

# Optimisation as a Service – OaaS Technology & Service Overview



## WAN OPTIMISATION IS NOW ESSENTIAL

The major IT initiatives of today – data centre consolidation, cloud computing, unified communications, virtualisation and disaster recovery – share a common theme: they all presume a well performing Wide Area Network (WAN).

The reality though is that most WANs are unable to compensate for the increased packet loss, latency and bandwidth problems endemic to publicly shared infrastructure. Applications running across these networks often underperform, inconveniencing the customer while raising support and deployment costs.

## OaaS – VERSATILE SCALEABLE OPTIMISATION

OaaS solves these problems by supporting a complete spectrum of real-time optimisation techniques, which optimise WAN performance by overcoming common bandwidth, latency and network quality challenges.

Because OaaS, unlike most competing solutions, can optimise all IP traffic including UDP and is scalable from bandwidths of 512kbps right up to 1Gbps, it is a key enabling technology for any business looking to implement one or any combination of VDI, application virtualisation, Cloud Computing, SaaS, Data Centre to Data Centre, Data Centre Consolidation and Unified Communications.

OaaS appliances leverage all the benefits of server virtualisation, which include:

- Reduced IT costs – consolidate different applications onto common hardware platforms
- High availability – Leverage existing high availability tools inherent in virtual solutions (e.g VMware VMotion)
- Flexible platform options – Deploy WAN optimisation on any hardware platform of choice, including industry standard x86 servers or other custom platforms

## OaaS KEY DIFFERENTIATORS

- Virtual software offering means that OaaS can be flexibly deployed and is not constrained by closed hardware architecture. Instantly deploy OaaS WAN optimisation technology anywhere in the world; easily move instances as needed
- Alleviates bandwidth congestion and latency challenges for all IP traffic including UDP traffic via a variety of optimisation technologies, leading to vastly improved end user experience and negating the need for costly and time-consuming WAN upgrades
- Fully scalable from the smallest remote branch to data centre deployments – ideal for application and desktop virtualisation projects to remote branches, large scale disaster recovery and data centre to data centre deployments. OaaS is offered in bandwidth capacities from as low as 512kbps up to as high as 1Gbps
- Application Aware Networking: Optimisation technology and Quality of Service platform allows for effective management and control of all applications, guaranteed bandwidth for business critical applications and effective deployment of unified communications solutions including VoIP and Video
- Annual license-based “as a Service” operating expense pricing model allows companies ability to avoid large-scale capital expenditures typically associated with WAN optimisation solutions. Companies can upgrade to higher bandwidth licenses as more capacity is needed. Deals typically 2 to 5 year contracts with substantial annual discounts for commitments beyond 3 years

## OaaS – THE SERVICE

**Assess and Profile** - Understand the current network profile (Network Base Line Analysis). Identify the business critical applications and create a policy platform for ensuring best possible and consistent application delivery

**Test and Deploy** - Deliver an environment to conduct a Proof of Concept. Produce a project plan for the roll-out deployment

**Support and Report** – Provide 24/7 support for the duration of the contract and access to a Management Portal that provides a dynamic landscape of the end user’s remote location estate. Offer ability to adjust/tune the end user’s policy platform dynamically (typically within 24 hours) and provide annual new application impact analysis

## ENTERPRISE-FEATURES

OaaS optimises all IP applications. This includes:

- Backup and recovery applications, including asynchronous backup/replication tools from EMC, HDS, Dell, NetApp, Symantec, Double-Take and other leading vendors
- Traditional TCP applications, such as Windows file sharing, MS Exchange, MS Sharepoint, Lotus Notes/Domino, Siebel, Oracle and VMware
- Non TCP applications, such as Veritas Volume Replicator, Aspera, EMC Disk library and Brocade FCIP
- Interactive applications, like Virtual Desktop Infrastructures (VDI), Citrix XenApp, Sunray, and Remote Desktop Protocol (RDP)
- Real-time applications, like VoIP, video conferencing, video streaming and other unified communications
- Security: All OaaS appliances use AES encryption to protect data stored locally. IPSec encryption protects data sent between appliances. Advanced algorithms ensure that data security is achieved with no impact on application performance

## NETWORK OPTIMISATION TECHNIQUES

OaaS provides three technology components that work in real-time primarily at the network (IP) layer to correct the problems undermining effective throughput.

- Network Acceleration:** TCP and other protocol acceleration techniques minimise the effects of latency on application performance and significantly improve application response time across the WAN
- Network Integrity:** Adaptive Forward Error Correction (FEC) mitigates packet loss by reducing the need for retransmissions when routers are oversubscribed. Packet Order Correction (POC) is a real-time solution for overcoming out-of-order packet delivery across the WAN. OaaS employs a variety of Quality of Service (QoS) and traffic shaping techniques to optimise traffic handling, including advanced queuing, scheduling, and standards-based packet-marking. OaaS appliances can honour

existing QoS tags or create new policies for granular QoS control

- Network Memory™:** Each appliance inspects WAN traffic at the byte level and stores copies of content in high-capacity disk drives. Advanced finger-printing techniques recognise repetitive patterns for local delivery so data is only sent across the WAN once. Network Memory operates at the network layer and supports all IP-based protocols including TCP, UDP and RTP
- High Availability Deployment:** To maximise uptime, OaaS appliances can be deployed redundantly in 1+1 or N+1 configurations, with failover and load balancing
- Easy to Manage:** A Graphical User Interface simplifies network monitoring, policy provisioning, and device management. Powerful wizards simplify configuration. A full-featured CLI is available via SSH
- Larger deployments can easily be managed using OaaS Management System. This is a comprehensive platform for deployment, management, and monitoring of an OaaS-enabled WAN. In addition to centralising the administration of OaaS appliances, it provides detailed visibility into all aspects of application delivery across a distributed enterprise, including application behaviour, WAN performance, Quality of Service (QoS) policies and bandwidth utilisation
- Easy Deployment:** OaaS appliances are deployed out-of-path using Policy-Based- Routing (PBR) redirection, Web Cache Coordination Protocol (WCCP), or VirtualRouter Redundancy Protocol (VRRP). By leveraging existing virtualisation management and configuration tools, typical deployment takes less than 10 minutes per appliance.

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**Optimisation Isn't Nice To Have...  
It Is Absolutely Essential!**

# Optimisation as a Service – OaaS

## Technology & Service Overview



### TECHNICAL SPECIFICATIONS

Features / Model	512k / 1MB / 2MB	4MB	10MB	20MB	50MB	200MB/ 1GB
<b>WAN Capacity (NA, NI and NM + encryption enabled)</b>	As stated	4Mbps	10Mbps	20Mbps	50Mbps	200MB / 1GB
<b>Certified Connections</b>	8,000	8,000	64,000	64,000	64,000	256,000
<b>AES Disk Encryption</b>	Real Time	Real Time	Real Time	Real Time	Real Time	Real Time
<b>IP Sec Traffic Encryption</b>	Real Time	Real Time	Real Time	Real Time	Real Time	Real Time
<b>Redundant Deployment</b>	VRRP or WCCP 1:1, N+1	VRRP or WCCP 1:1, N+1	VRRP or WCCP 1:1, N+1	VRRP or WCCP 1:1, N+1	VRRP or WCCP 1:1, N+1	VRRP or WCCP 1:1, N+1
<b>CPU</b>	Two 64-bit x86 logical processors – min speed 2.3GHz	Two 64-bit x86 logical processors – min speed 2.3GHz	Four 64-bit x86 logical processors – min speed 2.3GHz	Four 64-bit x86 logical processors – min speed 2.3GHz	Four 64-bit x86 logical processors – min speed 2.3GHz	Eight 64-bit x86 logical processors – min speed 2.3GHz
<b>RAM</b>	2GB	4GB	4GB	4GB	8GB	14GB
<b>Disk</b>	100GB of free contiguous disk space	100GB of free contiguous disk space	100GB of free contiguous disk space	100GB of free contiguous disk space	100GB of free contiguous disk space	250GB of free contiguous disk space
<b>Network Interfaces</b>	2 x 1GBps	2 x 1GBps	2 x 1GBps	2 x 1GBps	2 x 1GBps	2 x 1GBps
<b>Hypervisors</b>	VMware ESXi or ESX (4.0 or later) + Citrix, MS, KVM	VMware ESXi or ESX (4.0 or later) + Citrix, MS, KVM	VMware ESXi or ESX (4.0 or later) + Citrix	VMware ESXi or ESX (4.0 or later) + Citrix	VMware ESXi or ESX (4.0 or later) + Citrix	VMware ESXi or ESX (4.0 or later)