

Comments on Final Draft ENERGY STAR® Program Requirements for Computer Servers
Fujitsu Technology Solutions
7/5/2009

Page	Line	Requirement / Definition	Comment
5	177 - 182	1) Definitions A. Computer Server: A computer that provides services and manages networked resources for client devices, e.g., desktop computers, notebook computers, thin clients, wireless devices, PDAs, IP telephones, other Computer Servers and other networked devices. Computer Servers are sold through enterprise channels for use in data centers and office/corporate environments. Computer Servers are designed to respond to requests and are primarily accessed via network connections, and not through direct user input devices such as a keyboard, mouse, etc. In addition, Computer.	There is no clear distinction between Energy Star for Small Scale Server (Computer V 5.0) and Computer Server. Is it possible to certify a Tower Server with same model name and different configurations under the Energy Star Program for Computer V5.0 and Server V1.0?
5	191 - 192	<ul style="list-style-type: none"> • Includes at least one installed hard drive able to store and boot a local operating system or hypervisor; 	We would like to see a more generic description like “internal boot device” to allow the usage of e.g. solid state disks as well.
7	304 - 306	Note: Power supplies with multiple outputs at the primary voltage are considered a Single-Output Power Supply, unless these outputs are either, (1) generated from separate converters or have separate output rectification stages, and/or (2) have independent current limits.	The reason to implement separate power rails with the same voltage is mainly to assure a proper energy limitation (240VA) on each rail. For this reason each rail must have a separate current limitation. We propose to remove “and/or (2) have independent current limits”.

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7 and 11	321 and 498 - 500	<p>Devices include: Ethernet devices, InfiniBand devices, external RAID/SAS controllers and ...</p> <p>This approach has also allowed EPA to incorporate allowances for external RAID and SAS controllers despite receiving limited data for these devices.</p>	<p>RAID controllers should be treated the same way as all other I/O devices. We propose to remove the word "external".</p>
8	345 - 360	<ul style="list-style-type: none"> • Use the same model motherboard; • Use the same number of processors. All processors must be represented by the same model line and have identical power specifications and core counts (e.g., processors may vary in speed within the same power specification within a given model line); and • Incorporate the same model, with the same technical and power specifications, for the base components listed below (the relative numbers of these components may vary within the family): <ul style="list-style-type: none"> - Power supply(s) - Memory DIMM(s) - Hard drive(s) 354 - I/O Device(s) <p>A configuration does not need to incorporate every base component listed above to be considered as part of a qualified Product Family. For example, a configuration without add-in I/O Devices may be included as a base configuration in a Product Family with any number of additional I/O Devices included in other configurations.</p>	<p>These definitions have direct impact on the vendor's model policy. We understand EPA's intention to prohibit the use of non-compliant configurations of a product with an EPA label. We propose to leave the definition of EPA compliant product families completely in the responsibility of the server vendor.</p> <p>With the current definition a vendor would be forced to define different product families in case of e.g. delivering the same server with different CPU power specifications, even if all CPU power specifications would fulfil the EPA requirements. The same is valid for CPU core count etc.</p> <p>It should be allowed to use a single product family name, as long as all possible configurations are compliant with the EPA power definitions.</p>

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11	494 - 503	Note: Several stakeholders submitted data on I/O Devices to EPA. Based on this data, EPA has modified the I/O Device allowances to be technology neutral and based only on the link speed and the number of active ports on the device. This technology neutral approach recognizes the variety of I/O technologies available in the marketplace, provides Computer Sever manufacturers greater design flexibility, and allows different I/O technologies to compete on energy efficiency. This approach has also allowed EPA to incorporate allowances for external RAID and SAS controllers despite receiving limited data for these devices. The masked data set used to create these levels is available on the ENERGY STAR Computer Server development Web site at www.energystar.gov/NewSpecs . In addition, and in response to multiple stakeholder comments, EPA has modified and rearranged the text above for added clarity.	We believe that a technology independent approach does not really fit. The power allowance for a 6Gb SAS controller with 8 ports would be 32W, following the definitions in table 4. In fact such a controller would consume typically 12W to 15W. Similar problems might arise with different LAN PHYs, like 10G-Base-T vs. fibre optics.

Comments to ENERGY STAR® Power and Performance Data Sheet from April 24, 2009

1.	Thermal Information	We don't understand the requirement to report delta T, airflow at maximum fan speed, airflow at minimum fan speed, as there are no defined limits for these parameters. On the other hand the measurement of these values requires special lab equipment, which might not be available at all vendors.
2.	Power Data	Is a list of EPA recommended benchmarks available? Are there any specific requirements regarding the capabilities of the full load benchmarks?