Virtualiron®

J2EE Development, Deployment and Management

Reduce the cost and complexity of developing, testing, deploying and managing J2EE applications

The popularity of developing in the J2EE environment has resulted in a proliferation of customized, mission-critical J2EE applications. To support them, today's data centers contain a variety of different types and sizes of servers, each dedicated to running specific components of the distributed application. The number of servers can grow quite large and each of these servers is often over-provisioned. As a result of all this, J2EE application delivery infrastructure is saddled with major challenges:

- Complex environments that are difficult to operate and support

- Inflexible systems that are difficult to scale and reconfigure

- Under-utilized capacity making expensive infrastructure even more costly

- Time-consuming staging, testing and deployment cycles for new applications

- SLAs that are difficult and expensive to meet

Improve manageability, minimize total cost of ownership, and increase agility

Virtual Iron's advanced virtualization and management solutions help organizations reduce the cost and complexity of deploying, operating and managing their J2EE applications. With Virtual Iron, companies can improve operating efficiency, reduce capital expenditures, and enable a more flexible and agile J2EE infrastructure. The benefits are dramatic and include:

Scaling dynamically to accommodate changing resource demands. With Virtual Iron, spare computing capacity can be moved into a shared pool to be applied when and where it's needed, automatically via policy. These shared pools require dramatically less hardware than application silos, reducing software, hardware, and data center operating costs.

Completely decoupling applications from the constraints of the underlying physical resources. Virtual Iron allows applications to be moved seamlessly among any server in the data center without complicated migration scripts and SAN reprogramming. This flexibility allows zero-downtime system maintenance and upgrades, and application migrations in the event of hardware failures.

Maximizing hardware utilization via workload management. Virtual Iron's policy-based management allows resources to automatically be applied when and where needed, so that J2EE application performance is maintained regardless of usage spikes.
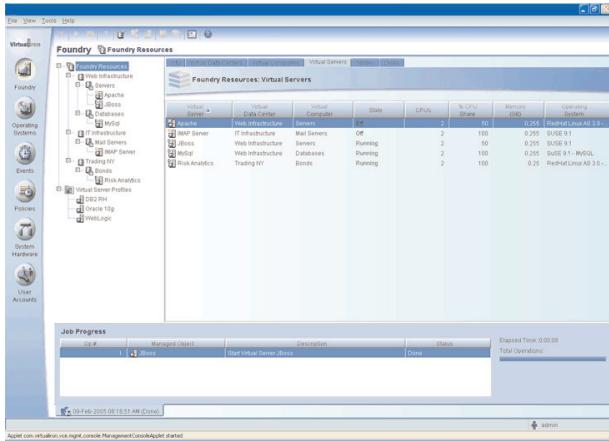
Simplifying provisioning of new equipment and applications. With Virtual Iron, applications can be deployed in minutes. Using a graphic management interface, administrators can point and click to assemble a virtual server in a few seconds. The operating system and applications are installed just as they would be on a physical server — but without ever touching physical hardware.

Streamlining J2EE application development and deployment lifecycle activities. With Virtual Iron, each software image can run on any hardware in the data center, significantly reducing the total number of images

to manage and maintaining consistency between environments. This reduces both the cost and time of software and operating system maintenance

Improving application availability with less hardware via shared redundancy. Virtual Iron improves the resource efficiency of high availability solutions by allowing multiple "primary" servers to share a "secondary" server — significantly reducing the number of back-up servers needed. This is often referred to as "N+1 failover" which is defined as one shared secondary server for N primary servers.

Virtual Iron decouples J2EE applications from underlying physical hardware

A more flexible and efficient solution for managing J2EE infrastructure

The Virtual Iron solution is built from the ground up for enterprise J2EE application workloads. The software optimizes the utilization of all J2EE data center hardware resources and delivers high availability with less redundancy. And it does this on industry-standard hardware and operating systems. Key capabilities include:

Flexible Virtualized Infrastructure. The Virtual Iron solution virtualizes the servers, storage, and network resources used by the J2EE application and web server layers to hide the hardware details. This complete hardware independence enables software-based reconfiguration and policy-based automation of the underlying J2EE infrastructure to provide maximum flexibility, utilization and responsiveness. Companies use Virtual Iron's software to create dynamic pools of standards-based resources that are shared among many J2EE applications. Administrators use a management console or automated policies to place any subset of processor, storage, or networking component(s) in the virtual computer, rather than reconfiguring physical machines, cables, and switches.

Dynamic Scale-Up and Scale-Out. Virtual Iron combines all J2EE resources into a sharable infrastructure-wide pool that can be shared by multiple J2EE applications in development, testing or production. This approach handles peak workloads without over-provisioning and accommodates changing application demands without service disruptions. Large J2EE deployments can use Virtual Iron for both horizontal scaling (adding new independent units of hardware — each running an instance of the operating system) and vertical scaling (adding resources to a single server to handle more load within a single operating system).

Automated Workload Management. Virtual Iron's unique policy-driven automation simplifies the management of computing resources, improves workload management, and enables rapid provisioning and deployment without increased administrative overhead. The software includes the Virtualization Manager, a web-based management server that controls the "bare metal" servers and I/O devices. This console configures the physical resources and virtual servers and allows administrators to create and manage policies that automatically maintain application availability and acceptable performance and response levels. These policies automate resource management by triggering reconfigurations based on user-defined rules and performance thresholds, e.g. add another CPU to a virtual server when CPU utilization is greater than 90 percent. These changes are done on-the-fly without impacting running applications.

Virtual Iron's advanced virtualization and management solutions dramatically reduce the cost of deploying, operating and managing J2EE applications. As a result, companies can greatly improve operating efficiency, reduce capital expenditures, and enable a more flexible and agile J2EE infrastructure. Learn more about how Virtual Iron can help you by calling 978.849.1200, or visit us on the Web at www.virtualiron.com

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