MTVSpool Version 2.02

User Guide


February 1991


By Mark T. Van Ditta

TABLE OF CONTENTS

1   INTRODUCTION

    Welcome to MTVSpool, an affordable non-dedicated distributed print
service for Novell NetWare Version 2.1 or higher.  I developed MTVSpool as
a project to assist me in preparing for the Certified NetWare Engineer
(CNE) examinations.  I have always believed that in order to truly
understand a software product, one must have intimate knowledge of that
product's algorithms and data structures.  By developing this product, I
was able to gain a thorough understanding of NetWare's: Bindery,
Connection, Directory, Message, Print, Queue Management, and Workstation
Services.

    After completing the CNE examinations, I decided that although there
were already several workstation based non-dedicated distributed print
services available for NetWare, not one of them was truly affordable.
Every one of these print services carries price tag in the $400-$500 dollar
range.  For an ELS NetWare user, $400-$500 is a hefty price to pay just to
have non-dedicated workstation based shared printing.  In an effort to
drive down the price of these print services, I decided to package my
project and offer it to the NetWare community at a fraction of my closest
competitor's price.


2   OVERVIEW OF MTVSPOOL

    Starting with NetWare Version 2.1, Novell included NetWare
Queue Management System Services in every workstation shell.  These
services provide the necessary hooks into the NetWare Operating System to
implement what are called Value Added Servers (VASs).  MTVSpool is one of
those VASs that Novell hoped third party developers would create and
distribute.  A workstation executing NetWare and MTVSpool becomes an
extension to the file server's normal print service.  Every command line or
menu utility which can be used to control a printer attached to a file
server can also be used to control a MTVSpool print server.   Thus, there
is no need to learn another set of commands to use a shared printer
attached to a workstation that is executing MTVSpool.

3  MTVSPOOL FEATURES

     From a features point of view, MTVSpool boasts a few that some of the
higher priced non-dedicated distributed print services do not have, such
as:

     o  Not requiring a user to be logged in at the workstation.

     o  Automatic redirection (capture) of the shared printer LPT port
        to queue which the shared printer services.

     o  Print job complete notification.

     o  Requires only 4.5K total memory space (DOS Memory Control
        Block + Program Segment Prefix + Executable Load Module)
        with banner pages or 3.3K (The smallest memory requirement
        of any non-VAP based distributed print server) without
        banner pages.

        ** Note ** : The demo version of this product contains
                     code that limits the number of concurrent
                     print servers to 1.  I included this code to
                     insure that I see a return on the large
                     investment in time (approximately 1000 hours)
                     I spent developing this product.  Thus, one
                     will notice that the TSRs have slightly larger
                     memory requirements than stated. The registered
                     version of this product does not contain this
                     concurrency control code.

     o  Not requiring the printer to send interrupts (e.g. IRQ 5 and
        IRQ 7 are still free to be used for other applications).

     o  Not requiring the execution of a VAP on the file server.

o  Not requiring an extra connection on a concurrent
   workstation/print server (i.e. if one uses Novell's Pserver or
   LAN Systems' LANSpool on NetWare 2.1x, then one loses a user
   connection to the VAP, an ELS II network becomes a 7 user
   network).

4  MTVSPOOL COMPONENTS

     In version 2.02 of MTVSpool, there are three software components:
MTVSPOOL.EXE, MTVSPLNB.EXE and MTVSETUP.EXE.  The MTVSPOOL.EXE and
MTVSPLNB.EXE components execute as TSRs on each workstation that
wishes to share its printer with other network users.  The only
difference being that the MTVSPLNB.EXE component does not support
banner pages. The MTVSETUP.EXE component is used by the Network
Supervisor to setup a file server to allow MTVSpool print servers to
service the file server's print queues.

5  MTVSPOOL COMMAND LINE ARGUMENTS

     Under normal operation, one will only need to use the /Q= command
line argument.  The rest of the arguments are optional and have
defaults.  The following is a list of command line arguments available
in MTVSpool 2.02:

     /B=<Size>     Where <Size> is greater than or equal to 512 and
                   <Size> is less than or equal to 49152.  This
                   command line argument is used to control the
                   print buffer size.  When using a LAN with
                   a bandwidth of 1 MBps or greater (i.e. Ethernet,
                   ARCnet, Token Ring), this command line option
                   should be left at its default of 512.

     /L=<Port>     Where <Port> equal the LPT number of the shared

locally attached printer.  The default for this
command line argument is 1.

/N              Notify the user who submitted the print job
                after it has been printed.  The default for
                this command line argument is no notification.

/Q=<Queue>      Where <Queue> is replaced with the queue one
                wishes the workstation to service.

/S              MTVSpool normally sends a trailing form feed to
                the printer to insure that the next print job
                does not start to print on the last page of the
                previous print job.  There will be times (i.e.
                printing labels) were one does not wish for
                MTVSpool to send this trailing form feed.  By
                using the /S command line argument, one may
                instruct MTVSpool not to send this trailing form
                feed.

6   INSTALLATION

    In order to setup the file server for MTVSpool, one must be
either the file server SUPERVISOR or a SUPERVISOR EQUIVALENT, as the
MTVSETUP program modifies the file server's bindery.  Once the file
server is setup for MTVSpool, anyone may share their printer using
either MTVSPOOL or MTVSPLNB.  The following steps must be followed in
order for MTVSpool to function correctly.


    1.  First, one must login as SUPERVISOR or as a SUPERVISOR
        EQUIVALENT.


    2.  Using PCONSOLE, create all of the print queues which one
        wishes to be serviced by MTVSpool print servers.  If one
        does not know how to create a print queue, this operation
        is performed by selecting "Print Queue Information" from the
        PCONSOLE Main Menu.  After selecting this menu item, one
        should see a window with the print queues that are currently
        available for use.  If one wishes MTVSpool to service only
        these existing queues, then they will not need to create any

new print queues; but, if one wishes to create a print queue
for each different workstation printer which will be shared,
then all one has to do is press the "INSERT" key to create a
new queue.  After pressing the "INSERT" key, one will be
prompted to enter the name of the new print queue.  After
entering the new print queue name and pressing "ENTER", one
will be taken back to the window which displays the currently
available print queues.  If one wishes to create more than
one print queue, then all they have to do is to repeat this
process for every new print queue which is needed.


3.  If the file server was not previously setup for version 1.0
    of MTVSpool, then one may skip to step 4.  Otherwise, using
    PCONSOLE delete the old MTVSPOOL print server bindery object
    using the "Print Server Information" selection from the
    PCONSOLE Main Menu.  After selecting this menu item, one
    should see a window with the names of the currently available
    print servers.  After locating and placing the highlighted
    bar on the print server named MTVSPOOL, one should press the
    "DELETE" key.


4.  If the file server was previously setup for any version
    of MTVSpool greater than 1.0; but, less than or equal to
    the current version, then one may skip to step 5.  Otherwise,
    one must execute the MTVSETUP program, which will afford one
    the opportunity the authorize only those queues which one
    wishes MTVSpool to service.  This authorization process comes
    in the form of a query prompt such as "Do you wish to have

    MTVSpool service Queue MTV_TEST?".  If one wishes MTVSpool to
    be able service the queue in the query prompt, then answer
    "Y" to this query prompt; otherwise, answer "N" to this query
    prompt.  This process will be repeated for every print queue
    on the file server.


5.  Copy the MTVSPOOL (or MTVSPLNB) program onto the startup
    disk of every workstation which will be used as a MTVSpool
    print server (a print server is a workstation which one
    wishes to be able to share its locally attached printer)
    and modify that workstation's autoexec.bat to execute the
    MTVSPOOL (or MTVSPLNB) program after the executing IPX.COM
    and the NetWare Shell (e.g. NET3.COM) when booting.  One
    should remember that the MTVSPOOL program requires that the
    print queue which will be serviced by MTVSpool to be

specified using the /Q= command line argument (e.g.
MTVSPOOL /Q=MTV_TEST, or MTVSPLNB /Q=MTV_TEST).


6.  One must then add the following lines to the config.sys file
    of every workstation will be used a print server:

        files=40    (this number can be greater; but, not less)
        stacks=0,0


7.  Now for the last and final step.  If one has successfully
    completed steps 1-6, then all one will need to do is to
    reboot the workstations which will be print servers
    (remember, if one has not purchased a registered copy of
    MTVSpool, one will not be allowed to use more than one
    workstation as a non-dedicated print server at a time).
    After rebooting the print server workstations, all one needs
    to do to use MTVSpool print servers from any other
    workstation is perform a capture (on a print serving
    workstation, one does not need to perform a capture of the
    LPT port which is attached to the printer which is being
    shared as MTVSpool performs this performs operation
    automatically) to the queue which the MTVSpool print server
    services.