

SIP Performance Benchmarking (BMWG)
draft-poretsky-sip-bench-term-04.txt
draft-poretsky-bmwg-sip-bench-meth-02.txt

SIPPING WG, IETF-71
Philadelphia
March 2008

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IETF's Benchmarking Methodology Working Group (BMWG)

- BMWG is in the Operations and Management Area
- BMWG writes recommendations for benchmarking the performance characteristics of internetworking technologies
- Documents are Terminology and Methodology
- Benchmark Requirements
 - Benchmark a Single DUT or SUT
 - Benchmarks devices in the lab, not live networks
 - Benchmark performance, not conformance
 - Black-Box Benchmarks, Not White-Box
- Methodology must be repeatable
- Benchmarks must be comparable

<http://www.ietf.org/html.charters/bmwg-charter.html>

Motivation

- Problem Statement:
 - Service Providers are now deploying VoIP and Multimedia using the IETF developed Session Initiation Protocol (SIP).
 - Industry lacks common terminology for SIP performance benchmarks
 - SIP allows a wide range of configuration and operational conditions that can influence performance benchmark measurements.
- Goals:
 - Service Providers use the benchmarks to compare performance of RFC 3261 network devices
 - Vendors and others can use benchmarks to ensure performance claims are based on common terminology and methodology.
 - Benchmark metrics can be applied to make device deployment decisions for IETF SIP

Industry Collaboration

- BMWG to develop standard to benchmark SIP performance of a single device
- SIPPING and BMWG Chairs met in Montreal to discuss this SIP Performance Benchmarking work item as it was first opened in BMWG
- PMOL WG developing standard to benchmark end-to-end SIP application performance.
- SPEC to develop industry-available test code for SIP benchmarking in accordance with IETF's BMWG and SIPPING standards

Relevance to BMWG

-----Original Message-----

From: Romascanu, Dan (Dan) [mailto:dromasca@avaya.com]

Sent: Sunday, June 25, 2006 6:00 AM

I believe that the scope of the 'SIP Performance Metrics' draft is within the scope of what bmwg is doing for a while, quite successfully, some say. On a more 'philosophical plan', there is nothing that says that the IETF work must strictly deal with defining the bits in the Internet Protocols - see <http://www.ietf.org/internet-drafts/draft-hoffman-taobis-08.txt>. And in any case, measuring how a protocol or a device implementing a protocol behaves can be considered also 'DIRECTLY related to protocol development'.

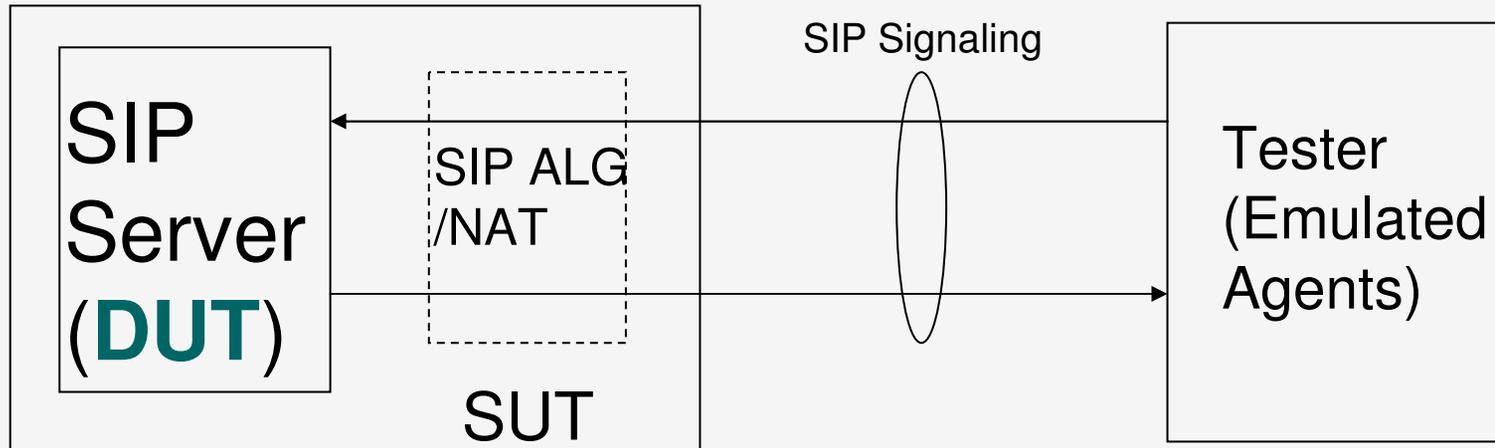
-----Original Message-----

From: nahum@watson.ibm.com [mailto:nahum@watson.ibm.com]

Sent: Friday, May 26, 2006 2:51 PM

SPEC wants to develop and distribute common code for benchmarking, as is done with SPECWeb a SPECJAppServer. That code can and should use the standardized performance definitions agreed to by SIPPING and/or BMWG.

Scope



- Terminology defines Performance benchmark metrics for black-box measurements of SIP networking devices
- Methodology describes how to measure the metrics for a DUT or SUT
 - DUT MUST be a RFC 3261 compliant device and MAY have SIP Aware Firewall/NAT and other functionality
 - SUT MAY be RFC 3261 compliant device with a separate external SIP Firewall and/or NAT
- Benchmark
 - Control Signaling in presence of Media, not media itself
 - SIP Transport (TCP, UDP, TLS over these)
 - Invite and Non-Invite scenarios

Benchmarks

- Maximum Session Establishment Rate
- Maximum Registration Rate
- Maximum IM Rate
- Session Capacity
- Session attempt performance
- Session setup delay
- Session disconnect delay
- Standing sessions

Next Steps

- Get this work item on BMWG agenda
- Solicit input from SIP/SIPPING WGs
- Have SIPPING expert review final draft at BMWG's WGLC