SOLUTION BRIEF

Fortinet and Ribbon Communications Securing Your RTC Border

Security without compromise for real-time communications

Enterprises are adopting SIP-based real-time communications (RTC) to benefit from its cost savings, and extended resiliency. With this transition from legacy telephony to IP-based Unified Communications (UC) comes a new set of challenges. With SIP, unified communication (UC) applications become just another "data application" (versus voice), and data continues to move freely between devices, locations, and across network environments, including virtualized networks, remote offices, mobile workers, and public cloud environments, making it difficult to consistently track and secure.

Data comprises of voice and video communication routes that are popular tools of collaboration. As a result, they are also dominant threat vectors to get most exploited in SIP-based UC attacks. When targeted, they can bring down a communications system, and possibly result in exfiltration of confidential information, in addition to other debilitating effects. Now, with more enterprises using direct internet access for branch access (SD-WAN), security continues to evolve into a more challenging prospect. Not only do we need to secure the broader enterprise perimeter but also the many open ports of entry that can be exploited by threat actors.

The need of the hour is an integrated security solution that will not only offer unified visibility and control across voice and data domains, but also share intelligence, collaborate to detect and isolate threats, and synchronize increasingly automated responses to threats in real time to empower enterprises with the best possible security posture against new and existing attacks.

Solution Description

The Fortinet Security Fabric is designed around a series of open Application Programming Interfaces (APIs), Open Authentication Technology, and standardized telemetry data to address these challenges. It enables organizations to integrate existing security technologies via open interfaces to provide end-to-end security without compromise.

FortiGate Enterprise Firewall and Ribbon Communications Session Border Controllers (SBC) are integrated via the Fortinet Security Fabric interfaces to combine the capabilities of NGFW and SBC to deliver a comprehensive security solution with intelligent cyber-threat identification, security efficacy and deep visibility that results in rapid response times and mitigation of threats. The integration allows SBC nodes to push RTC contextual events to Fortinet's award-winning FortiGate enterprise firewall platform. This threat intelligence sharing of UC sessions information makes FortiGate "UC aware" and enables a fast and coordinated response in case of threats. This effectively raises the trust level of UC in the network and raises the overall security posture of the enterprise. By linking the two platforms at the control plane level, the NGFW and SBC now share important threat intelligence and work together to block current and potential new UCbased attacks. This level of collaboration is unique to the industry.

Ribbon Communications RTC

The Ribbon SBC platform is built for today's and tomorrow's real time communications including HD voice, video and UC. The Ribbon SBC platform provides all the features that enterprises and service providers require in an SBC today—robust network security,

Real-Time Communications Security

Protects the network, ensures customer privacy, and meet industry compliance requirements.

Threat-Intelligence Sharing

Solves the security isolation issue by sharing the threat intelligence derived by individual solutions across the RTC network.

Real-Time Communications Behavioral Analytics

Determine a well-defined baseline of what is categorized as "normal" activity is established. Deviations from this baseline can be quickly identified and mitigated.

Securely Scale

Completely protecting the RTC network as capacity requirements increase, starts with a deep understanding of attack vectors targeting SIP.

FORTINET Fabric-Ready

sophisticated routing and policy management, overload controls, SIP normalization—plus future-ready features such as IPv4-IPv6 interworking, multi-modal communication and built-in media transcoding, all with assured performance and scale under heavy traffic loads. Ribbon SBCs are specifically designed to address the unique real-time communications challenges that organizations face for security, interoperability and reliability.

FortiGate Enterprise Firewall

The Fortinet FortiGate network security platform provides high performance, layered security services and granular visibility for an end to end protection across the entire enterprise network. Innovative security processor (SPU) technology delivers high-performance application layer security services (NGFW, SSL inspection, and threat protection), coupled with the industry's fastest SSL inspection engine to help protect against malware hiding in SSL/TLS encrypted traffic. The 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.

The Fortinet Enterprise Firewall Solution delivers end-to-end network security with one platform, one network security operating system and unified policy management with a single pane of glass—for the industry's best protection against the most advanced security threats and targeted attacks.

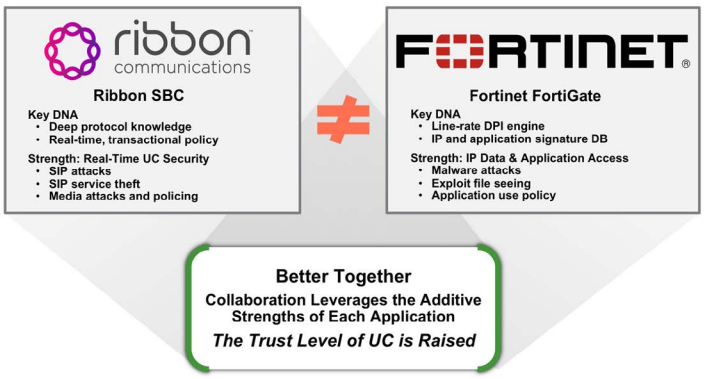

Figure 1: Aligning security strengths of RTC network elements.

Use Cases

In this new innovative solution, the Ribbon SBC shares threat intelligence information gathered from UC sessions with the Fortinet Fortigate.

1. The Ribbon SBC communicates with the Fortinet Fortigate firewallto extend critical provisioning and configuration information that allows a more secure and unified setup of SIP trunks for each enterprise customer. By exchanging SIP trunk security configurations with the firewall, SIP trunk security is effectively extended to the firewall. **The benefit is automated SIP security provisioning in the firewall resulting in reduced the security attack surface for SIP communications.**
2. The Ribbon SBC will share both black-list and white-list information with the Fortinet Fortigate firewall. This enables the two platforms to work in tandem to: 1) identify that the correct IP address pairs are allowed within a SIP trunk; and 2) block "bad actors" when identified. If the SBC detects "bad actor behavior" from a UC device, it can signal the firewall to take action and dynamically block access so the firewall will inherently block access in the future. The reverse is also true, in that the SBC can signal that certain end points are now white-listed and the firewall can remove them from the black-list. **The benefit is that bad behavior can now be identified and acted upon per IP address in near real time as well as triggering the firewall to block bad actors across other applications. This unifies the enterprise data and UC security perimeters.**

Summary

The integration between Fortinet FortiGate and Ribbon SBC provides an open, end-to-end fabric of security solution. By sharing threat intelligence information and taking advantage of the automation, the joint solution provides unprecedented UC security protection against data exfiltration via UC, UC registration floods, TDoS, and theft of service attacks.

About Ribbon Communications

Ribbon is a company with two decades of leadership in real-time communications. Built on world class technology and intellectual property, Ribbon delivers intelligent, secure, embedded real-time communications for today's world. The company transforms fixed, mobile and enterprise networks from legacy environments to secure IP and cloud-based architectures, enabling highly productive communications for consumers and businesses. With locations in 28 countries around the globe, Ribbon's innovative, market-leading portfolio empowers service providers and enterprises with rapid service creation in a fully virtualized environment. The company's Kandy Communications Platform as a Service (CPaaS) delivers a comprehensive set of advanced embedded communications capabilities that enables this transformation. To learn more visit RibbonCommunications.com.

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