

 Positive Technologies

5G-ready next-generation signaling firewall

positive-tech.com

Introduction

The Positive Technologies next-generation signaling firewall empowers mobile carriers to secure signaling networks, protect subscribers, and safeguard core assets from hacker attacks.

Positive Technologies is unique among telecom signaling security vendors in having both proven pedigree in traditional telecom protocols and extensive recognized expertise in general IT security. These skills and experience are combined to create a solution to comprehensively address the new consolidated 5G environment.

Effective against all attack types (GSMA Categories 1, 2, and 3)

- Denial of service
- Fraud
- Privacy violations
- Location tracking

Criminals are already performing denial of service, committing fraud, intercepting calls and text messages, tracking subscribers' locations, and stealing mobile operator data. These threats will continue to rise and must be addressed. With the next-generation signaling firewall from Positive Technologies, you can stand out from the crowd. Protect your bottom line, brand, and reputation, while earning customer trust and market recognition.

5G is slated to add general-purpose IT protocols, such as HTTPS and JSON, to support the telecom core. Coupled with expansion of the radio interface, these changes entail a significant shift in security focus. Positive Technologies has pooled experts from different security disciplines to create a team with in-depth 5G understanding and real-world security experience.

Stay ahead of the curve: signaling protection that's 5G-ready

**Positive Technologies
statistics based on
100+ security audits**



LTE networks are vulnerable
to denial of service attacks



attacks hit a mobile network
operator on average per day



of mobile networks put
subscribers at risk of geotracking



SMS messages can
be intercepted

Use cases

Protecting against attacks on core network and subscribers

5G will feature more components and greater complexity than previous-generation networks, potentially increasing the attack surface for hackers. Benefit from a next-generation solution with up-to-date, accurate, and complete data on exploits and malicious behavior patterns. Identify threats in real time as they emerge, get security status at a glance, and coordinate robust protection mechanisms to block illegitimate traffic.

Protecting against configuration errors

Despite security enhancements, 5G networks will need to be properly configured and implemented for those enhancements to be effective. When improperly deployed, configured, or managed, 5G equipment may be vulnerable to disruption and manipulation. Check the performance of your networks and make quick adjustments. With the Positive Technologies solution, you can easily implement specific tweaks such as SMS home routing settings, which have a profound impact and boost overall security.

Securing IoT ecosystems

The Internet of Things will change our lives by connecting homes, vehicles, and myriad other devices. Industry will be fully automated with multitudes of sensors to supervise the most critical and crucial environments. But placing critical infrastructure online also raises the cybersecurity stakes. With 5G, customers, businesses, and governments will demand rock-solid security from their telecom operators. Just one breach or downtime incident may be enough to drive away cautious clients or cause collapse.

The Positive Technologies solution for IoT builds on top of our existing services, focusing on the elements of the IoT's unique DNA. Operators gain a swift, effective way to address IoT-related risks originating at the device, network, and application levels.

**Security of IoT
requires knowledge
of its DNA**

**Device
Network
Application**



Instantly detect and prevent attacks on core network with a proven signaling security platform



In 2020, independent research and advisory company ROCCO has recognized PT Telecom Attack Discovery as a market-leading signaling firewall system for the second time in a row.¹

Real MNO feedback:

"Positive Technologies has deep expertise in signaling security and provides a user-friendly interface to work with"

"Performance is outstanding"

"Positive Technologies are real professionals in signaling security. The company has a very good product, amazing customer service, and huge technical expertise in this area."

"We have tested a few signaling FWs so far and from our experience PT is the best in terms of customization, integration, and hassle-free operation"

"Very reliable vendor with up-to-date solution"

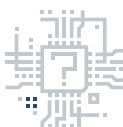
¹ [According to Rocco Signalling Firewall Vendor Performance Report 2020](#)

Benefits



Total real-time visibility and consistent protection

Identify all GSMA attack categories for the SS7, Diameter, and GTP protocols. Pinpoint targets and sources of illegitimate traffic—and respond decisively. Real-time notification capabilities have an immediate positive impact and boost the overall security level. Even better, they contribute the flexibility and intelligence needed to sustainably support 5G and the IoT.



Powerful threat intelligence

Deep knowledge of the signaling fraud market and security trends makes Positive Technologies expertise unique. Regular updates from our research team keep the Positive Technologies next-generation signaling firewall platform ahead of the latest vulnerabilities, attacks, and exploits targeting MNO networks.



Technical support from signaling experts

Signaling security is still a niche discipline. This is why Positive Technologies complements its solutions with ongoing access to the company's experts. You can discuss scenarios and learn based on your actual needs and experience, instead of abstractions. What's more, it helps to stay up to date with the ever-changing threat landscape.



More security with less effort

Finding signaling security pros can be next to impossible. Instead, deploy the Positive Technologies next-generation signaling firewall platform. This solution draws on our extensive experience with real-world clients and automates security processes. Focus on threats that really matter, while creating significant time and payroll efficiencies.



Compliance on the fast track

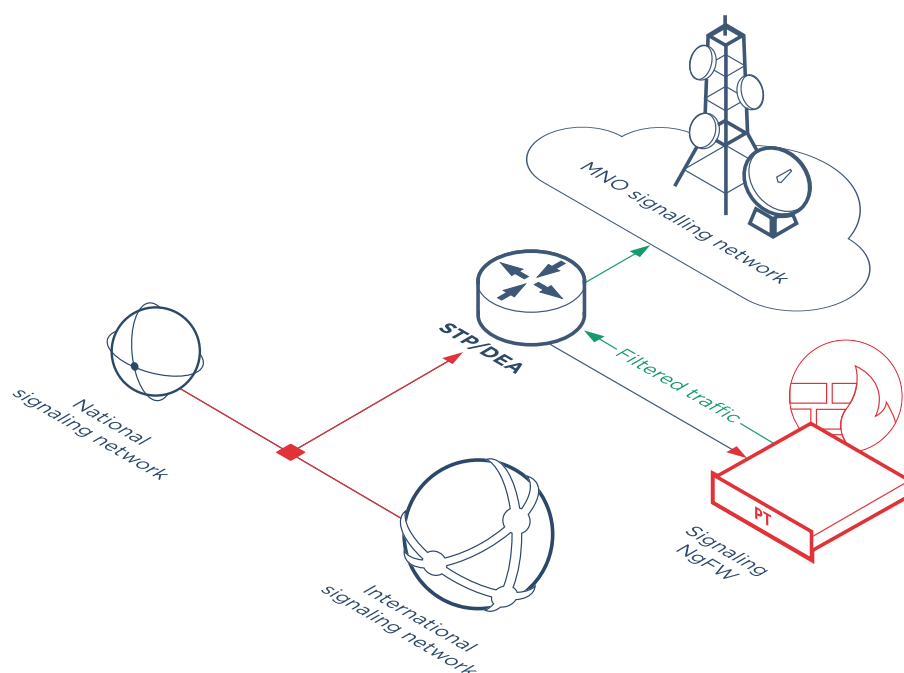
Need to prove compliance with GSMA (including FS.11, FS.19, IR.82, and CLP), GDPR, ENISA, FCC, or other regulations and best practices? Reporting in the Positive Technologies next-generation signaling fire-wall platform provides all the relevant information. Our experts can advise on how to stay compliant and avoid expensive fines.



How to deploy

The Positive Technologies next-generation signaling firewall delivers robust active protection with full performance and redundancy. Incoming traffic is checked for malicious attack patterns. Verified messages are looped back and passed on to the MNO core network.

With regular updates from our research team, this is a powerful way to prevent current and emerging threats from reaching your core infrastructure, assets, and subscribers.



Next-generation signaling firewall delivers robust **active protection**

How to migrate

A copy of signaling traffic is all that's needed to start performing analysis and securing core networks and subscriber data.

The Positive Technologies next-generation signaling firewall can analyze SS7, Diameter, and GTP traffic simultaneously to detect cross-protocol attacks, a new class of threats targeting all protocols in tandem.

When ready, our technical support and expert teams will help transition to active blocking mode, while maintaining full performance of all infrastructure and services.

Ready for a test-drive?

If you're ready to take a test-drive, contact us at contact@positive-tech.com to turbocharge your core network protection level. We will guide you through the preparation phase and major project milestones:



Company story

Positive Technologies is a global cybersecurity company. Its flagship Telecom Cybersecurity Suite enables network operators to drive business performance while protecting their subscribers and services. By providing greater visibility into infrastructure vulnerabilities and securing customer services, Positive Technologies helps to strengthen loyalty, drive revenue with value-added security offerings, and protect emerging telecom technologies such as 5G and the IoT.

Since 2012, Positive Technologies has continually proven its global leadership, vision, and expertise in telecom security. As a separate business entity based out of Europe, Positive Technologies was rolled out in 2019.

Positive Technologies operates globally with offices and staff in the UK, Italy, Czech Republic, Russia, Brazil, and South Korea. The company employs dozens of experts with deep knowledge of cybersecurity and telecom-related specialties, including vulnerability research, reverse engineering, pentesting and social engineering, and forensic analysis.

The company employs
dozens of experts with deep
knowledge of cybersecurity
and telecom-related specialties

Telecom expertise

Positive Technologies experts have pioneered research into telecom security. They were the first to discover the security issues associated with SS7 back in 2014, showing how such flaws could be exploited for everything from remotely intercepting phone calls to bypassing 2FA for access to social media profiles.

Testing has repeatedly shown that exploits—including signaling fraud attacks, customer data theft, and SMS interception—are still possible on all examined networks despite the advances in LTE and now 5G.

The Positive Technologies Telecom Cybersecurity Suite—consisting of PT Telecom Attack Discovery, PT GSMA Compliance Check, PT Signaling Firewall, and Telecom Security Assessment—is designed to assist operators in addressing these vulnerabilities. Positive Technologies continues to lead research and development in the field, with papers dedicated to network security for smart city technology, as well as development of a dedicated 4G and 5G assessment service.

Products in the Positive Technologies Telecom Cybersecurity Suite are widely regarded as market-leading by industry analysts. PT Telecom Attack Discovery was listed in Gartner's Operational Technology (OT) Security Market Guide in 2016 and analyst house Ovum placed it on the radar for its important role in telecom security in 2017. Rocco Research, a leading telecom market research company, named Positive Technologies a tier one provider for 2018.

Positive Technologies is an active member of the GSMA, for which it provides valuable insight as one of the few security vendors in the GSMA's Fraud and Security Group. Positive Technologies researchers often speak at the GSMA, share experience, and participate in shaping industry guidelines. Researchers regularly present at cybersecurity events, appear in the press as quoted experts on telecom security, and advise other telecom organizations such as the ITU, run by the UN.



Associate
Member

About Positive Technologies

Positive Technologies is a global cybersecurity company. Its flagship Telecom Cybersecurity Suite enables network operators to drive business performance while protecting their subscribers and services. By providing greater visibility into infrastructure vulnerabilities and securing customer services, Positive Technologies helps to strengthen loyalty, drive revenue with value-added security offerings, and protect emerging telecom technologies such as 5G and the IoT.

positive-tech.com
contact@positive-tech.com