Pulse Secure vADC

Fratto, Mike

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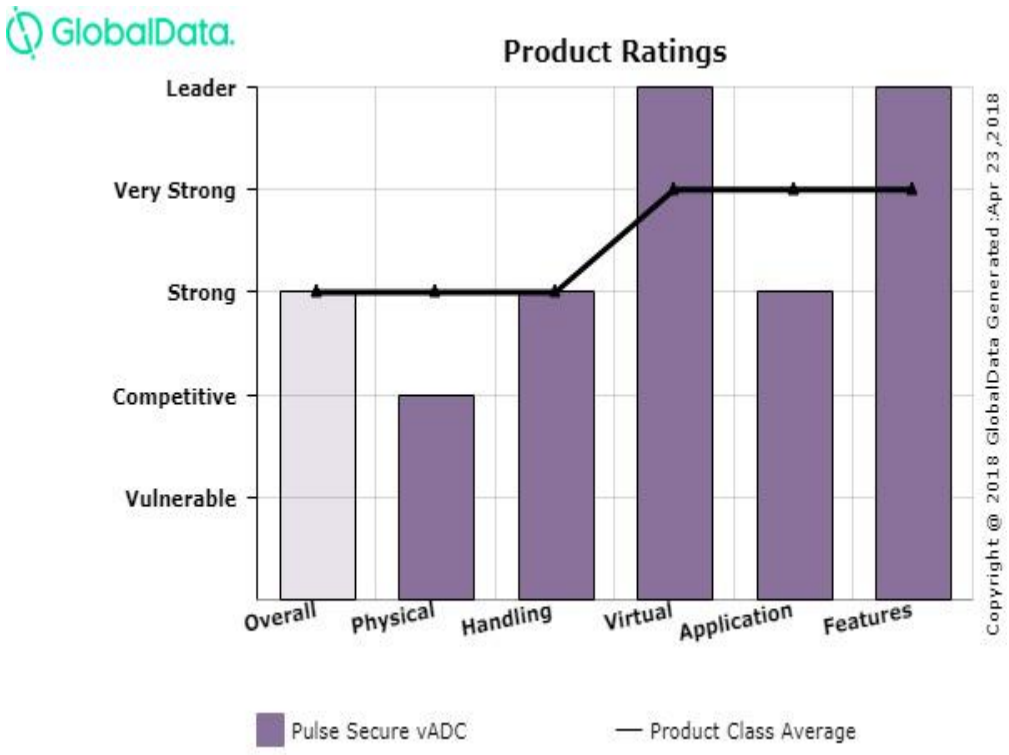
PRODUCT ASSESSMENT REPORT – APPLICATION DELIVERY CONTROLLER

SUMMARY

Pulse Secure closed the acquisition of Brocade's vADC product line including the vTM, vWAF, and Services Director. Given the company's other products, the acquisition should expand opportunities for new and existing customers.

March 22, 2018
Pulse Secure updated its Services Director with enterprise management features and an application analytics package that relies on Splunk for storage and retrieval. The new features take advantage of the company's pooled licensing.



WHAT'S NEW

• August 1, 2017: Pulse Secure completed its acquisition of Brocade's vADC assets. Branding has been updated and product naming is unchanged.

• March 21, 2018: Services Director 18.1, adds application analytics providing actionable insights into the behavior of applications across virtual and cloud platforms.

PRODUCT OVERVIEW

Product Name	Virtual Traffic Manager
Description	Virtual Traffic Manager (vTM) is a software-only ADC, which comes in Advanced, Enterprise, and Developer editions as a virtual appliance, cloud image, or bare metal offerings. The vTM is part of Pulse Secure's larger vADC family suite, which includes the virtual Web Application Firewall (vWAF) and the Services Director to support capacity-based licensing.
Components	• Virtual Traffic Manager (vTM) • Web Application Firewall (vWAF) • Services Director

ESSENTIAL ANALYSIS

Strengths

• **Capacity-Based Licensing:** Pulse Secure vTM offers a capacity-based licensing allowing customers to check-out and check-in licenses on demand across on-premises and cloud instances. Enterprises can monitor license usage and shift capacity to workloads as needed which prevents over-buying and wasted revenue. Additional license capacity can be added on demand.

• **Versatile:** Pulse Secure vTM is available on a variety of commodity hardware, hypervisors, and cloud service platforms, including AWS, Azure, and Google, making deployments extremely versatile.

• **Scripted:** Pulse Secure vTM includes TrafficScript for content-based routing and has Python/Java scripting extensions. vTM also supports RESTful API for integration with orchestration and management tools.

Limitations

• **Sans Templates:** The lack of pre-configured application templates can make integrating vTM into application deployment workflows more difficult, so customers use scripting to automate the deployment and configuration process.

• **Bring Your Own Hardware:** Pulse Secure vTM is software only, and customers have to source their own hardware, or host on an existing virtual or cloud platform. Additional server management and troubleshooting is required.

CURRENT PERSPECTIVE

STRONG

Pulse Secure vTM is part of its vADC portfolio, which also includes the Services Director and vWAF, available in software, virtual appliance, or bare metal form factors. Pulse Secure vTM ships in Developer, Advanced, and Enterprise editions. The Enterprise edition includes features like web acceleration and web application firewall, Kerberos support, and FIPS 140-2 certification on top of what the Advanced edition offers. The Developer edition is a full-featured version limited to 1 Mbps. While vTM has had a rapid succession of owners that will give some enterprises pause, Pulse Secure has had a rapid return to pre-acquisition revenue, and the company has fully integrated vTM into its portfolio and channel strategy, and continues to execute its roadmap.

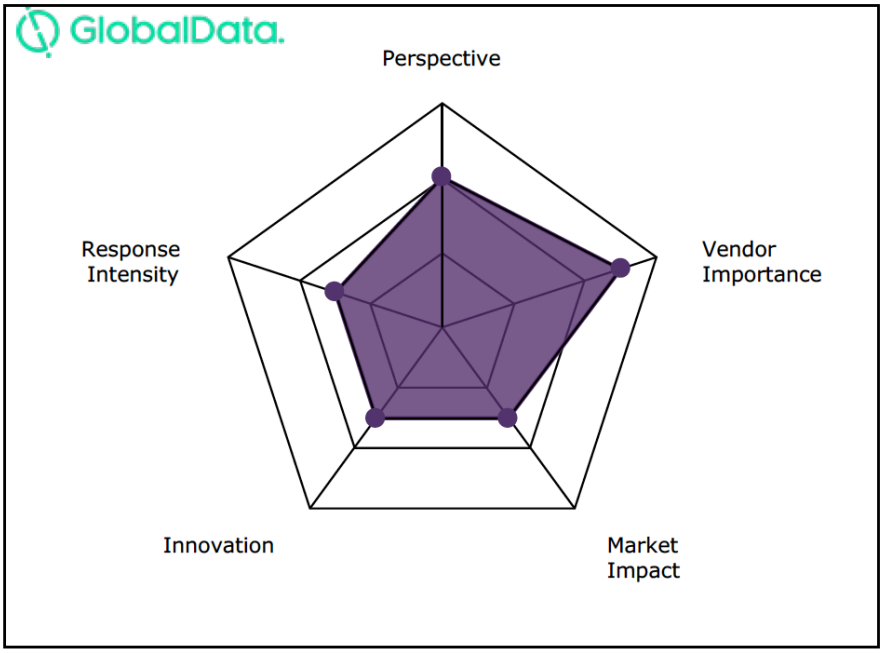
Integration features such as TrafficScript for on-device scripting and a RESTful API for configuration management and control make vTM easy to adapt to most environments. TrafficScript can be used to influence the load balancing algorithms allowing customers to address bespoke application delivery issues without waiting on the vendor feature roadmap. The vTM currently doesn't support application templates, but they are on the roadmap for H1 2018. Pulse Secure's analytics package, part of the Services Director 18.1 update, is similar in scope to application analytics from other ADC vendors like Citrix and F5 and brings it on par with those competitors. However, Pulse Secure's current reliance on an existing Splunk infrastructure for the analytics application is a potential hurdle, one the channel may struggle to cross. Pulse Secure's application analytics focuses on ease of use for enterprise IT and offers readily understandable graphic depictions of application performance and allows IT to drill into particular segments to gain deep detail and insight into application performance. It's a good starting point for most organizations that don't have an APM suite in place.

Customers that want to run a hardware ADC need to supply and manage their own server hardware. Pulse Secure maintains a list of certified server platforms and provides bare metal installation images, removing the need for customers to provide server OS management and maintenance. vTM is supported on a wide range of VM platforms such as Hyper-V, Linux KVM, OracleVM, VMware, and Xen Server, and offers full integration with OpenStack. vTM also runs on a wide array of cloud services such as Amazon Web Services, Google Cloud, Joyent, Microsoft Azure, Rackspace Cloud, RightScale, and VMware vCloud Air. This flexibility gives enterprises a wide variety of options for running the vTM either locally or in the public cloud, or both.

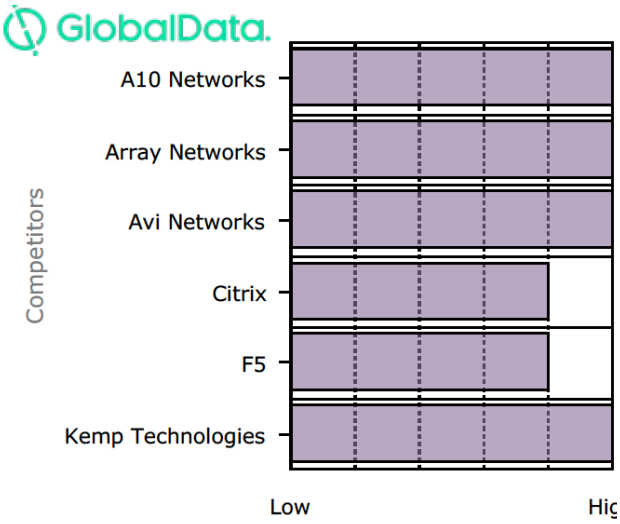
Pulse Secure has a versatile capacity based licensing program, supporting both perpetual and subscription licenses. Licenses can be checked in and out as needed and applied to any vTM. Subscription licenses also have the added benefit of including support and updates, while support is an additional charge for perpetual licenses. vTM can also be licensed on an hourly basis on AWS. Customers can avail themselves of additional cost benefits by the use of Services Director for licensing.

QUICK TAKE

Event Rating



Competitive Impact



• **Promote Automation:** Pulse Secure is one of the first ADC vendors to offer an automated management system including flexible license management, which is a positive differentiator.

• **Pursue MSPs:** Service and managed service providers are adding to their software offerings, which is a good fit for Pulse Secure. Pulse Secure should seek out more service providers.

• **Demonstrate Performance:** Competitors with hardware appliances will compete on having hardware and software offerings which ease migration and performance concerns.

• **Watch the Cloud:** Pulse Secure has added support for Google Cloud and Microsoft Azure to its already long list of supported cloud providers.

• **Flex Your Licenses:** Pulse Secure offers a flexible set of licensing options for cloud and on-premises, and will likely continue with more flexibility which will be attractive to customers.

• **No Hardware, No Problem:** Don't let the lack of hardware appliances be a hurdle. Pulse Secure offers bare metal support for a number of certified platforms and guidance on sizing, and the software-only products enhance application mobility.

• **Consider Licensing Options:** Moving to consumption-based pricing for some or all of your ADC deployments can help you better manage costs and match spend with revenue.

COMPETITIVE POSITIVES

• The additional analytics in Pulse Secure's new version of Services Director leverages data collected from the vADCs, allowing IT teams to easily view application performance and drill into issues.
• Analytics data can be exported to external applications like Splunk or Logstash, and then retrieved for analysis and presentation.
• Access to data export is controlled through a role-based access control system, limiting the potential for data exfiltration by unauthorized administrators.
• Pulse Secure has a flexible license-management process in which licenses can be checked in and out as needs change over time.
• Services Director 18.1 brings centralized backup and restoration of vADC instances, centralized administrative authentication, and centralized log collection.

EVENT SUMMARY

March 21, 2018 -- Pulse Secure announced a new release of its virtual Application Delivery Controller (vADC) Services Director, giving IT and security professionals detailed information about data flows through each application and providing actionable insights into the behavior of applications across virtual and cloud platforms. Pulse Services Director 18.1 is available immediately.

ANALYTICAL SUMMARY

Perspective

• Positive on Pulse Secure's Services Director 18.1 release, because it shows that the company is keeping pace with its new acquisition and continuing to expand the product capabilities in ways that will be attractive to enterprise buyers. Analytics is a feature enterprises want but struggle to attain because the capital and operational cost of application performance management can be quite high to justify when there are many competing IT budget demands.

Vendor Importance

• Very high to Pulse Secure, because this is the company's first major release of the vADC product it acquired from Brocade and it has carried forward the existing product roadmap by adding productive features and flexible capacity-based licensing. Pulse Secure continues to find synergies between its vADC software and other parts of its business and it is actively bringing together its sales channel and offering promotions to customers to expand their use of its software.

Market Impact

• Moderate on the ADC market, because while the enhancements to Services Director 18.1 add value to vADC customers, Pulse Secure must raise its awareness as an ADC vendor, not only with its own customers from different product lines, but also new customers. Most of the leading ADC competitors already have analytics in their products and integration with external log collection and APM systems, making Pulse Secure's analytics and data export a necessary but somewhat limited first attempt at analytics.

COMPETITIVE STRENGTHS

Competitive Positives

• The additional analytics capabilities in Pulse Secure's new version of Services Director leverage data collected from the vADCs, and allows IT teams to view application performance and drill into issues easily. The company focused on presenting visuals that show application health at various points and allows IT to find problems segments and address them.

• Analytics data can be exported to external applications like Splunk or Logstash, and then retrieved for analysis and presentation, allowing enterprises to use their existing log collection infrastructures to capture data. With centralized collection, enterprise IT can also combine data for its own reports.

• Access to data export is controlled through a role-based access control system limiting the potential for data exfiltration by unauthorized administrators. The role based access control ensures that potentially sensitive data is handled only by authorized personnel and will assist in data compliance audits.

• Pulse Secure has a flexible license-management process in which licenses can be checked in and out as demand changes over time. Enterprise needs do change over time, and the ability to manage licenses from a pool maximizes flexibility.

• Services Director 18.1 brings centralized back-up and restoration of vADC instances, centralized administrative authentication, and centralized log collection, all of which ease operational overhead, particularly as the size of a deployment grows over time.

COMPETITIVE WEAKNESSES

Competitive Concerns

• Pulse Secure has not made Services Director 18.1 available for cloud service providers, limiting its impact for that increasingly important route to market. Service providers of all types are looking to add more capabilities to their software portfolio, and managed services is proving to be a good route to market for hardware and software networking vendors. While SPs talk about multi-vendor, the fact is that the first vendor in typically has the advantage.

• Pulse Secure doesn't offer a Splunk application for data analytics, which may be a hurdle for Splunk customers that want to centralize reporting and analysis. Similarly, some Splunk customers have centralized both collection and analysis on Splunk, and forcing them to a separate software package may be a hurdle.

BUYERS ACTIONS

• Competitors can point to the current requirement of a Splunk deployment to retrieve stored data for analysis and an additional hurdle to successful deployment. Current Splunk customers may have to augment their Splunk licensing to accommodate the additional data. Non-Splunk customers will have to acquire the software.

• Pulse Secure can export data in a JSON format but the company has only developed formal support for Splunk and Logstash. It needs to add to its roadmap formal support for other log collection products and projects. This is necessary to counter claims that the current product will remain limited to a few log collectors. This is particularly true for deals that have no ADCs deployed or are considering switching.

• ADC competitors should evaluate Pulse Secure's capacity-based licensing, which is highly flexible and allows enterprise IT to dynamically move license entitlement to where it is needed. Enterprises are used to on-demand capacity and it factors into buying decisions

ANALYTICAL PERSPECTIVE

Enterprise IT is always looking for ways to extract more value out of existing infrastructures, and a continual blind spot is application performance management (APM). APM systems tend to be expensive to acquire the software and underlying software infrastructure, and then they take expert management to maintain. These additional costs become a barrier to alternatives to performance management, such as reports from network performance management, over-provisioning of server hardware, or simply waiting for users to complain about slow applications. Because ADCs sit in the application path, they are a viable option for application performance data collection and analysis using existing deployed products.

Pulse Secure's application analytics focuses on ease of use for enterprise IT and offers readily understandable graphic depictions of application performance and allows IT to drill into particular segments to gain deep detail and insight into application performance. It's a good starting point for most organizations that don't have an APM suite in place.

In addition, Pulse Secure's capacity pool licensing allows enterprises to consume the software at the points in the network and the scale that it requires. Licenses can be checked in and checked out making it easy for enterprise to tailor the analytics collection as it needs to as demands change. It also offers a low cost way for enterprises to get started.

METRICS

VENDOR

Product Family :	Pulse Secure vTM
List Price (low to High):	$5,500 - $125,500

CONNECTION HANDLING (per appliance or blade)

Rating	Strong
Throughput	10 Mbps - 145 Gbps (hardware dependent)
L4 Connections per second	10 Mbps - 145 Gbps (hardware dependent)
SSL Transactions Per Second 2Kb Keys	1,000 - 55,000 (1024 bit keys; hardware dependent)
SSL Bulk Encryption	50 Gbps (hardware dependent)

VIRTUAL MODEL

Rating	Leader
Name	Pulse Secure Virtual Traffic Manager
Hypervisor	vSphere 5 & 6, XenServer 7, OracleVM 3, Linux, Hyper-V 2012 & 2016, QEMU/KVM
Cloud Services	AWS, Google Cloud, Rackspace, Joyent, RightScale, Xerox ACS, IIJ, Microsoft Azure, VMware vCloud Air
Minimum VM requirements (CPU, RAM, storage, NIC)	Intel Xeon, AMD Opteron, 2 GB RAM, 16GB disk
Throughput (range)	10 Mbps - 80+ Gbps (hardware dependent)

APPLICATION DELIVERY

Rating	Strong
Load Balancing Methods (list)	Round robin, weighted round robin, random, least connections, weighted least connections, fastest response time, perceptive
Server Health Monitoring	Yes
SSL-Offload	Yes
Compression Offload	Yes
Application Templates	No
Application Manipulation	Yes
On-board Scripting (name)	TrafficScript
Session Management	Yes
Application Specific Support (list)	POP, IMAP, SIP, HTTP, HTTPS, FTP, SMTP, LDAP DNS, RTSP, UDP, Telnet
IPv6 Support	Yes
FIPS 140-2 SSL (including level 1-4)	FIPS 140-2 Level 1 is supported.

MANAGEMENT FEATURES AND RESILIENCY

Rating	Leader
Centralized Management	Yes
Active/Active Failover	Yes
ADC Clustering	Yes
Active Session Failover	Yes
Can physical and virtual appliances be clustered?	Yes
Can physical and virtual appliances be used in failover?	Yes
Can licenses be moved to/from cloud instances?	Yes
Integration APIs	Python, Java, REST, SOAP
Multi-tenant	Yes

GlobalData PLC,
John Carpenter House,
7 Carmelite Street,
London,
EC4Y 0AN,
+44 (0) 207 936 6400