

Tencent QQ Instant Messaging Protocol

Accelerate Performance of Network Devices Handling QQ IM Protocol Traffic

Instant messaging services have become a critical communication tool throughout the world, attracting more than one billion active users to services such as AOL Instant Messenger, IRC, Windows Live Messenger, and Yahoo! Messenger. While these names are instantly recognizable, Tencent Holdings' QQ Instant Messenger has rapidly become a vital cog in the instant messaging industry. With more than 800 million registered users and over 300 million active users monthly, QQ IM has become a powerhouse in a field of the world's most recognized brand names.

Originally launched in February 1999, Tencent originally branded their new instant messaging platform OICQ, an acronym for "Oriental ICQ". This name was then changed to QQ due to potential trademark infringement on Mirabilis' ICQ ("I Seek You") instant messaging client. In its early stages, QQ provided free registration access to anyone but for a brief period between 2002 and 2003, QQ charged a fee for new members. With backlash from consumers as well as increasing competition from U.S. based IM services, Tencent moved to a tiered structure with free registration for the bottom tier.

The interaction between the client and QQ IM servers begins with the client requesting authentication and login to several different QQ servers. There are two possible results from this transaction: deferred or accepted. If the authentication request is deferred, the QQ client will then attempt another request to a different QQ server. Once the authentication is accepted by a QQ server, the client then performs post-authentication tasks. These tasks include basic synchronization of buddy lists and current user status. Once these tasks have been completed, users are then allowed to communicate with the buddies on their list.

BreakingPoint Elite simulates the entire transaction set necessary to emulate QQ IM effectively. First, DNS requests are issued for the QQ IM login servers. Once the servers have been resolved, the client attempts to login. Once the login request has been accepted, users can actually control how many different messages are sent between the buddies, as well as the time delay between each of these messages. Once the chat is complete, a logout command is issued to terminate the IM session.

BreakingPoint Testing Tools Emulate the QQ IM Protocol:

- BreakingPoint emulates the most popular Chinese instant messaging protocol, QQ IM with a single, easy-to-use testing unit.
- Simulate the login server DNS resolution combined with the QQ IM authentication, synchronization, and chatting.
- Fully test the impact of QQ IM's use of multiple character sets and unique fonts on your network devices with blended applications.

Utilizing BreakingPoint Elite to generate QQ IM traffic has multiple benefits. Being China-based, QQ IM utilizes multiple character sets and is known for being classified as adware. These are both characteristics that could potentially lead to performance and security issues within your network. The ability to generate QQ IM traffic blended with the other applications on your network helps to ensure interoperability, performance and security.

IM Market Share - China

Source: EQO Communications (July 2008)

