Advanced Technical Support

Networking Systems Center

SNA Customization for Tivoli Software Distribution 3.1.3 for Windows NT Communicating with NetView DM/MVS

This document provides three different samples of customizing Tivoli Software Distribution 3.1.3 for Microsoft Windows NT to communicate with NetView DM/MVS using SNA. The samples use IBM Communications Server, IBM Personal Communications, and Microsoft SNA Server. The samples were testing at the Networking Systems Center in Gaithersburg, Maryland. Please contact Neil Armstrong (narmstr@us.ibm.com) if you have questions. Special thanks to Kathryne O'Brien for her work on this document.

SNA Customization for Tivoli Software Distribution 3.1.3 for Windows NT, Using IBM Communications Server and NetView DM/MVS

Purpose:
This section details the definitions necessary to create two-way communications between a Tivoli Software Distribution 3.1.3 Server on MS Windows NT and Netview DM/ MVS 1.6 with the SNA protocol.

Environment:
MS Windows NT Server or Workstation 4.0 with Service Pack 3
IBM Communications Server 5.01
TME 10 Software Distribution Server 3.1.3 with all maintenance through FixPack 0298
Netview DM/MVS 1.6.1 or 1.6.2

Planning your environment:
You will need to replace the names, both network names and software distribution names, used in this document with the appropriate values for your environment. You will need to exactly match values, such as LU name, between IBM Communications Server, Software Distribution 3.1.3 Server and NetView DM/MVS. Please remember that Software Distribution 3.1.3 is case sensitive.

Names are chosen by the user but must match between a Focal Point (NetView DM/MVS) and a Change Control Server (Software Distribution 3.1.3 Server for Windows NT). A list of the names used in this example follow below:

NDMR6	NetView DM/MVS application name
USIBMWZV	SNA network ID
NTCMLU0	SNA LUNAME used for communication at CC server and host
NDM2LU62	SNA LOGMODE entry used at CC server and at host
NTCMLU0	Target address of CC server
WZVCDRM	MVS control point name

Please check with your installation's VTAM system programmer for the correct values for the above parameters in your environment. Although the SNA LUNAME for the CC server and the Target Address of the CC server match in this example, it is NOT required that these two values be identical.

<u>Customization Tasks from MS Windows NT</u>:

On the Windows NT system, you will need to install and customize both Tivoli Software Distribution 3.1.3 Server and IBM Communications Server. The following steps walk you through this process. In addition there is documentation on the IBM Communications Server customization in the 0298 fixpack level of the Software Distribution 3.1.3 Server for Windows NT Quick Beginnings manual, SH19-4335.

1. Install IBM Communications Server V5.01. This is the minimum level required to establish communications in a software distribution environment. During the install, you will also install the IBM Link Level 2 (LL2) protocol stack used by IBM Communications Server. IBM LL2 provides link services.

2. Install Tivoli Software Distribution Server 3.1.3 with all maintenance through fixpack 0298 or later. Fixpacks are available on the Internet. They can be downloaded from ftp://ftp.software.ibm.com/ps/products/SD_server/fixes/. Follow the instructions that come in the README file. The base code and fixpack 0298 can also be found on the Tivoli Software Distribution CD, order number LCD4-0491-03.

3. Modify the Software Distribution Server definition using the "nvdm updtg" command to reflect the correct domain address and target address. The target definition for this example is shown next:

```
Target:                SDSRV1
Description:           INITIAL TARGET CONFIGURATION RECORD
Customer name:
Contact name:
Telephone number:
Manager:
Mailing address:
Target access key:     (none)
Mode:                  Push
Type:                  SERVER
Operating system:      WINDOWS_NT
Target address:        NTCMLU0
Domain address:        NTCMLU0
LAN address:
CM window:             12:00:00AM - 11:59:00PM
Distribution window:   12:00:00AM - 11:59:00PM
Network:               TCP sdsrv1
Logging level:         Normal
Tracing state:         Off
Installation parms:    BOOTDRIVE=C:
                       FREEDRIVE1=B:
                       FREEDRIVE2=E:
                       FREEDRIVE3=F:
                       FREEDRIVE4=G:
                       FREEDRIVE5=H:
                       LOG1=EXTLOG1
                       LOG2=EXTLOG2
                       LOG3=EXTLOG3
                       LOG4=EXTLOG4
                       LOG5=EXTLOG5
                       RSPFILE=D:\SOFTDIST\work\RSPFILE
Shared tokens:         (none)
Hardware parms:        (none)
Discovered inventory:  (none)
```

4. Use the "nvdm addtg" command to add a Software Distribution target definition to represent the NetView DM/MVS host target. Define the target mode as a focal point, the target type as server, and ensure you define the target and domain addresses correctly. The target address must be the same as

the VTAM APPL name for NetView DM, and the domain address must be the SNA network ID. The target definition for the MVS host in our test follows.

```
Target:              NDMMVS
Description:
Customer name:
Contact name:
Telephone number:
Manager:
Mailing address:
Target access key:    (none)
Mode:                 Focal
Type:                 SERVER
Operating system:
Target address:       NDMR6
Domain address:       USIBMWZV
LAN address:
Network:              APPC USIBMWZV.NDMR6
```

5. Modify the routetab file found in the softdist\db directory to reflect SNA protocol and the correct filename of your SNA connection file. In this example, connsna is the connection file name. The file name is case sensitive. Be careful not to imbed any null characters in this file. Use 'edit' instead of 'notepad' to modify this file. The example routetab used is shown below:

```
NETWORK PROTOCOL:                    BOTH
USIBMWZV.NDMR6    ANY    ANY    ANY    ANY    connsna
*.*               ANY    ANY    ANY    ANY    connsna
```

6. Modify the SNA connection file found in softdist\db\snadscon directory to reflect the definitions necessary for your environment. Make sure the next dsu parameter points to the MVS host itself and the TP symbolic names match the CPIC names defined in IBM Communications Server.   The example SNA connection file, connsna , is shown below:

```
PROTOCOL:                          APPC
TYPE:                              SNA
SEND TP SYMBOLIC DESTINATION:      NVDMSIDS
RECEIVE TP SYMBOLIC DESTINATION:   NVDMSIDR
NEXT DSU:                          USIBMWZV.NDMR6
TRANSMISSION TIME-OUT:             60
RETRY LIMIT:                       3
SEND MU_ID TIME-OUT:               60
RECEIVE MU_ID TIME-OUT:            120
```

7. Build the IBM Communications Server definitions for the Connection, Link Services, Mode entry, Local LU, Remote LU, SNA Server, and CPIC names for send and receive. The example SNA definitions used are shown below. Remember that the Control Point Name can not be the same as the Logical Unit Name for any resource. Remember to match the CPIC names with the names used in step 6. Look at the Software Distribution Server for Windows NT Up and Running (Quick Beginnings) softcopy manual for detailed information on how to create these definitions using a GUI

```
NODE=(
      ANYNET_SUPPORT=ANYNET_SUPPORTED
      CP_ALIAS=NTCMPU
      DEFAULT_PREFERENCE=NATIVE
      DISCOVERY_SUPPORT=NO
      FQ_CP_NAME=USIBMWZV.NTCMPU
      MAX_COMPRESSION_LEVEL=RLE
      NODE_ID=05D35154
      NODE_TYPE=END_NODE
      REGISTER_WITH_CDS=1
      REGISTER_WITH_NN=0
)
PORT=(
      PORT_NAME=LAN0_04
      DLC_DATA=00000000000004
      DLC_NAME=LAN
      IMPLICIT_CP_CP_SESS_SUPPORT=1
      IMPLICIT_DEACT_TIMER=0
      IMPLICIT_DSPU_SERVICES=NONE
      IMPLICIT_DSPU_TEMPLATE=00000000
      IMPLICIT_HPR_SUPPORT=1
      IMPLICIT_LIMITED_RESOURCE=NO
      LINK_STATION_ROLE=NEGOTIABLE
      MAX_IFRM_RCVD=8
      MAX_RCV_BTU_SIZE=65535
      PORT_TYPE=SATF
      PORT_LAN_SPECIFIC_DATA=(
            ACK_DELAY=100
            ACK_TIMEOUT=10000
            ADAPTER_NUMBER=0
            BUSY_STATE_TIMEOUT=15
            IDLE_STATE_TIMEOUT=30
            LOCAL_SAP=04
            OUTSTANDING_TRANSMITS=16
            POLL_TIMEOUT=8000
            POOL_SIZE=32
            REJECT_RESPONSE_TIMEOUT=10
            TEST_RETRY_INTERVAL=8
            TEST_RETRY_LIMIT=5
            XID_RETRY_INTERVAL=8
            XID_RETRY_LIMIT=5
      )
)
LINK_STATION=(
      LS_NAME=LSMVS
      ACTIVATE_AT_STARTUP=1
      ADJACENT_NODE_ID=05D12345
      ADJACENT_NODE_TYPE=APPN_NODE
      AUTO_ACTIVATE_SUPPORT=0
      CP_CP_SESS_SUPPORT=1
      DEFAULT_NN_SERVER=0
      DEST_ADDRESS=40003320278904
      DISABLE_REMOTE_ACT=0
```

```
          DSPU_SERVICES=NONE
          FQ_ADJACENT_CP_NAME=USIBMWZV.WZVCDRM
          HPR_SUPPORT=0
          LIMITED_RESOURCE=NO
          LINK_DEACT_TIMER=0
          LINK_STATION_ROLE=USE_ADAPTER_DEFAULTS
          MAX_IFRM_RCVD=0
          MAX_SEND_BTU_SIZE=65535
          NODE_ID=05D35154
          PORT_NAME=LAN0_04
          PU_NAME=NTCMPU
          SOLICIT_SSCP_SESSION=1
          TARGET_PACING_COUNT=1
          TG_NUMBER=0
          USE_DEFAULT_TG_CHARS=1
)
DLUR_DEFAULTS=(
          DEFAULT_PU_NAME=NTCMPU
          DLUS_RETRY_LIMIT=3
          DLUS_RETRY_TIMEOUT=5
)
LOCAL_LU=(
          LU_NAME=NTCMLU0
          LU_ALIAS=NTCMLU0
          LU_SESSION_LIMIT=0
          NAU_ADDRESS=0
          ROUTE_TO_CLIENT=0
          SYNCPT_SUPPORT=0
)

MODE=(
          MODE_NAME=NDM2LU62
          AUTO_ACT=2
          COMPRESSION=PROHIBITED
          COS_NAME=#CONNECT
          CRYPTOGRAPHY=NONE
          DEFAULT_RU_SIZE=1
          MAX_NEGOTIABLE_SESSION_LIMIT=8
          MAX_RU_SIZE_UPPER_BOUND=4096
          MIN_CONWINNERS_SOURCE=4
          PLU_MODE_SESSION_LIMIT=8
          RECEIVE_PACING_WINDOW=7
)
PARTNER_LU=(
          FQ_PLU_NAME=USIBMWZV.NDMR6
          ADJACENT_CP_NAME=USIBMWZV.WZVCDRM
          CONV_SECURITY_VERIFICATION=0
          MAX_MC_LL_SEND_SIZE=32767
          PARALLEL_SESSION_SUPPORT=0
          PARTNER_LU_ALIAS=NDMR6
          PREFERENCE=USE_DEFAULT_PREFERENCE
)
TP=(
          TP_NAME=21007
          API_CLIENT_USE=0
          CONVERSATION_TYPE=EITHER
          DUPLEX_SUPPORT=EITHER_DUPLEX
```

```
        DYNAMIC_LOAD=1
        INCOMING_ALLOCATE_TIMEOUT=30
        LOAD_TYPE=1
        PATHNAME=c:\softdist\bin\fndts.exe
        PIP_ALLOWED=1
        QUEUED=1
        RECEIVE_ALLOCATE_TIMEOUT=3600
        SECURITY_RQD=0
        SYNC_LEVEL=EITHER
        TP_INSTANCE_LIMIT=0
        TP_NAME_FORMAT=1
)
TP=(
        TP_NAME=21008
        API_CLIENT_USE=0
        CONVERSATION_TYPE=EITHER
        DUPLEX_SUPPORT=EITHER_DUPLEX
        DYNAMIC_LOAD=1
        INCOMING_ALLOCATE_TIMEOUT=30
        LOAD_TYPE=1
        PATHNAME=C:\SOFTDIST\BIN\FNDTR.EXE
        PIP_ALLOWED=1
        QUEUED=1
        RECEIVE_ALLOCATE_TIMEOUT=3600
        SECURITY_RQD=0
        SYNC_LEVEL=EITHER
        TP_INSTANCE_LIMIT=0
        TP_NAME_FORMAT=1
)
CPIC_SIDE_INFO=(
        SYM_DEST_NAME=NVDMSIDR
        CONVERSATION_SECURITY_TYPE=NONE
        MODE_NAME=NDM2LU62
        PARTNER_LU_NAME=USIBMWZV.NDMR6
        TP_NAME=21008
        TP_NAME_TYPE=SNA_SERVICE
)
CPIC_SIDE_INFO=(
        SYM_DEST_NAME=NVDMSIDS
        CONVERSATION_SECURITY_TYPE=NONE
        MODE_NAME=NDM2LU62
        PARTNER_LU_NAME=USIBMWZV.NDMR6
        TP_NAME=21007
        TP_NAME_TYPE=SNA_SERVICE
)
ADJACENT_NODE=(
        FQ_CP_NAME=USIBMWZV.WZVCDRM
        LU_ENTRY=(
              WILDCARD_LU=0
              FQ_LU_NAME=USIBMWZV.NDMR6
        )
)
SPLIT_STACK=(
        POOL_NAME=<None>
        STARTUP=1
)
VERIFY=(
```

```
        CFG_MODIFICATION_LEVEL=12
        CFG_VERSION_LEVEL=1)
```

Customization Tasks for NetView DM/MVS 1.6.2

NetView DM/MVS 1.6.2 installs via standard SMP/E processes, as described in the Program Directory. To tailor NetView DM for your environment you must do the customization tasks outlined below. Reference the NetView DM Release 6.2 Installation and Customization Guide, SH19-6794-05, especially chapters 1,2,11,12,15.

1. Code and assemble Stage 1 macros. These macros allow you to specify your unique operating environment. Alternatively, you can use an installation dialog via ISPF. The dialog panels use keywords that are the equivalent, but not always identical, to the keywords shown in the macros below. Stage 1 creates a batch job which you then submit in order to assemble the tables NetView DM needs, define VSAM files NetView DM will use and create other required libraries.

```
        NDMGEN              GENTYPE=INSTALL,
                            ADMID=USERID,
                            CLISTLB=NVDM.V162.NDMCLST,
                            SKELLIB=NVDM.V162.NDMSKLS,
                            LOAD=NVDM.V162.SFZDLOAD,
                            SMS=YES
        NDMNODE             TYPE=SRVR,FUNC=CMEP,XMFUNC=(SEND,RETR,DELE),
                            RESTYPE=(0060,0070,0080,0100,0120,0220,0230,0240,0250)
        NDMNODE             TYPE=CLNT,FUNC=CMEP,XMFUNC=(SEND,RETR,DELE),
                            RESTYPE=(0060,0070,0080,0100,0120,0220,0230,0240,0250)
        NDMTCP              APPLID=(NDMR6,*),
                            IAPPLID=(NDMR6IOF,*),
                            APPC=YES,
                            AUTOSTR=YES,
                            AUTOEND=NO,
                            DDPREQ=YES,
                            OPCTL=NETV,
                            RESWAIT=120,
                            RETRY=3,RETINT=10,
                            SWDLY=5,SWRTRY=5,
                            MAXTASK=(20,1),
                            STALINE=1,
                            SUFFIX=01,
                            TIMEOUT=20,
                            NETCHNG=IMMEDIATE,
                            HOPCNT=5
        NDMGIX              SUFFIX=01,NETCHNG=IMMEDIATE
        NDMBATCH            SUFFIX=01,NETCHNG=IMMEDIATE,PSWD=OPTIONAL
        NDMCOM              HCCSID=0025,SERVER=NO
        NDMCP               CPNAME=NOPOLL,POLLING=NO
        NDMRES              TYPE=0070,TRACK=YES,DEFINE=CAN,ASSIGN=CAN
        NDMRES              TYPE=0080,TRACK=YES,DEFINE=CAN,ASSIGN=CAN
        NDMRES              TYPE=0100,TRACK=NO,DEFINE=CAN,ASSIGN=CAN
        NDMRES              TYPE=0120,TRACK=YES,DEFINE=CAN,ASSIGN=CAN
        NDMRES              TYPE=0220,TRACK=YES,DEFINE=CAN,ASSIGN=CAN
        NDMDEF
        NDMDATA             TYPE=LIBD,DSN=NVDM.V162.NDMLIB,DELETE=NO
        NDMDATA             TYPE=LIB,DSN=NVDM.V162.NDMLIBT,DELETE=NO
```

```
            NDMDATA             TYPE=HFD,DSN=NVDM.V162.NDMHFDI,DELETE=NO
            NDMDATA             TYPE=HF,DSN=NVDM.V162.NDMHFDA,DELETE=NO,CSPC=60
            NDMDATA             TYPE=DRD,DSN=NVDM.V162.NDMDRD,DELETE=NO,DSPC=7,ISPC=2
            NDMDATA             TYPE=TCF,DSN=NVDM.V162.NDMTCF,DELETE=NO,DSPC=8,ISPC=3
            NDMDATA             TYPE=GIX,DSN=NVDM.V162.NDMGIX,DELETE=NO
            NDMDATA             TYPE=GIXD,DSN=NVDM.V162.NDMGIXD,DELETE=NO
            NDMDATA             TYPE=RQF,DSN=NVDM.V162.NDMRQF,DELETE=NO
            NDMDATA             TYPE=RQFD,DSN=NVDM.V162.NDMRQFD,DELETE=NO
            NDMDATA             TYPE=CWK,DSN=NVDM.V162.NDMCWK,DELETE=NO
            NDMDATA             TYPE=UN01,DSN=NVDM.V162.NDMUN01,DELETE=NO
            NDMDATA             TYPE=WF01,DSN=NVDM.V162.NDMWF01,DELETE=NO
            NDMDATA             TYPE=MSG,DSN=NVDM.V162.NDMMSGS,DELETE=NO
            NDMDATA             TYPE=TBL,DSN=NVDM.V162.NDMTABLE,DELETE=NO
            NDMDATA             TYPE=EIF,DSN=NVDM.V162.NDMEIF,DELETE=NO
            NDMDATA             TYPE=END
            END
/*EOF
```

2. Add VTAM definitions for the APPC LU's. An example is shown below,adding a CC server with LU
    name NTCMLU0.

```
WNTPU      PU     ADDR=63,
                  DLOGMOD=S3279M2,
                  IDBLK=372,
                  IDNUM=18705,
                  LOGTAB=LOGONTAB,
                  MAXDATA=1033,
                  MAXOUT=7,
                  MAXPATH=1,
                  MODETAB=PU3274C,
                  PASSLIM=7,
                  PUTYPE=2,
                  SSCPFM=USSSCS,
                  USSTAB=HSL3270A
           PATH   DIALNO=0104400013748705,GRPNM=G6RALL1
NTCMLU0    LU     LOCADDR=0,DLOGMOD=NDM2LU62,USSTAB=USSEMPTY
EMULLU2    LU     LOCADDR=2
EMULLU3    LU     LOCADDR=3
```

3. Add the VTAM definitions for NetView DM as an application.

```
           VBUILD  TYPE=APPL
NDMR6      APPL    AUTH=ACQ,
                   ACBNAME=NDMR6,
                   APPC=YES,
                   DSESLIM=1,
                   DMINWNL=0,
                   DMINWNR=1,
                   AUTOSES=1,
                   PARSESS=YES,
                   MODETAB=PU3274C,
                   DLOGMOD=NDM2LU62,
                   VPACING=63,
                   EAS=1
NDMR6IOF   APPL    AUTH=ACQ,
```

```
                      ACBNAME=NDMR6IOF,
                      EAS=1
```

4. Add the VTAM definitions for the logmode entry NDM2LU62.

```
NDM2LU62    MODEENT    LOGMODE=NDM2LU62,
                       TYPE=0,
                       FMPROF=X'13',
                       TSPROF=X'07',
                       PRIPROT=X'BO',
                       SECPROT=X'B0',
                       COMPROT=X'50B5',
                       PSNDPAC=X'07',
                       RUSIZES=X'8888',
                       PSERVIC=X'0602000000000000000002F00'
```

5. Add a node definition for a test CC server named NTWITHCM. Below is a batch job that will add the
    node definition.

```
//DEFNODE     JOB       (0), 'SMITH',CLASS=B,COND=(4,LT),
//SUBMIT      EXEC      PGM=DSXPREP,
//                      PARM='FUNCTION=SUBMIT,USERID=SMITH'
//STEPLIB     DD        DSN=NVDM.V162.SFZDLOAD,DISP=SHR
//SYSPRINT    DD        SYSOUT=*
//DSXPRINT    DD        SYSOUT=*
//SYSUDUMP    DD        SYSOUT=*
//SNAP        DD        SYSOUT=*
//DSXLIB      DD        DISP=SHR, DSN=NVDM.V162.NDMLIB
//DSXLIBT     DD        DISP=SHR, DSN=NVDM.V162.NDMLIBT
//DSXHFDI     DD        DISP=SHR, DSN=NVDM.V162.NDMHFDI
//DSXHFDA     DD        DISP=SHR, DSN=NVDM.V162.NDMHFDA
//DSXDRD      DD        DISP=SHR, DSN=NVDM.V162.NDMDRD
//DSXTCF      DD        DISP=SHR, DSN=NVDM.V162.NDMTCF
//DSXGIX      DD        DISP=SHR, DSN=NVDM.V162.NDMGIX
//DSXGIXD     DD        DISP=SHR, DSN=NVDM.V162.NDMGIXD
//NDMRQF      DD        DISP=SHR, DSN=NVDM.V162.NDMRQF
//NDMRQFDA    DD        DISP=SHR, DSN=NVDM.V162.NDMRQFDA
//SYSIN       DD        *
            DEFNODE   NAME=NTWITHCM,LUNAME=NTCMLU0,NODETYPE=SRVR,
                      LOGMODE=NDM2LU62,
                      RGN=NTCMLU0,REN=NTCMLU0,SRVNAME=NTCMLU0
            END
/*
```

6. Submit job (or procedure) to start the NetView DM Transmission Control Program.
    Example is shown below:

```
//xxxxxx      JOB       (0),'SMITH',CLASS=B,COND=(4,LT),
//                      MSGCLASS=O,MSGLEVEL=(1,1),REGION=4096K,
//                      TIME=1440
//NDMR6       EXEC      PGM=DSXTMM00,PARM='OPCTL=IOF,START=COLD,
                        PROFILE=01,CURTASK=(16,1)'
//STEPLIB     DD        DSN=NVDM.V162.SFZDLOAD,DISP=SHR
//SYSPRINT    DD        SYSOUT=*
//SYSUDUMP    DD        DUMMY
//SNAP        DD        DUMMY
//DSXTCF      DD        DISP=SHR,DSN=NVDM.V162.NDMTCF
//DSXDRD      DD        DISP=SHR,DSN=NVDM.V162.NDMDRD
```

```
//DSXHFDI    DD    DISP=SHR,DSN=NVDM.V162.NDMHFDI
//DSXHFDA    DD    DISP=SHR,DSN=NVDM.V162.NDMHFDA
//DSXLIBT    DD    DISP=SHR,DSN=NVDM.V162.NDMLIBT
//DSXLIB     DD    DISP=SHR,DSN=NVDM.V162.NDMLIB
//NDMEIF     DD    DISP=SHR,DSN=NVDM.V162.NDMEIF
//NDMRQF     DD    DISP=SHR,DSN=NVDM.V162.NDMRQF
//NDMRQFDA   DD    DISP=SHR,DSN=NVDM.V162.NDMRQFD
//DSXCWK     DD    DISP=SHR,DSN=NVDM.V162.NDMCWK
//DSXWF01    DD    DISP=SHR,DSN=NVDM.V162.NDMWF01
//DSXUN01    DD    DISP=SHR,DSN=NVDM.V162.NDMUN01
//DSXJOBS    DD    DISP=SHR,DSN=USER.PDS.JCL
//DSXDDSUB   DD    SYSOUT=(A,INTRDR)
/*
```

SNA Customization for Tivoli Software Distribution 3.1.3 for Windows NT, Using IBM Personal Communications V4.2 and NetView DM/MVS

Purpose:
This section details the definitions necessary to create two-way communications between a TME 10 Software Distribution Server on MS Windows NT and Netview DM/ MVS 1.6 using SNA protocol.

Environment:
MS Windows NT Server or Workstation 4.0 with Service Pack 3
IBM Personal Communications 4.2 plus APAR IC19991
TME 10 Software Distribution Server 3.1.3 with maintenance applied through FixPack 0298
Netview DM/MVS 1.6.1 or 1.6.2

Planning your environment:
You will need to replace the names, both network names and software distribution names, used in this document with the appropriate values for your environment. You will need to exactly match values, such as LU name, between IBM Personal Communications, Software Distribution Server and NetView DM/MVS. Please remember that Software Distribution is case sensitive.

Names are chosen by the user but must match between a Focal Point (NetView DM/MVS) and the Change Control Server (Software Distribution Server for Windows NT). A list of the names used in this example follow below:

NDMR6   NetView DM/MVS application name
USIBMWZV   SNA network ID
NTCMLU0   SNA LUNAME used for communications between CC server and host
NDM2LU62   SNA LOGMODE entry used at CC server and at host
NTCMLU0   Target address of CC server
WZVCDRM   MVS control point name

Please check with your installation's VTAM system programmer for the correct values for the above parameters in your environment. Although the SNA LUNAME and the Target Address of the Software Distribution Windows NT Server match in this example, it is not required that these values be identical.

<u>Customization Tasks from MS Windows NT</u>:

On the Windows NT system, you will need to install and customize both Software Distribution 3.1.3 Server and IBM Personal Communications. The following steps walk you through this process. In addition, there is a section on customizing IBM Personal Communications in the fixpack level of the Software Distribution Server for Windows NT Up and Running (Quick Beginnings) manual.

1. Install IBM Personal Communications V4.2. During the install, you will also install the IBM Link Level 2 (LL2) protocol stack used by IBM Personal Communications. IBM LL2 provides link services. Please install APAR IC19991 for support of APPC communications with Software Distribution 3.1.3.   The APAR fix is available on the internet at <u>ftp://ps.software.ibm.com/ps/products/pcom/fixes/v4.2x/WIN95_WINNT/</u> After installing the fix for this APAR, you must customize PComm to communicate with NetView DM/MVS. In the resulting ACG file, you need to edit the line for DEFAULT_POOL under LOCAL_LU and set DEFAULT_POOL=1. See the sample ACG file included in this section.

2. Install Tivoli Software Distribution Server 3.1.3 with all maintenance through fixpack 0298 or later. Fixpacks are available on the Internet. They can be downloaded from ftp://ftp.software.ibm.com/ps/products/SD_server/fixes/. Follow the instructions that come in the README file. The base code and fixpack 0298 can also be found on the Tivoli Software Distribution CD, order number LCD4-0491-03.

3. Modify the Software Distribution Server definition using "nvdm updtg" to reflect the correct domain address and target address. The target definition for this example is shown next:

```
Target:              SDSRV1
Description:         INITIAL TARGET CONFIGURATION RECORD
Customer name:
Contact name:
Telephone number:
Manager:
Mailing address:
Target access key:   (none)
Mode:                Push
Type:                SERVER
Operating system:    WINDOWS_NT
Target address:      NTCMLU0
Domain address:      NTCMLU0
LAN address:
CM window:           12:00:00AM - 11:59:00PM
Distribution window: 12:00:00AM - 11:59:00PM
Network:             TCP sdsrv1
Logging level:       Normal
Tracing state:       Off
Installation parms:  BOOTDRIVE=C:
                     FREEDRIVE1=B:
                     FREEDRIVE2=E:
                     FREEDRIVE3=F:
                     FREEDRIVE4=G:
                     FREEDRIVE5=H:
                     LOG1=EXTLOG1
                     LOG2=EXTLOG2
                     LOG3=EXTLOG3
                     LOG4=EXTLOG4
                     LOG5=EXTLOG5
                     RSPFILE=D:\SOFTDIST\work\RSPFILE
Shared tokens:       (none)
Hardware parms:      (none)
Discovered inventory: (none)
```

4. Add a Software Distribution target definition to represent the NVDM/MVS host. Define the target mode as focal point, the target type as server and ensure you define the target and domain addresses correctly. The target definition for the MVS host follows.

```
Target:              NDMMVS
Description:
Customer name:
Contact name:
Telephone number:
Manager:
Mailing address:
Target access key:   (none)
Mode:                Focal
Type:                SERVER
Operating system:
Target address:      NDMR6
Domain address:      USIBMWZV
LAN address:
Network:             APPC USIBMWZV.NDMR6
```

5. Modify the routetab file in the softdist\db directory to reflect SNA protocol and the correct filename for your SNA connection file. In this example, connsna, is the connection file. Be careful not to imbed any null characters in this file. Use 'edit' instead of 'notepad' to modify this file. This file is in the softdist\db\snadscon directory. The file name 'connsna' is case sensitive. The example routetab used is shown below:

```
NETWORK PROTOCOL:                       BOTH
USIBMWZV.NDMR6      ANY       ANY        ANY      ANY       connsna
*.*         ANY    ANY    ANY    ANY    connsna
```

6. Modify the SNA connection file found in the softdist\db\snadscon directory. Make sure the next DSU parameter points to the MVS host and the TP symbolic destinations match the CPIC names defined in IBM Personal Communications.   The example SNA connection file, connsna , is shown below:

```
PROTOCOL:                           APPC
TYPE:                               SNA
SEND TP SYMBOLIC DESTINATION:       NVDMSIDS
RECEIVE TP SYMBOLIC DESTINATION:    NVDMSIDR
NEXT DSU:                           USIBMWZV.NDMR6
TRANSMISSION TIME-OUT:              60
RETRY LIMIT:                        3
SEND MU_ID TIME-OUT:                60
RECEIVE MU_ID TIME-OUT:             120
```

7. Build the IBM Personal Communications definitions for the Connection, Link Services, Mode entry, Local LU, Remote LU, SNA Server and CPIC send and receive. The example SNA definitions used are shown below. Remember that the Control Point Name can not be the same as the Logical Unit Name for any resource. Remember to match the CPIC send and receive with the values used in step 6. Look at the Software Distribution Server for Windows NT Up and Running (Quick Beginnings) softcopy manual for detailed information on how to create these definitions using a GUI.

```
*TSTue Jul  7 10:00:16 1998
NODE=(
     ANYNET_SUPPORT=ANYNET_SUPPORTED
     CP_ALIAS=NTCMPU
     DEFAULT_PREFERENCE=NATIVE
     DISCOVERY_SUPPORT=DISCOVERY_CLIENT
     FQ_CP_NAME=USIBMWZV.NTCMPU
     NODE_ID=05D35154
     NODE_TYPE=END_NODE
     REGISTER_WITH_CDS=1
     REGISTER_WITH_NN=1
)
PORT=(
     PORT_NAME=LANX_04
     DLC_DATA=00000000000004
     DLC_NAME=LAN
     IMPLICIT_CP_CP_SESS_SUPPORT=1
     IMPLICIT_DEACT_TIMER=0
     IMPLICIT_DSPU_SERVICES=NONE
     IMPLICIT_HPR_SUPPORT=1
     IMPLICIT_LIMITED_RESOURCE=NO
     LINK_STATION_ROLE=NEGOTIABLE
     MAX_IFRM_RCVD=8
     MAX_RCV_BTU_SIZE=32767
     PORT_TYPE=SATF
     PORT_LAN_SPECIFIC_DATA=(
          ACK_DELAY=100
          ACK_TIMEOUT=3000
          ADAPTER_NUMBER=9999
          BUSY_STATE_TIMEOUT=60
          IDLE_STATE_TIMEOUT=30
          LOCAL_SAP=04
          OUTSTANDING_TRANSMITS=16
          POLL_TIMEOUT=3000
          POOL_SIZE=16
          REJECT_RESPONSE_TIMEOUT=30
          TEST_RETRY_INTERVAL=8
          TEST_RETRY_LIMIT=5
          XID_RETRY_INTERVAL=8
          XID_RETRY_LIMIT=5
     )
)
LINK_STATION=(
     LS_NAME=LINKMVS
     ACTIVATE_AT_STARTUP=0
     ADJACENT_NODE_TYPE=END_NODE
     AUTO_ACTIVATE_SUPPORT=0
     CP_CP_SESS_SUPPORT=1
     DEFAULT_NN_SERVER=0
     DEST_ADDRESS=40003320278904
     DISABLE_REMOTE_ACT=0
     DSPU_SERVICES=NONE
     ETHERNET_FORMAT=0
     FQ_ADJACENT_CP_NAME=USIBMWZV.WZVCDRM
     HPR_SUPPORT=0
     LIMITED_RESOURCE=NO
```

```
       LINK_DEACT_TIMER=0
       LINK_STATION_ROLE=USE_ADAPTER_DEFAULTS
       MAX_IFRM_RCVD=0
       MAX_SEND_BTU_SIZE=32767
       NODE_ID=05D35154
       PORT_NAME=LANX_04
       PU_NAME=NTCMPU
       SOLICIT_SSCP_SESSION=1
       TARGET_PACING_COUNT=1
       TG_NUMBER=0
       USE_DEFAULT_TG_CHARS=1
)
DLUR_DEFAULTS=(
       DEFAULT_PU_NAME=NTCMPU
       DLUS_RETRY_LIMIT=3
       DLUS_RETRY_TIMEOUT=5
)
LOCAL_LU=(
       LU_NAME=NTCMLU0
       LU_ALIAS=NTCMLU0
       LU_SESSION_LIMIT=1
       NAU_ADDRESS=0
       ROUTE_TO_CLIENT=0
       DEFAULT_POOL=1
)


MODE=(
       MODE_NAME=NDM2LU62
       AUTO_ACT=0
       COMPRESSION=PROHIBITED
       COS_NAME=#CONNECT
       CRYPTOGRAPHY=NONE
       DEFAULT_RU_SIZE=1
       MAX_NEGOTIABLE_SESSION_LIMIT=8
       MAX_RU_SIZE_UPPER_BOUND=4096
       MIN_CONWINNERS_SOURCE=4
       PLU_MODE_SESSION_LIMIT=8
       RECEIVE_PACING_WINDOW=7
)

PARTNER_LU=(
       FQ_PLU_NAME=USIBMWZV.NDMR6
       ADJACENT_CP_NAME=USIBMWZV.WZVCDRM
       CONV_SECURITY_VERIFICATION=0
       MAX_MC_LL_SEND_SIZE=32767
       PARALLEL_SESSION_SUPPORT=0
       PARTNER_LU_ALIAS=NDMR6
       PREFERENCE=USE_DEFAULT_PREFERENCE
)

CPIC_SIDE_INFO=(
       SYM_DEST_NAME=NVDMSIDR
       CONVERSATION_SECURITY_TYPE=NONE
       MODE_NAME=NDM2LU62
       PARTNER_LU_NAME=USIBMWZV.NDMR6
       TP_NAME=21008
```

```
        TP_NAME_TYPE=SNA_SERVICE
)

CPIC_SIDE_INFO=(
        SYM_DEST_NAME=NVDMSIDS
        CONVERSATION_SECURITY_TYPE=NONE
        MODE_NAME=NDM2LU62
        PARTNER_LU_NAME=USIBMWZV.NDMR6
        TP_NAME=21007
        TP_NAME_TYPE=SNA_SERVICE
)

ADJACENT_NODE=(
        FQ_CP_NAME=USIBMWZV.WZVCDRM
        LU_ENTRY=(
                FQ_LU_NAME=USIBMWZV.NDMR6
        )
)

SHARED_FOLDERS=(
        CACHE_SIZE=256
)
```

8. Run the FNDTPSET.EXE program found in the softdist\bin directory to configure the local software distribution transaction programs. FNDTPSET will invoke a blank entry panel. You will need to invoke this program twice, once for the send function and once for the receive function. The information entered will be added to the Windows NT registry. You need to follow the directions in the Windows NT Software Distribution Up and Running document carefully. The entry requirements for this example are shown below. After you have run FNDTPSET, you can check or modify the values entered via REGEDT32. You will find the values within the tree structure of: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\SnaBase\Parameters\TPs\SNAD007 or SNAD008\Parameters

    ```
    NOTE: DO NOT CHANGE TRANSACTION PROGRAM NAMES, SNAD007 and SNAD008.

    For the Send Function
    ```

    ```
        TP Program: SNAD007
        Command Line:  c:\softdist\bin\fndts.exe
        Deselect Register as Service
        Deselect Queued Program
        Local LU Alias:  NTCMLU0
    ```

    ```
    For the Receive Function
    ```

    ```
        TP Program: SNAD008
        Command Line:  c:\softdist\bin\fndtr.exe
        Deselect Register as Service
        Deselect Queued Program
        Local LU Alias:  NTCMLU0
    ```

9. Set Environment Variable **APPCLLU.** You will need to add the system environment variable APPCLLU to the NT system via the Control Panel - System - Environment Page. The APPCLLU should equal the LU Name for the Software Distribution Server. Please refer to the Up and Running documentation for an example. In our example, APPCLLU=NTCMLU0

Customization Tasks for NetView DM/MVS 1.6.2:

NetView DM/MVS 1.6.2 installs via standard SMP/E processes, as described in the Program Directory. To tailor NetView DM for your environment you must do the customization tasks outlined below. Reference the NetView DM Release 6.2 Installation and Customization Guide, SH19-6794-05, especially chapters 1,2,11,12,15.

1. Code and assemble Stage 1 macros. These macros allow you to specify your unique operating environment. Alternatively, you can use an installation dialog via ISPF. The dialog panels use keywords that are the equivalent, but not always identical, to the keywords shown in the macros below. Stage 1 creates a batch job which you then submit in order to assemble the tables NetView DM needs, define VSAM files NetView DM will use and create other required libraries.

```
        NDMGEN              GENTYPE=INSTALL,
                            ADMID =USERID,
                            CLISTLB=NVDM.V162.NDMCLST,
                            SKELLIB=NVDM.V162.NDMSKLS,
                            LOAD=NVDM.V162.SFZDLOAD,
                            SMS=YES
        NDMNODE             TYPE=SRVR,FUNC=CMEP,XMFUNC=(SEND,RETR,DELE),
                            RESTYPE=(0060,0070,0080,0100,0120,0220,0230,0240,0250)
        NDMNODE             TYPE=CLNT,FUNC=CMEP,XMFUNC=(SEND,RETR,DELE),
                            RESTYPE=(0060,0070,0080,0100,0120,0220,0230,0240,0250)
        NDMTCP              APPLID=(NDMR6,*),
                            IAPPLID=(NDMR6IOF,*),
                            APPC=YES,
                            AUTOSTR=YES,
                            AUTOEND=NO,
                            DDPREQ=YES,
                            OPCTL=NETV,
                            RESWAIT=200,
                            RETRY=3,RETINT=10,
                            SWDLY=5,SWRTRY=5,
                            MAXTASK=(10,1),
                            STALINE=1,
                            SUFFIX=01,
                            TIMEOUT=20,
                            NETCHNG=IMMEDIATE,
                            HOPCNT=5
        NDMGIX              SUFFIX=01,NETCHNG=IMMEDIATE
        NDMBATCH            SUFFIX=01,NETCHNG=IMMEDIATE,PSWD=OPTIONAL
        NDMCOM              HCCSID=0025,SERVER=NO
        NDMCP               CPNAME=NOPOLL,POLLING=NO
        NDMRES              TYPE=0070,TRACK=YES,DEFINE=CAN,ASSIGN=CAN
        NDMRES              TYPE=0080,TRACK=YES,DEFINE=CAN,ASSIGN=CAN
        NDMRES              TYPE=0100,TRACK=NO,DEFINE=CAN,ASSIGN=CAN
        NDMRES              TYPE=0120,TRACK=YES,DEFINE=CAN,ASSIGN=CAN
        NDMRES              TYPE=0220,TRACK=YES,DEFINE=CAN,ASSIGN=CAN
        NDMDEF
```

```
          NDMDATA              TYPE=LIBD,DSN=NVDM.V162.NDMLIB,DELETE=NO
          NDMDATA              TYPE=LIB,DSN=NVDM.V162.NDMLIBT,DELETE=NO
          NDMDATA              TYPE=HFD,DSN=NVDM.V162.NDMHFDI,DELETE=NO
          NDMDATA              TYPE=HF,DSN=NVDM.V162.NDMHFDA,DELETE=NO,CSPC=60
          NDMDATA              TYPE=DRD,DSN=NVDM.V162.NDMDRD,DELETE=NO,DSPC=7,ISPC=2
          NDMDATA              TYPE=TCF,DSN=NVDM.V162.NDMTCF,DELETE=NO,DSPC=8,ISPC=3
          NDMDATA              TYPE=GIX,DSN=NVDM.V162.NDMGIX,DELETE=NO
          NDMDATA              TYPE=GIXD,DSN=NVDM.V162.NDMGIXD,DELETE=NO
          NDMDATA              TYPE=RQF,DSN=NVDM.V162.NDMRQF,DELETE=NO
          NDMDATA              TYPE=RQFD,DSN=NVDM.V162.NDMRQFD,DELETE=NO
          NDMDATA              TYPE=CWK,DSN=NVDM.V162.NDMCWK,DELETE=NO
          NDMDATA              TYPE=UN01,DSN=NVDM.V162.NDMUN01,DELETE=NO
          NDMDATA              TYPE=WF01,DSN=NVDM.V162.NDMWF01,DELETE=NO
          NDMDATA              TYPE=MSG,DSN=NVDM.V162.NDMMSGS,DELETE=NO
          NDMDATA              TYPE=TBL,DSN=NVDM.V162.NDMTABLE,DELETE=NO
          NDMDATA              TYPE=EIF,DSN=NVDM.V162.NDMEIF,DELETE=NO

          NDMDATA              TYPE=END
          END
/*EOF
```

2. Add VTAM definitions for the APPC LU's. An example is shown below, adding a CC server with LU
    name NTCMLU0.

```
WNTPU     PU      ADDR=63,
                  DLOGMOD=S3279M2,
                  IDBLK=372,
                  IDNUM=18705,
                  LOGTAB=LOGONTAB,
                  MAXDATA=1033,
                  MAXOUT=7,
                  MAXPATH=1,
                  MODETAB=PU3274C,
                  PASSLIM=7,
                  PUTYPE=2,
                  SSCPFM=USSSCS,
                  USSTAB=HSL3270A
          PATH    DIALNO=0104400013748705,GRPNM=G6RALL1
NTCMLU0   LU      LOCADDR=0,DLOGMOD=NDM2LU62,USSTAB=USSEMPTY
EMULLU2   LU      LOCADDR=2
EMULLU3   LU      LOCADDR=3
```

3. Add the VTAM definitions for NetView DM as an application.

```
          VBUILD  TYPE=APPL
NDMR6     APPL    AUTH=ACQ,
                  ACBNAME=NDMR6,
                  APPC=YES,
                  DSESLIM=1,
                  DMINWNL=0,
                  DMINWNR=1,
                  AUTOSES=1,
                  PARSESS=YES,
                  MODETAB=PU3274C,
                  DLOGMOD=NDM2LU62,
```

```
                    VPACING=63,
                    EAS=1
NDMR6IOF   APPL     AUTH=ACQ,
                    ACBNAME=NDMR6IOF,
                    EAS=1
```

4.   Add the VTAM definitions for the logmode entry NDM2LU62

```
NDM2LU62   MODEENT   LOGMODE=NDM2LU62,
                     TYPE=0,
                     FMPROF=X'13',
                     TSPROF=X'07',
                     PRIPROT=X'BO',
                     SECPROT=X'B0',
                     COMPROT=X'50B5',
                     PSNDPAC=X'07',
                     RUSIZES=X'8888',
                     PSERVIC=X'0602000000000000000002F00'
```

5.   Add a node definition for a test CC server named SDSNT1. Below is a batch job that will add the node
     definition.

```
//DEFNODE    JOB       (0), 'SMITH',CLASS=B,COND=(4,LT),
//SUBMIT     EXEC      PGM=DSXPREP,
//                     PARM='FUNCTION=SUBMIT,USERID=SMITH'
//STEPLIB    DD        DSN=NVDM.V162.SFZDLOAD,DISP=SHR
//SYSPRINT   DD        SYSOUT=*
//DSXPRINT   DD        SYSOUT=*
//SYSUDUMP   DD        SYSOUT=*
//SNAP       DD        SYSOUT=*
//DSXLIB     DD        DISP=SHR, DSN=NVDM.V162.NDMLIB
//DSXLIBT    DD        DISP=SHR, DSN=NVDM.V162.NDMLIBT
//DSXHFDI    DD        DISP=SHR, DSN=NVDM.V162.NDMHFDI
//DSXHFDA    DD        DISP=SHR, DSN=NVDM.V162.NDMHFDA
//DSXDRD     DD        DISP=SHR, DSN=NVDM.V162.NDMDRD
//DSXTCF     DD        DISP=SHR, DSN=NVDM.V162.NDMTCF
//DSXGIX     DD        DISP=SHR, DSN=NVDM.V162.NDMGIX
//DSXGIXD    DD        DISP=SHR, DSN=NVDM.V162.NDMGIXD
//NDMRQF     DD        DISP=SHR, DSN=NVDM.V162.NDMRQF
//NDMRQFDA   DD        DISP=SHR, DSN=NVDM.V162.NDMRQFDA
//SYSIN      DD        *
           DEFNODE   NAME=NTWITHCM,LUNAME=NTCMLU0,NODETYPE=SRVR,
                     LOGMODE=NDM2LU62,
                     RGN=NTCMLU0,REN=NTCMLU0,SRVNAME=NTCMLU0
           END
/*
```

6.   Submit job (or procedure) to start the NetView DM Transmission Control Program.
     Example is shown below:

```
//xxxxxx     JOB       (0),'SMITH',CLASS=B,COND=(4,LT),
//                     MSGCLASS=O,MSGLEVEL=(1,1),REGION=4096K,
//                     TIME=1440
//NDMR6      EXEC      PGM=DSXTMM00,PARM='OPCTL=IOF,START=COLD,
                       PROFILE=01'
//STEPLIB    DD        DSN=NVDM.V162.SFZDLOAD,DISP=SHR
//SYSPRINT   DD        SYSOUT=*
//SYSUDUMP   DD        DUMMY
```

```
//SNAP        DD    DUMMY
//DSXTCF      DD    DISP=SHR,DSN=NVDM.V162.NDMTCF
//DSXDRD      DD    DISP=SHR,DSN=NVDM.V162.NDMDRD
//DSXHFDI     DD    DISP=SHR,DSN=NVDM.V162.NDMHFDI
//DSXHFDA     DD    DISP=SHR,DSN=NVDM.V162.NDMHFDA
//DSXLIBT     DD    DISP=SHR,DSN=NVDM.V162.NDMLIBT
//DSXLIB      DD    DISP=SHR,DSN=NVDM.V162.NDMLIB
//NDMEIF      DD    DISP=SHR,DSN=NVDM.V162.NDMEIF
//NDMRQF      DD    DISP=SHR,DSN=NVDM.V162.NDMRQF
//NDMRQFDA    DD    DISP=SHR,DSN=NVDM.V162.NDMRQFD
//DSXCWK      DD    DISP=SHR,DSN=NVDM.V162.NDMCWK
//DSXWF01     DD    DISP=SHR,DSN=NVDM.V162.NDMWF01
//DSXUN01     DD    DISP=SHR,DSN=NVDM.V162.NDMUN01
//DSXJOBS     DD    DISP=SHR,DSN=USER.PDS.JCL
//DSXDDSUB    DD    SYSOUT=(A,INTRDR)
/*
```

SNA Customization for Tivoli Software Distribution 3.1.3 for Windows NT, Using Microsoft SNA Server and NetView DM/MVS

Purpose:

This section details the definitions necessary to create two-way communications between a Tivoli Software Distribution 3.1.3 Server with MS Windows NT and Netview DM/ MVS 1.6 using SNA protocol .

Environment:

MS Windows NT Server 4.0 with Service Pack 3
MS SNA Server 3.0
TME 10 Software Distribution Server 3.1.3 with maintenance applied through FixPack 0298
Netview DM/MVS 1.6.1 or 1.6.2

Planning your environment:

You will need to replace the names, both network names and software distribution names, used with the appropriate values for your environment. You will need to exactly match values, such as LU name, between MS SNA Server, Software Distribution 3.1.3 Server and NetView DM/MVS. Please remember that Software Distribution is case sensitive.

Names are uniquely chosen the user but must match at the Focal Point (NetView DM/MVS)   and at the CC Server (Software Distribution 3.1.3 Server for Windows NT):

  NDMR6   NetView DM/MVS application name
  USIBMWZV   SNA network ID
  NTCMLU0   SNA LUNAME used for communication at CC server and host
  NDM2LU62   SNA LOGMODE entry used at CC server and at host
  SDSNT1   Target address of CC server
  WZVCDRM   MVS control point name

Please check with your installation's VTAM system programmer for the correct values for these parameters in your environment.

Customization Tasks for MS Windows NT:

On the Windows NT system, you will need to install and customize both Software Distribution 3.1.3 Server and MS SNA Server. The following steps walk you through this process. In addition there is documentation on MS SNA Manager setup in the fixpack level of the Software Distribution Server for Windows NT Up and Running manual.

1. Install Microsoft SNA Server. In this example, MS SNA Server 3.0 was installed using the MS Backoffice 2.5 CD-ROM.

2. Install the MS 802.2 LLC Protocol. This is done via adding the protocol to the Network. The network setup is found in the Control Panel of Microsoft Windows NT. Note that to add the protocol, the MS Windows NT source code must be available.

3. Install Tivoli Software Distribution Server 3.1.3 with all maintenance through fixpack 0298 or later. Fixpacks are available on the Internet. They can be downloaded from ftp://ftp.software.ibm.com/ps/products/SD_server/fixes/. Follow the instructions that come in the README file. The base code and fixpack 0298 can also be found on the Tivoli Software Distribution CD, LCD4-0491-03.

4. Modify the Software Distribution Server definition using "nvdm updtg" to reflect the correct domain address and target address. The target definition for this example is shown next:

```
Target:               SDSNT1
Description:          INITIAL TARGET CONFIGURATION RECORD
Customer name:
Contact name:
Telephone number:
Manager:
Mailing address:
Target access key:    (none)
Mode:                 Push
Type:                 SERVER
Operating system:     WINDOWS_NT
Target address:       SDSNT1
Domain address:       SDSNT1
LAN address:
CM window:            12:00:00AM - 11:59:00PM
Distribution window:  12:00:00AM - 11:59:00PM
Network:              TCP sdsnt1
Logging level:        Normal
Tracing state:        Off
Installation parms:   BOOTDRIVE=C:
                      FREEDRIVE1=B:
                      FREEDRIVE2=E:
                      FREEDRIVE3=F:
                      FREEDRIVE4=G:
                      FREEDRIVE5=H:
                      LOG1=EXTLOG1
                      LOG2=EXTLOG2
                      LOG3=EXTLOG3
                      LOG4=EXTLOG4
                      LOG5=EXTLOG5
                      RSPFILE=D:\SOFTDIST\work\RSPFILE
Shared tokens:        (none)
Hardware parms:       (none)
Discovered inventory: (none)
```

5. Add a Software Distribution target definition to represent the NetView DM/MVS host. Define the target mode as focal point, the target type is server and ensure you define the target and domain addresses correctly. The target definition for the MVS host in this example follows:

```
Target:                NDMMVS
Description:
Customer name:
Contact name:
Telephone number:
Manager:
Mailing address:
Target access key:     (none)
Mode:                  Focal
Type:                  SERVER
Operating system:
Target address:        NDMR6
Domain address:        USIBMWZV
LAN address:
Network:               APPC USIBMWZV.NDMR6
```

6. Modify the routetab file found in softdist\db directory to reflect SNA protocol and the correct filename for the SNA connection file. Be careful not to imbed any null characters in this file. Use 'edit' instead of 'notepad' to modify this file. This file points to connsna found in softdist\db\snadscon for the connection information. The file name 'connsna' is case sensitive. The example routetab used is shown below:

```
NETWORK PROTOCOL:                      BOTH
USIBMWZV.NDMR6      ANY       ANY       ANY       ANY       connsna
*.*          ANY   ANY   ANY   ANY   connsna
```

7. Modify the SNA connection file found in softdist\db\snadscon directory to reflect the definitions necessary for your environment. Make sure the next dsu parameter points to the MVS host itself and that the TP symbolic names match the CPIC names defined in MS SNA Server. The symbolic names used here are the CPIC symbolic names used in MS SNA Server, and should NOT be the names of the Software Distribution transaction programs (SNAD007 and SNAD008). The example SNA connection file used, connsna , is shown below:

```
PROTOCOL:                           APPC
TYPE:                               SNA
SEND TP SYMBOLIC DESTINATION:       SENDAIX
RECEIVE TP SYMBOLIC DESTINATION:    RCVAIX
NEXT DSU:                           USIBMWZV.NDMR6
TRANSMISSION TIME-OUT:              60
RETRY LIMIT:                        3
SEND MU_ID TIME-OUT:                60
RECEIVE MU_ID TIME-OUT:             120
```

8. Build the MS SNA Server definitions for the Connection, Link Services, Mode entry, Local LU, Remote LU, SNA Server and CPIC names for send and receive. The example SNA definitions used are shown below. Remember that the Control Point Name can not be the same as the Logical Unit Name for any resource. Remember to match the CPIC names with the names used in step 7, and to

NOT make the CPIC names SNAD007 or SNAD008. MS SNA Server provides the ability to add the definitions through the SNA Server Manager. The output file shown below was generated using the command, SNACFG /display > filename.ext. Look at the Software Distribution Server for Windows NT Up and Running online manual for additional reference information.

```
MODE NDM2LU62

  Mode Name               NDM2LU62
  Comment                 MODE NAME for SWD
  Session Limit           1
  Min Con Winners         0
  Min Con Losers          0
  Autoactivation Lim      0
  Enable Autopartner      No
  High Priority           Yes
  Pacing Send Count       7
  Pacing Recv Count       7
  Max Send RU             1024
  Max Receive RU          1024


SERVER SDSNT1

  Server Name             SDSNT1
  Comment                 Local LU - Server Address
  Control Point Name      CPSDSNT1
  Network Name            USIBMWZV

  Link Services associated with this Server:
    SNADLC1      SnaDlc1

  Connections associated with this Server:
    802CONN      DLC Connection  to MVS

  APPC Local LUs associated with this Server:
    NTCMLU0      Local SDSNT1 LU Name


LINK SNADLC1

  Link Service Name       SNADLC1
  Server Name             SDSNT1
  Comment                 SnaDlc1
  Link Service Type       Token Ring

  Connections associated with this Link Service:
    802CONN      DLC Connection  to MVS


CONNECTION 802CONN

  Connection Name           802CONN
  Server Name               SDSNT1
  Comment                   DLC Connection  to MVS
  Remote End                Host
  Activation type           Initially Active
  Dynamic LU Definition     No
  Call Direction            Both
  Local Block Number        05D
  Local Node Number         35154
  Control Point Name        WZVCDRM
  Network Name              USIBMWZV
  Remote Block Number       05D
  Remote Node Number        12345

  Primary Link Service      SNADLC1

  Connection Type           802.2 DLC
  DLC Type                  Token
```

```
   XID Format              Format3
   Remote Network Address  400033202789
   Remote SAP Address      4
   Max BTU Length          1929
   Receive ACK Threshold   2
   NAK Send Limit          8
   Retry Limit             10
   XID Retry Limit         3
   T1 Timeout              Default
   T2 Timeout              Default
   Ti Timeout              Default
   Reactivation Delay      Default
   Reactivation Retry Limit   None


   No 3270 LUs assigned to this Connection.

   No LUA LUs assigned to this Connection.

   No Downstream LUs assigned to this Connection.

   APPC LUs assigned to this Connection:
     NDMR6        nvdm lu


APPCRLU NDMR6

   LU Alias                NDMR6
   Connection Name         802CONN
   Network Name            USIBMWZV
   LU Name                 NDMR6
   Uninterpreted LU Name   NDMR6
   Comment                 nvdm lu
   Parallel sessions       No
   Automatic partnering    No
   Session level security  None
   Implicit Mode           NDM2LU62

   This LU has no partner LUs.




APPCLLU NTCMLU0

   LU Alias                NTCMLU0
   Server Name             SDSNT1
   Independent LU          Yes
   Network Name            USIBMWZV
   LU Name                 NTCMLU0
   Comment                 Local SDSNT1 LU Name
   Automatic partnering    No
   Member of def. pool     Yes
   Implicit remote LU      <none>
   Timeout for TP start    60

   This LU has no partner LUs.




CPIC RCVAIX

   SymDest Name            RCVAIX
   Comment                 SD Receive CPIC
   Service TP Name         21F0F0F8
   Partner LU Network Name USIBMWZV
   Partner LU Name         NDMR6
   Mode Name               NDM2LU62
   Conversation Security Type None
```

```
CPIC SENDAIX

  SymDest Name               SENDAIX
  Comment                    SD Send CPIC
  Service TP Name            21F0F0F7
  Partner LU Network Name    USIBMWZV
  Partner LU Name            NDMR6
  Mode Name                  NDM2LU62
  Conversation Security Type None


DIAGNOSTIC

  Audit Level                Level 10
  Popup Server               <local system>
  Logging Server             <local system>
  Network Management Conn    <none>
  Display/CNOS Conn          <none>
```

9. Run the FNDTPSET.EXE program found in softdist\bin directory to set the software distribution
    transaction programs. FNDTPSET is a Software Distribution Program that will bring up a blank entry
    panel. The information entered here will be added to the Windows NT registry. Note: Follow the
    directions found in the Windows NT Software Distribution Up and Running document carefully. The
    exact entry requirements for these programs are noted below. Do NOT have these programs registered
    as services to Windows NT. After you have run FNDTPSET, you can check or modify the values
    entered from REGEDT32. You will find the values within the SNABASE tree structure of
    HKEY_LOCAL_MACHINE\SOFTWARE.

    NOTE: DO NOT CHANGE TRANSACTION PROGRAM NAMES, SNAD007 and SNAD008.

```
     Send Program: SNAD007
     Program:     c:\softdist\bin\fndts.exe
     Deselect Register as Service
     Deselect Queued Program
     Local LU Alias:  NTCMLU0
```

```
     Receive Program: SNAD008
     Program:     c:\softdist\bin\fndtr.exe
     Deselect Register as Service
     Deselect Queued Program
     Local LU Alias:  NTCMLU0
```

Customization Tasks for NetView DM/MVS 1.6.2:

NetView DM/MVS 1.6.2 installs via standard SMP/E processes, as described in the Program Directory. To
tailor NetView DM for your environment you must do the customization tasks outlined below. Reference
the NetView DM Release 6.2 Installation and Customization Guide, SH19-6794-05, especially chapters
1,2,11,12,15.

1. Code and assemble Stage 1 macros. These macros allow you to specify your unique operating
    environment. Alternatively, you can use an installation dialog via ISPF. The dialog panels use
    keywords that are the equivalent, but not always identical, to the keywords shown in the macros below.
    Stage 1 creates a batch job which you then submit in order to assemble the tables NetView DM needs,
    define VSAM files NetView DM will use and create other required libraries.

```
        NDMGEN            GENTYPE=INSTALL,
                          ADMID =USERID,
                          CLISTLB=NVDM.V162.NDMCLST,
                          SKELLIB=NVDM.V162.NDMSKLS,
                          LOAD=NVDM.V162.SFZDLOAD,
                          SMS=YES
        NDMNODE           TYPE=SRVR,FUNC=CMEP,XMFUNC=(SEND,RETR,DELE),
                          RESTYPE=(0060,0070,0080,0100,0120,0220,0230,0240,0250)
        NDMNODE           TYPE=CLNT,FUNC=CMEP,XMFUNC=(SEND,RETR,DELE),
                          RESTYPE=(0060,0070,0080,0100,0120,0220,0230,0240,0250)
        NDMTCP            APPLID=(NDMR6,*),
                          IAPPLID=(NDMR6IOF,*),
                          APPC=YES,
                          AUTOSTR=YES,
                          AUTOEND=NO,
                          DDPREQ=YES,
                          OPCTL=NETV,
                          RESWAIT=200,
                          RETRY=3,RETINT=10,
                          SWDLY=5,SWRTRY=5,
                          MAXTASK=(10,1),
                          STALINE=1,
                          SUFFIX=01,
                          TIMEOUT=20,
                          NETCHNG=IMMEDIATE,
                          HOPCNT=5
        NDMGIX            SUFFIX=01,NETCHNG=IMMEDIATE
        NDMBATCH          SUFFIX=01,NETCHNG=IMMEDIATE,PSWD=OPTIONAL
        NDMCOM            HCCSID=0025,SERVER=NO
        NDMCP             CPNAME=NOPOLL,POLLING=NO
        NDMRES            TYPE=0070,TRACK=YES,DEFINE=CAN,ASSIGN=CAN
        NDMRES            TYPE=0080,TRACK=YES,DEFINE=CAN,ASSIGN=CAN
        NDMRES            TYPE=0100,TRACK=NO,DEFINE=CAN,ASSIGN=CAN
        NDMRES            TYPE=0120,TRACK=YES,DEFINE=CAN,ASSIGN=CAN
        NDMRES            TYPE=0220,TRACK=YES,DEFINE=CAN,ASSIGN=CAN
        NDMDEF
        NDMDATA           TYPE=LIBD,DSN=NVDM.V162.NDMLIB,DELETE=NO
        NDMDATA           TYPE=LIB,DSN=NVDM.V162.NDMLIBT,DELETE=NO
        NDMDATA           TYPE=HFD,DSN=NVDM.V162.NDMHFDI,DELETE=NO
        NDMDATA           TYPE=HF,DSN=NVDM.V162.NDMHFDA,DELETE=NO,CSPC=60
        NDMDATA           TYPE=DRD,DSN=NVDM.V162.NDMDRD,DELETE=NO,DSPC=7,ISPC=2
        NDMDATA           TYPE=TCF,DSN=NVDM.V162.NDMTCF,DELETE=NO,DSPC=8,ISPC=3
        NDMDATA           TYPE=GIX,DSN=NVDM.V162.NDMGIX,DELETE=NO
        NDMDATA           TYPE=GIXD,DSN=NVDM.V162.NDMGIXD,DELETE=NO
        NDMDATA           TYPE=RQF,DSN=NVDM.V162.NDMRQF,DELETE=NO
        NDMDATA           TYPE=RQFD,DSN=NVDM.V162.NDMRQFD,DELETE=NO
        NDMDATA           TYPE=CWK,DSN=NVDM.V162.NDMCWK,DELETE=NO
        NDMDATA           TYPE=UN01,DSN=NVDM.V162.NDMUN01,DELETE=NO
        NDMDATA           TYPE=WF01,DSN=NVDM.V162.NDMWF01,DELETE=NO
        NDMDATA           TYPE=MSG,DSN=NVDM.V162.NDMMSGS,DELETE=NO
        NDMDATA           TYPE=TBL,DSN=NVDM.V162.NDMTABLE,DELETE=NO
        NDMDATA           TYPE=EIF,DSN=NVDM.V162.NDMEIF,DELETE=NO
        NDMDATA           TYPE=END
        END
  /*EOF
```

2. Add VTAM definitions for the APPC LU's. An example is shown below, adding a CC server with LU name NTCMLU0.

```
WNTPU     PU      ADDR=63,
                  DLOGMOD=S3279M2,
                  IDBLK=372,
                  IDNUM=18705,
                  LOGTAB=LOGONTAB,
                  MAXDATA=1033,
                  MAXOUT=7,
                  MAXPATH=1,
                  MODETAB=PU3274C,
                  PASSLIM=7,
                  PUTYPE=2,
                  SSCPFM=USSSCS,
                  USSTAB=HSL3270A
          PATH    DIALNO=0104400013748705,GRPNM=G6RALL1
NTCMLU0   LU      LOCADDR=0,DLOGMOD=NDM2LU62,USSTAB=USSEMPTY
EMULLU2   LU      LOCADDR=2
EMULLU3   LU      LOCADDR=3
```

3. Add the VTAM definitions for NetView DM as an application.

```
          VBUILD    TYPE=APPL
NDMR6     APPL      AUTH=ACQ,
                    ACBNAME=NDMR6,
                    APPC=YES,
                    DSESLIM=1,
                    DMINWNL=0,
                    DMINWNR=1,
                    AUTOSES=1,
                    PARSESS=YES,
                    MODETAB=PU3274C,
                    DLOGMOD=NDM2LU62,
                    VPACING=63,
                    EAS=1
NDMR6IOF  APPL      AUTH=ACQ,
                    ACBNAME=NDMR6IOF,
                    EAS=1
```

4. Add the VTAM definitions for the logmode entry NDM2LU62

```
NDM2LU62  MODEENT   LOGMODE=NDM2LU62,
                    TYPE=0,
                    FMPROF=X'13',
                    TSPROF=X'07',
                    PRIPROT=X'BO',
                    SECPROT=X'B0',
                    COMPROT=X'50B5',
                    PSNDPAC=X'07',
                    RUSIZES=X'8888',
                    PSERVIC=X'060200000000000000002F00'
```

5. Add a node definition for a test CC server named SDSNT1. Below is a batch job that will add the node definition.

```
//DEFNODE    JOB       (0), 'SMITH',CLASS=B,COND=(4,LT),
//SUBMIT     EXEC      PGM=DSXPREP,
//                     PARM='FUNCTION=SUBMIT,USERID=SMITH'
//STEPLIB    DD        DSN=NVDM.V162.SFZDLOAD,DISP=SHR
//SYSPRINT   DD        SYSOUT=*
//DSXPRINT   DD        SYSOUT=*
//SYSUDUMP   DD        SYSOUT=*
//SNAP       DD        SYSOUT=*
//DSXLIB     DD        DISP=SHR, DSN=NVDM.V162.NDMLIB
//DSXLIBT    DD        DISP=SHR, DSN=NVDM.V162.NDMLIBT
//DSXHFDI    DD        DISP=SHR, DSN=NVDM.V162.NDMHFDI
//DSXHFDA    DD        DISP=SHR, DSN=NVDM.V162.NDMHFDA
//DSXDRD     DD        DISP=SHR, DSN=NVDM.V162.NDMDRD
//DSXTCF     DD        DISP=SHR, DSN=NVDM.V162.NDMTCF
//DSXGIX     DD        DISP=SHR, DSN=NVDM.V162.NDMGIX
//DSXGIXD    DD        DISP=SHR, DSN=NVDM.V162.NDMGIXD
//NDMRQF     DD        DISP=SHR, DSN=NVDM.V162.NDMRQF
//NDMRQFDA   DD        DISP=SHR, DSN=NVDM.V162.NDMRQFDA
//SYSIN      DD        *
            DEFNODE    NAME=NTWITHCM,LUNAME=NTCMLU0,NODETYPE=SRVR,
                       LOGMODE=NDM2LU62,
                       RGN=NTCMLU0,REN=NTCMLU0,SRVNAME=NTCMLU0
            END
/*
```

6. Submit job (or procedure) to start the NetView DM Transmission Control Program.
   Example is shown below:

```
//xxxxxx     JOB       (0),'SMITH',CLASS=B,COND=(4,LT),
//                     MSGCLASS=O,MSGLEVEL=(1,1),REGION=4096K,
//                     TIME=1440
//NDMR6      EXEC      PGM=DSXTMM00,PARM='OPCTL=IOF,START=COLD,
                       PROFILE=01'
//STEPLIB    DD        DSN=NVDM.V162.SFZDLOAD,DISP=SHR
//SYSPRINT   DD        SYSOUT=*
//SYSUDUMP   DD        DUMMY
//SNAP       DD        DUMMY
//DSXTCF     DD        DISP=SHR,DSN=NVDM.V162.NDMTCF
//DSXDRD     DD        DISP=SHR,DSN=NVDM.V162.NDMDRD
//DSXHFDI    DD        DISP=SHR,DSN=NVDM.V162.NDMHFDI
//DSXHFDA    DD        DISP=SHR,DSN=NVDM.V162.NDMHFDA
//DSXLIBT    DD        DISP=SHR,DSN=NVDM.V162.NDMLIBT
//DSXLIB     DD        DISP=SHR,DSN=NVDM.V162.NDMLIB
//NDMEIF     DD        DISP=SHR,DSN=NVDM.V162.NDMEIF
//NDMRQF     DD        DISP=SHR,DSN=NVDM.V162.NDMRQF
//NDMRQFDA   DD        DISP=SHR,DSN=NVDM.V162.NDMRQFD
//DSXCWK     DD        DISP=SHR,DSN=NVDM.V162.NDMCWK
//DSXWF01    DD        DISP=SHR,DSN=NVDM.V162.NDMWF01
//DSXUN01    DD        DISP=SHR,DSN=NVDM.V162.NDMUN01
//DSXJOBS    DD        DISP=SHR,DSN=USER.PDS.JCL
//DSXDDSUB   DD        SYSOUT=(A,INTRDR)
/*
```