Stratus 2 Released, Takes Peer to Peer in Flash to New Levels

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Adobe have just announced the immediate availability of the version 2 of Stratus, an update to the existing Peer 2 Peer rendezvous service that was launched in 2008.

In Adobe's words: "Adobe Stratus 2 enables peer assisted networking using the Real Time Media Flow Protocol (RTMFP) within the Adobe Flash Platform. The most important features of RTMFP include low latency, end-to-end peering capability, security and scalability. These properties make RTMFP especially well suited for developing real-time collaboration applications by not only providing superior user experience but also reducing cost for operators."

While this sounds like the same capabilities that the previous version of Stratus offered it contains some significant updates, the main one being support for RTMFP Groups.

As you can probably guess from the name, Groups allows you to target a specific group of connected Flash Player peers and treat them like - for example - a particular room of users in a chat application. Groups will allow for FMS-like real-time enabled applications to be developed on top of Stratus, in a peer to peer environment, but without requiring a server technology to manage or relay the data that is being sent from user to user.
Other updates include the support for direct routing, which is comparable to a Client.call on FMS. Direct routing allows for data messages to be sent to a specific user within a group. Posting and Object Replication are now also supported.

Another major feature update is that of Application-Level Multicast. This feature essentially makes high bitrate broadcasts such as video and audio streaming infinitely scalable, provided that there is a large audience of peers available to re-transmit the data. This can potentially mean immense savings on bandwidth costs since data is being broadcast through a mesh of connected Flash Player peers rather than through a cluster of servers.

Lastly, an upcoming version of Flash Media Server will also support a rendezvous service such as the one that Stratus 2 offers - remember that a rendezvous service is always needed before peer connections can be made. However once the peer connections are established no more data will flow through the server.

RTMFP Groups is a massive feature, and so far hugely underestimated in terms of the potential it offers. I've seen very few mainstream technology blogs picking up on this yet, but if Adobe executes this properly it could be a real game-changer for real-time collaboration and large scale live streaming, in particular given the pervasiveness of the Flash Player. Moreover, there are already several examples of basic P2P file sharing with Stratus and Flash/AIR. Oh yes.

The Stratus page on labs is here, and there's more info on Groups here.