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EXHIBIT 2

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US007437730B2

(12) United States Patent

Goyal

(54) SYSTEM AND METHOD FOR PROVIDING A SCALABLE ON DEMAND HOSTING SYSTEM

- (75) Inventor: **Pawan Goyal**, San Jose, CA (US)
- (73)Assignee: International Business Machines Corporation, Armonk, NY (US)
- Subject to any disclaimer, the term of this (*) Notice: patent is extended or adjusted under 35 U.S.C. 154(b) by 908 days.
- Appl. No.: 10/714,331 (21)
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- (51) Int. Cl. (2006.01) G06F 9/46 G06F 15/16 (2006.01)G06F 15/173 (2006.01)
- U.S. Cl. 718/105; 718/1; 718/104; (52) 709/201; 709/202; 709/223; 709/226
- (58)Field of Classification Search 718/1, 718/100-108; 709/201-203, 223-226 See application file for complete search history.

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(45) Date of Patent: Oct. 14, 2008

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(57)ABSTRACT

A VM based hosting architecture system in which finer grain control in optimizing multiple workloads across multiple servers is provided. The system includes a plurality of servers to be utilized by multiple workloads. In addition, the system includes a plurality of virtual machines (VMs) at each of the plurality of servers, wherein the plurality of VMs at each of the plurality of servers each serve a different one of the multiple workloads. Moreover, the system includes resource management logic to distribute server resources to each of the plurality of VMs according to predicted resource needs of each of the multiple workloads. Each of the multiple workloads are distributed across the plurality of servers, wherein fractions of each of the multiple workloads are handled by the plurality of VMs. The distribution of multiple workloads over multiple servers has the effect of achieving a finer grain control in optimizing workloads across the plurality of servers.

16 Claims, 4 Drawing Sheets

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