

Bullet Proof Your Network, Don't Rely on Estimations



Susan Becker, 2013-21-01

The Real-time dynamic of Diameter signaling: Beyond calculations

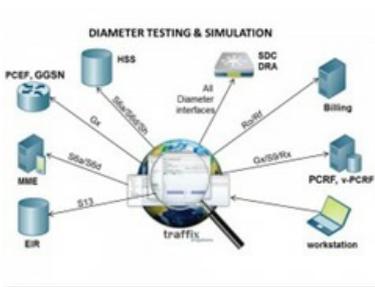
Estimating the volume of signaling is exactly that... an estimation. The telecom ecosystem is filled with so many factors that can radically change signaling volume at any second making calculations irrelevant. Although helpful for an intellectual discussion, formulas for signaling volume calculations do nothing to protect a network.

There are many factors that influence Diameter signaling volume, however I'll point out a few that explain why it is almost impossible to quantify in a way that works as a general estimation:

- The number of smart phones and the various types of phones used in a network
- What apps customers are using on their smart phones, how often and where
- Is the operator using real-time billing control which means there is active use of an Online Charging System (OCS)
- What special policies are applicable as each policy requires various levels of interaction with a PCRF
- Both the number of LTE network elements and the number of times a network node goes down and is rebooted, generating skyrocketing signaling messages
- External events like holidays or public events during which everyone is tweeting or posting photos on Facebook, or streaming live videos from a conference of tens of thousands of participants...
- Which interface is being used to transport the message and the size of the signaling message
- What services and applications are being supported at the particular transmission
- What release (version) of the various Diameter protocols is used, as some releases have combined charging information in one message and others require separate messages

Bullet-proof your network with a real simulation suite

In short, Diameter protocol is a relatively new protocol in a telecom network, having been introduced in RFC 3588 in 2003 and has unpredictable behavior. The volume of signaling generated is an unforeseen, dynamic occurrence that requires real planning by using a real simulation suite that can test actual network elements in deployment scenarios. And this is the only way to truly "bullet-proof" your network from the endless factors that can cause the signaling storm.



The F5 Traffix Diameter Testing and Simulation Suite was not developed just for marketing purposes. Rather it was an integral part of the R&D process in developing the Traffix Signaling Delivery Controller a multi-functional Diameter solution for routing, load balancing and gateway connectivity. When operators use the F5 Traffix Diameter Testing and Simulation Suite, operators have the full view including the "worst-case" scenarios of deploying the actual network node.

The F5 Traffix Diameter Testing Suite prevents downtime, maximizes revenue, and enables faster deployment. By using the Suite operators can constantly maintain high network performance and availability, leading to an excellent customer experience and is available with the deployment of the F5 Traffix Signaling Delivery Controller.

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