



Breakout Session: Blade Servers

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Goals for the Session



- Provide feedback on
 - near-term options for blade efficiency assessment
 - data commonly collected *today* for blade efficiency
 - how blades are marketed for efficiency (e.g. comparisons against rackmount servers)
 - options and timeline for longer term options for evaluating efficiency and timeline

Recap of Tier 1



- Blade Servers were excluded from Tier 1 – limited data collection and analysis was possible
- Idle data collection effort
- Further discussion required to determine how Idle power in Blade Servers could be addressed
- EPA will consider adding Blade Systems to the specification at a later date upon development of a proper test method and subsequent data collection

Challenges



- Modularity
- Identifying the expected effect of overhead (cooling/power distribution/network)
- Active mode rating tool – how to evaluate. Is single blade sufficient? Are workloads commonly shared between blades
- Diverse marketing practices – different assumptions leading to different efficiency results: customers may not trust conclusions...

Preliminary Draft Approach



- Framework for the following:
 - Criteria for standard servers for Idle/PM apply to blades
 - Standard reporting required for both the **blade server** (minimum, maximum & typical configuration) and a **blade chassis fully populated with minimally configured blade servers**
 - Data acquired in the populated chassis is divided by the number of installed blades to measure per-blade power and allocated chassis overhead

Discussion



- What efficiency information do purchasers routinely request when investigating a new blade system? Do requests change at all if the purchase is intended to replace standalone servers rather than other blades? What information would be useful to blade purchasers that is *not* routinely requested?
- What assumptions must typically be reported when marketing comparative blade performance and efficiency?
- Regarding infrastructure overhead (power distribution/supply, cooling), how can the most efficient implementations be identified? What assumptions are fair/relevant to ensure fair comparison?
- Is analysis at the chassis level a valid approach to determining requirements for blades?
- Are there any anticipated purchasing practices when a user moves to a blade architecture (e.g. customers typically purchase blade chassis fully populated, half populated, etc.)?