SOLUTIONS DATASHEET

Server Consolidation and Containment with Virtual Infrastructure and Metron

Computing Challenges Today

To meet the constant demand to deploy, maintain and grow a broad array of services and applications, IT organizations must continually add new servers. However, as a consequence of purchasing more and more servers, organizations face a growing server sprawl presenting challenges that include:

- **Rising Costs.** In addition to the expense of adding new hardware, organizations pay more for power, cooling, network infrastructure, storage infrastructure, server administration, data center upgrades and new data centers.
- **Poor return on investment.** The common practice of dedicating a single server to each x86 application and sizing it for peak loads has led to severe underutilization of server assets in most data centers.
- **Decreasing manageability.** Managing servers becomes increasingly difficult as the number of servers grows and the number of applications continue to multiply.
- **Reduced efficiency.** As server sprawl increases, IT organizations are forced to spend more time on reactive tasks such as server provisioning, configuration, monitoring and maintenance.

Consolidating and Containing Servers

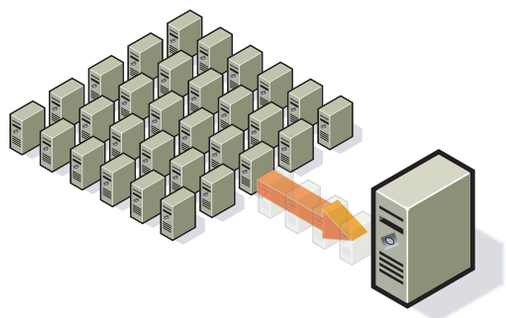
VMware® Infrastructure meets the challenges of server sprawl and underutilization by reducing hardware and operating costs by as much as 50%. A virtual infrastructure also simplifies server deployment and automates resource management to optimize capacity and infrastructure management.

VMware virtualization technology makes it possible to package a complete x86 server into a portable virtual machine package. Multiple virtual machines can then run simultaneously and independently on a single x86 server with consolidation ratios often exceeding five virtual machines per host processor.

Benefits of Server Consolidation and Containment

Over 20,000 VMware corporate customers are realizing numerous benefits on a daily basis from implementing a VMware server consolidation solution, including:

- **Dramatically lower costs.** IT organizations can reduce hardware and operating costs by as much as 50% from implementing a VMware server consolidation solution. Fewer servers also means lower costs for administration, power, cooling and data center infrastructure.



- **Boosted utilization and availability.** VMware Infrastructure aggregates x86 server resources into pools that can reliably support CPU utilization exceeding 80% with the continuous load balancing provided by VMware DRS. If a physical server goes down, all the virtual machines on that hardware will migrate automatically and restart upon another physical server within the resource pool, via VMware High Availability (HA).
- **Improved manageability and reliability.** VMware Infrastructure reduces data center complexity by reducing the number of servers that IT organizations need to manage. Meanwhile, the VMware hypervisor sets the standard for reliability. Instances of VMware ESX have been running in production customer environments for more than three years without a second of downtime.
- **Simplified server provisioning.** IT departments can reduce the time it takes to provision new servers by 50-70%. Virtual machines are as easy to copy as software files and are hardware independent, so deploying new workloads takes minutes instead of days.
- **Increased IT efficiency.** A VMware solution streamlines and eliminates common administrative tasks enabling IT organizations to manage a growing server environment with existing resources.
- **Improved ability to handle future growth.** Because a VMware solution eliminates the need to dedicate a physical server to each workload (or server application), organizations can more effectively monitor growth in relation to utilized capacity.

Learn More

To learn more about VMware solutions and products, visit http://www.vmware.com or call 1-877-4VMWARE.

Partner Solution Profile

Metron Technology Limited
www.metron-athene.com
VMware Technology Alliance Partner

ISV Overview

Metron is a specialist capacity management company with 350+ man years of experience also providing ITIL accredited capacity management training.

Key Business Needs

Farms of disparate applications servers can be consolidated into homogenous blade servers but all the operating systems and applications that existed before the exercise still exist and require management. As a result, performance managers are faced with the same challenges. Good performance management is critical for any successful virtualization implementation.

Key Business Benefits

Athene empowers the user to:

- Assure benefits of consolidation are maintained going forward by managing projects and downstream lifecycle effectively to reduce hardware expenditure and maintenance.
- Ensure maximum use of server resources within existing SLAs.

Business Results

- Reduced hardware expenditure, maintenance and downtime
- Increased employee productivity and customer satisfaction
- Improved service levels

VMware and Metron

Metron's Athene provides integrated support for every stage of your virtualization project and all the information required to ensure continued optimized capacity management.

Products

- VMware® ESX
- VMware VirtualCenter

Partner Products

- Athene and Athene Virtual Appliance
- VMware Capacity Management Service Acceleration Kit

Virtual Infrastructure ITIL Performance and Capacity Management from Athene

Athene assures continued optimized capacity management

Industry Overview

Virtualization is providing the means to show better ROI following past over-expenditure on distributed hardware. Capacity management is the means to ensure that on-going investment is closely aligned to business requirements.

The need to minimize expenditure whilst meeting service level targets does not stop on migration. Things change—business growth may mean more transactions, more users, more complex reports, etc.

Managers with budget and IT performance accountability, architects and capacity managers need to ensure they mitigate the risk that a performance or capacity crisis could happen with each change. They need to allocate and provision new servers, choose the right mix of application workloads per ESX host and ensure the right capacity is available for the business going forward. These steps will enable end-user satisfaction, support mission-critical business operations and ensure hardware purchases are planned and cost-effective.

Solution Overview

Athene provides ongoing capacity management of VI within a standard framework such as ITIL and applicable to the complexities of a mixed physical and virtualized IT environment.

Athene provides the information necessary to model and plan the distribution of guest VMs in server farms with enterprise reporting of physical and virtual resources. Athene ensures you have the right information at the right time to make a planned IT management decision such as purchase of new hardware. Enterprise capacity and performance reporting automatically gives visibility and real information on the capacity and performance status of VI and physical IT environment to the entire organization.

Athene collects data from VMware via VMware VirtualCenter. This 'agentless' technology is the recommended route for the capture of performance data and ensures complete compatibility between Metron's products and VMware software for current and future datacenter configurations.

Solution Benefits

Athene is simple to install, easy and intuitive to use, provides real answers in minutes and is the most flexible integrated capacity solution in the market today.

Specially engineered platform-based performance tools, such as Athene, are the most accurate way to collect and assess CPU utilization and other time-series metrics:

- Manage lifecycle for server consolidation products, effectively reducing hardware and ongoing maintenance expenses
- Make quick wins by optimizing mix of virtual machines for a given VMware ESX configuration
- Maximize server resource utilization while maintaining existing SLAs
- Produce standard reports and provide actionable recommendations for optimal resource utilization

Metron and VMware

Virtualization/consolidation project lifecycle and the use of **Athene Applications:**

- Make inventory of servers and applications
- Collect raw performance and capacity data
- Identify under-utilized servers using **Analyst/Automatic Reporting**
- Identify potential virtualization candidates and profile complementary workloads and data using **Analyst/Automatic Reporting**
- Baseline performance of under-utilized servers to assess options using **Planner**
- Move actual workloads to virtual machines
- Plan future performance based on expected workload growth using **Planner**
- Lifecycle performance and capacity management using **Analyst/Automatic Reporting/Planner**

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