

RnD NEWS

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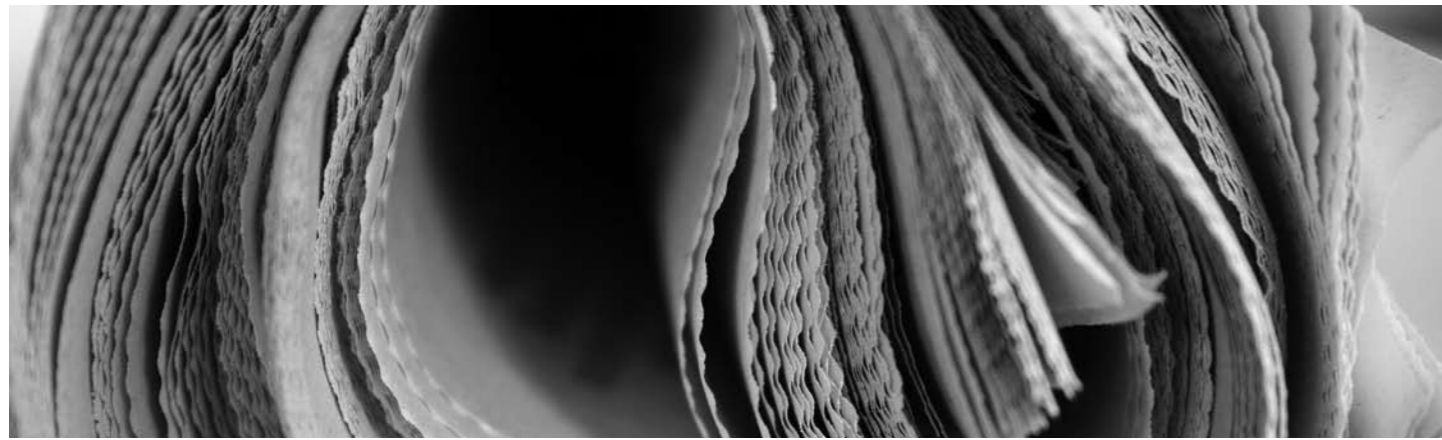
Welcome to our summer newsletter. We hope you will find it informative and interesting. We want to bring you news and opinion about the IT solutions and services that may benefit your business as well as the latest developments from RnD.

If there is anything you would like to see included in future publications, please feel free to email us at info@rnd.co.uk – we'd be delighted to hear your thoughts!

Alison Shanahan and Alan Clarke, RnD

Please contact RnD on 020 7853 2350

RnD news



Altman Technologies' Pcounter wins Environmental Product of the Year

Technology solutions company Altman Technologies has been elevated to Four-Star status within The Green Organisation, one of the country's leading environmental groups. The company has also been voted Winner of the Environmental Product of the Year in the Network Computing Awards for its Pcounter printing/photocopying accounting and control product.

Pcounter eliminates waste and misuse of printed output as well as providing centralised management and reporting for all print and copy activity - fitting all types of environment from commercial organisations and multi-campus universities to single printer cost control within primary schools.

Read more about Altman Technologies and how Pcounter can help you become more environmentally friendly [here](#).

For more information on Altman Technologies solutions please contact Alison Shanahan Alison.shanahan@rnd.co.uk.



Gartner upgrades Stonesoft in IPS Magic Quadrant

Leading IT industry analyst firm Gartner has positioned Stonesoft in the Niche Players quadrant in the Network Intrusion Prevention System (IPS) Appliances Magic Quadrant report.

Stonesoft's offering of StoneGate IPS appliances - for both physical and virtual environments - includes built-in high availability technologies, transparent (layer-2) firewall capabilities, and SSL

inspection for both client- and server-side protection.

Previously, Gartner positioned Stonesoft solutions in the Challengers quadrant in the Magic Quadrant for Enterprise Network Firewalls report published in November 2008.

Read more [here](#).



News in brief



RnD awarded upgraded Symantec technical status

RnD Systems Integration has been accepted into the new Symantec Technical Assistance Partner Program (TAPP). Managing Director Dave Morris said: "This will ensure access to increased levels of knowledge and support for all the Symantec solutions we deploy and provide a better standard of service for our clients." Membership of the exclusive program is based on commitment to product and the level of skills within an organisation.

Read more [here](#).

Citrix XenServer....free reign!

Citrix has claimed its recent decision to make XenServer 5.5 a free product has been vindicated by the fact as many as 100,000 companies and individuals have downloaded it so far.

Read more and download it [here](#).

SonicWALL granted EAL4 accreditation

SonicWALL has announced that the Network Security Appliance (NSA) series product line in combination with SonicOS v5.0.1 has earned Common Criteria Evaluation Assurance Level 4 certification.

EAL 4+ is one of the highest mutually recognised certifications in the networking industry and now applies to SonicWALL's NSA E7500, E6500, E5500, 5000, 4500 and 3500.

Read more [here](#).

Solutions update



New StoneGate FW-5105 and IPS-6105 high performance appliances

Stonesoft has introduced the new StoneGate FW-5105 firewall/VPN and StoneGate IPS-6105 intrusion prevention system appliances for most demanding high capacity environments. The new firewall offers up to 25 Gbit/s and the IPS appliance up to 10 Gbit/s performance.

The new **StoneGate FW-5105** provides an ideal solution for the increasingly expanding capacity needs of large enterprise networks and MSSPs (Managed Security Service Providers). With four 10 Gbit/s interfaces, 18 gigabit interfaces and the capacity of over 25 Gbit/s, StoneGate FW-5105 is designed to meet the performance, redundancy and scalability requirements of large central sites, large VPN networks and data centres with thousands of users.

The new **StoneGate IPS-6105** intrusion prevention system (IPS) offers excellent visibility and enterprise-level inspection for demanding network environments. It has been designed to meet the needs of large organisations and MSSPs (Managed Security Service Providers). The StoneGate IPS-6105 has four 10 Gbit/s fiber bypass interfaces and eight 1 Gbit/s bypass interfaces, so it allows the inspection of several network segments simultaneously. The new serial clustering technology allows

organisations to add new appliances and capacity to the security cluster.

Both appliances can be managed from the StoneGate Management Centre (SMC), providing enhanced ease of use and a comprehensive view over network security.

Read more about these products at the [Stonesoft blog](#).

These products will be available from July 2009. For further information on all Stonesoft solutions please contact Alan Clarke alan.clarke@rnd.co.uk



RnD and Networks First: Solving business challenges and avoiding network downtime

As IT networks become ever more business-critical, avoiding network downtime is crucial. Diagnosing the source of network problems is difficult, particularly in the converged world where networks are increasingly complex.

Companies are asking: does the problem lie with the data network, voice equipment or business application? Do we have the skills to reduce downtime? Can our suppliers work together effectively to resolve network problems?

Multi-vendor, multi-layer network scenarios are common and can be expensive, resource-intensive and difficult to manage. It is vital to know which supplier will take responsibility if a network goes down. RnD felt that, rather than working with several providers, they should take a diligent approach and look for a best-of-breed, multi-vendor support provider.

To this end, RnD partners with Networks First - a specialist services organisation that focuses purely on network support and management. Founded in 1990, its level of expertise perfectly complements the RnD mentality. RnD took the lead in recommending in-depth solutions with Networks First, who will deliver the implementation, on-going support and management of the network infrastructure.

Whether a business is looking to push existing network assets to the brink, rationalise voice and data infrastructure or develop network infrastructure, the experienced multi-vendor, mixed technology service delivery partnership that RnD and Networks First offers, is a one-stop service. This approach offers a number of important business benefits including:

Solutions update continued

- Faster incident resolution and a simple escalation process giving increased SLA visibility, delivered by a single source
- Seamless migration – working to develop an organisation's network over time to take advantage of network convergence and introduce new technologies while reducing total cost of ownership
- Support options tailored to meet specific commercial needs and provide added value
- Guaranteed quality of service – complete ownership of network problems with a commitment to see issues through to resolution
- Guaranteed service levels with predictable costs so all projects are executed smoothly, ensuring a high quality of service with an impressive 99.8% SLA achievement rate
- Access to an experienced, flexible and accredited engineering team

To find out how RnD and Networks First can enhance your network performance, please contact Dave Morris dave.morris@rnd.co.uk



WebSense launches new V10000 Web Security Gateway Appliance

"In the second half of 2008, 70% of the top 100 sites either hosted malicious content or contained a masked redirect to an illegitimate website."
WebSense Security Labs

The WebSense V10000 Web security gateway appliance platform is an extremely accurate and effective solution for Web 2.0 content control and threat

protection, enabling organisations to accelerate business without having to worry about security, productivity and liability threats such as malicious and inappropriate content and data loss.

Using a hardened operating system optimised for analysing Web traffic and content, the WebSense V10000 meets the performance requirements of high-throughput enterprise networks. It provides lower cost of ownership by minimising the amount of hardware required to deploy and manage a secure Web gateway and delivers unparalleled price performance.

The WebSense V10000 appliance platform offers:

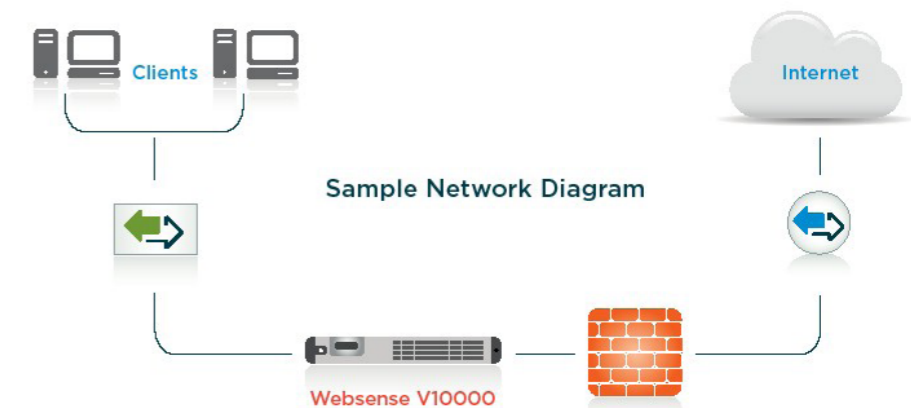
- Visibility and control over dynamic Web content and outbound data loss including SSL-encrypted traffic
- Protection against Web 2.0 threats such as dynamic scripts
- Advanced application controls for IM, P2P, and more
- Leading price and performance
- Intuitive, easy-to-use, centralised management and reporting
- Integrated Web proxy and caching
- Built-in extensibility for future-proofed security



Read more about this product here.

For further information on the WebSense V10000 appliance please contact Alan Clarke alan.clarke@rnd.co.uk

or Alison Shanahan Alison.Shanahan@rnd.co.uk



RND guides

Virtualisation: Citrix XenServer or VMware vSphere?



Citrix XenServer is a free-of-charge virtualisation platform and includes XenCenter, a multi-server management console. In addition, Citrix offers advanced management capabilities in Citrix Essentials for XenServer product line.

VMware vSphere is a server virtualisation platform that includes the VMware ESX hypervisor and associated management tools. vSphere servers are managed from vCenter Server, VMware's multi-server management console.

These are two of the leading server virtualisation products on the market. As this comparison will illustrate, XenServer is a powerful and feature-rich alternative to VMware and distinguishes itself in a number of areas—including its open architecture, performance, storage integration and total cost of ownership.

System architecture

Both products feature bare metal or Type 1 hypervisor technologies that are installed directly onto physical servers without requiring a host OS. VMware ESX has been on the market the longest and its first generation architecture predates virtualisation-aware operating systems and processors. ESX's approach to virtualisation can best be described as binary translation: each OS request to the processor is intercepted and translated into a virtualisation-friendly instruction.

The architecture of XenServer is quite



different from VMware and is built on the open-source Xen hypervisor, which is the basis for nearly two dozen commercial virtualisation products and the engine powering the world's largest virtualisation deployment, the Amazon Elastic Compute Cloud. Instead of using binary translation like VMware, XenServer uses a combination of para-virtualisation and hardware-assisted virtualisation, which allows a guest OS to be fully aware that it is being run on virtualised hardware. This collaboration between the OS and the virtualisation platform provides highly optimised performance.

XenServer hypervisor architecture

With XenServer, all virtual machine interactions with the hardware are managed through the Domain 0 control domain, which itself is a specially privileged virtual machine running on top of the hypervisor. Domain 0 runs a hardened, optimised instance of Linux. It's important to recognise that to the administrator, Domain 0 is part of the overall XenServer system and requires no additional installation or management.

Domain 0 enables XenServer to leverage standard open-source Linux device drivers, resulting in extremely broad hardware support. Because of this design, XenServer can even run on laptops or workstations—systems on which VMware's proprietary drivers are much less likely to function.

XenServer has a straightforward installation process, often referred to as the '10 minutes to Xen' experience. XenServer is installed on the host systems using a CD or network-based installation process. The XenCenter GUI-based administration console is then installed on any Windows PC or server.

System configuration information is kept in an internal data store within the XenServer control domain and is replicated across all servers that are managed together (forming a resource pool) to maintain high availability of the core management services. As a result of this architecture, a separate database server is not required for the core management functions.

Similar to XenServer, the VMware ESX hypervisor is installed on the host servers.

RND guides (continued)

VMware uses vCenter Server for multi-server management and configuration. vCenter Server runs as a Windows service on a separate management server and requires a third-party database for storage and management of host system configurations. For redundancy and availability of the core management services, VMware recommends the addition of clustering software such as its vCenter Server Heartbeat add-on product.



Guest OS support

VMware and XenServer both support the most popular Windows and Linux OSs, including Windows XP, Vista, Windows 2000, 2003 and 2008 Server, Red Hat Linux, SUSE Linux and others. In addition, VMware ESX supports some flavours of BSD, Sun Solaris and Novell Netware. VMware and XenServer are both certified for Windows according to the requirements of the Microsoft Server Virtualisation Validation Program (SVVP).

Virtual machine backup and recovery

XenServer and VMware both offer VM snapshot capability for basic backup and recovery needs. XenServer extends the agent-based approach for Windows VMs through the enablement of a XenServer-specific Volume Shadow-copy Service (VSS) provider. When a backup agent makes a call to the Windows VSS provider, the XenServer VSS provider intercepts it and redirects it to perform a disk-level snapshot. This snapshot is a differential copy and can take as little as five seconds to complete.

VMware offers a feature called Data Recovery in vSphere for backup of virtual machines. Data Recovery is a plug-in for vCenter Server that schedules regular disk snapshots for virtual machines. Some customers see this as an alternative to traditional agent-based approaches; however, Data Recovery does not offer application-level awareness, which is often cited by customers as a reason to use agent-based solutions for workloads such as SQL Server, Oracle, Exchange and Active Directory.

Disaster recovery

XenServer and VMware both support multi-site deployments, whereby VMs can be made available in primary and DR sites. In each case, the virtualisation solution relies on SAN-based replication technologies to keep VM files and configuration data current at a backup location.

High availability and fault tolerance

Both VMware and XenServer have high availability features that offer granular policies governing the behaviour of specific VMs after a host failure. VMware also includes fault tolerance, a feature that maintains mirrored instances of virtual machines running on separate hosts which can maintain continuity of the workload in the event of a failure. XenServer can be augmented with leading third-party products such as

Marathon Technologies and Stratus to deliver VM fault tolerance.

VM load management

VM load management ensures that a VM is started up on the host most suitable for the VM workload and also performs ongoing management of the location of VMs running in a pool of host servers. XenServer includes Workload Balancing (WLB), which captures data such as CPU, memory, disk I/O and network I/O on the hosts and virtual machines to guide the initial and ongoing host location for virtual machines. VMware offers DRS, a feature that guides the initial VM placement as well as semi- or fully-automated load management of VMs using its Distributed Resource Scheduler (DRS) feature.

Provisioning services

XenServer includes unique provisioning services features for virtual machines. This technology allows users to set up a library of server workloads and stream them on-demand to multiple virtual or physical servers within the data centre. Provisioning services enable multiple virtual machines to share a single workload image, resulting in streamlined administration as well as significant storage savings. Provisioning services are a unique feature that simply must be seen to be fully appreciated—there is nothing else on the market quite like it.

The above is an extract from a recent white paper commissioned by Citrix, the full version of which is available upon request from Alan Clarke, alan.clarke@rnd.co.uk.



RND guides (continued)

Providing effective disaster recovery

Most businesses know that disaster recovery is critical, but may not know which solution is best for them. Here's our guide to the technologies currently on the market and their benefits and drawbacks.



Tape

The most common method of storage protection is also the oldest: backing up to and restoring from magnetic tape. This method has been around for almost 40 years and is still the bedrock of most recovery strategies. The cost per megabyte for tape storage is low; it's easy to move tapes to secure offsite storage and the technology continues to scale well for many applications.

However, tape backups have limitations, such as the amount of time required to back up and restore large volumes of data, the accompanying latency between when the data was protected and when the loss occurs, and the security involved in moving tapes to offsite storage. Accordingly, much attention is being focused on replication-based technologies.

Replication

Replication-based technologies offer the promise of capturing a data set at a particular point in time with minimal overhead required to capture the data or to restore it later. There are four main methods of interest in today's storage environments:

- **Whole-file replication** copies files in their entirety. This is normally done as part of a scheduled or batch process since files copied while their owning applications are open will not be copied properly. The most prevalent use of this technology is for login scripts or other files that don't change frequently.
- **Application replication** copies a specific application's data. The implementation method (and general usefulness) of this method varies dramatically based on the feature set of the application, the demands of the application and the way in which replication is implemented. This model is almost exclusively implemented for database-type applications.
- **Hardware replication** copies data from one logical volume to another and copying is typically done by the storage unit controller. Normally, replication occurs when data is written to the original volume. The controller writes the same data to the original volume and the replication target at the same time. This replication is usually synchronous, meaning that the I/O operation isn't considered complete until the data has been written to all destination volumes. Hardware replication is most often performed between storage devices attached to a single storage controller, making it poorly suited to replicating data over long distances. Most hardware replication is built out of SAN-type storage or proprietary NAS filers.

- **Software replication** integrates with the Windows OS to copy data by capturing file changes as they pass to the file system. The copied changes are queued and sent to a second server while the original file operation is processed normally without impact to application performance. Protected volumes may be on the same server, separate servers on a LAN, connected via storage-area network (SAN), or across a wide-area network. As long as the network infrastructure being used can accommodate the rate of data change, there is no restriction on the distance between source and target. The result is cost-effective data protection.

Double-Take

Double-Take from Double-Take Software can fulfil the backup, disaster recovery and emergency mode operations that are required for compliance. Double-Take is a real-time data replication and failover application that augments an existing network environment by providing a data protection mechanism that has minimal impact on users or network resources.

Double-Take allows the administrator to specify that mission-critical data stored on a network server should be protected by creating a second copy of the data on another system, usually at a disaster recovery site. Double-Take monitors any changes to the production copy of the data and replicates those changes to the secondary server. This second copy of the data is synchronised in real-time with the first, making the data accessible in the event of a major disaster or system outage.

