

Date: 9th May 2008

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RE: ENERGY STAR® Revised Definitions for Computer Servers Based on Draft 1
Specification Comments

Dear Rebecca:

Avocent would like to thank you for the opportunity for feedback. Comments and 3
recommendations follow:

Summary

As can be seen by Table 1, Wake on LAN (WoL) features provides little, if any, real
world use to support the power-related characteristics required of servers to support this
ES program. Specifically, WoL does NOT support Section 3.D and 3.E in the following
ways:

1. Report on real time system of power health and general server capabilities
2. Store or support retrieval of power logs or alerts/alarms
3. Help to measure power consumption – which helps determine efficiency
4. Is insecure relative to Data Center requirements for enterprise grade security using
AAA (Authentication, Authorization and Accounting) and data encryption
5. Does not have real world Data Center applications as would be needed to support the
full program reqs. This is partly due to the fact that WoL is mostly used to power up
desktop systems today, and not servers (how many servers are in a sleep state?).

Recommendation #1: Maintain the Service Processor requirement and delete WoL from 1.A.

Additionally, the server industry has in the past used the terms Service Processor and
BMC interchangeably – much to the detriment of IT customers. This causes constant
confusion. BMC is used mainly for historical reasons. It is – to all intent and purposes – a
‘basic’ service processor. To avoid user confusion, we believe there is value in
converging the description of this intelligent management capability around the term
‘Service Processor’

Recommendation #2: Converge description of ‘Service Processor/BMC’ to ‘Service Processor’

**1.A. should read “Dedicated management controller, typically described as a
Service Processor”.**

Regarding the instrumentation of the power supply. Today, the industry is moving
towards using PMBus (<http://pmbus.org/>). The Power Management Bus (PMBus) is an

open standard power-management protocol with a fully defined command language that facilitates communication with power converters and other devices in a power system. Vendors using this standard offer increased functionality within the server chassis to support the ES program section 3. This in turn promotes interoperability and offers greater choice of PMBus components.

Recommendation #3: Add additional requirement of PMBus 1.1 to section 1.A. as “Support PMBus 1.1”

Table 1 – Base Service Processor and WoL comparison

Category	Base Service Processor	Wake on LAN
System Health & Security Alerts	<ul style="list-style-type: none"> • Health Alerts (Temperature, Voltage, Fan, etc.) • Security Alerts (Chassis Intrusion, LAN Heartbeat, System Password Violation) • BIOS Messages & Alerts • OS Hung Watchdog Timer 	
Authenticated Remote Control*	<ul style="list-style-type: none"> • Processor Missing (startup Watchdog) • Power up, down, cycle, reset • Boot & Boot Path Options 	<ul style="list-style-type: none"> • Power up
Status Info	<ul style="list-style-type: none"> • System State • Presence Ping/Pong 	
Monitoring	<ul style="list-style-type: none"> • Abstracted Local and Remote Monitoring • Health Sensor "Present Reading" Access (Temperature, Voltage, Fan, etc.) 	
Inventory and Logging	<ul style="list-style-type: none"> • FRU/Inventory Data Access • Event Logging 	
Extended Out-of-Band Access	<ul style="list-style-type: none"> • Serial/Modem Access • Text-based Access • Inter-Chassis Access • Multi-level, Multi-user Security* 	
Extended Alerting	<ul style="list-style-type: none"> • Alerts to multiple destinations • Paging via Modem 	
Automatic Actions	<ul style="list-style-type: none"> • Platform Event Filtering - Configurable, Event-based automatic recovery & alerts 	
Scalability / Extensibility	<ul style="list-style-type: none"> • Utilizes independent Silicon (i.e. BMC) • Extensible Sensor/Event Busses • Firmware update/upgrade 	

* Multi-user as well as multilevel security that includes enterprise grade Authentication, Authorization and Accounting (AAA) using LDAP, SHA-1, AES, and RMCP+.

Avocent would like to thank you for the opportunity to participate. Please contact the individuals below to help answer questions or to provide further information.

Regards

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