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SNA•ps 1.1: Memory Configuration Running on Token Ring Card

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TOPIC -----

I need the memory profile of the newest version of SNA•ps, running on the new 4/16 Token Ring card. I need to know how much memory to buy for the cards that will be hosting the gateways. I need figures for both APPC and terminal sessions. I also need memory options for the new Token Ring card and the Serial NB card acting as a SDLC link.

How many APPC sessions can the old card accommodate in client mode? Does the new API take up significant space?

DISCUSSION -----

Apple SNA•ps version 1.1 is the only version to run on the new Token Ring NB card. The new card uses TokenTalk 2.4, which uses about 54K of RAM on the card, and after SNA•ps is loaded there is 1K for the gateway configuration file information. You will see below, that it IS IMPOSSIBLE TO RUN SNA•ps 1.1 on a 1/2 MB card.

The old TokenTalk 2.2 took 12K of RAM. With SNA•ps 1.1 loaded, it left around 43K for configuration, which allowed very small gateways (6-8 3270 sessions or 1-3 APPC sessions).

If you're using the Apple Serial card to operate as an SNA SDLC gateway, you have the entire 54K RAM for configuration. So configurations with up to 32 3270 sessions are possible.

Coax gateways ALWAYS fit in 1/2 MB RAM.

Minimum Memory Usage Computation

In order to run a gateway, you must configure objects on that gateway. The description here gives a procedure that you can use to compute the amount of memory required for a given configuration.

The table gives the total amount of memory the various configured objects use. Add the values for your configuration.

7490 Gateway Overhead (always required)
 250 Line
 1160 Host Partner
 690 Peer Partner
 270 6.2 LU (Local LU) -- each one configured
 1930 3270 LU -- each one configured
 270 Local LU user or Profile
 190 Transaction Program -- each one configured
 190 Transaction Program User
 1100 Remote LU with parallel sessions enabled
 120 Remote LU without parallel sessions disabled -- each one configured
 200 Mode -- each one configured
 1600 Each 6.2 Peer Session
 2100 Each 6.2 Host Session

In addition to the memory above, there is a factor for the allocation of data buffers you must make based on the largest BTU configured. The following table indicates the multiplier. Multiply the number obtained by adding up all the individual requirements above by the multiplier given below.

MAX BTU SIZE	Multiplier
0 - 265	1.43
266 - 521	2.00
522 - 1033	2.50
1034 - 2057	3.33
2058 - Larger	5.00

After completing this computation, you must add in the memory required for the link buffers. If there are any Local LUs (6.2 LUs) in the configuration, add 8 times the size of the largest BTU configured to the total. Additionally, if this is a Token Ring configuration, add 160 to the total, and also add 8 times the size of the largest BTU to the total. The result is the final amount required.

Here are some real examples:

1) SNA•ps 3270 with 2 LUs and NO LU 6.2 LUs.

GW overhead	7490
Line	250
Host Partner	1160
3270 LU	1930
3270 LU	1930
 Total	 12760

If you use a BTU size of 265 (slow performance) then take $12760 \times 1.43 = 18247$ (this won't fit with TokenTalk 2.4 on any Token Ring card from Apple with 1/2 MB RAM).

If you use a BTU of 1033, then take $12760 \times 2.5 = 31900$, which is too big

for any 1/2 MB Token Ring card from Apple, unless TokenTalk isn't running. This gateway could run on the old TokenTalk card with TokenTalk version 2.2

You can see that SNA•ps 1.1 with TT 2.4 just doesn't work in any card with 1/2 MB RAM.

2) SNA•ps with 6 LU 6.2 LUs and BTU sizes of 1033:

GW overhead	7490
Line	250
Peer Partner	690
Local LU	270
Local LU User	270
TP and user	380
Remote LU	120
Mode	200
Peer Session x6	9600
Total	19270

Use BTU size 1033 multiplier of 2.5 x 19270 = 48175

Since LU 6.2 LUs are involved add 8 times 1033 = 8264 for total of 56439 for SDLC and another 160 for Token Ring = 56599.

To answer your other questions:

If the Macintosh is client only, then the card is only loaded with TokenTalk, and any number of sessions are possible. Old cards should be client cards, and not server cards.

The APPC API hasn't changed much in 1.1, and runs in the Macintosh anyway. The 3270 API runs in the Macintosh as well.

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