CASE STUDY

Spirent Landslide 5G Test Platform

Powers Korean Operator's NSA/SA Expansion

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Customer Overview

With demand for 5G growing across South Korea, operators are moving quickly to augment their Non-Standalone (NSA) and Standalone (SA) capabilities. But ensuring reliability, maximum availability and high-performance connectivity amplifies the need for rigorous testing before deploying new systems.

To enable a more versatile, competitive 5G network, a leading Korean wireless operator sought to expand its network infrastructure. A global communication technology provider was positioned to deliver a 5G NSA platform as a Proof of Concept (PoC), which, if successful, would lead to both NSA and SA implementations. However, testing of the NSA system proved challenging using the operator's existing test suite. Spirent partner ERK Solution Co. teamed with the technology provider to define and deliver a solution that could meet the operator's stringent performance demands.

The Challenge

To deliver new platforms to this leading 5G network operator, the communications technology provider needed to show that its solution could yield high performance and stability. This required testing beyond the operator's current testbed capabilities but was essential to prove that the new systems would support the requirements needed to compete in a fast-growing 5G market.

Key Requirements

The network operator needed a high-performance test environment to measure 5G NSA performance at 200 Gbps, and to cover all design verification tests. In addition, testing needed to simulate a range of components of the 5G core under demanding conditions and ultimately provide stable, accurate testing of NSA and SA systems.

The operator's existing testbed could not support these conditions, impeding reliable testing under the most strenuous environments and preventing a full-featured PoC implementation.

Highlights

- Landslide enables high-performance, high-stability testing of both 5G NSA and SA networks
- With support from Spirent's technical experts, the technology provider and integrator team created a 5G NSA Proof of Concept (PoC) platform that supported testing at 200 Gbps—a key requirement from the operator
- PoC performance led to the operator implementing the NSA solution, with testing now underway for an SA solution

Spirent Solution

The ERK Solution Co. team, having long-established relationships with the technology provider's engineers, proposed Spirent's Landslide 5G Core Network Testing platform. Landslide is a highly flexible solution that can emulate high volumes of traffic to better simulate real-world conditions either on Spirent hardware or virtual infrastructure. Landslide can also be deployed via cloud infrastructure to effectively measure cloud-native VNF/CNF performance. In contrast, the testing product in use by the operator worked only on virtual infrastructure and provided limited flexibility and capability.

Landslide's ability to replicate extreme test scenarios was crucial to benchmarking the solution. Since the operator's test environment could not provide sufficient stability to measure 200 Gbps throughput, they had no way to verify the performance of the proposed solution.

But key to the solution is Landslide's ability to simulate both 5G NSA and SA deployments; the testbed in place at the operator at that time could not support 5G SA, giving the Landslide-based solution another critical advantage by offering the operator a path for comprehensive testing for the future.

To ensure smooth operation of the PoC, Spirent and the solution partners built an initial testing environment: the technology provider created a network with switching and 5G core products, while ERK engineers, supported by Spirent's technical resources, implemented the Landslide technology. The Spirent team's responsiveness ensured that the integration of the test environment went smoothly and that Landslide was configured optimally. Tests in this environment validated the stability and performance of the solution. Once tuned and evaluated to ensure smooth integration with the operator's network, the PoC solution was delivered to the operator for real-world trials.

> With Spirent Landslide, we can test more easily and in less time versus the competition.

Mr. GG Lee, President
ERK Solution Co., Ltd.

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About Spirent

Spirent Communications (LSE: SPT) is a global leader with deep expertise and decades of experience in testing, assurance, analytics and security, serving developers, service providers, and enterprise networks. We help bring clarity to increasingly complex technological and business challenges. Spirent's customers have made a promise to their customers to deliver superior performance. Spirent assures that those promises are fulfilled.

For more information visit: www.spirent.com

Results

The Spirent technical team's quick support for configuring and fine-tuning Landslide, along with ERK's expertise in creating test environments, and the technology provider's familiarity with the operator's processes and infrastructure, ensured that the 5G platform delivered stable performance and advanced features that will help the operator compete in a fast-growing market.

The operator was able to achieve its objectives for function, performance, and stability tests within a tightly-defined timeframe—much faster than the testing solution that was in place. Also, the proposed 5G NSA solution, which includes Landslide, was not only more capable, but highly cost-effective, providing further incentive to the operator.

As a result, the operator selected the team's solution for 5G NSA. In addition, testing is underway for 5G SA solutions, and Landslide's capabilities will be essential in ensuring performance, stability, and functionality for the operator and its customers.

> The network operator's existing test technology for 5G core could not cover all DVTs (design verification tests). Spirent supports more features and has a faster product roadmap than competitors.

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