SOLUTION BRIEF

Fortinet and ADVA Create Enterprise Secure Cloud Access uCPE Solution

Unparalleled Security Combined With NFV-based Agility Deliver Industry-leading TCO

Executive Summary

The communications industry is undergoing a major transformation in terms of how networks are built and services are delivered. This revolution is being driven primarily through the adoption of network functions virtualization (NFV) and software-defined networking (SDN) technology. NFV and SDN enable service providers to deliver new software-defined services in a more agile and cost-efficient manner, thereby offering several advantages over legacy appliance models. One of these key advantages is the expansion of cloud technology to the network edge and the customer premise, which allows enterprise customers to consume communications services in new ways and the communications service providers a method of driving new service revenue and improved operational efficiency. As NFV and SDN gain wide adoption, there will be a growing need for cloud-native solutions to become more secure and efficient. ADVA and Fortinet have integrated their award-winning technologies to meet these challenges.

One of the more important considerations when moving to an NFV/SDN architecture is the security implications of these highly distributed environments. Cybersecurity threats are increasing in diversity, complexity, and sophistication from a wide range of bad actors, including hacktivists, cyber criminals, and nation-states. To stay ahead of detection technologies, cyber criminals are continually developing new techniques and resources to bypass security and evade detection. To address these challenges and effectively secure today's dynamic networks, security needs to see and understand every entity on the network, dynamically segment traffic based on policy, and monitor and protect data and resources across the entire distributed environment.

Solution Description

Fortinet and ADVA have partnered to deliver an integrated solution to address these needs. Integrating ADVA's award-winning Ensemble solution with Fortinet's industry-leading FortiGate network security firewall platform enables customers to benefit from Ensemble's comprehensive network virtualization suite with advanced cloud hosting, while simultaneously leveraging the best-validated security protection in the industry provided by Fortinet.

To address the complexity inherent in today's NFV-based deployments, the ADVA Ensemble portfolio delivers a truly open network virtualization suite providing powerful orchestration, virtual hosting, management, and automation tools. Ensemble Connector provides a programmable framework for virtual hosting,

Joint Solution Components

- Fortinet FortiGate
- ADVA Ensemble

Joint Solution Benefits

- Leverage advanced orchestration, virtual hosting, analytics, and automation capabilities of the solution to provision, and deliver a new generation of on-demand, application-aware services

- Simplify and automate service creation, reducing time to deploy new services

- uCPE solution provides a microcloud hosting platform for other enterprise services (virtual router, SBC, DPI, POS, Wi-Fi, etc.)

- Reduce cost and complexity of service assurance through intuitive, intelligent, and automated tools

- Leverage the industry's best validated security protection offered by Fortinet's award-winning FortiGate network security platform to protect against sophisticated cyber threats

virtual networking, an accelerated vSwitch, and zero-touch commissioning. Ensemble allows the customer to have their choice of white box technology for a true cloud-native "universal CPE" (uCPE) solution. Ensemble provides a flexible, highly adaptable solution that supports a wide variety of popular network virtualization use cases. With Ensemble, service providers are now able to deliver a new generation of on-demand, application-aware services at the speed of software.

With the ADVA Ensemble solution, service providers can optimize service orchestration and delivery while boosting performance to levels that rival hardened appliances. Virtualized service delivery enables cost-effective creation and delivery of new services as well as quick response to end-customer service change requests. By introducing automation, open application programming interfaces (APIs), and orchestration, the ADVA Ensemble product suite transforms the way service providers create, deliver, and sell network services.

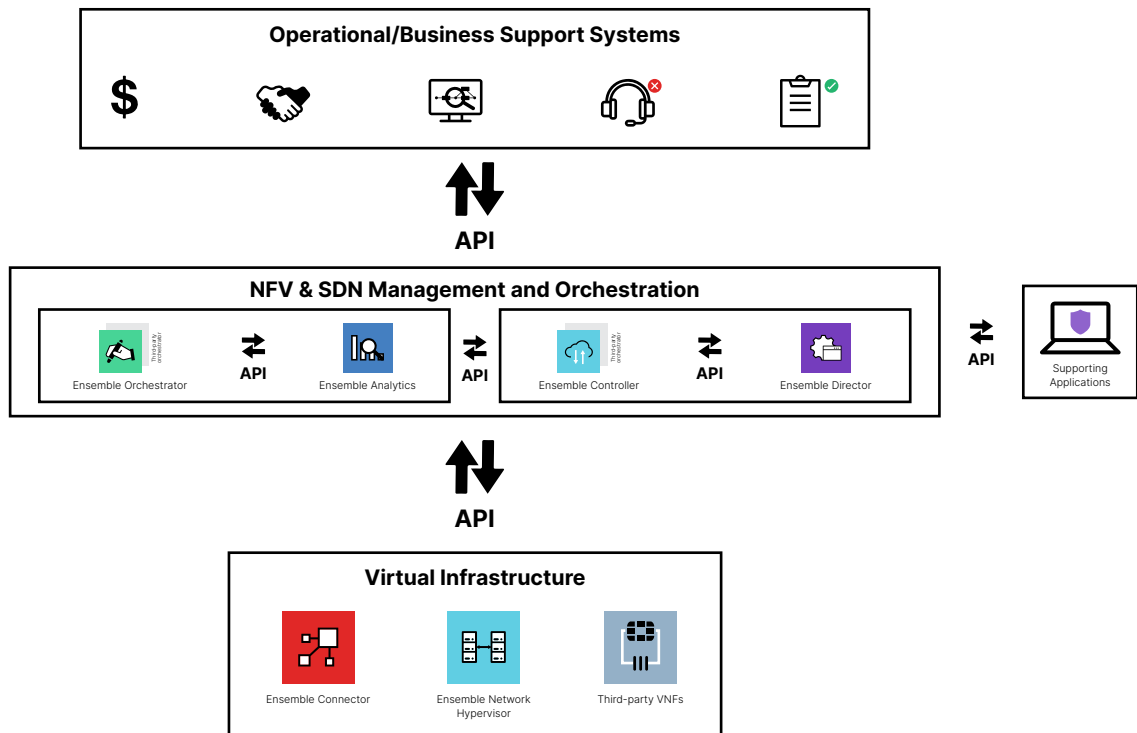The diagram illustrates the ADVA Ensemble solution architecture.

Figure 1: ADVA Ensemble solution architecture.

The ADVA Ensemble solution architecture embraces the open principles of SDN and NFV to deploy network and service functions at the customer premises, at the service provider point of presence (POP), and in the cloud. This deployment flexibility gives service providers flexibility to replace closed appliances with software hosted anywhere in the network on any open hardware. The solution also delivers big data analytics and correlation capabilities, providing network and service systems with actionable intelligence.

The award-winning Fortinet FortiGate network security platform integrates into the ADVA Ensemble solution at the virtual infrastructure layer as a virtual network function (VNF), as illustrated above. FortiGate virtual firewalls offer protection from a broad array of threats, with support for all of the security and networking services offered by the FortiOS operating system. FortiGate provides high performance, layered security services, and granular visibility for end-to-end protection across the entire enterprise network.

FortiGate is a key part of the Fortinet Security Fabric, which enables security components to collect and share intelligence between devices, systems, and partners, support unified management, and synchronize and automate responses to threats. The open, end-to-end fabric of security solutions—woven together to scale and adapt as business demands change—

enables organizations to address the full spectrum of challenges they currently face across the expanding attack surface. The FortiGate platform also leverages global threat intelligence to protect individual customers, by using Fortinet's FortiGuard Security Subscription Services to enable visibility and control for next-generation protection against advanced threats, including zero-day attacks.

In summary, the Fortinet-ADVA solution integration provides a carrier-class, analytics-driven orchestration and uCPE solution for virtualizing networks, together with unparalleled protection and security without compromise.

About ADVA Optical Networking

At ADVA Optical Networking, we're creating a new vision for a more connected world. Our award-winning network functions virtualization (NFV) solutions provide our customers with unprecedented choice and flexibility. Our ADVA Ensemble solution suite provides a comprehensive NFV architecture that includes programmable hardware, comprehensive software, and end-to-end orchestration solutions. Learn more at www.advaoptical.com.

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