NSX Advanced Load Balancer
PULSE Cloud Services –
Automated Support and Security

Enhanced case management, threat intelligence, and much more

EASIER SAID THAN DONE
The expectations for enterprise networking infrastructure are sky-high: Applications should function smoothly, cater to each need of a company, integrate multiple systems of the company, be secure, be available across different environments, regardless of time zones and peak usage conditions and produce considerable return on investment (ROI).

Troubleshooting problems and keeping up with the latest security threats are just a small fraction of the areas to meet these expectations that need constant monitoring, precise coordination and consume a lot of time. Legacy infrastructure is not able to deliver applications securely and reliably without increasing the amount of effort involved to keep these systems up and running consistently.

Modern enterprises need an on-demand, fast-to-deploy, easy-to-use, multi-cloud solution that can automate fault detection and remediation and mitigate security vulnerabilities through an up-to-date live security posture.

Easier said than done.

SERVICES THAT ACCELERATE BUSINESS AGILITY
PULSE services which is part of the VMware NSX Advanced Load Balancer (formerly Avi Platform) provide an automated and central facility to manage and operate security intelligence and case management for globally distributed Avi Controller clusters run by customers.

The platform uses a software-defined architecture that separates the central control plane (Avi Controller) from the distributed data plane (Service Engines). The Avi Controller is the “brain” of the entire system and acts as a single point of intelligence, management, and control for the distributed data plane.

Any Avi Controller in any cluster can optionally (based on customer consent) connect to PULSE services to retrieve the latest threat intelligence and automatically contact VMware support if a system failure is detected. See Figure 1.

These new capabilities provided by PULSE services will reduce the complexity, management, and cost of your network operations. Reduce risk with automated compliance and remediation services, increase business agility, and accelerate the digital transformation of your business.
AUTOMATED SUPPORT CASE MANAGEMENT

In most enterprise monitoring systems are in place to alert if a failure or a problem occurs within the network or applications. The challenge with this legacy approach is that someone has to log on to the failed system, download support bundles, download log files and traces (possibly from multiple different systems that are only accessible via jump boxes), contact customer support, create a case, upload the support files to customer support and then wait for the support engineer to figure out what went wrong. This process is very time consuming and error prone.

PULSE services with its automated support case management capability eliminates these challenges giving operations the choice to create a case directly from any Avi Controller or configure the Controller to automatically create a support case in the event of any failure and attach the relevant debug information.

Upon fault notification the administrator simply creates a support case directly from any controller within the cluster. The selected controller will collect all eco-system meta-data such as software versions, connected service engines, etc., create a tech support bundle with all logs and traces, and automatically create a tech support case, fill out all information from the collected meta data, and upload the tech support bundle to the created case. This reduces the time to create a support case with all relevant information from hours to minutes. See Figure 2.

With PULSE automated case creation, if a failure occurs, any Controller within the cluster will collect all eco-system meta-data, create a tech support bundle, and automatically create a tech support case, without any involvement from an administrator. Upon case creation VMware tech support will start working the case immediately and notify the customer, possibly with a solution. See Figure 3.
LIVE SECURITY THREAT INTELLIGENCE

Staying up to date on new and changing cybersecurity threats pose an enormous challenge for enterprises due to the speed at which these sophisticated cyberattacks evolve and the increasing frequency at which they occur. Reduce these challenges and mitigate security vulnerabilities through an always up to date, live security posture with Avi’s Intelligent Web Application Firewall (iWAF) touchless security threat intelligence updates from PULSE Services. See Figure 2.

KEY FEATURES

- Automated threat updates
- Consistent and always up to date security posture across datacenters
- Point-and-click simplicity for security policies with central control
- Elastic scale with high performing, traffic based automatic scale-out architecture
- Granular security insights on traffic flows and rule matches for precise policies
- Real-time app security insights and analytics
- Protects applications from DDoS attacks and OWASP Top 10 threats
- Transaction tracing & fine-grained logging

PULSE Services provide live feeds of new threat updates including IP reputation, signatures, WAF CRS rules and more, and automatically minimize false positives with advanced security analytics, detection, and enforcement modes. With distributed web application security fabric to enforce security through closed-loop analytics and application learning mode that covers OWASP CRS protection, support for compliance regulations such as PCI DSS, HIPAA, and GDPR, and signature-based detection. Through PULSE live updates iWAF provides an optimized security pipeline with positive security model to maximize the efficiency for resource intensive operations. See Figure 3.

Figure 4: PULSE Security Services

Figure 5: Avi iWAF Security Pipeline Optimization