OS/400 TCP/IP Tuning: MTU AND WINDOW SIZES

Your AS/400 may be running TCP/IP at a disadvantage unless you've changed some IBM default settings:

**Minimum Transfer Unit (MTU) size**

**TCP/IP window size**

**MTU** limits the size of the largest packet transmitted by your AS/400. The default MTU size of 576 bytes is designed to be effective over dial-up connections.

Alas, it is much lower than the most efficient values for Ethernet and Token-Ring, which can handle 1500 and 2000 bytes, respectively.

The result is that your AS/400 must chop data up into three times as many packets to send it - very wasteful and a huge performance sink on today's fast LAN and Internet networks.

Matching the MTU size to the best one for a particular physical interface will improve network efficiency markedly. You do this by editing each TCP/IP route in your OS/400's routing table (usually there is just one, the default route, but you may have more):
1. **GO CFGTCP**
2. Select option 2, *Work with TCP/IP routes*
3. Edit the desired route - *DFTROUTE* for example
4. Change the Maximum Transmission Unit to *IFC*

![Image of CGTCP interface]

This sets the MTU to the most efficient value for the interface supporting that route. For example, if your default route is an Ethernet port leading to your Internet gateway, the *IFC* value will automatically change the MTU for packets on that path from 576 to 1500.

The other default value to change is the **TCP/IP window size**, which governs how much data can be "in the air" waiting for an acknowledgment. Here again IBM has been overly conservative - the *window size defaults to just 8 K*, when today’s reliable networks can easily juggle much more. Fixing this will have a noticeable effect on performance - the larger the window, the better the performance. Too large a window size results in buffer overruns, which can cause retransmissions and degraded performance, so you may have to experiment a bit. A good bet is to start with **32 K or 64 K**. Here's how to do it:
1. **GO CFGTCP**
2. Select option 3, *Change TCP/IP attributes*
3. Change the send and receive buffer sizes
4. Restart TCP/IP