

SMART DATA: THE KEY TO 5G ASSURANCE AND SECURITY

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Effective Monitoring from Edge to Core Vital in Distributed Multi-Cloud Network Environments

For service providers, the key to overcoming 5G challenges and delivering a superior end-user experience comes down to understanding what is happening in the network. This requires extensive visibility.

Exactly how quickly 5G will sweep the nation and the world is up for debate, but the reality is that it is coming. In fact, according to recent reports, the number of 5G connections is forecast to reach between 20 million and 100 million by 2021 – and possibly even higher. Spending on 5G mobile infrastructure for that same year is forecast to be at around US \$2.3 billion.

While this 5G wave represents enormous opportunity, it also creates significant challenges for carrier service providers (CSPs). The disaggregated network functions of 5G with cloud RAN, Control and User Plane Separation (CUPS), network slicing, new 5G disaggregated core, edge cloud, NFV, SDN, containers, micro-services, and more will bring greater complexity, security vulnerabilities, and service visibility challenges with them. Solving them will require two things: Pervasive visibility and smart analytics.

1. Pervasive Visibility Will Drive 5G Service Assurance

For service providers, the key to overcoming 5G challenges and delivering a superior end-user experience will come down to understanding what is happening in the network. This will require pervasive visibility across a distributed multi-cloud network environment, which means effective monitoring across both edge and core deployments. For this, you need flexible, cost-effective instrumentation that can be deployed across both physical and virtual environments throughout the hybrid network environment.

To attain this visibility, service providers should look to drive value from IP traffic by turning it into smart data. Smart data – analytics-ready meta data collected and optimized from traffic flows in real time – can offer providers holistic, real-time visibility of their network, services, technologies, and subscribers. Smart data is so valuable because it is imbued with user experience covering all devices, network infrastructure, and applications consumed. Smart data is contextual, timely, relevant, structured, and compact.

Ultimately, smart data is worth its weight in gold because it helps to identify problems before they impact service, which is essential to providing a quality customer experience. Smart data is also the fuel for smart analytics, which can be used to identify which aspects of network performance and devices are responsible for churn.

2. Smart Analytics Key to Improved Security

As service providers embark on 5G rollout efforts, they need to bake in a strategy to secure the expanded attack surface of virtualized infrastructure against advanced persistent threats. Providers will need a scalable, real-time analytics solution that offers early warning of anomalous behavior detection to prevent service disruptions, as well as threat mitigation with on-demand cloud resources. Here too, smart data and smart analytics will be key to advanced threat management for security operations.

As service providers continue to invest in and evolve their networks and operations to support digitalization with 5G, edge computing, and virtualization technologies, they should plan for smart protect assets that they can't see.

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