One-Way Active Measurement Protocol

Accelerate Performance of Network Equipment Handling One-Way Active Measurement Protocol Traffic

The One-Way Active Measurement Protocol (OWAMP) was developed by the IP Performance Metrics Working Group (IPPM) as a part of the Internet Engineering Task Force (IETF). Specified in RFC 4656, OWAMP creates a process by which one-way measurements such as latency and packet loss may be made.

OWAMP is the umbrella specification for two underlying protocols: OWAMP-Control (OWAMP-C) and OWAMP-Test (OWAMP-T). OWAMP-C runs over TCP port 861 and is responsible for the negotiation of the various parameters necessary to successfully complete the measurements. Additionally, this protocol handles the communication of the measurement results back to the initiating host. The OWAMP-T protocol actually sends the test packets, which are used to calculate the appropriate metrics. This protocol runs over a UDP port to be negotiated within the OWAMP-C session. Additionally, the IP address of the sender and receiver are negotiated as well, allowing physical separation of the OWAMP-C and OWAMP-T endpoints.

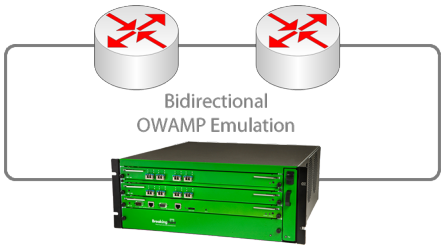
BreakingPoint Testing Tools Emulate Gnutella:

- Emulate all aspects of the Gnutella protocol including ping, query and push, and the HTTP used for file transfer.
- Blending other applications with Gnutella provides a mechanism to ensure QoS on mission critical applications even when Gnutella traffic is present.
- Utilizing BreakingPoint's Gnutella protocol can help network equipment manufacturers and service providers properly test equipment that must handle the Gnutella application protocol for performance and security.

In some instances, interference by intermediaries within the network may result in obscured test results. In order to reduce this impact, OWAMP was designed to be difficult to detect and manipulate. This is the primary reason for the negotiated UDP ports within the OWAMP-C session.

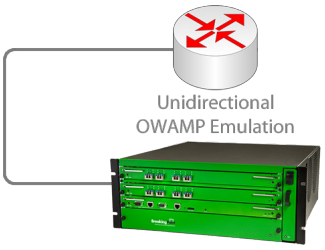
Utilizing BreakingPoint Application Simulator test component, BreakingPoint allows users to emulate both ends of an OWAMP session.

Figure 1 - Typical OWAMP Traffic Generation Test Bed



BreakingPoint is able to act as both clients and servers for the OWAMP protocol. Using Application Simulator, users are able to generate realistic background traffic utilizing blended applications and determine the effects of such traffic on measurement protocols such as OWAMP.

Figure 2 - OWAMP End-Point Test Bed



The BreakingPoint Elite is able to perform advanced testing of inline devices that act as OWAMP endpoints. This capability allows for the functional testing of network devices that report IPPM metrics.

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