Multiple Message Datagrams

Diagnostic from sender side

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When multiple messages are destined for the same target node/socket, they may be concatenated into a single datagram, assuming a maximum datagram size is not exceeded. The new Java-based client side has detected some strange datagrams that apparently consist of more than one message. To be sure, almost always, multiple messages are successfully concatenated. But occasionally, parsing them is problematic. This note explores how to diagnose the problem from the server side.

`LOOPFMON` is an example of a local application that monitors datagram traffic in and out of the local node. It can be set to capture 56 bytes from each datagram that is sent to and/or received from a given target node/socket. It does this by making a local request for the `NETFRAME` data stream. This basic technique may be useful for analyzing the problem described here.

Monitor datagrams that are transmitted to the Acnet port of any node. Scan the contents of the datagram to parse each message and check for certain possible errors in the Acnet header. To pass the examination, require that each message include an Acnet header that looks sensible and that the sizes of all messages add up to the total datagram size. For cases in which it does not, note why it did not and capture at least some of the datagram.

This diagnostic will monitor the results of underlying software that is somewhat obscure. A caser that will be difficult occurs what fragments are transmitted, in which case the datagram is not contiguous. It may be best to ignore datagram fragments.