

Worksheet to accompany 286-Based Netware v2.1x File Service Processes - The Final Word.

After reading the 286-Based Netware v2.1x File Service Processes technical report from Netware, I devised the enclosed spreadsheet to help understand how Netware used memory for FSP's.

Instructions:

In cell C5, enter the Operating System Type. You can look up the type from the table in H1..J8. The spreadsheet uses the @VLOOKUP function to fill-in the Description and Bytes columns.

In cells C6..C9, enter the disk drivers installed in the file server. Make an entry for each different disk driver installed, do not make a second entry for a driver, even if it is used multiple times. (See page 7 of the FSP report) Look up the disk driver type from the table in H12..J18.

In cells C10..C12, enter the Lan Card Type, once for each card. Here you will make additional entries each time a card is used. You can look the Lan Card Type up in the table in H22..L51.

In cell C19, enter a 1 if TTS is active, leave blank if TTS is not installed.

In cell C20, enter the number of printers connected to the file server. Do not count printers connected to print servers, only printers connected directly to the file server.

In cell C26, enter the number of logical volumes attached and mounted.

In cell C27, enter the number of megabytes of storage on all disk drives attached to this server.

In cell C28, enter the total number of directory entries on all volumes. Total up all of the maximum directory numbers from VOLINFO for all volumes.

In cell C33, enter the number of mapped drives for all users on this server.

In cell C34, enter the number of physical disk drives (not volumes) attached to this server.

Cells C35 and C36 are the Netware defaults for these entries.

In cell C37, enter the number of mirror drive pairs on this server.

In cell C38, enter the maximum number of Macintosh files open at any given time on this server.

In cell C39, enter the maximum number of simultaneous users logged into this server. Include attached users.

In cell C40, enter a 1 if disk accounting is active.

In cell C41, enter the maximum number of print jobs that will be queued at any time.

In cell C42, enter the number of print queues setup on this server.

In cell C43, enter the number of print servers servicing queues from this server.

Cell C44 is copied from cell C26.

In cell C45, enter the number of VAPs active on the server.

The section prior to row 54 calculates the size of each FSP buffer based on the largest buffer required for the LAN cards chosen. The result is displayed in cell E54. Each file server process requires a buffer of this size.

Rows 56 through 61 summarize the sections above, leading to the amount of memory available for FSP's. Cell E68 calculates the number of FSPs this file server will have based on all of the information entered. Cell E71 is the amount of RAM unused for FSPs that will be added back to POOL 1 RAM. (POOL 1 can be monitored from FCONSOLE).

Rows 73 through 83 calculate the optimum value for the patch byte of the FSP patch. Novell does not recommend the FSP patch except in cases where there are not enough FSPs to operate the server, see pages 25-27 of the FSP report. Using the value in E80 results in the maximum FSPs based on the memory that can safely be moved from POOL 1, based on the entries in rows 33 through 45.

Before resorting to the patch, try all of the suggestions on page 21 of the FSP report. The table at N1..AD20 should be very useful to help calculate the number of directory entries to use on each drive. Using FCONSOLE's VOLUME INFORMATION, enter the information in columns N-Q and S-T. Column AB suggests the minimum number of entries based on past usage and the maximum FSP gain resulting from these reductions. You can use columns AC and AD to make minor adjustments to the suggested values and see the effect in terms of FSP gain. Plug the revised total into cell C28, and see if you now have adequate FSPs without applying the patch, in most cases you should.

This worksheet was done in Lotus 123 version 2.2, and includes an ALLWAYS format file. To print the completed worksheet, load ALLWAYS to be activated from F7 and press ALT-P.

I hope you find this worksheet useful.