

# Multi-Tenant Hosting

**Dramatically reduce data center operational costs while offering unique hosting services**

**Companies in the web hosting business — Software-as-a-Service (SAAS) providers, Application Service Providers (ASPs), and Business Processing Outsourcing organizations — have unique data center requirements as a result of the complexity and sheer size of their computing environments. They are committed to deliver a service that has the attributes of an application utility. To be successful they need to:**

- Rapidly deliver preconfigured business applications over the Internet through a subscription-based model.
- Differentiate their customer offerings in a very competitive provider environment
- Meet stringent levels of service requirements promised in the outsourcing contract.
- Share computing infrastructure across customers (multi-tenant configurations) but retain the security and isolation of a dedicated environment.
- Avoid contract penalties that can occur from running out of capacity during peak workloads, and the resulting costly upgrades.
- Address problems associated with under-utilized capacity or under-sized hardware.
- Simplify system management and reduce high operational costs caused by a data center environment that is complex and difficult to manage.

## **Differentiate go-to-market service offerings and minimize total cost of ownership with Virtual Iron**

Virtual Iron's advanced virtualization and management software solutions help service providers reduce the cost of deploying, operating and managing hosted applications. With Virtual Iron, companies can improve operating efficiency, reduce capital expenditures, and enable a more flexible and agile infrastructure that can cost-efficiently support customized service offerings. The benefits are dramatic and include:

**Delivering on SLAs (Service Level Agreements) more cost effectively and consistently.** Applications running on Virtual Iron's software scale dynamically to accommodate changing resource demands. Spare computing capacity can be moved into a shared pool to be applied when and where it's needed, automatically via user-defined policies - avoiding the risk of running out of capacity.

**Differentiating by delivering unique offerings and customized SLAs.** Virtual Iron gives service providers a "competitive edge" by enabling them to cost-efficiently deliver both customized SLAs (Platinum, Gold, Silver services) and customized capacity that can vary by time of day or year.

**Avoiding overbuying of capacity (CPU, memory, I/O) for peak workloads.** Virtual Iron's policy-based management allows resources to automatically be applied when and where needed, so that application performance is maintained regardless of usage spikes. This can increase utilization across the data center by up to 4 times.

**Enabling rapid provisioning and redeployment of 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 software allows applications to be moved seamlessly among any server in the data center without complicated migration scripts and SAN reprogramming.

**Streamlining 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.

**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. Virtual Iron’s high availability solution also enables users to perform routine and non-routine maintenance without stopping applications through hot-swapping of processors, memory, and I/O.

### **A more flexible, cost-efficient solution for creating custom service offerings**

The Virtual Iron solution is built from the ground up to handle diverse applications — from low-volume, low-end to high-volume, enterprise-class application workloads. The software optimizes the utilization of all 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:

**Easy-To-Configure Virtualized Infrastructure** — Virtual Iron allows service providers to deploy applications on a virtual computing platform where they can build dynamically adaptable virtual servers — the ideal approach for multi-tenant hosting. The Virtual Iron solution virtualizes the servers, storage, and network resources used by the 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 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 customer 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.

**Capacity On Demand via Shared Resources** — Virtual Iron combines all web hosting resources into a sharable infrastructure-wide pool that can be shared by multiple applications in development, testing or production. This approach handles peak workloads without over-provisioning and accommodates changing application demands without service disruptions. Large deployments can use Virtual Iron for both horizontal and vertical scaling. Virtual Iron further improves utilization of hardware by enabling multiple virtual computers to fail over to a single virtual computer (N+1 failover), reducing the amount of hardware required for high availability.

**Policy-Driven Resource and Workload Management** — Virtual Iron’s unique policy-driven automation simplifies the management of computing resources, improves workload management, and enables rapid provisioning. 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 hosted applications. As a result, hosting companies can greatly improve operating efficiency, reduce capital expenditures, and enable a more flexible and agile data center infrastructure that can cost-efficiently support customized service offerings. Learn more about how Virtual Iron can help you by calling 978.849.1200, or visit us on the Web at [www.virtualiron.com](http://www.virtualiron.com).**

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