

# **Network Station - S/390: Network Station Manager Version 1 Release 3 Migration Considerations**

This document is the detailed description of how to migrate user and configuration data from Network Station Manager(NSM) V1R3 running on S/390 (OS/390 or VM/ESA) to the new NSM V2R1 running on the supported platforms. Use of the new migration utility, shipped with NSM V2R1 and the instructions in this document will provide the steps necessary to ensure a successful migration to the new Network Station family of products.

The migration utility has been enhanced to allow the designation of an alternate path for the V1R3 Configuration. This will allow us to migrate the V1R3 S/390 configurations to V2R1 supported server platforms (AS/400, AIX, NT). The process will include establishing a mount point from the V2R1 system to the V1R3 S/390 system and then specifying the mount point as the alternate path (-P option) on the Migration Utility.

Any group or user ID assignments that are existing on the S/390 server platform would also need to be defined to the target NSM V2R1 server prior to running the migration utility. This will insure that the group to user associations and configuration settings will continue to work properly on the new V2R1 server platform after migration. If group settings are not implemented on the S/390 platform or were elected not to be migrated, then the V2R1 server would assume the default group settings for the migrated users.

The migration utility will also overwrite all existing V2R1 configuration and user settings at each invocation of this utility. Care must be taken if the same user is running on an existing NSM V2R1 system and you plan to migrate V1R3 settings for that user to that V2R1 target system. Any previous V2R1 settings for that user will be lost after running the migration utility.

Some V1R3 configuration preferences are not migrated by the V2R1 migration utility. For file names and additional details please review the 'IBM Network Station Advance Information' in the chapter titled 'Migrating from V1R3'. The most current copy of this pub is located on the web at the url referenced at the end of this document.

## **S/390 Requirements**

The following requirements are the S/390 Server Platform in preparation for using the Migration Utility:

- 1) An installed and configured NSM V1R3 on OS/390 or VM/ESA. It is recommended that you also have Advanced Function PTF # 8 installed on your S/390 system. PTF # 8 will include the coexistence level required with the correct level of boot monitor code. This supporting PTF will allow migrated users the capability to boot and read configuration data from your S/390 NSM V1R3 server after migration of those users to a V2R1 server. Only those directories that exist on the V1R3 S/390 server will be

migrated. For example, if users created 3270, 5250 emulation preference data, then that data will be migrated to V2R1.

- 2) NFS Server installation and configuration to support access to HFS/BFS configuration and user data
- 3) Requires Super UserID (UID 0 / GID 0) and password for NFS access to HFS/BFS data
- 4) File permissions for all S/390 user data should be set to x'755' or unexpected results can exist on the target migration server after running the migration utility. The following shell command is an example of changing the permission bits on S/390:

For OS/390: **chmod -R 755 /etc/nstation/users/\***

For VM/ESA: **chmod -R 755 /QIBM/UserData/users/\***

**NOTE:** If migrating to the AS/400 or Windows/NT environment, this platform does not support the mixed-case character naming for similar UserID's (i.e. JOE vs. joe) that is allowed on the S/390 NSM server platform. Care must be taken to ensure that you migrate the correct UserID that may have a similar UserID on S/390. You should review your assigned UserIDs to insure uniqueness. This may require that you either delete one or more of the similar UserIDs or rename them to conform to uniqueness required by the AS/400 and Windows/NT platform.

## **Migrating S/390 to AS/400**

### **On OS/390:**

- 1) Export the USERBASE directory (/hfs/etc/nstation)
- 2) Start the NFS Server

### **On VM/ESA:**

- 1) Configure NFS for access to BFS data
- 2) Start the NFS Server

### **On AS/400:**

This must run from the **QSECOFR** userid to obtain the proper UID 0 authorization. Also, prior to migration the migrated users **MUST** login to the AS/400 via the Network Station client to establish the

initial correct directory and file ownership (permission bit settings) and then logout. User's should not make changes after the initial login or they will be reset by the migration utility.

1) Run MOUNT command (from command line or from go cmdnfs menu)

```
MOUNT TYPE(*NFS)  
MFS('<system name>:/hfs/etc/nstation')  
MNTOVRDIR('QIBM/ProdData/NetworkStationV2/migration')  
OPTIONS(ro,,,,,,,,,rsize=2048,wsize=2048,,,,,,,,)
```

**NOTE:** Remaining options can be left at default settings. The example given is for mounting the OS/390 HFS directory, for VM/ESA use the following syntax in the MFS paramater:

```
MFS('<system name>:./VMBFS:VMSYSU:QIBM/QIBM/UserData/NetworkStation')
```

2) Run the Migration Utility

```
CALL PGM(QYTCV2/QYTCMUMU)  
PARM('-P' 'QIBM/ProdData/NetworkStationV2/migration' '-A')
```

Where the '-A' flag migrates all user, group, terminal, and system preferences.

**NOTE:** If partial migration is required for just users, groups, etc., additional flags are fully documented in supporting software documentation for the AS/400 NSM V2R1 server located at the url in the end of this document.

3) Unmount

```
UNMOUNT TYPE(*NFS)  
MNTOVRDIR('QIBM/ProdData/NetworkStationV2/migration')
```

## Migrating S/390 to AIX

### **On OS/390:**

1) Export the USERBASE directory (/hfs/etc/nstation)

2) Start the NFS Server

## On VM/ESA:

- 1) Configure NFS for access to BFS data
- 2) Start the NFS Server

## On AIX:

This must run from the **ROOT** userid to obtain the proper UID 0 authorization. Also, prior to migration the migrated users **MUST** login to the RS/6000 via the Network Station client to establish the initial correct directory and file ownership (permission bit settings) and then logout. User's may however stay logged in but, they should not make changes after the initial login or those changes will be reset by the migration utility.

Also, if you are planning to migrate NC Navigator mail and address book functions, you must also after the initial login, start the Netscape Messenger and then run migration. The user can be logged on, but not attempting updates or changes during migration.

- 1) Run "mount" command (from command line) and mount to default mount point "/mnt". Before mounting /mnt, verify that /mnt is not mounted by entering the command, "mount". After which, look and verify that "/mnt" is not listed. If so, perform the command "umount /mnt". Then run the command below:

for OS/390 use the following syntax in the mount command:

```
mount <system name>:/hfs/etc/nstation /mnt
```

for VM/ESA use the following syntax in the mount command:

```
mount <system name>:././VMBFS:VMSYSU:QIBM/QIBM/UserData/NetworkStation /mnt
```

- 2) Run the Migration Utility

```
/usr/NetworkStationV2/bin/nsmmigr -P /mnt -A
```

Where the **-A** flag migrates all user, group, terminal, and system preferences.

**NOTE:** If partial migration is required for just users, groups, etc., additional flags are fully documented in supporting software documentation for the AIX/6000 NSM V2R1 server located at the url in the end of this document.

- 3) Unmount from the command line:

```
umount /usr/NetworkStationV2/migration
```

## Migrating S/390 to Windows/NT

Migrating from S/390 to Windows/NT will require additional manual steps to copy the S/390 configuration and user data (optional) to a staging area and then allow access from the Windows/NT migration utility to read the data. Mapping tables, following the migration steps, are provided as a reference for directories/files that are required or optionally required for staging on S/390. Also the Windows/NT server will require a working NFS client to mount the HFS/BFS staged data for input to the migration utility. The preferred method is to use NFS for migration, but if this is not possible on your Windows/NT target server then you may use the alternate method for migrating S/390 to Windows/NT described after the following NFS method.

### **On OS/390:**

This must be run from a User ID with UID 0 GID 0

1) Create the staging area for migration:

mkdir the directory /nstation (permission bit setting of 755)

```
mkdir -m 755 /NT  
mkdir -m 755 /NT/nstation
```

Create a HFS file system and mount it (read/write) at the /nstation directory. (This step may be omitted if you plan to use the root file system for the staging area)

Use the following commands to make new directories (permission bit setting of 755)

```
mkdir -m 755 /NT/nstation/userbase  
mkdir -m 755 /NT/nstation/prodbase  
mkdir -m 755 /NT/nstation/userbase/SysDef  
mkdir -m 755 /NT/nstation/userbase/groups  
mkdir -m 755 /NT/nstation/userbase/users  
mkdir -m 755 /NT/nstation/prodbase/configs  
mkdir -m 755 /NT/nstation/userbase/home (optional)
```

2) Use the following commands to copy the config/user data into staging area:

```
cp -Rp /etc/nstation/SysDef/* /NT/nstation/userbase/SysDef/  
cp -Rp /etc/nstation/groups/* /NT/nstation/usersbase/groups/  
cp -Rp /etc/nstation/users/* /NT/nstation/userbase/users/  
cp -Rp /etc/nstation/StationConfig/* /NT/nstation/prodbase/configs/
```

3) Use the following commands to copy optional user data into staging area:

```
cp -Rp /etc/nstation/users/* /NT/nstation/userbase/home/
```

4) Create the NT V1R3 migration flag file with the following command:

```
touch /NT/nstation/userbase/ntr3migr.txt
```

5) Start the NFS Server

**NOTE:** Be sure to export the newly created /nstation directory as read-only

### **On VM/ESA:**

This must be run from a User ID with UID 0 GID 0

1) **OPENVM SHELL**

2) **CD /**

3) Create the staging area for migration:

mkdir the directory /nstation (permission bit setting of 755)

```
mkdir -m 755 /NT  
mkdir -m 755 /NT/nstation
```

Use the following commands to make new directories (permission bit setting of 755)

```
mkdir -m 755 /NT/nstation/userbase  
mkdir -m 755 /NT/nstation/prodbase  
mkdir -m 755 /NT/nstation/userbase/SysDef  
mkdir -m 755 /NT/nstation/userbase/groups  
mkdir -m 755 /NT/nstation/userbase/users  
mkdir -m 755 /NT/nstation/prodbase/configs  
mkdir -m 755 /NT/nstation/userbase/home (optional)
```

2) Use the following commands to copy the config/user data into staging area:

```
cp -Rp /QIBM/UserData/NetworkStation/SysDef/* /NT/nstation/userbase/SysDef/  
cp -Rp /QIBM/UserData/NetworkStation/groups/* /NT/nstation/userbase/groups/  
cp -Rp /QIBM/UserData/NetworkStation/users/* /NT/nstation/userbase/users/  
cp -Rp /QIBM/ProdData/NetworkStation/configs/* /NT/nstation/prodbase/configs/
```

3) Use the following commands to copy optional user data into staging area:

```
cp -Rp /QIBM/UserData/NetworkStation/users/* /NT/nstation/userbase/home/
```

4) Create the NT V1R3 migration flag file with the following command:

```
touch /NT/nstation/userbase/ntr3migr.txt
```

5) Start the NFS Server

**NOTE:** Depending on the NT client you have, you may need to export the newly created /nstation directory as read-only. Do do so you must be at the VM/ESA 2.4.0 level, if you are not follow the alternate method for migrating.

If you are at VM/ESA 2.4.0 and the client you have requires exports, Edit the VMNFS CONFIG file and add the following line:

```
EXPORT ../VMBFS:VMSYS:ROOT/NT ../VMBSF:K4POOL:ROOT/NT,LINES=EXT,TRANS=EXT
```

### On Windows/NT:

1) Depending on which NFS client you are using on your Windows/NT server you need to either run the NFS client GUI interface or the commandline interface to mount the staged data mountpoint on the S/390 server. Here's examples of a generic mount or nfs link commands:

For OS/390

```
Mount YourServer:/hfs/NT X:
```

For VM/ESA

```
Mount YourServer:../VMBFS:VMSYS:ROOT:/NT X:
```

Where **X:** is the drive designation for the NFS mount and "**YourServer**" is the host name or IPAddress of the S/390 Server

2) Run the Migration Utility From a Windows DOS command prompt, type:

```
nsmv2migr -a -p X:\nstation
```

Where the **-a** flag migrates all user, group, terminal, and system preferences, the **-p** flag for the alternate directory path and **X:** is the drive designation for the NFS mount..

**NOTE:** If partial migration is required for just users, groups, etc., additional flags are fully documented in supporting software documentation for the Windows/NT NSM V2R1 server located at the url in the end of this document.

3) From the MS-DOS Prompt enter the unmount command:

```
umount /nstation
```

### Alternate method for migrating S/390 to Windows/NT

Use the following steps if a NFS client is not available on your Windows/NT V2R1 target server. You will be required to install an unpacking tool that will handle the TAR type of archive from S/390. An example of such a tool is the WinZip tool that is available at <http://www.winzip.com>

#### **On OS/390 or VM/ESA:**

1) Complete steps 1 though 4 in the previous sections for OS/390 or VM/ESA. This will create and load the migration data that is staged in the required directory structure for Windows/NT.

2) Use the following commands to tar the V1R3 staged prodbase and userbase configuration and user preference data.

```
cd /NT  
tar -cvf nstation.TAR nstation/*
```

This will create the nstation.TAR file in the /NT directory.

#### **On Windows/NT:**

1) From the MS-DOS Prompt enter the following commands:

```
mkdir /"YourMigrationDir"  
cd /"YourMigrationDir"  
ftp "YourServer"
```

Where “YourMigrationDir” is your directory of choice to place the tar file and “YourServer” is the host name or IPAddress of the S/390 Server

2) Login with a valid userid/password that has read permissions to the /nstation directory on S/390

3) Set the transfer representation as image by entering: **bin**

4) Change to the staged data directory on S/390

On OS/390, enter: **cd '/NT'**

On VM/ESA, enter: **cd '/../VMBFS:VMSYSU:ROOT/NT'**



- 5) Transfer the nstation.TAR file by entering: **get nstation.TAR**
- 6) Quit your ftp session by entering: **quit**
- 7) Using your choice of an unpacking tool, i.e. WinZip, unpack the nstation.TAR file into the **"YourMigrationDir"** directory.
- 8) Run the Migration Utility From a Windows DOS command prompt, type:

**nsmv2migr -a -p X:"YourMigrationDir\nstation"**

Where the **-a** flag migrates all user, group, terminal, and system preferences and the **-p** flag for the alternate directory path and **X:** is the drive designation for the alternate path.

**NOTE:** If partial migration is required for just users, groups, etc., additional flags are fully documented in supporting software documentation for the Windows/NT NSM V2R1 server located at the url in the end of this document.

## Mapping table for OS/390

General Description:	OS/390 V1R3 Directory or File:	Staging V1R3 NT Directory or File:
NSM System preference files	/etc/nstation/SysDef/*.*	/NT/nstation/userbase/SysDef/*.*
NSM Group preference files	/etc/nstation/groups/*.*	/NT/nstation/userbase/groups/*.*
NSM User preference files	/etc/nstation/users/*.*	/NT/nstation/userbase/users/*.*
NSM Terminal preference files	/etc/nstation/StationConfig/*.*	/NT/nstation/prodbase/configs/*.*
NSLD configuration file (Since the nsld file between the two systems is not compatible, it does not make sense to migrate it. The V2R1 clients will simply use the nsld file installed with V2R1.)	/etc/nstation/nsld.cnfg /etc/nstation/nsld.envars	(not applicable)
Kiosk (Suppression of Login) file	/etc/nstation/StationConfig/kiosks.nsl	/NT/nstation/prodbase/configs/kiosks.nsl
Users home directory files (Optional migration... it will move all files in the user's home directory to the new V2R1 directory, including non-Network Station files. If this is not desired, do not copy this directory to the NT staging directory tree.)	/etc/nstation/users/ <i>USERID</i> /*.*	/NT/nstation/userbase/home/*.*
User's Navio files (bookmarks, etc) (Optional migration. If this is not desired, do not copy these directories to the NT staging directory tree.)	/etc/nstation/users/ <i>USERID</i> /NAV/*.*	/NT/nstation/userbase/home/ <i>USERID</i> /NAV/*.*
NT V1R3 migration flag file	(does not exist)	/NT/nstation/userbase/ntr3migr.txt (create 0 byte empty text ascii file)

## Mapping table for VM/ESA

<b>General Description:</b>	<b>VM/ESA V1R3 Directory or File:</b>	<b>Staging V1R3 NT Directory or File:</b>
NSM System preference files	/QIBM/UserData/NetworkStation/SysDef/*.*	/NT/nstation/userbase/SysDef/*.*
NSM Group preference files	/QIBM/UserData/NetworkStation/groups/*.*	/NT/nstation/userbase/groups/*.*
NSM User preference files	/QIBM/UserData/users/*.*	/NT/nstation/userbase/users/*.*
NSM Terminal preference files	/QIBM/ProdData/NetworkStation/configs/*.*	/NT/nstation/prodbase/configs/*.*
NSLD configuration file (Since the nsld file between the two systems is not compatible, it does not make sense to migrate it. The V2R1 clients will simply use the nsld file installed with V2R1.)	Does not exist	(not applicable)
Kiosk (Suppression of Login) file	Does not exist	/NT/nstation/prodbase/configs/kiosks.nsl
Users home directory files (Optional migration... it will move all files in the user's home directory to the new V2R1 directory, including non-Network Station files. If this is not desired, do not copy this directory to the NT staging directory tree.)	/QIBM/UserData/users/USERID/*.*	/NT/nstation/userbase/home/*.*
User's Navio files (bookmarks, etc) (Optional migration. If this is not desired, do not copy these directories to the NT staging directory tree.)	/QIBM/UserData/users/USERID/NAV/*.*	/NT/nstation/userbase/home/USERID/NAV/*.*
NT V1R3 migration flag file	(does not exist)	/NT/nstation/userbase/ntr3migr.txt (create 0 byte empty text ascii file)

## **NVRAM or DHCP settings on the IBM Network Station**

Update the parameters to list the V2R1 server as the boot and configuration hosts. This can be done in either the Network Station configuration panels on the Network Station or in a DHCP configuration file (if DHCP is being used). Re-boot and test your new V2R1 boot and configuration environment.

## **Placement of V1R3 data on the new V2R1 Server**

After migration to the supported NSM V2R1 server and you start the boot process, the network station will get a new boot monitor update and place any NSM V1R3 configured applications in the 'Old Applications' folder on the new graphical desktop launch bar. The NSM V2R1 administrator may be required to make post migration configurations to meet the needs of your NSM V2R1 users, i.e. reconfigure the emulator session(s) icon(s) in the 'Old Applications' folder to the new 'Host Access' icon pull-down menu.

Please refer to the NSM V2R1 Software Information or the NSM Advanced User Information for more detailed information at the following website:

**<http://service.boulder.ibm.com/nc/index.shtml>**