ABS Tech Note: SNA•ps19 System Heap Fragmentation (5/93)

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TOPIC ---

This Technical Note describes problems which may occur in a system where the system heap cannot grow because of memory fragmentation.

DISCUSSION ---

Introduction

The SNA•ps Gateway uses the Macintosh system heap to dynamically allocate space for data structures. These data structures are used to manage the connections between the SNA•ps clients and gateway. If the data structures cannot be created, then no new connections can be opened to the gateway, until more memory becomes available.

Memory can become available in two ways. Either memory that was previously in use is released, and can be reused by the SNA•ps Gateway, or the system can increase the size of the system heap.

Under normal conditions, the system heap can grow to handle the increased need for memory space. In some situations it cannot. This can occur even though the machine has memory available. The system heap can only grow into memory that is contiguous with the existing system heap. If an application is occupying memory that is adjacent to the system heap, the heap will not be able to grow. The SNA•ps Gateway will be not be allowed to dynamically allocate memory for new connections until the application exits and frees up contiguous memory space.

Example of the Problem

If the following error message or a similar message is received when trying to make a SNA•ps Gateway connection and there should be more Gateway connections available the problem may be caused by the Macintosh system heap fragmentation.

"Sorry, there are too many clients connected to the gateway already. Please try again, or run SNA•ps Admin on the gateway machine".

If this error is caused by Macintosh system heap fragmentation the solution is to quit the application in low memory. Determining the application in

low memory may be difficult, if you are unable to you may have to quit all other applications make the Gateway connection and then start up the applications.

Keywords: <None>

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