FÖRTINET.

Fortinet and AppNeta Active App and Network Performance Monitoring

Active Monitoring Provides Actionable Network Intelligence for Optimal End-user Connectivity and Performance to Business-critical Applications

Executive Summary

Security and reliable network performance are vital to enterprise business success. Fortinet's Fabric-Ready platform combined with AppNeta's active app and network performance monitoring provides the secure connectivity and network visibility needed to optimize the end-user experience of business-critical applications.

Challenge

Digital transformations are increasing network reliance. Work From Home or Anywhere (WFH/WFA) and growing adoption of SaaS applications push more work to the network edge—Gartner estimates 75% of data processing will be performed at the WAN edge by 2025—across many network connections that fall outside of IT control.

These transformations substantially increase use of third-party networks that business-critical data, voice, and video traffic must cross. This growing reliance on third-party networks increases business risk as remote access adds security vulnerabilities, while IT operations lose visibility into, and control over, these "black box" network hops, which can lead to increased mean time to resolution (MTTR) and decreased user productivity that can negatively impact business results. To regain network management control, reduce business risk, and maintain business productivity, IT teams need improved solutions that add security and give insight into end-to-end network performance and corresponding end-user experience.

Joint Solution

Fortinet and AppNeta have established a Fabric-Ready Technology partnership in the Fortinet Open Ecosystem that enables IT operations to provide secure network connectivity and to regain visibility into end-to-end network performance. Fortinet FortiGate Next-General Firewall (NGFW) and AppNeta Performance Manager combine to deliver enhanced network visibility and control. AppNeta's active network monitoring continuously tests "end-to-end" network paths to provide insight into performance "hot spots" before these issues impact user experience. AppNeta monitoring also looks at raw network traffic to identify all applications in use, which aids in capacity planning and management, and enables managers to baseline network performance and validate DevSecOps changes to ensure that changes produce the desired outcomes.

::: AppNeta®

Joint Solution Components

- FortiGate, FortiClient
- AppNeta Performance Manager

Joint Solution Benefits

- Secure user connectivity
- Continuous visibility into third-party networks
- Optimized Work-From-Anywhere end-user experience when accessing business-critical applications
- Successful, quantified digital transformations
- Predictive DevSecOps analysis of network adds and changes

FÖRTINET. FABRIC-READY

The combination of the AppNeta solution and FortiClient, enabled through the Fabric-Ready Program in the Fortinet Open Fabric Ecosystem, delivers unprecedented control, visibility, and security for end-user experiences. FortiGate deployments and subsequent DevSecOps changes can be validated via AppNeta's active network monitoring performed from the user edge, across each individual network hop, to business-critical apps, with continuous monitoring providing proactive, actionable insight into developing performance issues anywhere in the network path.

Joint Solution Components

AppNeta Performance Manager

AppNeta Performance Manager provides granular network performance visibility across the end-to-end network path to better understand end-user experience when accessing business-critical applications. AppNeta uses active synthetic testing and passive performance instrumentation to present users a unified view of four data types: network paths, packets, web transactions, and flow records.

FortiGate Next-Generation Firewall

FortiGate NGFWs deliver industry-leading enterprise security for any edge at any scale with full visibility and threat protection. Organizations can weave security deep into the hybrid IT architecture and build security-driven networks to achieve: ultrafast security, end to end; consistent real-time defense with FortiGuard Services; excellent user experience with security processing units; and operational efficiency and automated workflows.

FortiClient Fabric Agent

FortiClient is a Fabric Agent that delivers protection, compliance, and secure access in a single, modular lightweight client. A Fabric Agent is a bit of endpoint software that runs on an endpoint, such as a laptop or mobile device, that communicates with the Fortinet Security Fabric to provide information, visibility, and control to that device. It also enables secure, remote connectivity to the Security Fabric.

Joint Solution Integration

AppNeta Performance Manager can be flexibly deployed via optimized hardware appliances that can measure performance at speeds up to 100 Gbps, or as a completely virtual platform, to provide active network and application visibility from behind the firewall or from the user workstation. Bidirectional network insight into the connectivity from the user edge, remote office, headquarters, or cloud environment provides faster MTTR of performance issues. For SaaS and cloud apps, AppNeta provides detailed metrics on Domain Name System (DNS) resolution, app response, network transit, and client browser rendering.

For FortiClient customers, AppNeta provides third-party validation of the successful deployment and continuous performance of components like FortiGate. AppNeta's active methodology periodically sends test traffic through and around virtual private network (VPN) services to provide visibility into the tunnel overlay and underlying network infrastructure. With improved insights and better data, IT teams can provide clarity to executive teams to the current state of user connectivity, business-critical application access, and strategic efforts that drive business success.

Joint Use Cases

Use case #1 – Performance Visibility Enables Work From Anywhere: FortiClient + AppNeta provide insight into wireless metrics (signal strength, retransmits, etc.), Wi-Fi and VPN connections, host metrics, and hop-by-hop network path analysis that ensures that the WFA end-user experience is optimized for data, voice, and video traffic.

Use case #2 – Ensuring SD-WAN Deployment Success: FortiGate + AppNeta combine to deliver insight into baseline network metrics for data, voice, and video for new or existing deployments to ensure connectivity and performance continue to meet or exceed requirements. AppNeta continuously monitors all underlay and overlay network performance to ensure positive end-user experiences.

AppNeta Monitoring Points

- Continuously analyze end-to-end traffic

- Measure bandwidth per user, per app

- Capture metrics at the user host-level

- Validate network changes

- Identify hop-by-hop performance

Figure 1: Fortinet-AppNeta joint solution.
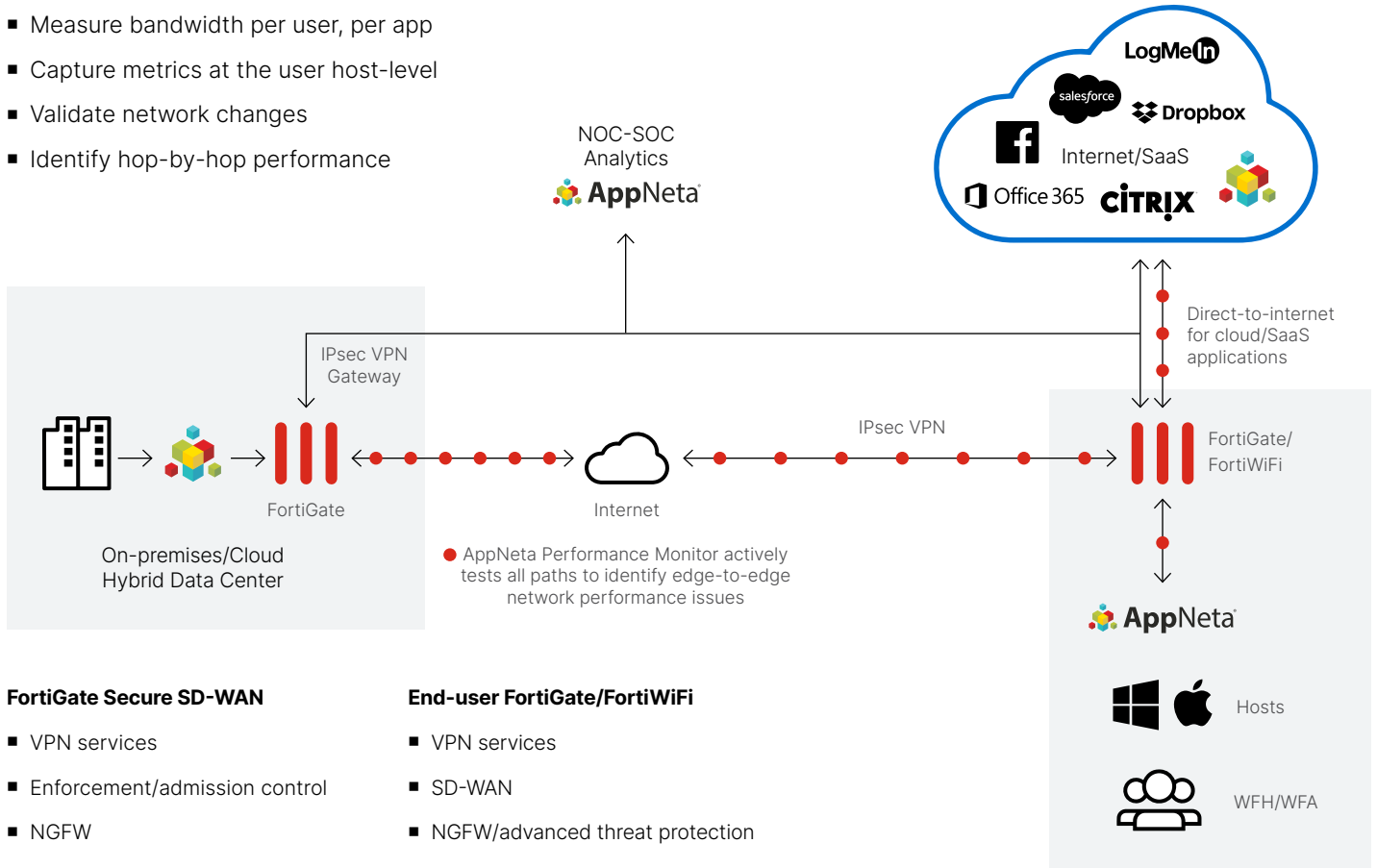
FortiGate Secure SD-WAN

- VPN services

- Enforcement/admission control

- NGFW

- Fabric connectors

- Dynamic policy

End-user FortiGate/FortiWiFi

- VPN services

- SD-WAN

- NGFW/advanced threat protection

- Dynamic security policies

- ZTP

About AppNeta

AppNeta is the only network performance monitoring solution that delivers visibility into the end-user experience of any application, from any location, at any time. With AppNeta's SaaS-based solution, IT and Network Ops teams at large, distributed enterprises can quickly pinpoint issues that affect network and business-critical cloud application performance, regardless of where they occur. AppNeta is trusted by some of the biggest Fortune 1000 companies, including 3 out of the 5 largest corporations in the world, as well as 4 out of the 5 largest cloud providers. For more information, visit www.appneta.com.

www.fortinet.com