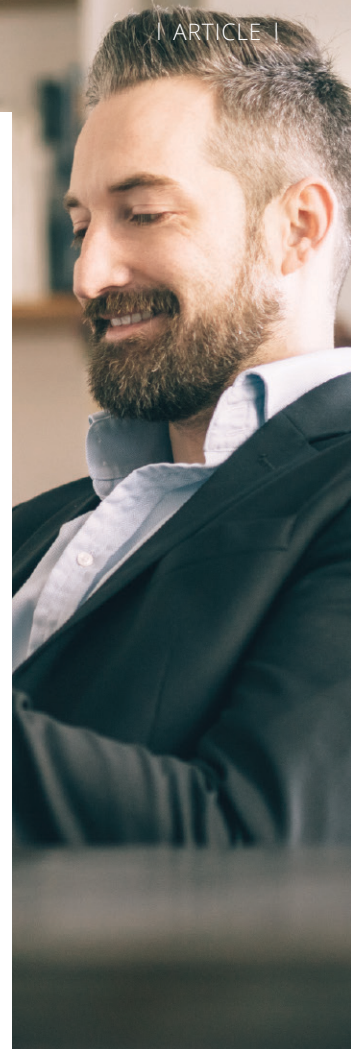


# VIRTUALIZATION PICKS UP THE PACE FOR 5G CRAWL, WALK, AND RUN DEPLOYMENTS



**John English, Director of Marketing,  
Service Provider Solutions, NETSCOUT**

The application of virtual technologies including network functions virtualization (NFV) and software defined networking (SDN) to 5G networks is essential if 5G is to be deployed and operated at a sustainable cost.

Markets such as the US and South Korea are leading the way in terms of deployments with the major service providers in both countries well advanced in their network deployments. These providers are utilizing their new 5G capacity to provide services such as fixed mobile broadband, which makes use of the 1Gbps capability, that 5G offers. This has valuable enterprise applications and is supporting software defined wide area network (SD-WAN) services, which are increasingly seen as a way to achieve 5G monetization.

However, these baby steps illustrate that both virtualization and 5G are being deployed on a crawl, walk, and run basis. We're still very much in the crawl phase, with service providers tentatively deploying both technologies in contained parts of their networks and businesses so they can learn how these technologies work and understand how to deploy them most efficiently.

Both technologies are reliant on a series of other technologies for their deployments to be a success. Both need tools that enable intelligent visibility into the network so clear, actionable insights can be generated to feed automated systems and enable performance to be managed and automation to be controlled. After all, power is nothing without control and virtualized network will need accurate control as a fundamental capability.

The good news is these tools, themselves designed as virtualized software exist to gather data, analyze it, and present it in a way that is actionable by service providers' other systems. Critically, the days of expensive hardware probes to reactively report on network performance are over. These are still applicable in trial phases when new networks are established but as the scale and scope of 5G deployment accelerates towards the running phase, only software based network assurance will be able to scale up, handle the volume of data involved, and do so at a sustainable cost.

The exact nature of the services of the future is still unclear and the killer apps for 5G are yet to emerge. However, universal requirements that remain the same regardless of what the services turn out to be are now apparent. They all rely on visibility into the network and gaining insights to enable predictive rather than reactive responses to network issues. Such tools also have the ability to provide immense help in setting up virtualized networks, most immediately 5G.



**Corporate Headquarters**

NETSCOUT Systems, Inc.  
Westford, MA 01886-4105  
Phone: +1 978-614-4000  
[www.netscout.com](http://www.netscout.com)

**Sales Information**

Toll Free US: 800-309-4804  
(International numbers below)

**Product Support**

Toll Free US: 888-357-7667  
(International numbers below)

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