Arm
* TianoCore Community (<https://www.tianocore.org>)

**# Summary of the change**

Define 2 \_OSC bits for OSPM to inform platform firmware that it understands bit 0 (presence) and bit 1 (enabled) of the CPU \_STA method, and that the OSPM is compatible with these bits changing at OS runtime.

**# Benefits of the change**  
On platforms that support CPU enabling/disabling and insertion/removal, platform firmware must know if OSPM is able to detect and support the CPU status change.

This ECR introduces 2 \_OSC bits for OSPM to declare its understanding of each bit in \_STA, and thus instruct the platform firmware that it can enable/disable or insert/remove CPUs at OS runtime.

**# Impact of the change**OSs that intend to use the proposed \_OSC bits must be updated.

Platform firmware that supports CPU enabling/disabling and/or insertion/removal should be updated with the new \_OSC fields, and only use the features that OSPM has declared to support.

**# Detailed description of the change [normative updates]**

* Insertions highlighted
* Removals in ~~red~~

#### 6.2.11.2. Platform-Wide OSPM Capabilities

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|  |  |  |
| --- | --- | --- |
| 20 | PCI BAR Target GAS Support | The OS sets this bit to indicate support for the PCI BAR Target GAS structure, as described in [Table 5.2](https://uefi.org/specs/ACPI/6.5/05_ACPI_Software_Programming_Model.html#address-space-format). |
| 21 | Platform Runtime Mechanism Support | The OS sets this bit to indicate support for the Platform Runtime Mechanism (PRM). See Links to ACPI-Related Documents (<https://uefi.org/acpi>) under the heading “Platform Runtime Mechanism Table”. |
| 22 | Functional Fixed Hardware | The OS sets this bit to indicate support for the usage of Functional Fixed Hardware (FFixedHW) Operation Regions. |
| 23 | Processor device  \_STA object Bit [0] (presence) support | OSPM sets this bit to indicate that it supports reacting to Bit [0]  of the \_STA object for all processor devices in the system.  This indicates that OSPM is able to support the following cases:   * A processor which was previously absent has been physically introduced into the system (Bit[0] of \_STA object of the processor device changes from 0 to 1) * A processor which was previously present has been physically removed from the system (Bit[0] of \_STA object of the processor device changes from 1 to 0)     If this bit is cleared, OSPM ignores any changes to Bit [0] of the \_STA object for any processor device, and does not support any of the scenarios listed above. |
| 24 | Processor device  \_STA object Bit[1] (enabled) support | OSPM sets this bit to indicate that it supports reacting to Bit [1]  of the \_STA object for all processor devices in the system.  This indicates that OSPM is able to support the following cases:   * A processor which was previously disabled has been enabled (Bit[0] of \_STA object of the processor device changes from 0 to 1) * A processor which was previously enabled has been disabled (Bit[0] of \_STA object of the processor device changes from 1 to 0)     If this bit is cleared, OSPM ignores any changes to Bit [1] of the \_STA object for any processor device, and does not support any of the scenarios listed above. |
| 31:2~~3~~5 |  | Reserved (must be 0) |