Operations Guide
Version 6.0

Contents

Preface

This guide is for technical staff who will install, configure, and support ENPS. It contains confidential and proprietary information. Refer to the *ENPS Basic User's Guide* and *ENPS Advanced User's Guide* for in-depth information about using ENPS.

ENPS was designed for ease of use and efficiency, to expand enterprise-wide access to real-time content and archives, and to make it possible to collaborate in new ways. For System Administrators, ENPS provides a reliable 24-hour-a-day operation and a "future-proof" design that grows with your enterprise.

To view the latest version of the documentation or to download ENPS software updates, visit the ENPS website at `http://www.enps.com`.

Technical Support

Users can press the `F1` key for online help while they are using ENPS.

If you are in the United States and you require further assistance call the ENPS support line at +1-866-ENPS-911 or +1-202-641-9941. If you are outside of the United States call +44 (0) 20 8225 7272.

If you need help with AP news wires or radio network delivery contact your local AP bureau. If you are in the United States call +1-800-232-7241 or +1-202-641-9880.

If you are not sure which department to contact call +1-800-821-4747 or +1-202-641-9000.

You may also post your question on the ENPS support forum by visiting `http://support.enps.com`. You must register to receive a username and password.

Typographical Conventions in this Guide

The following table lists the typographic conventions you will find in this guide:

Typeface	Meaning	Example
`SAMPLE TEXT`	Text to be to be typed, keystrokes, filenames, or directories.	The `ENPS.EXE` file is located in `C:\Program Files\ENPS`. Press `CTRL+Q` to exit ENPS.
Sample →Text	Navigation from one menu to another	Click on the rover for the personal folder and select **New→ Contact→ Personal**.
Sample text	Button names	Click *Close* to close the current window.

Upgrading ENPS

Follow the instructions in this section if you already have ENPS installed and you are upgrading to a newer version. If you have multiple Primary Servers you should upgrade the Central Server first.

You can use the upgrade installer to upgrade your version of ENPS when the newer version is within the same major build number as the one you are currently using such as 5.0.0053 to 5.0.0087. If you are upgrading between major builds, such as 4.05 to 5.0 use the full installer.

Perform the upgrade when there is the least resource load on the system and give users prior notice that the Primary Server will be unavailable.

Using the Upgrade Installer

1. Download the upgrade `.EXE` from ENPS website or FTP location. You can e-mail `info@enps.com` for a link to the upgrade executable.

2. Extract the files to the root of the ENPS Work drive, usually `F:`, then copy those files to the same location on the Buddy Server.

3. Perform the routine maintenance steps in Chapter 19 for the Buddy Server.

4. Shut down ENPS on the Buddy Server by closing the Watch, NOM Maint, NWP and NOM applications. Extract, WalkCS, and Publish should also be shut down if they are running on the Buddy Server.

5. Run the upgrade `.EXE` on the Buddy Server.

6. Start the NOM Watch by using the desktop shortcut or by running `\NOM\WATCH.EXE`.

7. On the Primary Server open the NOM and select **NOM Maintenance →** **Buddy Process** to view the Buddy Server queue. Proceed to the next step once this queue is empty.

8. If your station's language is American English, skip this step. Start the ENPS client on an administrative workstation and select **Fourth Folder rover →** **System Maintenance → Language Resources**. Highlight your language resource file in the list on the left and click Edit then select *Validate*. Any changes to the master English file requiring translation will be added at the bottom of the file. Click *Save*. You should edit this file later to localize any necessary changes. ENPS setup does not overwrite language resource files other than `G_LANGEN`. However, for reference purposes, updated copies of all AP-updated language files are installed in `\COMMON\G_SUPPORT\MASTERS`.

9. On the Primary Server's NOM select the **NOM Configuration/Status** window then check the *Block Primary Access* checkbox. Users will see a message saying that the Primary Server is unavailable. They should select the option to switch to the Buddy Server to continue working.

10. Verify that the Buddy Server is properly handling user requests, then shut down ENPS applications on the Primary Server by closing Watch, NOM Maint, NWP and NOM. Extract, WalkCS, and Publish should also be shut down if they are running.

11. Perform the routine maintenance steps in Chapter 19 for the Primary Server.

12. Run the upgrade `.EXE` on the Primary Server.

13. Open the command prompt and enter the following command:
`F:NOM\NOM.EXE /BLOCK` on the Primary Server.

14. Click *OK*. The News Object Manager will now launch on the Primary Server.

15. Start the NOM Watch by using the desktop shortcut or by running
`\NOM\WATCH.EXE`.

16. Open the Buddy Server's NOM and select **NOM Maintenance → Buddy Process** to view the queue. Proceed to the next step once this queue is empty.

17. On the Primary Server open the NOM and select the **Configuration/Status** window and uncheck the *Block Primary Access* checkbox.

18. Users will now see a message notifying them that the Primary Server is available. They should select the option to return to the Primary Server. The upgrade is now complete.

Using the Full Installer

1. Download the upgrade `.EXE` from ENPS website or FTP location. You can e-mail `info@enps.com` for a link to the upgrade executable.

2. Extract the files to the root of the ENPS Work drive, which is usually `F:`, then copy those files to the same location on the Buddy Server.

3. Perform the routine maintenance steps in Chapter 19 for the Buddy Server.

4. Shut down ENPS on the Buddy Server by closing Watch, Extract, Maint, NWP and NOM. If WalkCS and Publish are running they should also be shut down.

5. Run the full installer on the Buddy Server and follow the prompts. Refer to Chapter 4 "Installing the Buddy Server" for more information. Select your language dictionary, even if you have already installed one, to ensure that the spell checker will run correctly. Restart the server when you are prompted.

6. Open the Primary Server's NOM and select **Maintenance → Buddy Process**. Proceed to the next step once this queue is empty.

7. On the Primary Server in the NOM application select **NOM Configuration/Status** window then check the *Block Primary Access* checkbox. Users will see a message saying that the Primary Server is unavailable. They should select the option to switch to the Buddy Server to continue working.

8. Verify that Buddy Server is properly handling user requests. Then shut down ENPS applications on the Primary Server by closing Watch, NOM Maint, NWP and NOM. Extract, WalkCS, and Publish should also be shut down if they are running.

9. Perform the routine maintenance steps in Chapter 19 for the Primary Server.

10. Run the full installer on the Primary Server and follow the prompts. Refer to Chapter 3 "Installing the Primary Server" for more information. Do not restart when prompted. Instead, remove Watch from the Startup folder of the ENPS Primary Server then restart the server.

11. Open the command prompt and enter the following command:
`F:NOM\NOM.EXE /BLOCK`

12. Click *OK*. The NOM will now launch on the Primary Server.

13. Start the NOM Watch by using the desktop shortcut or by running `\NOM\WATCH.EXE`.

14. Open the NOM and select **NOM Maintenance → Buddy Process** to view the queue. Proceed to the next step once this queue is empty.

15. On the Primary Server open the NOM and select the **Configuration/Status** window, and uncheck the *Block Primary Access* checkbox.

16. Users will now see a message notifying them that the Primary Server is back online. They should select the option to return to the Primary Server.

17. Add Watch back into the Startup group. The upgrade is now complete.

If you are scripting in English (UK), Dutch, German, you should also run `DICT3000.EXE` from the installation CD to update your language dictionary. ENPS includes 14 dictionaries: Croatian, Czech, Danish, Dutch, German, English (UK), English (US), French, Italian, Polish, Slovenian, Spanish, and Swedish. Any or all of these dictionaries can be installed on ENPS servers for automatic installation on client PCs as part of client updates. Users can also enable multiple dictionaries for simultaneous use. Refer to Appendix A "ENPS Language Support" for more information.

The upgrade application does not overwrite language resource files other than `G_LANGEN`. Updated copies of language files are installed in `\COMMON\G_SUPPORT\MASTERS` on the server. Remember that users must have local administrative rights for ENPS to operate properly.

Hardware and Software Requirements

Before you install the ENPS server, make sure you have the appropriate software drivers for all hardware devices. Consult with AP Broadcast Technology before you purchase new hardware. Server specifications will vary based on the number of users and other factors.

Minimum Server Requirements	
CPU	Two servers are required: a Primary Server and a backup Buddy Server.
	ENPS servers should use Intel Pentium IV or Xeon processors. You must have at least two processors and it is recommended that they both run at least 2 GHz each.
	Dual core processors are advantageous but do not take the place of the multiple processor requirement.
Supported Operating Systems	Windows 2000 Server
	Windows Server 2003
	Windows 2008 Server
	The x64 operating system is not officially supported.
	The operating system you are using must have the latest service packs from Microsoft installed.
RAM	1 GB minimum, 2 GB or more recommended. More may be required if you are converting legacy archives.
Video Card	Standard Microsoft VGA 256 color video drivers are preferred because they are the least resource-intensive.
Hard Disk Storage	RAID-5: 3 x 36 GB 10k RPM+ SCSI drives or RAID-1: 2 x 72 GB 10k RPM+ SCSI drives. This must be a hardware-based RAID; software-based RAIDs will not work. The RAID Configuration must yield at least 72 GB of space including the operating system.
Wire Ingestion	Multi-Port Serial Card, Comtrol Rocketport or Digi Board. One port for each incoming wire feed.
Browser	Internet Explorer 6.0 or higher
Network Card	Network interface card capable of supporting TCP/IP protocol on a Windows networking environment with 10-base-T minimum.
Backup System	Additional hard drives or file servers for backing up data.
Additional Software	
Microsoft Internet Explorer 6.0 or later. Adobe IFilter 6.0, available as a free download from Adobe: http://www.adobe.com/support/ downloads/detail.jsp?ftpID=2611 Diskeeper Server 6.0 or higher Real-time antivirus software is not recommended. Refer to "Antivirus Software Recommendations" in this chapter for more information.	

All hardware must be listed on the Windows Hardware Compatibility List. Please consult with AP Technology *before* you purchase any hardware. Server specifications will vary based on the number of users and the type of news application.

Minimum Client Requirements	
CPU	Pentium III 700 MHz minimum. Pentium III 1 GHz or faster machines are recommended. Faster machines are recommended for stations using ActiveX multimedia snap-ins.
Supported Operating Systems	Windows 2000 Professional
	Windows XP Professional
	Windows Vista Business
	Windows Vista Ultimate
	The operating system must have the latest Service Packs from Microsoft installed. The workstation must have a Server Client Access License and must be a member of Windows domain. ENPS security authentication is done through the Windows domain structure.
RAM	256 MB minimum; 1GB or higher is recommended.
Hard Disk Storage	5 GB
Network Card	Network Interface Card capable of supporting TCP/IP protocol on a Windows Networking Environment with 10-base-T minimum.
	If you are using Multimedia ActiveX use consult with the Video or Audio vendor for their required network topography. 100 MB switched networks may be required.
Browser	Microsoft Internet Explorer 6.0 or later.
Graphics	Minimum display resolution of 800x600x16 bit. 1024x768 is the recommended resolution.
Additional Hardware	Audio card and speakers

ENPS uses standard Microsoft Windows Printing. Laser printers are recommended for all ENPS printing, such as the Hewlett Packard LaserJet series. Dot Matrix printers have limited support under ENPS and are not recommended.

See your Prompter/Captioning manual for information about the hardware requirements for your setup. The following requirements can be used as guidelines:

Prompter/Captioning Workstation Requirements	
CPU	Pentium III 1 GHz or faster machines are suggested
Supported Operating Systems	Windows 2000 Professional Windows XP Professional Windows Vista Business Windows Vista Ultimate The operating system must have the latest Service Packs from Microsoft installed. The workstation must have a Server Client Access License and must be a member of Windows domain; ENPS security authentication is done through the Windows domain structure.
RAM	256 MB minimum;1 GB or higher is recommended
Hard Disk	5 GB
Network Card	Network Interface Card capable of supporting TCP/IP protocol on a Windows Networking Environment with 10-base-T minimum.
Video Card	Premium Quality Video Card with 128MB Video RAM. Serial (RS-232) port for optional hand controller. VGA10-to-NTSC converter. *Examples*: Black Box VGA to Video Portable Pro Videoing Inc. Print-To-Video Standard Mouse and/or Trackball for controlling prompter.
Prompter	It is strongly recommended that you use +WinPlus+ as the primary prompter. The +WinPlus+ prompter is an ISA/PCI hardware board with NTSC/PAL outputs. It comes with a hand controller and can be genlocked. The AP +WinPlus+ software prompter should be used for a backup prompter and/or for remote sites.

Antivirus Software Recommendations

AP does not recommend the use of real-time anti-virus software on ENPS servers due to possible kernel-level conflicts between most real-time antivirus scanners and Microsoft's Index Server, which is used to power the ENPS Search function. Using realtime anti-virus software on an ENPS server can result in any or all of the following issues:

- New material such as wires, stories, or Rundowns added to the server may take significantly longer to be added to the index and will not be available via Search as quickly.
- The index may be frequently corrupted and if so, re-indexing may take significantly longer to complete.
- Unscheduled Master Merges may occur several times a day which can significantly degrade ENPS server performance.
- The Index Server may attempt to fix itself by rescanning the indexed drives which can also significantly degrade server performance.

While these potential consequences can be severe, they do not always occur. So it is possible to run anti-virus software on ENPS servers if you understand and accept the possible consequences of doing so. If you do run anti-virus software

on an ENPS server, the following steps should reduce the chance of encountering problems:

- Uninstall any real-time scanning components and only perform scheduled scan, effectively eliminating the antivirus software's use of the change notification journal and removing the conflict with Index Server.
- If you must do real-time scans, disable the AV software from scanning the ENPS data drives (typically D: on a single-partition system or F: G: and H: on a multi-partition system) as well as the ENPS index folder `Catalog.WCI`.

If you experience frequent Search/indexing problems while running anti-virus software on your ENPS servers, you may need to uninstall the antivirus software during troubleshooting.

To lessen your risk for viruses and spyware on the servers ensure that you:

- Keep servers updated with all critical updates and hot fixes from Microsoft
- Do not allow access to e-mail or the Internet from the servers
- Make sure there are no open file shares on the servers. The only exception is the ENPS client installation folder which must be shared as ENPS but should be set to read-only for everyone.

This will eliminate most vulnerabilities on the servers and lessen the need for anti-virus software.

Installing the Primary Server

An ENPS server environment consists of at least two servers, a Primary Server and a Buddy Server. This section describes how to install a new Primary Server on the Windows 2008 Server, Windows Server 2000 and Windows Server 2003 platforms. Refer to Chapter 4 "Installing the Buddy Server" for instructions for installing the Buddy Server. If you already have ENPS installed and you want to update it to the latest version refer to Chapter 1 "Upgrading ENPS."

In every organization, ENPS requires a Central Server to host common databases including staff lists, various templates, and security privileges. If you have only one Primary Server and one Buddy Server, then your Primary Server will also serve as the Central Server. If you are connecting multiple sets of Primary Servers and Buddy Servers, you will need a separate server to function as a Central Server. The hardware requirements and installation steps of the Central Server are identical to those of the Primary Server.

There is one more type of server, called a Central Text Object Server (CTOS). A CTOS is a type of Central Server that stores and indexes a large enterprise's archives. The storage requirements for the CTOS will depend on how many archives will be stored on the server.

Central Server and CTOS

A Central Server serves as the main repository for your ENPS System Maintenance files (staff lists, field definitions, MOS configurations, etc.) Every enterprise must have a Central Server. If you only have a single ENPS Primary/Buddy pair, then one of these servers, typically the Primary Server, must also be defined as the Central Server.

If your enterprise has multiple ENPS servers pairs, which may be across multiple physical locations, any one of these servers can be designated as the Central Server for the enterprise. Alternately, a separate server that does not function as either a Primary or a Buddy server can be designated as a standalone Central Server. This standalone Central Server would only host the master copy of the ENPS system files and would not host any program groups or user data.

If you use a standalone Central Server you have the option to configure it as a Central Text Object Server or CTOS. A CTOS stores and indexes copies of archive data pushed to it from other ENPS servers in the enterprise, allowing for a single integrated search of archives from across the entire enterprise. This is typically used by large enterprises.

The hardware requirements and installation steps for building a standalone Central Server are identical to those for building the Primary Server. The storage requirements for a CTOS depend on how many archives will be stored on the server. CTOS is enabled using the CTOS Global Configuration Option. Refer to Chapter 12, "Customizing ENPS" for more information on this option.

Installing on Windows 2008 Server

Before you begin installation:

- Refer to Chapter 2 "Hardware and Software Requirements" to make sure your equipment meets all of the pre-requisites before you continue. Refer to

Step 5: Partition Drives below for information about the partition size you will need for your operating system.

- Do not name your server "ENPS."
- Ensure that ENPS servers are given static IP addresses, not reserved DHCP IP addresses.
- Ensure that server NICs and the ports they are connected to are both locked in to identical settings and do not have auto-negotiate or auto-sense functions enabled.

Step 1: Install the Operating System

1. Install Windows 2008 with Service Pack 2. ENPS servers must be standalone and cannot run any other services. The only extra service that is allowed is the SNMP service. ENPS servers must not be Active Directory Domain Controllers.

Make sure you remember the System Administrator password that you enter during the installation process. The ENPS installer will prompt you for it later.

2. Install any third party SNMP agents, Diskeeper, and tape backup software at this time. It is important to install these applications before you install ENPS.

Step 2: Modify Windows Components

1. Right-click on your computer's desktop icon and select *Manage* to open the Server Manager. In the Security Information section click *Configure IE ESC* in the top right corner and make sure it is set to *Off* for both Administrators and Users.

2. Open a command prompt and enter `MSCONFIG` to open the System Configuration utility. On the **Tools** tab select *Disable UAC* then click *Launch*. When the operation is complete close the command prompt window and click *OK* in the system configuration window.

Reboot your system for the changes to take effect.
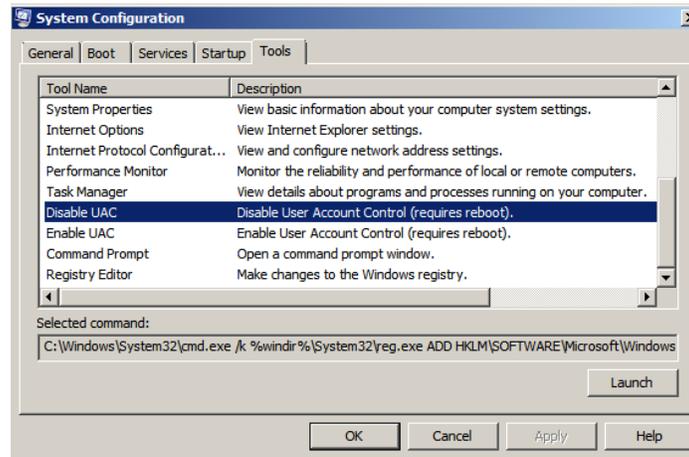
3. Right-click on your computer's desktop icon and select *Manage* to open the Server Manager. In the **Server Manager** pane expand **Features**.

4. Under Features Summary click *Add Features* then select *Telnet Client*, *Telnet Server*, and *.NET Framework 3.0 Features* if they are not already selected. Expand the **.NET Framework 3.0 Features** and make sure the sub-entries *.NET Framework 3.0, XPS Viewer* and *WCF Activation* are also selected.

When you select *.NET Framework 3.0 Features*, an Add Roles Wizard will appear prompting you to add roles services. Click the *Add Required Role Services* button.

Click *Next* through the wizard until you can click *Install*. When installation is complete click *Close*.

5. Click **Roles** on the Navigation Pane. Under **Roles Summary** click *Add Roles*.

Check *File Services* and *Application Server.* Make sure *Web Server (IIS)* is selected*.*

After selecting *Application Server* another Add Roles Wizard will appear. Select *Add Required Role Services* and click *Next.*

Check *Com+ Network Access* and *Web Server IIS Support.* When the Add Roles Wizard appears click *Add Required Role Services* and click *Next.*

In the Web Server IIS Pane make sure *Management Tools* and its sub-entries are selected. Make sure *IIS 6 Compatibility* is selected then click *Next.*
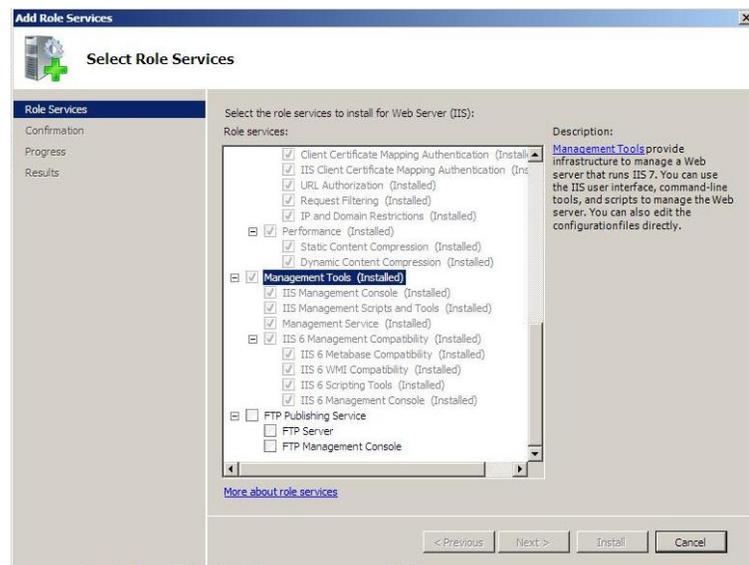
Expand *Windows Server 2003 File Services* and check *Indexing Service* and click *Next.* Click *Install* to install the selected services and reboot the server if necessary.

6. From the Control Panel select *Windows Firewall.* Make sure the Firewall is set to *Off* then click *OK.*

Step 3: Modify Registry Settings

1. This step must be done before reformatting the ENPS Data volumes. Run REGEDT32 and navigate to the following key:

```
HKEY_LOCAL_MACHINE
\System\CurrentControlSet\Control\FileSystem
```

2. Select **Edit → New → DWORD Value**. Enter the following name:

```
NtfsMftZoneReservation
```

3. Select **Edit → Modify** and in the Value Data field enter the number 3.

4. Reboot the server for the new registry setting to take effect.

Step 4: Backup Configuration Data

1. Create a `C:\BACKUPS` folder.

2. Select **Start → Run** and type `REGEDIT`. Navigate to the following registry key:

`HKEY_LOCAL_MACHINE`
`\SYSTEM\CurrentControlSet\Control\ContentIndex`

3. Select **File → Export**. Save this file to the folder `C:\BACKUPS` as "`Index Server Default Settings.reg`". Close the registry editor.

Step 5: Partition Drives

The settings in the following instructions are based on an average ENPS configuration. If your organization retains wires for more than 100 hours, if your server ingests more than six wires, or if you have more than 150 users per server consult with ENPS Support for partition sizes.

Use the following general rules for calculating the total working size:

- RAID-1: Two identical drives which yield a space equal to the size of one of the drives. One drive can be lost and the server will continue to run.

- RAID-5: A minimum of three identical drives which yield a space equal to the sum of all drives minus the size of one drive. For example, 3x36 GB drives will yield a working size of 72GB. One drive can fail and the server will continue to run.

For systems with multiple RAID arrays it is recommended that you have two physical disks in a RAID-1 mirror configuration with two NTFS partitions:

- A C: System volume with 6 GB and a 4 GB D: Swap file/Index Catalog with the remainder of the RAID-1 volume.

- The second array should be a minimum of 3 x 9 GB drives in RAID-5 configuration. Do not partition this array.

If you are using a RAID-1 array, it is recommended that you use 2 x 72 GB 10k RPM SCSI or larger drives to form the RAID-1 array.

Partition Sizes				
Drive Letter	Volume Name	Minimum Size	Recommended Size	File Allocation Unit Size
C:	System	20 GB	50 GB	4096 (default)
D:	CD ROM			
E:	Indexes	6 GB*	10 GB	4096 (default)
F:	ENPS Work	10 GB	40 GB	1024
G:	Wires	2 GB	5 GB	1024
H:	Archives	30 GB	50+ GB**	1024

*On configurations with more space, it is recommended that indexes are placed on a separate volume. However if you are limited on drive space, you may place Indexes on the same volume as your Archives (H:).

**Any extra space in your partitions should be allocated to the Archives volume.

To set the partition letters for your setup complete the following steps:

1. In **Computer Management** expand the **Storage** and click on **Disk Management**. If the drive letter of your CD-ROM is F:, G:, or H: assign it to D: or another available drive letter.

Windows permits every logical disk to have up to four partitions, but you can increase this number by right-clicking on the disk name and selecting *Convert to dynamic disk.* This does not result in performance loss, but does allow you to create a separate space for certain ENPS resources. You will not be able to revert to standard Windows disk once you complete these steps.

2. Right-click on the unformatted partition area and select **Format**.

3. When you are prompted for the Volume Type select *Primary Partition* or *Simple Volume* if you are using a dynamic disk.

4. If you put your Indexes on a separate volume format the remainder of your RAID-1 volume as NTFS with a standard (4096) File Allocation Unit Size using the drive letter E: and a volume name of Indexes.

5. Format each drive according to the volume name, partition size, and file allocation sizes listed in the *Partition Sizes* table above.

6. When you have formatted all of the partitions close the Computer Management Utility.

Step 6: Install Server Components

1. Download the ENPS installer from the download site or insert the ENPS Setup CD-ROM. Run the ENPS Server components setup executable from the root directory of the ENPS Work drive.

2. You will be prompted to enter the drive letters for the Data, News wires, Archives, and Indexes (Archives and Indexes may be the same drive letter).

3. Select the type of wires you will be ingesting.

4. Enter the Net BIOS machine name of the server you are installing on. This is the same name you used during the server installation. Enter the server IP address.

5. Enter the Net BIOS machine name of Buddy Server. If this server is a CTOS or will not have a Buddy Server, enter "NONE".

6. Enter the name of the Central Server. If you do not have a separate Central Server, your Primary Server will be your Central Server.

7. Enter the system password so that the system can login automatically. This is helpful in the event of a power failure or when the server area is unattended. If you do not enable this step here, you can manually enable this feature by following the instructions in *Enabling Automatic Logon* at the end of this chapter.

8. After you fill out the ENPS registration form reboot the server.

Step 7: Set Configuration Settings

After rebooting, ENPS Server applications will start automatically. Minimize them before you proceed.

1. Right-click on the Recycling Bin and select *Properties.*

2. Select the ENPS volumes (F:, G:, H:) and select the *Do not move files to the Recycling Bin* radio button. Click *Apply* and exit.

Step 8: Verify IIS Settings

1. Verify that IIS settings have been set correctly by opening **Computer Management**. Expand **Services and Applications** and select **Internet Information Services**. In the **Connections** pane click on the server name to expand it then click on the **ENPS Web** website.

2. Under **ENPS Web Home** double-click **Handler Mappings** to display a list of extensions. Make sure that the following extensions are displayed:

AboMapperCustom-30810	*.htw	Enabled	Unspecified	IsapiModule
AboMapperCustom-30811	*.ida	Enabled	File	IsapiModule
AboMapperCustom-30812	*.idq	Enabled	File	IsapiModule

3. Double-click each extension so that the **Edit Script Map** box appears. Click *Request Restrictions* and then select the **Verbs** tab. Make sure that the verbs GET, HEAD, and POST are listed for each extension.

Step 9: Install Adobe IFilter

For users to search the contents of `.PDF` files stored in Newsgathering Grids you need to install Adobe PDF IFilter 6.0 on the Primary Server. This free download is available from the following URL:

`http://www.adobe.com/support/downloads/detail.jsp?ftpID=2611`

Step 10: Enter the License Key

Call +1 (866) 367-7911 or +1 (202) 641-9941, or if you are outside the Americas call (+44) 20 8225 8685 to obtain a license. Enter your license key by opening the NOM and selecting **File → Update license**. You will also need to complete the instructions in the following section for enabling automatic logon. You will not be able to obtain a license key via e-mail.

Enabling Automatic Logon

The ENPS installation process prompts you to allow the system to log in automatically, which allows ENPS server components to restart without manual

intervention. If you did not choose to enable automatic server logon you can perform the following steps to enable it:

The following process works only if the login uses a password.

1. Run the Registry Editor (REGEDT32.EXE) and locate the following Registry sub-key:

```
HKEY_LOCAL_MACHINE
\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Winlogon
```

2. Establish your domain name, account name and password by setting values for the following:

```
DefaultDomainName
DefaultUserName
DefaultPassword
```

DefaultPassword cannot be blank. If the DefaultPassword value does not exist, select **Edit → Add Value**.

3. In the Value Name field, enter DefaultPassword. Select REG_SZ for the Data Type. In the String field, enter your password.

4. Save your changes.

5. Select **Edit → Add Value**. Select AutoAdminLogon in the **Value Name** field. Select REG_SZ for the Data Type. Enter 1 in the **String** field.

6. Save your changes and exit REGEDT32.

7. When you restart your computer the server should logon automatically.

Installing on Windows Server 2003

Before you begin installation:

- Refer to Chapter 2 "Hardware and Software Requirements" to make sure your equipment meets all of the pre-requisites before you continue. Refer to *Step 5: Partition Drives* below for information about the partition size you will need for your operating system.
- Do not name your server "ENPS."
- Ensure that ENPS servers are given static IP addresses, not reserved DHCP IP addresses.
- Ensure that server NICs and the ports they are connected to are both locked in to identical settings and do not have auto-negotiate or auto-sense functions enabled.

Step 1: Install the Operating System and Configure Arrays

1. Install Windows 2003 Server and the latest Microsoft Service Pack.

IMPORTANT: If you are using a Compaq, HP, Dell, or IBM server, make sure you do not use the manufacturer's startup disk. Instead, boot from the Windows CD. If you must install the vendor's utilities, install the operating system first, then install vendor utilities before you install any Microsoft Service Packs.

2. During the Windows 2003 Server installation, you will be prompted for a number of options at the Windows 2003 Server Components screen. Do not select any other options or services. ENPS servers must be standalone and cannot run any other services. The only extra service that is allowed is the SNMP service. ENPS servers must not be Active Directory Domain Controllers.

Make sure you remember the System Administrator password that you enter during the installation process. The ENPS installer will prompt you for it later.

3. Install any third party SNMP agents, Diskeeper, PCAnywhere 11, and tape backup software at this time. It is important to install these applications before you install ENPS.

Step 2: Modify Windows Components

1. Open the Control Panel and select *Add/Remove Programs*. Then select Add/Remove Windows Components

2. Enable Indexing Service.

3. Disable Internet Explorer Enhanced Security Configuration. Make sure Terminal Server is <u>not</u> installed.

4. Select Application Server and click *Details.* Enable Application Server Console, ASP.NET, and Network COM+ Access.

5. Select Internet Information Services and click *Details.* Enable Common Files, Internet Information Services Manager, and World Wide Web Service.

6. Click *OK* until you return to the main Windows Components screen, and then click *Next.* When the new components are finished installing, you may close the *Add or Remove Programs* window.

Step 3: Modify Registry Settings

1. This step must be done before reformatting the ENPS Data volumes. Run `REGEDT32` and navigate to the following key:

```
HKEY_LOCAL_MACHINE
\System\CurrentControlSet\Control\FileSystem
```

2. Select **Edit → New → DWORD Value**. Enter the following name:

```
NtfsMftZoneReservation
```

3. Select **Edit → Modify** and in the Value Data field enter the number 3.

4. Reboot the server for the new registry setting to take effect.

Step 4: Backup Configuration Data

1. Create a `C:\BACKUPS` folder.

2. Select **Start → Run** and type `REGEDIT`. Navigate to the following registry key:

```
HKEY_LOCAL_MACHINE
\SYSTEM\CurrentControlSet\Control\ContentIndex
```

3. Select **File → Export**. Save this file to the folder `C:\BACKUPS` as "`Index Server Default Settings.reg`". Close the registry editor.

Step 5: Partition Drives

The settings in the following instructions are based on an average ENPS configuration. If your organization retains wires for more than 100 hours, if your server ingests more than six wires, or if you have more than 150 users per server consult with ENPS Support for partition sizes.

Use the following general rules for calculating the total working size:

- RAID-1: Two identical drives which yield a space equal to the size of one of the drives. One drive can be lost and the server will continue to run.

- RAID-5: A minimum of three identical drives which yield a space equal to the sum of all drives minus the size of one drive. For example, 3x36 GB drives will yield a working size of 72GB. One drive can fail and the server will continue to run.

For systems with multiple RAID arrays it is recommended that you have two physical disks in a RAID-1 mirror configuration with two NTFS partitions:

- A C: System volume with 6 GB and a 4 GB D: Swap file/Index Catalog with the remainder of the RAID-1 volume.

- The second array should be a minimum of 3 x 9 GB drives in RAID-5 configuration. Do not partition this array.

If you are using a RAID-1 array, it is recommended that you use 2 x 72 GB 10k RPM SCSI or larger drives to form the RAID-1 array.

Partition Sizes			
Drive Letter	**Volume Name**	**Minimum Size**	**File Allocation**
C:	System	12 GB	4096 (default) File Allocation Unit Size
D:	CD ROM		
E:	Indexes	6 GB*	4096 (default) File Allocation Unit Size
F:	ENPS Work	15 GB	1024 File Allocation Unit Size
G:	Wires	5 GB	1024 File Allocation Unit Size
H:	Archives	30+ GB**	1024 File Allocation Unit Size

*On configurations with more space, it is recommended that indexes are placed on a separate volume. However if you are limited on drive space, you may place Indexes on the same volume as your Archives (H:).

**Any extra space in your partitions should be allocated to the Archives volume.

To set the partition letters for your setup complete the following steps:

1. In the Computer Management utility, expand the Storage icon and click on the Disk Management utility. If the drive letter of your CD-ROM is F:, G:, or H: assign it to D: or another available drive letter.

Windows permits every logical disk to have up to four partitions, but you can increase this number by right-clicking on the disk name and selecting *Convert to dynamic disk.* This does not result in performance loss, but does allow you to create a separate space for certain ENPS resources. You will not be able to revert to standard Windows disk once you complete these steps.

2. Right-click on the unformatted partition area and select **Format**.

3. When you are prompted for the Volume Type select *Primary Partition* or *Simple Volume* if you are using a dynamic disk.

4. If you put your Indexes on a separate volume format the remainder of your RAID-1 volume as NTFS with a standard (4096) File Allocation Unit Size using the drive letter `E:` and a volume name of `Indexes.`

5. Format each drive according to the volume name, partition size, and file allocation sizes listed in the *Partition Sizes* table above.

6. When you have formatted all of the partitions close the Computer Management Utility.

Step 6: Install Server Components

1. Download the ENPS installer from the download site or insert the ENPS Setup CD-ROM. Run the ENPS Server components setup executable from the root directory of the ENPS Work drive.

2. You will be prompted to enter the drive letters for the Data, News wires, Archives, and Indexes (Archives and Indexes may be the same drive letter).

3. Select the type of wires you will be ingesting.

4. Enter the Net BIOS machine name of the server you are installing on. This is the same name you used during the server installation. Enter the server IP address.

5. Enter the Net BIOS machine name of Buddy Server. If this server is a CTOS or will not have a Buddy Server, enter "NONE".

6. Enter the name of the Central Server. If you do not have a separate Central Server, your Primary Server will be your Central Server.

7. Enter the system password so that the system can login automatically. This is helpful in the event of a power failure or when the server area is unattended. If you do not enable this step here, you can manually enable this feature by following the instructions in *Enabling Automatic Logon* at the end of this chapter.

8. After you fill out the ENPS registration form reboot the server.

Step 7: Set Configuration Settings

After rebooting ENPS Server applications will start automatically. Minimize them before you proceed.

1. Right-click on the Recycling Bin and select *Properties.* Select the option *Configure drives independently.*

2. Select the ENPS volumes (F:, G:, H:) and check the *Do not move files to the Recycling Bin* checkbox. Click *Apply* and exit.

Step 8: Verify IIS Settings

Verify that IIS settings have been set correctly by opening **Computer Management** → **Internet Information Services** and then right-clicking on ENPS Web site. Click *Properties* then select the **Home Directory** tab and click the *Configuration* button.

You will see a list of Application Mappings. If the extensions `.ida`, `.htw` and `.idq` are not listed with the following mappings, add them to the list.

Extension	Executable Path	Verbs (Limit To)
.ida	C:\WINDOWS\system32\idq.dll	GET, HEAD, POST
.htw	C:\WINDOWS\system32\webhits.dll	GET, HEAD, POST
.idq	c:\WINDOWS\system32\idq.dll	GET, HEAD, POST

Step 9: Install Adobe IFilter

For users to search the contents of `.PDF` files stored in Newsgathering Grids you need to install Adobe PDF IFilter 6.0 on the Primary Server. This free download is available from the following URL:

`http://www.adobe.com/support/downloads/detail.jsp?ftpID=2611`

Step 10: Enter the License Key

Call +1 (866) 367-7911 or +1 (202) 641-9941, or if you are outside the Americas call (+44) 20 8225 8685 to obtain a license. Enter your license key by opening the NOM and selecting **File → Update license**. You will also need to complete the instructions in the following section for enabling automatic logon. You will not be able to obtain a license key via e-mail.

Enabling Automatic Logon

The ENPS installation process prompts you to allow the system to log in automatically, which allows ENPS server components to restart without manual intervention. If you did not choose to enable automatic server logon you can perform the following steps to enable it:

The following process works only if the login uses a password.

1. Run the Registry Editor (`REGEDT32.EXE`) and locate the following Registry sub-key:

```
HKEY_LOCAL_MACHINE
\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Winlogon
```

2. Establish your domain name, account name and password by setting values for the following:

```
DefaultDomainName
DefaultUserName
DefaultPassword
```

`DefaultPassword` cannot be blank. If the `DefaultPassword` value does not exist, select **Edit → Add Value**.

1. In the Value Name field, enter `DefaultPassword`. Select `REG_SZ` for the Data Type.

2. In the String field, enter your password.

3. Save your changes.

4. Select **Edit → Add Value**. Select `AutoAdminLogon` in the Value Name field. Select `REG_SZ` for the Data Type. Enter 1 in the String field.

5. Save your changes and exit `REGEDT32`.

6. When you restart your computer the server should logon automatically.

Installing on Windows 2000 Server

Before you begin installation:

- Refer to Chapter 2, "Hardware and Software Requirements" to make sure your equipment meets all of the pre-requisites before you continue. Refer to *Step 3: Partition Drives* below for information about the partition size you will need for your operating system.
- Do not name your server "ENPS."

- Ensure that ENPS servers are given static IP addresses, not reserved DHCP IP addresses.
- Ensure that server NICs and the ports they are connected to are both locked in to identical settings and do not have auto-negotiate or auto-sense functions enabled.

Step 1: Install the Operating System and Configure Arrays

1. Install Windows 2000 Server and the latest Microsoft Service Pack.

IMPORTANT: If you are using a Compaq, HP, Dell, or IBM server make sure you do not use the manufacturer's startup disk. Instead, boot from the Windows CD. If you must install the vendor's utilities, install the operating system first, then install vendor utilities before you install any Microsoft service packs.

2. During the Windows 2000 Server installation, you will be prompted for a number of options at the Windows 2000 Server Components screen. Do not select any other options or services. ENPS servers must be standalone and cannot run any other services. The only extra service that is allowed is the SNMP service. ENPS servers must not be Active Directory Domain Controllers.

When you are prompted for a System Administrator password, make sure this is a password you will remember, as the ENPS installation utility will prompt you for it later.

3. Install any third party SNMP agents, Diskeeper, PCAnywhere 10.5, and tape backup software at this time. It is important to install these packages before you install ENPS.

Step 2: Modify Registry Settings

1. This step must be done before reformatting the ENPS Data volumes. Run REGEDT32 and navigate to the following key:

`HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\FileSystem`

2. Select **Edit → Add Value**. For the Value Name enter:

`NtfsMftZoneReservation`

3. From the Data Type pull-down menu select `REG_DWORD`. Click *OK*. In the DWORD editor, enter 3 for the data value (the default value is 1). For more information on the DWORD setting see the following article:

`http://support.microsoft.com/support/kb/articles/q174/6/19.asp`

4. Reboot the server for this registry setting to take effect.

5. Right click on My Computer and click *Manage* to open the Computer Management utility. Expand the Services and Applications icon, then right-click *Internet Information Services* and select *Backup/Restore Configuration*.

6. Select *Create Backup* and enter the name "Windows Default Settings". Click *Close* and leave the Computer Management utility open.

7. Create a folder on the C: drive called `Backups`.

8. Backup the default Index Server settings by selecting **Start → Run** and type `REGEDIT`. Navigate to the following registry key:

`HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\ContentIndex`

---

9. Click **Registry** → **Export Registry File**. Save this file to the folder `C:\BACKUPS` as "`Index Server Default Settings.reg`". Close the registry editor.

Step 3: Partition Drives

The settings in the following instructions are based on an average ENPS configuration. If your organization retains wires for more than 100 hours, if your server ingests more than six wires, or if you have more than 150 users per server, consult with AP Support for partition sizes for your site.

Use the following general rules for calculating the total working size:

- RAID-1: Two identical drives which yield a space equal to the size of one of the drives. One drive can be lost and the server will continue to run.

- RAID-5: A minimum of three identical drives which yield a space equal to the sum of all drives minus the size of one drive. For example, 3x36 GB drives will yield a working size of 72GB. One drive can be lost and the server will continue to run.

- For systems with multiple RAID arrays it is recommended that you have two physical disks in a RAID-1 (mirror) configuration with two NTFS partitions:

- A C: System volume with 6 GB and a 4 GB D: Swap file/Index Catalog with the remainder of the RAID-1 volume.

- The second array should be a minimum of 3 x 9 GB drives in RAID-5 configuration. Do not partition this array at this time.

If you are using a RAID-1 array, it is recommended that you use 2 x 72 GB 10k RPM SCSI or larger drives to form the RAID-1 array.

Partition Sizes			
Drive Letter	**Volume Name**	**Minimum Size**	**File Allocation**
C:	System	12 GB	4096 (default) File Allocation Unit Size
D:	CD ROM		
E:*	Indexes	6 GB	4096 (default) File Allocation Unit Size
F:	ENPS Work	15 GB	1024 File Allocation Unit Size
G:	Wires	5 GB	1024 File Allocation Unit Size
H:	Archives	30+ GB	1024 File Allocation Unit Size

*On configurations with more space, it is recommended that indexes are placed on a separate volume. However if you are limited on drive space, you may place Indexes on the same volume as your Archives (H:).

**Any extra space in your partitions should be allocated to the Archives volume.

To set the partition letters for your setup, complete the following steps:

1. In the Computer Management utility, expand the Storage icon and click on the Disk Management utility. If the drive letter of your CD-ROM is F:, G:, or H: assign it to D: or another available drive letter.

Windows permits every logical disk to have up to four partitions, but you can increase this number by right-clicking on the disk name and selecting *Convert to dynamic disk.* This does not result in performance loss, but does allow you to create a separate space for certain ENPS resources. You will not be able to revert to standard Windows disk once you complete these steps.

2. Right-click on the unformatted partition area and select **Format**.

3. When you are prompted for the Volume Type, select *Primary Partition*, or *Simple Volume* if using a dynamic disk.

4. If you put your Indexes on a separate volume format the remainder of your RAID-1 volume as NTFS with a standard 4096 file allocation unit size. Use the drive letter E: and the volume name "Indexes".

5. Format each of the drives according to the volume name, partition size, and file allocation sizes listed in the *Partition Sizes* table above.

6. When you have formatted all of the partitions close the Computer Management Utility.

Step 4: Install Server Components

1. Download the ENPS Setup application from the ENPS FTP site or insert the ENPS Setup CD-ROM. Run the ENPS Server components setup executable from the root directory of the ENPS Work drive.

2. Enter the drive letters for the Data, News wires, Archives, and Indexes. Archives and Indexes may have the same drive letter.

3. Select the type of wires you will be ingesting.

4. Enter the Net BIOS machine name of the server you are installing on. This is the same name you used during the server installation. Enter the server IP address.

5. Enter the Net BIOS machine name of the Buddy Server. If this server is a CTOS or will not have a Buddy Server enter "NONE."

6. Enter the name of the Central Server. If you do not have a separate Central Server your Primary Server will be your Central Server.

7. Enter the system password so that the system can login automatically. If you do not enable automatic login here you can manually enable it later by referring to *Enabling Automatic Logon* at the end of this chapter.

8. Fill out the registration form.

9. Reboot the server.

Step 5: Set Configuration Settings

When the system boots up the ENPS Server components start automatically. Minimize all applications before you proceed.

1. Right-click on the Recycling Bin and select *Properties.* Select the option *Configure drives independently*.

2. Select the ENPS volumes (F:, G:, H:) and check the *Do not move files to the Recycling Bin* checkbox. Click *Apply* and exit.

Step 6: Install Adobe IFilter

For users to search the contents of `.PDF` files stored in Newsgathering Grids you need to install Adobe PDF IFilter 6.0 on the Primary Server. This download is available free of charge from the following URL:

`http://www.adobe.com/support/downloads/detail.jsp?ftpID=2611`

Step 7: Enter the License Key

Call +1 (866) 367-7911 or +1 (202) 641-9941, or if you are outside the Americas call (+44) 20 8225 8685 to obtain a license. Enter your license key by opening the NOM and selecting **File → Update license**. You will also need to complete the instructions in the following section for enabling automatic logon. You will not be able to obtain a license key via e-mail.

Installing the Buddy Server

The Buddy Server is a backup copy of the Primary Server, so if the Primary Server becomes disabled for any reason, users should still be able to access and work with all of their information via their Buddy Server without disruption. Transactions handled by the Primary Server will appear almost instantly in the Buddy Server database in the same sequence in which they were executed on the Primary Server, so that both servers have the same information. The information between the two servers is sent through a guaranteed TCP stream. Only after the transaction is posted successfully on the Buddy Server will it be deleted from the Primary Server's log queue. The NOM provides visual status and a log of this process.

If possible, the Primary and Buddy Servers should be physically separated, but should not be connected over a WAN, as this can cause communication problems between the two servers. Primary Server and Buddy Servers must be in the same subnet or users may lose real-time updates. The impact of a Buddy Server on network traffic is only for new and changed data. The minimum possible bandwidth is used to perform such operations.

Set up the Buddy Server the same way you set up the Primary Server, with the exception of the machine name. For the instructions below, the following machine names are used as examples: `AP-ENPS1` and `AP-ENPS2`. If you are in the United States, you should use your stations call letters instead of `"AP"`. Otherwise, create a standard abbreviation for your station name. You will not be able to change the machine name later.

Wire stories are not copied from the Primary Server to the Buddy Server. Therefore, the Buddy Server requires a separate, redundant wire feed in case the Primary Server fails.

1. Create a folder with the machine name of the Buddy Server. The machines AP-ENPS2 and AP-ENPS1 should both have the following folders on the data drive:

```
\AP-ENPS1
\AP-ENPS1_H
\AP-ENPS2
```

2. Copy the contents of the Primary Server's machine name folders (`\AP-ENPS1` and `\AP-ENPS1_H`) to the Buddy Server. Do this just before you turn the Buddy process on and while no one is using the system. Remember that the Buddy process only mirrors files from the point that it is turned on. So any data that has already been created on the Primary Server will *not* automatically be copied to the Buddy Server.

3. You must install the ENPS Client before you can complete the remainder of the installation. Refer to Chapter 7 "Installing ENPS Clients" for instructions.

4. In the ENPS client select **Fourth Folder rover** → **System Maintenance** → **Servers**. Click *New*. For the Buddy Server ID enter the Buddy Server's machine name (e.g. `AP-ENPS2`) and add a description. MOS should be the same as the ID unless a separate MOS server is used. It is recommended that the IP address of the server be entered, although it is not necessary.

5. Save these changes, quit the client and re-open the ENPS client. Select **Fourth Folder rover** → **System Maintenance** → **Servers** again and on the line for the Primary Server, select the *Buddy Server* field and enter the Buddy Server machine ID, AP-ENPS1, for example. Then select the *Buddy Server* field in the row for your Buddy Server, such as AP-ENPS2, and enter the name of your Primary Server, such as AP-ENPS1. These servers are now set as Buddy Servers for each other.

6. Set the IS Version column to 3.0.

7. Save changes and restart the client.

8. In the `NOM.INI` file, located in the NOM folder of both servers, make sure `Buddy=1` in the `[NOM]` section.

9. Go to the Buddy Server, open the NOM Maintenance program and press *Sync Now*. Exit the NOM and NOM Maintenance programs and re-run them. Do the same on the Primary Server. The servers are now configured to Buddy each other.

If a user cannot connect to the Primary Server for any reason, the user will be given a choice to switch to local mode, switch to the Buddy Server, cancel the operation, or quit ENPS. When users from a Primary Server are running on their Buddy Server, they access the agency news wire material available on the Buddy Server. They will not see real-time updates of either news wire material or Rundown changes if their workstations and the Buddy Server are in different subnets, unless reflectors are enabled. Refer to Chapter 10 "Network Communications" for information on how to set up reflectors.

Adding Servers

You can add additional local or remote servers to your ENPS system, allowing users to utilize the resources of other parts of your enterprise. To add additional servers or modify existing ones, select **Fourth Folder rover** → **System Maintenance** → **Servers**. You can modify the following fields:

Field	Description
ID	Short name description of the server. No spaces are allowed in this entry, which may be up to 15 characters long.
Description	A descriptive name for the server, which may describe its physical location, purpose, or owner.
MOS	NCS ID that the server uses to identify itself when it connects to a MOS machine.
Buddy	ID of this server's Buddy Server.
IP	Server's IP address.
Broadcast Mask	Address where the server will send broadcast UDP datagrams. If left blank, the default address is 255.255.255.255. For Windows 2003 servers, the address must be the broadcast address of the server's network. For example, if the server's IP Address is 192.168.100.5 and the subnet mask is 255.255.255.0 the broadcast address for this network would be 192.168.100.255. Use an IP subnet calculator, available on the Internet, to calculate the broadcast address of a given subnet.
Server Group	Type the unique server group name to which you want this server to belong. Typically, this name describes a physical location or department.
IS Version	Version number of Microsoft Index Server. This field allows ENPS to take advantage of improvements and updates not available in all versions of the Microsoft product. The setting should be 3.0.
MOS Repeater	This field is checked only if the server is a MOS repeater. Refer to Chapter 13 "MOS Protocol Configuration" for more information.
MOS Server	Name of the ENPS server providing MOS messages to a MOS repeater. Refer to Chapter 13 "MOS Protocol Configuration" for more information.
MOS Active Days	Number of days for all MOS-active Rundowns to shut down. This affects all Rundowns on a machine. Once this setting is enabled, it will not be possible to make a Rundown MOS active for a time later than the one specified by this setting.

Chapter 6

Server Components

Below is an overview of the major ENPS server components:

News Object Manager (NOM)

The NOM processes handle most ENPS client/server communication. The NOM controls all of the local databases and client access to those databases. It can maintains up to several hundred simultaneous user connections through the client-server protocol, and will minimize connection time and per-connection demands on the server. It interprets requests from client workstations to read from and write to the databases and maintains a list of all connected clients, records locks for data coherency, and posts database transactions for "buddying" to a parallel server.

When a change is made to a record, the NOM updates a history table with each major change. With each new or modified record, the NOM broadcasts the record to all clients as a UDP datagram.

News Wire Profiler (NWP)

The NWP ingests news wire feeds and writes incoming stories to the news database. It then forwards news agency data and urgent news wire alerts to users.

Runs in either of two modes: concentrator or non-concentrator. In concentrator mode, it receives news wire copy from multiple serial ports and relays a single stream to other NWP systems via TCP/IP. In non-concentrator mode, it receives news wire copy from multiple serial ports and/or a concentrated socket stream. Usually resides on the same physical server as the NOM.

Media Object Server (MOS)

Hosts browse-quality audio and video media clips, compressed below broadcast quality in order to minimize network bandwidth requirements. Usually resides on the same physical server as the NOM.

NOM Watch

Ensures that required server processes are running and restarts them if they are closed or are terminated in error. Resides on the same physical server as the NOM.

NOM Maintenance

Purges expired data, synchronizes global tables with the CTOS, and manages the buddying processes. Resides on the same physical server as the NOM.

Installing ENPS Clients

You can install the ENPS client on each workstation by completing the following steps. Additional topics in this section refer to special cases for client installations. If you are installing in a non-English language environment, refer to Appendix A "ENPS Language Support" for more information about setting up the Client in your language.

1. If the ENPS server components are not running on the Primary Server, double-click *Watch* to launch them.

2. Log in to a client workstation as "Administrator" on the ENPS domain. An account named *Administrator* and a group *System* are available for new installations, allowing you to create basic account information for yourself and other administrators, along with a basic group structure.

3. Make sure all users have local administrator privileges; can read and write to the system registry; set the local system clock; and can read and write to the following directories on their local workstations:

```
\Program Files\ENPS
\%SYSTEMROOT%\
\%SYSTEMROOT%\SYSTEM
\%SYSTEMROOT%\SYSTEM32
```

Clients synchronize their local clocks to the settings on their server when ENPS is launched. Users must have local administrator privileges for the clock in their PC to be adjusted correctly when ENPS is started. You can set the number of minutes for the ENPS client to poll the server to synchronize system clocks. To enable this feature, open the `[ENPS]` section of the local `ENPS.INI` file and set `PollClockInterval=x`, where x is a number of minutes greater than 0.

In Windows Active Directory environments, scheduled clock synchronization takes place automatically, so ENPS synchronization is unnecessary. To disable server synchronization on individual workstations add `SyncToNOMTime=0` to the `[ENPS]` section of the local `ENPS.INI`.

To download this change to multiple workstations, change the value in `\\ENPSSERVERNAME\ENPS\ENPS.INI` before installing the client software on any workstations. If the client software is already installed, run `\\ENPSSERVERNAME\ENPS\SETUP.EXE` from each workstation after making the changes.

You must first delete `ENPS.INI` before the updated version is downloaded to the client workstation, but make sure you save a copy of special settings that may exist in this file, such as teleprompter and CG settings.

4. If you are installing the client on Windows Vista you will need to download and install the DHTML Editing Control for Applications Redistributable Package from the Microsoft website:
http://www.microsoft.com/downloads/details.aspx?FamilyID=b769a4b8-48ed-41a1-8095-5a086d1937cb

If you are installing the ENPS client on Vista or Windows 7 the operating system's User Access Control (UAC) feature may interfere with the execution of macros. While most macros excute rover menu options some ENPS macro commands emulate input from the keyboard and may be interpreted as a security

violation by UAC. Refer to the Windows operating guide for information on disabling UAC.

5. From the Windows desktop select **Start** → **Run** and enter the following command to begin the installation:

```
\\<MACHINE NAME>\ENPS\SETUP.EXE
```

where `<MACHINE NAME>` is the name of the local ENPS server. By default, the ENPS client software is installed to `C:\Program Files\ENPS`.

If you are using ENPS in a non-English speaking environment, refer to Appendix A "ENPS Language Support" for information about using ENPS in a non-English environment.

Installation Options in `SETUP.INI`

Settings in `SETUP.INI` in the ENPS directory on the server determine what changes should be made on client workstations during ENPS software installation or updates. For example:

```
[ENPS]
Desktop=1
StartMenu=1
QuickLaunch=1
```

If `Desktop=1` an ENPS icon is placed on the user's desktop. If the `StartMenu=1` an ENPS icon is added to the Start menu. If `QuickLaunch=1` and the user's *Quick Launch* toolbar is enabled an ENPS icon is added to that toolbar.

The default for all of these options is 0 meaning that no changes will be made to the workstation. Do not change any settings in the `[Files]` section of `SETUP.INI`.

Set MAC Addresses

The system administrator must maintain a current list of MAC addresses of each adapter on the network. You can obtain the MAC address by clicking on the logo in the upper left-hand corner of the client.

If any network card is added or removed, you must update the MAC Addresses table accordingly. If client workstations or devices are not maintained in this table, they will be denied access to ENPS. MAC addresses are maintained in the G_MACS table in the `\COMMON\G_SUPPORT` directory. If the `G_MACS` table does not exist, no access will be disallowed.

To help you in building your workstation MAC address table, the file `G_MACS.NEW` is automatically populated when workstations log in for the first time. The format is the same as `G_MACS` so that you can copy `G_MACS.NEW` over your `G_MACS` file.

1. Log in to an ENPS workstation using an account with Supervisor privileges. Open the ENPS client and go to **Fourth Folder rover** → **System Maintenance** → **MAC Addresses**.

2. The table consists of multiple fields, of which only a few are required. The rest are used for internal tracking purposes for sites that wish to maintain a database of workstations connected to ENPS servers.

Property	Definition
ID	MAC Address of the network adapter (e.g. `000123A2BCDE`)
Server	Server name (e.g. `BNCENPS01`)
AcctCode	Internal accounting code
Active	Checkbox to indicate whether this network address has access to ENPS. If not checked, this workstation is explicitly prohibited from accessing ENPS.
Free	Flag for internal accounting use.
Property ID	Text for internal accounting use.
Monitor	True/false flag for enabling or disabling special client monitoring features. Normally, this should be disabled.
Location	Internal accounting use only.
Charge Code	Internal accounting use only.
Department	Internal accounting use only.
Notes	Internal accounting use only.
StartDate	Date when access begins.
Private Channels	Semicolon delimited list of ENPS servers against which this client should open private communications channels.
Expires	Date access will be terminated.

3. Select the Primary or Central Server in the Server drop-down dialog. This field is only used for internal tracking/billing purposes, but needs to be filled out.

4. The `AcctCode` field is also for internal purposes at some sites. Even if you are not using it, this field must have an entry. Enter `0001`.

5. Activate the ID by clicking on the *Active* checkbox.

6. For each workstation on your network, create a new ID using the MAC address of the computer's network card. The following rules apply to MAC addresses:

- 12 characters long
- Only numbers 0-9 and letters A-F are allowed
- Omit dashes

The workstation's physical address is the MAC address. To find the MAC address of the workstation you can click on the logo in the upper left-hand corner of the client or enter `IPCONFIG -ALL` at a command prompt.

Select the server from the server list, enter the `AcctCode` (0001), and check *Active* for each workstation. See the following section for information on setting up private channels.

Installing Through Another Account

The ENPS client setup application may "run as" a user that is a either domain account or local computer account with local administrator rights. This capability is useful in environments where user accounts are normally prohibited from

having the privileges necessary to update common system files and the Windows registry during installations and upgrades.

System managers may provide/specify account, password and optional domain details to be stored as encrypted text and passed to clients by ENPS servers during update processes. This information may be specified through the `SETADMIN.EXE` application in the NOM folder.

It is recommend that the account be a domain account because such accounts can be centrally managed on the domain controller. Alternatively, local accounts require the change to be made on each workstation. A domain account does not need any permissions on the domain, nor does it need to be a member of any system group, and its password policies should not be enforced. Further, the account should not be part of a global or local group that has had access explicitly denied to the local workstation because "deny" always overrides "permit."

If a local workstation account is used instead of a domain account, the username and password must be the same on every workstation, and the domain setting should not be specified when using `SETADMIN.EXE`.

Installing the Client on a Drive Other than C:

Create a file in the `C:\WINDOWS` on the client named `SETENPS.INI`.

The drive letter can refer to any accessible drive. Edit the `SETENPS.INI` file and add the following lines:

```
[Location]
Drive=D:
```

ENPS Client Configuration

Remember that any settings in the home server's master `ENPS.INI` file are replicated to the client's copy when the client is updated, allowing centralized management if desired. If no settings are specified in `ENPS.INI` the default values will be used.

Configuration Settings in `ENPS.INI`

`ENPS.INI` in `\Documents and Settings\All Users\Application Data\ENPS` allows you to set special settings on a client-specific basis. To disable a setting or to add comments place a semi-colon in front of it. Restart the client for changes to take effect.

Option and Description	Settings/Examples
[ENPS]	
`BaseDialect` Dialect code. Local dialects take precedence over the setting for `BaseLanguage`. A complete list of base dialect codes may be found in Appendix A "ENPS Language Support." This field can also be set as a global configuration option.	Four letter dialect code, such as `ENUS` for American English.
`BaseLanguage` Language for ENPS labels, menus and fields. A complete list of language codes may be found in Appendix A "ENPS Language Support." This field can also be set as a global configuration option.	Two letter language code such as `EN` for English.
`CG` Allow CG functionality from the client machine. Refer to *Step 2: Configuring your CG with ENPS* on page 112 for more information.	0 – Disabled (default) 1 – Enabled
`CGMacro` Allows the user to create CG macros that will allow you to trigger pause events and transforms from the ENPS CG workstation. ENPS will be able to feed CG captions to a preview channel before moving them to the air channel. This setting must be enabled in both the `[ENPS]` section and the `[CG]` section.	0 – Disabled (default) 1 – Enabled
`CGMacro` Allow creation of CG macros that will allow users to trigger pause events and transforms from the ENPS CG workstation. This line should also appear in the `[CG]` section.	0 – Disabled (default) 1 – Enabled
`ChatDateTime` Date and time is prefixed on messages if the *Include date/time* rover option is checked. The date/time format defaults to "dd-mmm hh:nn". Use this field to assign other formats.	Example "mmm-dd hh:nn" displays month, day, hours and minutes

`ChatHoldTime` Seconds of hold time allowed during a chat session.	Default is 240 seconds, or four minutes.
`ChatStatusDelay` Delay in seconds for flashing status messages.	Default is 3.
`CreateRCFiles` If you are upgrading to ENPS 4.5 from earlier versions, enable this option prior to performing the upgrade to enable functionality which will allow you to select text and change its case to all upper, all lower, or mixed case.	0 – Disabled (default) 1 – Enabled
`CtrlAlt` ENPS uses the `Ctrl+Alt` keys or `Alt+Gr` keys – depending on the language – to access special functions like performance logging. However, use of these keys is not enabled by default.	0 – Disabled (default) 1 – Enabled
`DebugSocket` Used for troubleshooting purposes by AP technical support.	Do not modify.
`DefSettings` Allows clients to set security profiles which specify different user security levels across different servers and/or groups. You must also enable the Global Configuration option `CENTRALPRIV`. For more information about security profiles refer to *Creating Security Profiles* on page 52.	0 – Disabled (default) 1 – Enabled
`DetachedActiveX` Option on the media rover to open an ActiveX in a separate window. This feature useful for editing components that may need to run on a second monitor. Only three controls – one or more of which may be the integrated ENPS browser – may be opened in this window at one time.	0 – Disabled (default) 1 – Enabled

`DraftPrintCharsPerLine,`
`DraftPrintLinesPerPage,`
`LeftZoneWidth,CenterZoneWidth,`
`RightZoneWidth`
Print scripts in "draft" format from Editing Window and Rundown rovers. This option uses the current script report layout and these two settings for setting the number of characters per line and the number of lines per page. These settings take precedence over the margins in determining when a page or line ends.
	# of characters per line and lines per page

`ExternalDocuments` Store Word or Adobe Acrobat documents in the collection field of a Newsgathering Grid by dragging and dropping the document to the assignment "collection" field.	0– Disabled (default) 1 – Enabled
`ExportPath`	Folder path

Configure the default save directory to something other than `the` root directory when exporting a Rundown	
`FarsiTextBoxFont` If ENPS is unable to render a Farsi language character with the current font it will use the font set specified in this setting. This value can be set to either Tahoma or Arial, either of which will work with all Farsi characters. This setting will also take effect if the font specified in a script is not installed on the client workstation. This setting can also be added to the global configuration options.	Value can be *Tahoma* or *Arial.*
`GridCellHighlightEnable` Change the cell highlighting color for Rundowns and Newsgathering Grids. The system default highlighting color is dark gray. If this option is enabled for a client workstation the color set in the `GridCellHighlightColor` setting in the Global Configuration Options will be used as the default highlighting color. This setting enables the *Workstation grid cell highlight color* option in Personal Settings which allows users to select custom highlighting colors for particular workstations.	0 – Disabled (default) 1 – Enabled
`GridRptHMargin, GridRptFontSize` Width of the left and right margins and the font size used when printing generic grids with these settings. The value is in twips (a twentieth of a point) where 1440 twips = 1 inch.	Default for `x` is 360 twips and default for `y` is 240 twips.
`LoadPrintersOnDemand` Validate available printers only the first time they are used. This will allow ENPS to start more quickly, especially in locations with numerous printers or for users operating in remote locations.	0 – Disabled (default) 1 – Enabled
`LocalSort` Enable this option if some instances of the date sort order of Search items are displayed incorrectly.	0 – Disabled (default) 1 – Enabled
`MIRXMLTree` View MOS Item Reference tool tips in an XML tree view. The value you set in the `ENPS.INI` will override the value for this setting in the Global Configuration Options.	0 – Disabled (default) 1 – Enabled
`PollClockInterval` Frequency of the ENPS client to poll the server to synchronize system clocks.	Number of minutes
`PrintJobDelay` Adds a delay to give the system additional time to prepare print jobs. This is necessary to correct printing problems on some printers, including right-to-left	Number of seconds

languages printing scripts from Rundowns.

Additionally, users may also need to add {WAIT} command to their code if they are using macros for print jobs.

`PublishDBEnabled` Allow publishing from the client.	0 – Disabled (default) 1 – Enabled
`PublishEnabled` Display Publishing tables and columns in System Maintenance.	0 – Disabled (default) 1 – Enabled
`RTLPrint` An alternate print engine for the ENPS client This option is required for right-to-left for languages such as Arabic. It also enables print options not available by default such as the ability to add page breaks to long Rundowns or Newsgathering Grids using the Page Break column. If this setting is set in the Global Configuration options that value will override the setting in the `.INI` file.	0 – Disabled (default) 1 – Enabled

`ScriptMediaViewer`
 	
Preview pane for viewing MOS Item References in a script. The media must have an object path to the media, as specified by the MOS Protocol. The script pane can be toggled on or off from the script rover or the toolbar in the script window.
 	
The format of the MOS Item Reference must follow the rules set in the MOS Protocol, which can be found at `www.mosprotocol.com` in the section "objPaths—Unambiguous pointers to media files." Sample paths:
HTTP
`http://server/proxy/ clip3928cd20s0e.wmv`
FTP
`ftp://server/proxy/clip3928cd20s0e.wmv`
UNC
`\\server\media\ clip3928cd20s0e.mxf`
 	
If MOS Item References do not have a valid path, ENPS will display a generic media graphic from the ENPS client `\BITMAP` sub-directory.
	0 – Disabled (default)
	1 – Enabled

`SelectRows` Number of entries to store in the List Window.	Default is 250.
`SetupRestart` Prompt users to restart workstations after clients are updated from the server.	0 – Disabled 1 – Enabled (default)
`SystemEdit` Allows users with sufficient privileges to edit system fields.	0 – Disabled (default) 1 – Enabled
`SyncToNOMTime` In Windows Active Directory environments, scheduled	0 – Disabled 1 – Enabled (default)

clock synchronization happens automatically, therefore ENPS synchronization is unnecessary. Use this setting to disable server synchronization on individual workstations.

TerminateOnExit Specify which external processes should automatically stop when the client is shut down. For the HP Universal PS driver, for example, which must be shut down before the client can be restarted, this setting should be set to `hpmup081.bin`. This setting can also be added to the Global Configuration Options for a global change.	Name of the process to shut down.
UnicodeFontSubst Enable a substitute Unicode font for the ENPS interface. If this setting is enabled, a font must be specified using `UnicodeFontName`.	0 – Disabled (default) 1 – Enabled
UnicodeFontName If `UnicodeFontSubst` is enabled, specifies a default Unicode font that will be used for the ENPS interface. This font must be installed through Windows and the name specified here must match the font name exactly.	Name of the Unicode font.
UserIDSpace ENPS does not allow login names containing spaces and certain reserved characters such as underscores and periods. To work with legacy systems where spaces are used in names, set this setting to a replacement character such as a hyphen or underscore. Spaces in user names will be converted to the specified character for internal ENPS use. Use of a hyphen is suggested. If this change is made in the `ENPS.INI` file on the Primary Server installing or updating ENPS clients will replicate the setting to local copies on client workstations.	Windows account name of `John_Doe` would be converted to (and should be created in the ENPS staff database) as `John-Doe` using this setting. If no setting is specified the name would become `JohnDoe`.
UseRTFtext Enhanced formatting options on script toolbars such as bold, italics, underline, and font colors. This option is enabled by default. This option also requires `XMLstorage=1` in the `[NOM]` section of the `NOM.INI`.	0 – Disabled 1 – Enabled (default)
WireRptHMargin, WireRptFontSize Set the width of the left and right margins for wire story printouts or the font size. The default margin is .25 inches and the default font size is 12 pt. The value is given in twips (a twentieth of a point) where 1440 twips = 1 inch.	Default for x is 360 twips and the default value for y is 240 twips.

[TCPIP]

ConnectTimeout Length of time the client will use to attempt to connect to the ENPS server.	Default is 20 seconds.
LocalServer Name of the Primary Server.	Example: `APENPS01`

`PacketVersion` Allow support for non-English feeds. Port 10517 may be automatically used in addition to 10512 and 10513 for UDP datagrams. Make sure this setting is the same for both the client's `ENPS.INI` and server's `NWP.INI`.	1 – English wire feeds (default) 2 – Non-English wire feeds
`ReceiveTimeout` Number of seconds before a timeout to receive information back from the ENPS server.	Default is 20 seconds.
`ReceiveTimeoutBriefing` Number of seconds the client will wait for Search results.	Default is 20 seconds.
`ReceiveTimeoutMOSQuery` Number of seconds the client will wait for MOS 2.8.1 search returns.	Default is 5 seconds.
`ReceiveTimeoutWebHits` Amount of time the client will wait when the *Count* button is pressed from the Search dialog box's *Advanced Options* tab.	Default value is 4 seconds.
`SearchAutoKeyboard` When using ENPS in any RTL language locale such as Arabic an operating system conflict may switch the keyboard language in some textboxes like the Search box. This setting controls whether ENPS should prevent the language switching. By default, this option will be enabled only if the default locale uses a RTL language but you can enable this setting to ensure that switching is prevented regardless of your locale.	0 – Disabled 1 – Enabled (default)
`UDPInfo` When this setting is enabled, UDP packets received by the workstation will be recorded and the command `Ctrl+Alt+U` will display a table of servers, packets received, and a reliability measure. Only NOM UDP packets (not NWP packets) are tracked and UDPs are only sent only when non-private data is manipulated such as a script is saved or a Rundown is re-ordered. UDPs from servers on different subnets will not be received unless they are explicitly "reflected" and if private channels are active the UDPs will still be tracked even though they are not processed because the packets are duplicated in the private channel. The `CtrlAlt` setting in the `[ENPS]` section must be enabled for this feature to work.	0 – Disabled (default) 1 – Enabled
[Prompter]	
`Driver` Enables Prompter output and "Dump to ..." menu option.	0 – Disabled (default) 1 – Enabled
`Log` Create a log file for testing purposes.	0 – Disabled (default) 1 – Enabled

`Path` If you are using WinCue, WinPlus, or AP Prompter and you prompter data to be written to disk, specify a drive letter and directory name or UNC name and path.	Examples: C:\PromptData \\APENPS1\Prmpt
`Port` Prompter port for AutoCue prompters.	Default is 1.
`Settings` Serial port settings including baud rate, parity, packet size, and stop bits.	`9600,N,8,1`

[CG]

`AstonAnimation` Any `AstonCopyPreviewToDisplay` command sent to an Aston will be followed by an `AstonWaitForDynamicEnd` command.	0 – Disabled (default) 1 – Enabled
`AutoPreview` First item to be automatically previewed when grid is first opened, and the next item to be previewed when an item is rendered.	0 – Disabled (default) 1 – Enabled
`BigEndian` When the Unicode setting is enabled, this settings causes the byte order of Unicode data to conform to the Java binary standard instead of the Intel binary standard.	0 – Disabled (default) 1 – Enabled
`CGMacro` Allows the user to create CG macros that will allow you to trigger pause events and transforms from the ENPS CG workstation. ENPS will be able to feed CG captions to a preview channel before moving them to the air channel. This setting must be enabled in both the `[ENPS]` section as well as the `[CG]` section.	0 – Disabled (default) 1 – Enabled
`CharMap` Refer to *Character Generator Mapping* on page 114 for more information.	
`Directories` Specifies all available message directories on the Chyron or drives on the Dubner. This setting is not valid for the Codi. Each entry must include the full drive and path name and exactly match the message directories on the Chyron. All messages in these directories must be built using machine fonts, not converted fonts. All tab fields must be set to auto-erase, and all tab stops must match the order of the AP ENPS templates as built by the ENPS operator. Each message directory must have sufficient clear space above the defined starting location to handle large newscasts.	Chyron/ TypeDeko example: DIRECTORIES= C/AM;C/NOON;C/5PM; C/6PM;C/10PM Dubner example: DIRECTORIES= 1;2;3
`GlobalCommand` When disabled, CG commands will utilize the Chyron	0 – Disabled (default) 1 – Enabled

machine ID code and the proper syntax to address a unique machine on a multi-drop serial cable. When enabled, CG commands will use a global command structure to address all Chyron CGs on a multi-drop serial cable.

LeadingTab	0 – Disabled (default) 1 – Enabled

When enabled, a Tab command is sent when beginning communication with the character generator, sometimes necessary to position the CGs cursor in the proper starting field.

Preload	0 – Disabled (default) 1 – Enabled

Preload all CG instructions for show to the character generator. Changes will be transmitted to the CG in real-time and subject to control by the CG keyboard. When disabled, the ENPS PC is in control. This setting is not valid for the Codi.

PrimaryUser	0 – Disabled (default) 1 – Enabled

In some situations, multiple users can work with the Chyron CG at the same time and it may be desirable to specify which user's commands will be given priority processing. If this option is disabled "X" commands will be used and if enabled "Y" commands will be used.

Retries	Default is 3.

Number of times to retry transmission to the CG device after a timeout.

RTS	0 – Disabled (default) 1 – Enabled

When enabled, the Request to Send signal on the CG is respected. This feature may be required for arbitrating flow control between ports on serial port sharing devices. Many such devices have different operational characteristics and may, or may not, be suitable for use with ENPS. Generally, a CG-enabled PC should have exclusive control of the CG to prevent arbitration problems.

Test	0 – Disabled (default) 1 – Enabled

When enabled, the ENPS character generator driver is in "test mode" and does not respect the settings for CGTimeout or CGRetries.

Timeout	Default is 3000 (three seconds).

Milliseconds the ENPS character generator driver will wait to hear from the CG device before timing out (500 ms is half a second; 1000 ms is one second).

Trace	0 – Disabled (default) 1 – Enabled

CG operations are logged to a temporary file named CGTRACE.LOG for review.

Unicode	0 – Disabled (default) 1 – Enabled

Data to be sent in Unicode rather than ANSI in the default code page.

`UserAccount`	Example: `JOHNSMITH`
User account name for an Aston model character generator. If specified, a command instructs the Aston to change to that user account.	
`UseSBCGOutput`	0 – Disabled (default)
Use this setting if you are not using a double-byte character language and output is sent to the CG incorrectly.	1 – Enabled
`UTF-8`	0 – Disabled (default)
Force UTF-8 encoding for the output to the CG device. This setting will output to Unicode UTF-8 regardless of whether the `Unicode` setting is enabled or not.	1 – Enabled

[Reflect]

`Servers, NOM, NWP`	<u>Example</u>
You can run the standalone reflector `REFLECT.EXE` on a workstation that is dedicated to being a reflector. This option is enabled by adding a list of servers, delimited by semicolons, as a `Servers` setting. This section might also be placed in a file called `REFLECT.INI`. Refer to *Using a Workstation as a Reflector* on page 64 for more information.	APENPS01; APENPS02

[Update]

`Defer`	Default value is 10.
The client detects if the network connection is via dial-up RAS or standard LAN before it automatically launches urgent client updates. This speeds up ENPS for dial-up users who, due to bandwidth and/or time constraints, may not be able to wait for a client software update that is not of urgent importance.	
By default, if the connection is dial-up, the user has an option of deferring the update up to the value specified here until more convenient time or when back on the home LAN. If the update is major rather than minor, updates are still forced.	

[StatsCG]

Refer to the *ENPS Stats Guide* for more information on these settings.

[TickerCG]

Because tickers use crawls which are different than normal ENPS CG templates, you must enter all of the CG information for News Tickers into its own section. Refer to *Enabling News Tickers* in this chapter for more information.

[Automation]

This section apply to the OmniBus serial interface. Refer to *Using the OmniBus System* on page 125 for more information.

Command Line Switches

The user can start the ENPS client with a command line switch to control initial behavior.

`/LOCAL`	Start off-line in local mode.
`/W`	Start in windowed mode.
`/F`	Start in full-screen mode.

For example, to run the client off-line enter:

`C:\Program Files\ENPS\ENPS.EXE /LOCAL`

Dictionary, Thesaurus and Pronouncer

AP provides dictionaries for checking spelling in English (U.S. and U.K.), Dutch, French, German, Italian, Norwegian, Polish and Spanish. The AP thesaurus is currently available only in U.S. English.

You may add more words specific to your locale or requirements, one word per line, to the file `SUPP.DIC` in the `\ENPS\DICT` directory on the server. Each time the client software is updated or installation is manually executed, this supplemental file will be updated on client workstations for their use.

ENPS allows you to enable multiple dictionaries for simultaneous use. Refer to Appendix A "ENPS Language Support" for more information.

Enabling the My ENPS Feature

My ENPS is a feature designed to give users a quick overview of wire stories and local content by adding an icon to the ENPS desktop. Refer to the *ENPS Basic User's Guide* for more details about its features.

To enable My ENPS functionality, complete the following steps:

1. Add `MyENPS=1` to the Global Configuration Options.

2. Restart the ENPS client.

3. To enable the application and enable automatic launch on startup, add `TopStories=1` to the `[Watch]` section of `NOM.INI` in the NOM folder on each server.

4. On the NWP select *Configuration*, then select the *General* tab. Check *Process Top Stories*. For each wire input that you want to be included in the Top Stories list, ensure that the box *Top Stories* is checked so that the stories will be sent by the NWP to the Top Story Server. This step will require you to temporarily disable each wire as you click the *Top Stories* checkbox. Note that for wires via socket, each socketed wire has its own *Top Stories* checkbox. Both the NOM and NWP send updates to the TSS via direct UDP packets on port 11800. This port can be changed by placing the following entry into the `[NOM]` section of the `NOM.INI` file:

`RemotePortTSS=xxx`

where `xxx` is the port number you wish to use. It is possible to exclude certain categories of stories from being sent to the Top Stories Server, even if the news wire is configured for TSS processing. To set the exclusion, add the following entry to the `NWP.INI`:

```
[TOPSTORIES]
ExcludedCategories=1;9;10;13;91;92;101;102;104;105;106;107;108
```

with the numbers representing NWP category numbers. Stories you might consider not sending to TSS would be routine weather stories, lottery results, or non-news advisories.

5. Restart the NOM.

The NOM only sends items in Rundowns and with today's date. Stories below the black line in Rundowns are not sent. If a story slug is updated, the TSS will update the slug and refresh the top stories list. For every news wire source that sends stories to the Top Stories Server, there is a corresponding window in the TSS application along with an additional window for local news content.

In the upper left corner of each window is a count of the stories each category has generated that day. Beneath that is a box in which managers may set a purge interval for each category. Options are a minimum of 1 hour to a maximum of 24 hours. Note that the size of the overall list will vary according to the purge setting you use.

The TSS compares slugs of incoming stories, keeping a list of those that match. When the number of matches exceeds the value of the "Top Story Minimum," then the story is added to the "List of Today's Top Stories".

Two additional boxes allow managers to refine how the TSS compares story or wire slugs. The first is a noise word or restricted term list which may be used to strip extraneous words before the slug comparison takes place. For example, if "Correction" is in the noise word list and a news wire story slugged "Martha Stewart Correction" is received, the word "correction" would be stripped from the slug for comparison purposes, and the story would be added to the count of items slugged "Martha Stewart". The final list is called "exclude from top stories". Slugs containing words in this box will be completely excluded from the top stories list. For example, if you add "Tide Predictions" to the list and a wire story slugged "Miami Tide Predictions" is received, this slug will be removed from the top stories list.

Enabling Web Searches

Web Searches enable users to extend the capability of ENPS Search to the Internet. To set up these features, select **Fourth Folder rover → System Maintenance → Web Search Engines**.

Name	URL
Google	http://www.google.com/search?hl=en&lr=&ie=ISO-8859-1&q=
Yahoo	http://search.yahoo.com/search?ei=UTF-8&fr=fp-tab-web-t&n=20&fl=0&x=wrt&p=
MSN	http://search.msn.com/results.aspx?q=
Movie Database	http://www.imdb.com/find?q=
New York Times	http://query.nytimes.com/search/query?query=
CNN.com	http://search.cnn.com/pages/search.jsp?query=
Washington Post	http://www.washingtonpost.com/ac2/wp-dyn/Search?keywords=
York Daily Record	http://www.ydr.com/search?runSearch=true&query=
Philly.com	http://www.philly.com/mld/philly/search/search_results.htm?pubName=philly&orderBy=date&pageStart=1&sitesToSearch=philly%2Cinquirer%2Cdailynews%2Crealcities&pageSize=10&fieldsToSearch=HEADLINE%2CFORSEARCH%2CLEAD%2CBYLINE&queryType=all&searchSelect=article&query=
USA Today	http://asp.usatoday.com/search/yahoo/search.aspx?qt=both&nr=5&kw=
WJLA.com	http://www.wjla.com/internetsearch.hrb?k=
Penn Live.com	http://www.pennlive.com/search/index.ssf?sconfig=penn&xpath.category_letter=&xpath.pubdate=01%2F23%2F06+01%2F22%2F06+01%2F21%2F06+01%2F20%2F06+01%2F19%2F06+01%2F18%2F06+01%2F17%2F06+01%2F16%2F06+01%2F15%2F06+01%2F14%2F06+01%2F13%2F06+01%2F12%2F06+01%2F11%2F06+01%2F10%2F06&count=20&xref=1&xpath.any=
CNN Financial News	http://search.money.cnn.com/pages/search.jsp?QueryText=
Google News	http://news.google.com/news?hl=en&q=
ESPN.com	http://search.espn.go.com/keyword/search?searchString=
SI.com	http://search.sportsillustrated.cnn.com/pages/search.jsp?query=

Find   New   Delete   Print   Save   Cancel

A URL you use must allow you to enter your query text at the end of the string. For example, to create a Yahoo search string you would enter:

```
http://search.yahoo.com/search?ei=UTF-8&fr=fp-tab-web-
t&n=20&fl=0&x=wrt&p=
```

You can test a URL to see if it will work as a Web Search by pasting the URL into your Web browser, then enter search terms at the end of the string. If the Website is able to process your query successfully, then the query string will work in ENPS.

Enabling News Tickers

You can use ENPS to create a scrolling news ticker directly from the ENPS Rundown. This functionality is supported on the following CGs:

- Pinnacle's Deko family
- Chyron Codi
- Chyron iNFiNiT! Family, including MAX! and MAXINE!, with the Chyron serial crawl option enabled

You must also be subscribed to the AP NNTP headlines feed.

Complete the following steps to enable Rundowns to generate news tickers. Instructions for creating news tickers can be found in the *ENPS Advanced User's Guide.*

1. In the `NWP.INI`, add the line `NNTP=1` to the `[NWP]` section. Restart the NWP.

2. You will then see the NNTP Ticker Feed window in the NWP where you may enter a news server name (or IP address), a username and password, and where you can select whether the target server requires a logon.
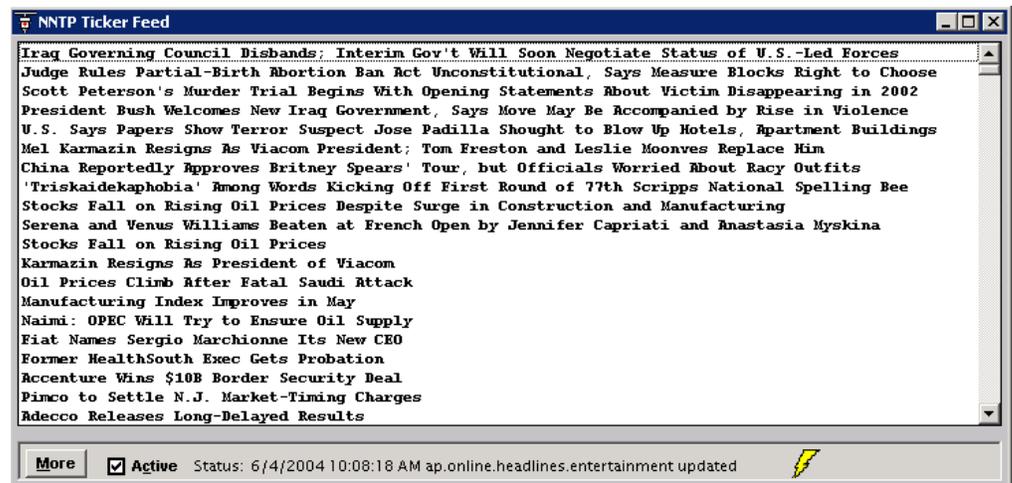
3. Select the *Active* checkbox and the application will download a list of available news groups, such as `ap.online.headlines.us`. Select the categories you want to add, then click the *Add* button to add them to the category list. You may also add a shorter, easier to recognize name for each category.

4. Once the NWP configuration is complete, click *Active*, and the application will begin downloading headline content.

5. Open `NOM.INI` and add the setting `RefreshMax=X` to the `[TopStories]` section where `X` is the number of stories at which the TSS will stop refreshing the Top Stories List (the default is 500). For example, if you set `RefreshMax=25`

and the total number of stories is 26, the TSS will not refresh the list. If you do not want to refresh the list at all, set `RefreshMax=1`.

6. Because tickers use crawls which are different then normal ENPS CG templates, you must enter all of the CG information directly into the `ENPS.INI` file. On the ENPS client machine from which you want to create the tickers, add the following section to the `ENPS.INI`:

```
[TickerCG]
;for CG output (if CG=1 in ENPS section above)
;for Chyron serial crawl
;CG=Infinit!;NTSC;COM1:9600,n,8,1;0;
;for Pinnacle Deko Intelligent Interface commands
;CG=Deko;NTSC;COM1:9600,n,8,1;0;5000
;for Chyron Codi commands
;CG=Codi;NTSC;COM3:9600,n,8,1;1000
Timeout=5000
Test=0
Retries=1
Trace=0
DateFormat=h:nn am/pm

;Pinnacle Deko specific
;CG Directories
;CGCurrentDir=C:\DEKO
;CG BasePage
;BasePage=C:\DEKO\CRAWL.DKO

;Chyron Codi specific
CodiPosition=400
CodiSpeed=2
CodiFont=1
CodiFontColor=1
CodiBackgroundTopColor=200,200,200
CodiBackgroundBottomColor=50,50,50
CodiBackgroundTopPosition=200
CodiBackgroundBottomPosition=256
```

Locate the section of lines for the CG you are using and remove the semi-colon from the beginning of each line that contains an "=" to make that line active. Make sure that all of the settings are correct for your CG, including `BasePage` and `CGCurrentDir` for Pinnacle Deko and communications parameters such as baud rates, stop bits, and parity. Refer to Chapter 14 "Character Generators" for more information on how these parameters are formatted.

Setting Up Follow-Me Messaging

Follow-Me Messaging (FMM) gives users the ability to forward their incoming top-line messages to a cell phone or wireless device while they are away from their desk. You must install the Follow-Me server application on a POP mail server machine, which must be running Windows Server 2003. Install all Windows Updates and security patches before you begin the installation process.

Step 1: Setting up the Server

The Follow-Me Messaging server must be a different machine than the ENPS server.

1. Install the latest Microsoft .NET Framework v1.1 or higher. This package can be downloaded from:
`http://msdn.microsoft.com/netframework/downloads`. Search for

`DOTNETFX.EXE`. Download the latest version of the .NET Framework Redistributable Package. Run `DOTNETFX.EXE` on the server that will host the Messaging Gateway. Reboot the machine when the installation is complete.

2. Check to see if SMTP service is installed. To do this, open the Control Panel and select *Add/Remove Programs*. On the left hand side of the window, click **Add/Remove Windows Components**. Click **Application Server** and then click *Details*. Click **Internet Information Services (IIS)** and then click *Details*. The *SMTP Service* checkbox should be selected. Also make sure ASP.net is installed

3. Open Computer Management and verify that ASP.net State Service is running set to startup automatically. Expand the menu below Services and Applications, click on *Services* and then double-click *ASP.net State Service*. The dropdown box for *Startup type* should be set to "Automatic."

Expand the menu underneath Services and Applications. Check to make sure that *Default SMTP Virtual Server* is selected under Internet Information Services. If you want to make sure your SMTP server is listening, go to the command line and enter `netstat -an`. At the beginning of list that appears you should see `0.0.0.0:25` with a status of "listening"."

4. Install MDAC v2.8. This can be found at the Microsoft download site `http://www.microsoft.com/downloads`.

5. Run `ENPSMsgGatewayInstaller.msi`. The installation program will prompt you for the following information:

- Number of hours the Messaging Gateway should wait for reply from an e-mail. If an email message does not arrive within this number of hours after it was sent then it will be purged.

- Domain of the e-mail address used for your Messaging Gateway. Enter the domain name of the ENPS Messaging Gateway e-mail address, e.g. `ENPSMsgGateway.com`.

- ENPS Central Server. If you are only using one Primary Server, that is your Central Server.

Next, make sure ASP is installed. It is also recommended that you verify ASP is running in Computer Management.

6. Reboot when you are finished running the installer.

7. From the Control Panel, open Administrative Tools and click *Services.* Scroll down to find ENPS Messaging Gateway. Make sure its status is set to *Started*.

8. From the `\NOM` directory, run `MAINT.EXE` and synchronize with the Central Server, or Primary Server, depending on your network configuration.

Step 2: ENPS Configuration

1. Start ENPS. Select **Fourth Folder rover → System Maintenance → Global Configuration Options**. Add the value `MessageGateway=1`.

2. Select **Fourth Folder rover → System Maintenance → MOS Configuration**. Click *New* and create an entry with the ID "ENPSMsgGateway.MOS" (remember that the ID is case-sensitive) and the IP address for the Applications Server where the MsgGateway resides.

You will have to restart the NOM and the ENPS client for changes to take effect.

3. Select **Fourth Folder rover → System Maintenance → Messaging Gateway Devices**. This table lets you configure a list of mobile device names and

descriptions that will be supported by your enterprise. Your table may look like the following:

Device	Description
MOB	Mobile phone
PDA	Personal digital assistant

4. For ENPS top line messages to be properly interpreted by the devices you have configured, ENPS ships with XSL transforms that converts a user message to a format that is readable by the device. Select **Fourth Folder rover** → **System Maintenance** → **Messaging Gateway Transforms**. Select the ID of the device you want to configure, the Message Type (Assignment, Contact, Script, or Topline) and then the name of the transform you wish to use:

Mobile Phone Transforms	Description
Assignments	`mobAssignments.xsl`
Contacts	`mobContact.xsl`
Scripts	`mobScript.xsl`
Topline	`mobTopLine.xsl`

PDA Transforms	Description
Assignments	`pdaAssignments.xsl`
Contacts	`pdaContact.xsl`
Scripts	`pdaScript.xsl`
Topline	`pdaTopLine.xsl`

All the ENPS fields which are called in the standard transforms are marked as Rundown Story Send fields in the ENPS Fields. To check this, select **Fourth Folder Rover** → **System Maintenance** → **{Enterprise} Fields**. If additional fields are required, they must be added in this screen and they must be designated for MOS Story Send output. Note that custom transforms may be required to add these fields to the standard output provided by AP, and writing and support of those transforms is the responsibility of the news organization.

5. Select **Fourth Folder rover** → **System Maintenance** → **Staff** and highlight a user name. Click the *Show devices* button. From this screen you can select a device and its unique address for messages to get forwarded. This can be an e-mail address or a mobile phone's unique identifying text messaging address, such as `John_Smith@555.1212`. ENPS users will be able to configure which devices to send messages, and the time ranges in which to send them to those devices.

Step 3: Sending a Test Message to a Mobile Device

Once you have configured a user's Follow-Me messaging settings, make sure that user is not logged in. Then, in the ENPS client, select **Mail rover** → **Send** and send a Top Line Message to that user. If the message is transmitted to that user's device, you have properly configured Follow-Me messaging.

Launching External Applications from ENPS

Create a workstation-specific `USERID.INI` file (e.g. `JOHNSMITH.INI`) and place it in the Windows directory. To launch other applications, add the following lines to this .INI file, replacing the paths listed below with paths to the desired applications. This will determine which external applications may be launched from within the ENPS client.

The text to the left of each equal sign appears to the user from Personal Folder rover, and the executable command follows to the right:

```
[Shell]
Word=C:\MSOFFICE\WINWORD\WINWORD.EXE
Excel=C:\MSOFFICE\EXCEL\EXCEL.EXE
Calculator=C:\WINDOWS\SYSTEM32\CALC.EXE
```

If long filenames or names with spaces are used, they should be surrounded by quotes, e.g.:

```
[Shell]
Word="C:\Program Files\Microsoft Office\Office\winword.exe"
Excel="C:\Program Files\Microsoft Office\Office\excel.exe"
Outlook="C:\Program Files\Microsoft
Office\Office\outlook.exe"
```

The macro to launch an application:

```
%2o{Right}~
```

This will launch the first application in your list (`WINWORD.EXE`). To launch the second application in the list, add `{DOWN 1}` before the ~

```
%2o{Right}{DOWN 1}~
```

To launch the third application, add `{DOWN 2}`, etc.

Security and Staff Administration

As the ENPS System Administrator, you will need to maintain a record of the current users and make sure users have the appropriate security privileges. You will also create user groups and assign privileges to Folder Managers to manage those groups.

This section also describes how you can create Performance Monitoring and audit logs to keep track of how the system is being used.

Setting Security Levels

You can define enterprise-wide security levels by selecting **Fourth Folder rover** → **System Maintenance** → **Security**. To create a new security level, click *New*.

These settings are related to a user roles in the organization. You can define a set of access rights for an Editor, for example. Each privilege level has four possible security levels per ENPS item:

Security	Privileges
0 - None	No access to the item.
1- Read Approved	Only able to read approved items; not able to change or delete any item.
2 - Read Any	Able to read the item, approved or not, but not able to change or delete an item.
3 - Read/Write	User can read the item, create a new item, delete an item or change an item.

Each security level requires an ID and a description. You can then set the user's abilities for all of the following areas of ENPS:

Column	Security options	Applies to…
Running Order	0 - None 1 - Read Approved 2 - Read Any 3 - Read/Write	Ability to Add, Delete and Move stories in a Rundown. Also gives the user the ability to Delete items from a Newsgathering Grid.
Script	0 - None 1 - Read Approved 2 - Read Any 3 - Read/Write	Ability to create and write in loose scripts outside of a Rundown and the script properties.
RO Scripts	0 - None 1 - Read Approved 2 - Read Any 3 - Read/Write	Ability to write in a Rundown script and the script properties (Rundown fields, story slug and Rundown script properties).

Approve	Yes No	Ability to finally approve a script, float, freeze page numbers, create and lock Rundowns, use on-air timing functions, choose MOS Story Send devices and make a Rundown MOS Control Active.
Staff	Yes No	Ability to access and modify Staff Privileges within the group.
NG Grids	0 - None 1 - Read Approved 2 - Read Any 3 - Read/Write	Ability to create a new Newsgathering Grid, Add and Move Newsgathering Grid Items in a Newsgathering Grid.
NG Items	0 - None 1 - Read Approved 2 - Read Any 3 - Read/Write	Ability to create new loose NG Items and write in an existing NG Item and the item properties (Grid fields, story slug, forms and Story Log).
NG Approve	Yes No	Ability to choose MOS Story Send devices and make a NG Grid MOS Control Active.
Maint	Yes No	Ability to access and modify all group templates, macros, report layouts, saved Searches. Create standard Rundown and Newsgathering Grid views for other users.
Election	Yes No	Ability to create, edit races and enter election results into Stats.
Write Archives	Yes No	Ability to write to archives for Rundowns and Newsgathering Grids on the Buddy Server.

When you have completed changes, open NOM on the Primary Server and click *Sync Now*.

Security levels can also vary by group: a user may be an Editor in one group, a Producer in another group, and so on. Folder Managers can find more information about setting privileges for groups in the *ENPS Advanced Users Guide*.

Creating Groups

Groups are used in parallel to how your enterprise works. In small news stations, this may be as simple as one group for News and another for the Desk, while in large enterprises, there may be dozens or even hundreds of groups. Each group has its own:

- Group Searches
- Macros
- CG, Rundown, and Newsgathering Grid templates

- Script and Rundown print report layouts

Planning the layout of groups for your ENPS site or enterprise should be conducted with an understanding of these group functions in mind.

To create a new group, select **Fourth Folder rover** → **System Maintenance** → **Groups**. Click *New* to add groups/programs to the server.

Parameter	Definition
ID	The Group ID
Description	The name of the group that users will see.
Server	Select the appropriate Primary Server name from the *Server* pull-down list. Typically, groups will be located on the local server, but you may also add "remote" groups and specify that they are located on a remote server.
Type	Sets up the folder group as an internal or external "publishing" folder as outlined below.
Newsgathering	Enable the Newsgathering Grid for a group.
Private	Not currently enabled.
Parent/Child	Used for notifying certain users if a change has been made to a Rundown. Once this option has been enabled, Group Managers will be able to set the Status column in Rundowns so that when the status has changed, certain users will be notified.
Gateway Queue	Valid only for selected sites with legacy system gateways.
WarnApproved	Optional. This setting, when enabled, will provide a warning message to users when they attempt to edit a script that has been editorially approved.
ForceEnglish	Force the keyboard layout to English in text entry fields if another language's keyboard layout is currently in use. This option applies to text entry fields in script titles, Rundown property fields, Rundown cells, and input windows such as the "Save changes?" prompt. This setting also takes effect during macro playback; the original keyboard layout will be restored when macro playback is done.
Allowed Wires	Optional. In some cases, it is desirable to limit the wires that some groups in an enterprise may see. This allows group managers to enter a semicolon delimited list of allowed wires for that group. You may enter up to 255 characters in this field.
Enable CTOS	By default, Rundowns and Newsgathering Grids will not be sent to the Central Text Object Server. By selecting this box, Rundowns and Newsgathering Grids *can* be sent to the CTOS, but users will have to also select "Allow CTOS" on the template properties for it to happen. It is recommended that only highly important Rundowns and Newsgathering Grids are sent to the

	CTOS. This will not change local archive behavior.
Election	When enabled, allows creation and viewing of election documents in the target group.
AutoCreate	Enables option to set the days of the week on which Rundowns will be automatically created.
WriteEnable Archives	Allow this group to write to archives.
WarnRODelete	When enabled, presents a warning when the user tries to delete a Rundown or a Newsgathering Grid.
MOS Redirection	You can redirect the MOS messages for all of the Rundowns that are dragged into the Group by specifying the device to which MOS messages should be sent. For example: `<family>=<family>.<machine>.<location>.<enterprise>.<mos>` To redirect to multiple devices separate entries with a semicolon. For example: `SNAPFEEDDC=SNAPFEED.WASHINGTON.AP.MOS; SNAPFEEDNY=SNAPFEED.NEWYORK.AP.MOS`
MOS Include	Double-click this box and a list of current MOS devices and ActiveX controls will be displayed. Select the checkboxes of the MOS devices and ActiveX controls that you want to be visible from the Media rover for the group.
MOS Exclude	Double-click this box and a list of current MOS devices and their controls will be displayed. Select the checkboxes of the devices that you do <u>not</u> want to be visible from the Media rover for the group.
Office Document Path	Specify a folder where users can view text documents from the network and import them into ENPS scripts. Files with the extensions `.DOC`, `.RTF`, and `.TXT` will be visible from ENPS. You must first enable the `EnableOfficeDocs` setting in the Global Configuration Options and restart ENPS before you can use this feature. Once these documents are selected, they will open in the appropriate application, such as Microsoft Word, or Notepad. Users can import the document into ENPS by right-clicking on them and choosing "import as script." Generally, this preserves Word formatting, but some material such as graphics and pictures may not be imported. If a document is dragged to the ENPS trash can, it will be deleted from the network location.
Default Security	Assign a default privilege level for a group. All users not specifically assigned a privilege level in a folder will assume the folder's default privilege level. If no default level is assigned to a folder, then the default level of *Viewer* will be used.

Group Managers can refer to the *ENPS Advanced User's Guide* for information on how to add users to their group and how to set users' security privileges. For

information on how to configure a group for publishing refer to Chapter 11, "Receiving and Sending Wires."

After you have set these group options click *Save*. Exit the ENPS client and restart it to see the new group.

Creating and De-Activating User Accounts

To add a new user, select **Fourth Folder rover** → **System Maintenance** → **Staff**. Click *New* and then enter the following information:

Field	Description
ID	User's Windows login name.
Program	User's home group. When the user clicks on their Third Folder, this will be the group that opens.
Active	This box must be checked for the user to be able to use ENPS. If a certain user is no longer working for your enterprise, you must de-select this box. Do not delete the user from the system.
Supervisor	System Administrator privileges.
Surname	User's last name.
Given Name	User's first name.
BasysID	Not used.
Department	Description of the user's department and/or position.
Notes	Notes about this user.
ServerManager	Allows user to add, delete, and edit Read-ins for the server.
SNAPfeed	Permission to use SNAPfeed functionality.

You should avoid deleting users from the ENPS because any templates or scripts created by that user will not be attributed to any owner, and this can cause instability in the system. Instead, select **Corporate Folder rover** → **Staff** and de-select the *Active* checkbox.

Creating Security Profiles

Security profiles are used to specify different user security levels across a number of different servers and/or groups. One profile might give a user Group Manager security in one group, Producer privileges in another on the same server, and a completely different set of privileges in another group on a separate server. Security Profiles are useful for creating default user settings.

1. To enable this feature, add DefSettings=1 to the [ENPS] section of ENPS.INI in the client's ENPS folder.

2. Select **Fourth Folder rover** → **System Maintenance** → **Global Configuration Options**. Add the global setting CENTRALPRIV=1 if it has not already been enabled**.**

3. Select **Fourth Folder rover** → **System Maintenance** → **Security Profiles**.

4. To start a profile select **Fourth Folder rover** → **Security Profiles**. Click in a blank space under *Profile* and enter a name for the profile. For each profile select

the server(s) and programs group(s) you want that user to have access. For each one select the security level(s) you want the user to have.

Here is a summary of default security level privileges:

Role	Description
Guest	No access to read and write any items in either Rundowns or Newsgathering Grids.
Viewer	Default setting for all users until another setting is specified. Can only read items that have been approved; not able to change or delete any item in Rundowns or Newsgathering Grids.
Superviewer	Same as viewer level but with additional privileges to read any script in a Newsgathering Grid or Rundown regardless of whether it is approved or not.
Intern	Create and modify loose scripts but no items in Rundowns or Newsgathering Grids.
Desk Ideas	Modify loose scripts but not scripts in a Rundown; may create and modify any items in a Newsgathering Grid.
Writer	Same as Desk Ideas but able to modify scripts in a Rundown.
Desk	Create Rundowns and Newsgathering Grids; read and modify any script in either. Approve items in Newsgathering Grids but not in Rundowns.
Assistant	Read any loose scripts but can only modify scripts in a Rundown; can read Newsgathering Grid items but cannot modify them.
CGMaint	Modify scripts in a Rundown but cannot modify Newsgathering Grid items; can read any items in both, provides folder maintenance privileges like creating report templates.
Director	Cannot create Rundowns or Newsgathering Grids, can read any item in both but can only modify items in a Newsgathering Grid.
Producer	Create Rundowns and Newsgathering Grids, modify any items in either, and approve items in either one.
Manager	Highest group security level with all of the Producer privileges plus folder maintenance options like modifying report templates, and ability to modify staff privileges within the group. Only a small number of users in the group should have this privilege level. This level is required to complete many of the tasks described in this guide.

You may have to press the down arrow on your keyboard to create a new row for the next entry in that profile. The group in the first row will be the user's home group once the security profile is applied. Once you have created profiles, click *Save* and restart the ENPS client.

5. To apply a security profile, select **Fourth Folder rover → System Maintenance → Staff**. Select one or more staff members, then click *Show Security.* Although the security settings will only display one user's security profiles, the settings will be apply to all of the users you have selected. You can

apply multiple security profiles, but remember that if two profiles refer to the same program group, the higher privilege will override any others.

You can also give users additional access to specific program groups without having to alter the security profile by using the Ad-hoc feature. Simply select "Ad-hoc" from the Profile column, and then select the Server, Program, and Security levels from the drop down menus in the other columns. The ad-hoc setting will always override the setting that was specified in the profile.

6. When you are finished making changes, click *Apply Security* to save your changes, then restart the ENPS client.

Creating User Settings Profiles

This feature allows group managers or System Administrators to set all of the defaults for user-configurable settings. These profiles can be global—linked to overall security levels—or group-level—specific to a work group folder. In either case, setting defaults does not prevent users from later altering any of their own personal settings.

1. To enable this feature, add the line `DefSettings=1` to the `[ENPS]` section of your `ENPS.INI` file and start the ENPS client.

2. Select **Fourth Folder rover → System Maintenance → Default Settings Profiles**. A dialog box will appear with all of the available settings.

To set your preferences, first select a security level, such as "Editor," and then make any changes to the preferences, including personal settings (such as fonts and 4th folder choice), macros, forward searches, and Searches. Once you have finished making your selections, click *Save* to save the preferences.

To save work, you can copy a set of preferences from one profile to another. To select a profile, click on the security level and then click *Select.* By default, if only global preferences are set, then any user added to the staff list will have the

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appropriate default settings from the global list, i.e., those found on the System Maintenance menu.

However, System Administrators and group folder managers may also set profiles for individual group folders. These are set from the group maintenance menu from each group. Instructions are also available in the *ENPS Advanced User's Guide* for folder managers.

Creating Custom Fields

You can add or remove your own custom fields for Rundowns, Newsgathering Grids, scripts, contacts and more. Open the ENPS client and go to **Fourth Folder rover → System Maintenance** then select **System Fields** for system default fields or **[Your enterprise name] fields** for fields specific to your enterprise. Custom fields added to this area which duplicate any System Fields will override the System Field designations.

Three columns in the ENPS corporate fields definition area work in sync with each other: Validation, List and Type. Modifying the following settings will allow you to customize what users see and are permitted to enter into a field:

Field	Description
ID	System ID given to the local field. If this ID contains an invalid character (~ ! @ # $ % ^ & * ( ) - = + _ `) users will not be able to locate the ID using Search. For example, do not enter the label "Tape#" for the ID.
Read Only	Select this column to set whether a field is read-only or can be edited.
Default Caption	Title of the field as displayed in a Rundown, Script field, etc., unless overridden by an entry in the active Languages table.
Just	Field justification (left, center, right).
Validation	Set how ENPS will display and verify the information entered into the field. This section works closely with the List and Type fields.

	Text	The user will be permitted to type anything into the field with no limitations. Items entered into the list for this field have no effect.
	ComboBox	A ComboBox gives a user a drop-down list of multiple selections, such as VO, VOSOT, PKG, etc. The user cannot type freely into this field and must either leave it blank or pick one of the selections. By default, the top line in the drop-down will be blank to allow the user to clear a previously selected choice.

Format:
Choice1|Choice2|Choice3|Choice4

Example: for a field named "Type":
VO|VOSOT|RDR|PKG|LIVE

CheckBox	If this is chosen, the user will see a checkmark appear in the field when he or she clicks on it. An example of this is the "Final Appr" column in the Rundown. Items entered into the list for this field have no effect.	
CheckList	Allows the user to select multiple choices from a drop-down checklist. Choices are specified in the List separated by vertical lines. It is not recommended that you use this option for custom fields.	
	Format: `Choice1|Choice2|Choice3|` etc.	
Duration	The user's entry will be converted to a duration. Entering "2" in one of these fields will result in ":02".	
Number	Forces the user to enter a numerical value.	
Date	Forces the user to enter a date. Entering "12-24-98" will result in "12/24/98." Entering "122498" will result in an error.	
Time	User entering of "7:00" will result in "7:00:00 AM." Entering "700" will result in an error.	
Collection	Works in conjunction with a Newsgathering Grid. Allows users to drag and drop scripts, contacts or wire stories into the column for later retrieval. This is the "Assign Info" column in Newsgathering Grid.	
Form	Works in conjunction with the Event Sheet choice under Type. The form field is the one attached to the grid function. Creates multiple rows with user-specified labels and multiple forms of validation.	

For the Form type:

Format:
label,Validation,length,extractcolumn|etc.

Example: for a form called "Assignment info":
Contact,,,Contact|Date,Date,,Date|Time|Place,Text,100,Location|etc.

When this field is exported via MOS StorySend and/or Publishing, XML-based formatting will be applied. Fields with the validation type of "Form" will appear as in the following example for the "Schedule" form:

```
<Schedule><Time>10:44</Time>
<Location>here</Location>
<Reporter>Ralph</Reporter>
<Crew>crewman</Crew><Origin>New
York</Origin></Schedule>
```

Special	Works only in an Event Sheet. Creates multiple columns with user-specified labels and multiple forms of validation.	
	Format: label,Validation,length,extractcolumn|etc.	
	So "Update by:,Time,100, Update" will result in a column called "Update by:" that's 100 pixels wide and uses the "Time" validation detailed above. Anything inputted into Update by: field in a NG Item or script will be extracted into the Update column in a Rundown or Newsgathering Grid column. IMPORTANT: The validation is case sensitive.	
	Example: Who,Text,10|What,Text,10|Date,Date,5,Date|Length,Duration,5,EstDuration.	
	When this field is exported via MOS StorySend and/or Publishing, XML-based formatting will be applied. Fields with the validation type of "Special" will appear as repeating elements named after the field. Each will contain child elements named after the subfield column headings as in the following example for two rows of "Costs" data:	

```
<Costs><Date>11/11/2002</Date>
<Amount>44</Amount><Other>333</
Other></Costs><Costs><Date>11/2
2/2002</Date><Amount>55</Amount
><Other>667</Other>
```

Tree	Works similar to the wire rover selection, where the user can choose one choice and then a sub-choice within that. Once *Tree* is selected in the *Validation* column click in the *List* field then press `Enter` or the `Space bar` to display a new window to configure the tree view. The bottom of the window displays a number of options that will help you configure the options on the tree.	
Dual	Allows the user to select two choices from a drop-down list. Choices are specified in the List separated by the vertical line character.	
	Format: `Choice1|Choice2|Choice3|`etc.	

	Table	Shows a table when the user clicks on the column. The table is defined by the list entries. List entries of "`SS Name|SS Number`" will result in a two-column, two-row table with rows titled "SS Name" and "SS Number."
		Format: `Rowname1|Rowname2|Rowname3|`etc.
	MOS DateTime	Not used.
	MOS Duration	Not used.
	MOS Automation	Used to add custom tags to a Rundown.
	MOS Automation Duration	Not used.
List		Available choices to appear in a pull-down list, delimited by pipes (the "|"character). Form, Special and Tree information is also entered here.
Reqd		Select this column to determine whether the field is required.
Width		Enter the width in pixels for the default column display.
MaxLen		Enter the maximum number of characters which can be inserted into field.
Upper		Select this column to force all text to uppercase.
MinVal		Enter a minimum value for a numeric entry.
MaxVal		Enter a maximum value for a numeric entry.
Merge		Do not use.

Type	Determines where in ENPS the field choice will be found. The field contains the following choices in varying combinations:

Script	Script property. Accessed by the user by pressing ALT+P or clicking on the magnify glass icon on a script.
RO Column	A column in a Rundown
RO Property	A field in the Rundown Properties. For example, "On Air" is a Rundown Property.
NG Column	Newsgathering Grid column
NG Property	Newsgathering Grid property
Event Sheet	Events listed in grid format
Contacts	A contact field
Script Header	Appears at the top of scripts
Script Front	Appears just below the script header

Protected	Select this column to determine whether the field is to be protected or can be changed. Protected fields cannot be changed once selected.
Sequence	Enter a number that will correspond to the sorting sequence for Rundown property fields, Newsgathering Grid Property fields, and contacts. This number also determines the order in which fields appear on the "back" of a script.
Parent	Type the number of the parent field. Fields with this entry are indented under their parent in properties windows.
Briefable	Select this column to allow the field to be located through a Search. This will add the field to the Search box's "Corporate Content" tab.

The first word entered in these fields can be searched using the field search box under the *More-Corporate* tab of the *Search* button. Anything after the first space can be found using "Words in Text."

If you enter: "Video of President's Motorcade. Hotel Fire. Video of Caminos Hotel burning down" you could find this story by doing a field search for "Video" and a "Words in Text" search for any word after the first word (or space). i.e. "Caminos" would find this in a Words in Text but not a Field search. "Video of President's Motorcade" could also be found in a field search because this is an exact phrase and the first words of the entry. |
| Set Lock | Implements a field-level edit lock. (Not intended for general use.) |
| Word Wrap | Words move to the next line when the text reaches the column width. |

Extract Target	Extracts script information to the Rundown or Script backplate from a script production command. Only the following production commands can be extracted and must have the following field IDs: ANCHOR, CG, NOTES, TAKE and INSERT. Take Other and Insert Other are the only entries that will extract for TAKE and INSERT.
Approval Extension	In some sites, multiple people such as a senior editor and a director may need to approve an item before it is cleared for broadcast. You can create several additional "approval" fields for Rundowns, which would require that all fields be selected in order to constitute script approval. If any of the multiple required flags does not show approval or is changed to unapproved, or if script contents change, the item is not approved.
	To require multiple approval fields, add "Checkbox" fields of type "RO Column" to local field definitions and set the "Approval Extension" attribute of each. Once these fields are defined and the NOM and client are restarted, the "Final Approval" column will be read-only and will be set only when all "Approval Extension" fields are set.
	Rover options do not offer an "Approve Item" option when Approval Extension fields have been defined. When the Final Approval property is reset due to a change in an item, then all Approval Extension fields will also be reset. If an Approval Extension field is reset (unchecked in the Rundown), then this will reset the Final Approval field as well, and the other Approval Extension fields will remain unaffected.
	Refer to the Global Configuration option `EnableSecurityLevels` in Chapter 12 "Global Configuration Options" for information about fine-tuning the security settings.
Autosize Width	Automatically adjust the width of the Rundown column.
MOS Send	Information in this field is sent through the Rundown Story Send when the Rundown is MOS active. Any field set for MOS Send will be sent in the MOS external metadata block.
MOS Tag	User can add MOS tags to a summary MOS item or to a MOS item in a script from the Rundown level.
Publish	Enable this entry for Publishing.

Creating Fields to Display MOS Objects

You can create Rundown or Newsgathering Grid fields that display MOS objects from a MOS device. One use of this feature would be to let directors, for example, have a field in their Rundown view that would show only video items instead of all MOS placeholders in the story. To enable this feature, add a field to local fields that will extract data based upon the value you want. For example, to see a list of video MOS Item References that come from the MOS ID "MYVIDEOMOS" create the following field:

Field	Value
ID	MyVideo
Default Caption	"My Video"
List	Enter the MOS ID here.
Validation	MOS Automation
Type	RO Column
MOS Send	Enabled
MOS Tag	objSlug

Restart ENPS and add the column to your Rundown. When you add MOS Item References to the script, in this MOS column ENPS will extract IDs for "MYVIDEOMOS" and display them.

Using this feature, you could display any possible tag from the MOS Item Reference by specifying it in the MOS Tag field. You could also set this field to allow entry of information into the MOS Item Reference specified by the MOS ID. For example, if you wanted to create a column to set the video playout channels for MYVIDEOMOS, you could add the following entry into the list box in field definitions: "Channel, MYVIDEOMOS" This would present a table for channel entry, but only for those MOS Item References which have MYVIDEOMOS as the MOS ID.

You can also create Rundown field that can list MOS Item References in the source content area – below the black line – in scripts. To create this field, enter a MOS-related field name with the letters BBL appended to it. For example, you could create a column MOSSlugsBBL and that column would display only the MOS Slugs for items below the black line.

Small

Network Communications

In this section you will configure the networking options for the ENPS servers to communicate with client workstations. A TCP/IP (Transmission Control Protocol/Internet Protocol) network links all clients and servers. Client-server requests are carried via TCP streams and use UDP (User Datagram Protocol). The NOM uses a UDP application-layer protocol to broadcast updated records, and ENPS clients use an application-layer protocol on top of TCP/IP and UDP to communicate with the NOM.

Multicasting

By default, the ENPS server uses UDP broadcasts to communicate updates to client workstations. You can configure ENPS to use multicasting as an alternative method of distributing data updates. Multicasting makes communication between the server and clients more efficient by using the network infrastructure to deliver updates only to those client workstations that need them, not to every workstation in a particular subnet. Multicasting eliminates the need for reflectors to individual subnets.

As an added benefit, dial-up and VPN users can now receive dynamic updates from both the NOM and the NWP provided the dial-up or VPN system supports multicasting.

To enable this option complete the following steps:

1. Make sure that all of the hardware on the network between the ENPS server and the client workstations is compatible with multicasting.

2. Open the server's `NOM.INI`. In the `[TCPIP]` section verify `Broadcast=1`.

3. Open the server's `NWP.INI`. In the `[NWP]` section verify `Broadcast=1`.

4. Set the following global configuration options according to their descriptions in Chapter 12, "Customizing ENPS."

```
Multicast
MulticastAlsoBroadcast
```

5. Open the Servers table by selecting **Fourth Folder rover → System Maintenance → Servers** and enter the `Multicast IP` and `Multicast Port` values for each server.

6. Restart the NOM of the Central Server. This will assign the new `MulticastIP` and `MulticastPort` values to all of the servers across the enterprise, as in the example below:

Server Name	MulticastIP	MulticastPort
Server 1	239.0.0.1	10601
Server 2	239.0.0.2	10602
Server 3	239.0.0.3	10603

Although these values are automatically inserted, you can use the Global Configuration Options to set different values for individual servers.

Reflectors

If the ENPS server is on a different subnet than any of its client workstations and multicasting is not enabled, you will need to use reflectors to transmit information from the ENPS server to those client workstations. An application reflects UDP datagrams to remote subnets. This allows users at other sites to view real-time updates to newswires, Rundowns, Newsgathering Grids, and top-line messages.

Remote NOMs and NWPs can send point-to-point updates to registered standalone reflector applications, or to reflector-enabled ENPS clients that immediately broadcast these for the benefit of other users on the local subnet. For a number of technical reasons, reflectors to RAS workstations are not supported.

You can set up a reflector to work on a standalone workstation or by using a router.

The maximum number of reflectors that can be configured on a single ENPS server varies with the processing speed of the server and the server's workload. The faster the server or the lighter the workload, the more reflectors the server can support. Too many reflectors can cause a delay in real-time updates reaching your client PCs. A typical ENPS server should be able to support at least 10 reflectors.

Standalone Reflector

A standalone reflector can be implemented in two different ways:

You can set up a workstation to run the application `REFLECT.EXE`.

Use an optional feature of the standard ENPS client. The benefit of using this methods is that no additional hardware is required and there is no penalty in performance. This is suitable for servicing small groups or single off-site users.

The risk of using either one of these methods is that if the workstation crashes for any reason, the users in that subnet will not receive dynamic updates to wires or Rundowns.

Configuring routers to pass directed UDP packets (preferred method)

To allow the ENPS server to directly update clients, your router must be configured to allow directed broadcasts to the destination network.

In the Cisco IOS, this is done by configuring the interface of the destination network (int e0 -- for Ethernet 0) and entering the following command:

```
ip directed-broadcast
```

Transmitting Directly to a Reflector

To enable servers to transmit packets directly to certain reflectors, add the desired IP addresses to the `[Reflectors]` section of `\NOM\NOM.INI` for NOM material and/or `\NWP\NWP.INI` for NWP material. Example:

```
[Reflectors]
; Standalone reflector PC in Building A
10.141.8.15
; ENPS client in small work area acting as a UDP reflector
132.185.158.136
```

Only one reflector should be active on a given subnet in order to prevent message duplication. Computers acting as reflectors must have static IP addresses.

If necessary, you may also use this capability to reflect packets directly to machines on certain IP addresses in another subnet. However, servicing too many workstations in this manner, especially if many are often unavailable, will slow down your server's performance.

Dial-up workstation addresses or address ranges should never be added to the `[Reflectors]` section of `NWP.INI`. Instead, to enable real-time urgent news wire updates only for such workstations, add the IP address of each modem to the `[ReflectUrgents]` sections of `NWP.INI`. With this setting, only urgent items will be transmitted to those points, which means that *Forward Search* alerts will not be available to those users.

Using a Workstation as a Reflector

You can run the standalone reflector `REFLECT.EXE` on a workstation that is dedicated to being a reflector. This option is enabled by adding a list of servers, delimited by semicolons, as a `Servers` setting in the `[Reflect]` section of `REFLECT.INI` or `ENPS.INI`, as appropriate. For example:

```
[Reflect]
Servers=NEWTVCENPS01;NEWLBHENPS01
```

In this example, only traffic received from servers `NEWTVCENPS01` and `NEWLBHENPS01` will be reflected. Omitting a `Servers` setting will continue to reflect all traffic.

Using the ENPS client as a reflector

A standard ENPS client contains normally dormant reflector components and may be configured as a non-dedicated reflector. The separate installation program `SETUPREF.EXE` will install standalone Reflector application components `REFLECT.EXE` and `REFLECT.INI` in `C:\Program Files\ENPS`, although this requires a dedicated PC and cannot be used on an ENPS server or an ENPS client workstation.

Options are set in the `[Reflect]` section of the local `ENPS.INI` file for the ENPS client in Reflector mode or in the local `REFLECT.INI` file located in the same path as the standalone Reflector application.

```
[Reflect]
; Reflect NOM broadcasts (1=On, 0=Off)
NOM=1
; Reflect NWP broadcasts (1=On, 0=Off)
NWP=1
```

The default for both NOM and NWP is **0** for the ENPS client and **1** for the standalone Reflector.

Both the standalone and embedded Reflector components also allow ENPS servers for which datagrams should be reflected to be specified. This option is enabled by adding a list of servers, delimited by semicolons, as a Servers setting in the `[Reflect]` section of `REFLECT.INI` or `ENPS.INI`, as appropriate. For example:

```
Servers=NEWTVCENPS01;NEWLBHENPS01
```

In this example, only traffic received from servers `NEWTVCENPS01` and `NEWLBHENPS01` will be reflected. If this setting is omitted, all traffic will be reflected.

Optimizing UDP Messages through Reflectors

Since a single UDP port cannot be opened more than once concurrently on the same computer, the standalone reflector application requires a Windows computer not running ENPS server or client software. This computer does not require an ENPS account, but it does need a TCP/IP network connection. The NWP uses a queue system for UDP messages. Up to 20 UDP datagrams per second are transmitted, however, this number can be changed in `NWP.INI`:

```
[TCPIP]
DatagramsPerSecond=20
```

You should not need to change the `DatagramsPerSecond` setting. However, if you want to optimize for the number of reflectors you are using, you can use the following formula: `peak average story receive rate * (Number of active reflectors+1) = DatagramsPerSecond`

For example, if you expect to receive five stories per second and you have four reflectors you would have 5 * (1 + 4) = 25 so you would set the `DatagramsPerSecond` value to 25. If this value is not set high enough, UDPs may be delayed. The maximum backlog is 1000 total items, where one item is able to serve the basic broadcast plus all reflectors).

The "Messages" list on the NWP console will show the number of datagrams in queue as well as any error messages. Each datagram is given three chances to be sent to each address/recipient where the recipient list is composed of the general broadcast address and any reflectors. If the attempt to send generates an error for the third time (with timer delays between attempts), an error is logged with the IP address of the recipient. Should many errors be logged for the same recipient, check the network path to that recipient and any reflector.

You can also set the maximum socket packet size, sometimes important for certain router configurations, in `NWP.INI`:

```
[TCPIP]
MaxSocketPacket=x
```

The default value is `8192.` This value should be set to 1024 when Unicode formatting is enabled in the `NWP.INI`.

Reflector Support with VPN

There are two types of VPN systems. One is a site to site VPN where VPN routers do the work. This is usually used when a branch office or bureau connects to a main office. In this situation, a reflector *is* supported because there is a broadcast address for the site.

The other type of VPN is a client to server VPN. This is used on laptops in the field: users connect to a wireless network, dial in and make a point-to-point connection to the main office. In this situation reflectors are *not* supported.

Private Channels

A workstation with a private channel receives system updates from the NOM via guaranteed TCP instead of UDP packets. Private channels should only be used if you are experiencing problems with your network and you want to ensure that mission-critical workstations receive communication with the ENPS server. Some stations use private channels for their CG and prompter machines.

To create a private channel complete the following steps:

1. Find the MAC address for the workstation you want to connect via private channel. This number can be found by opening the ENPS client and double-clicking the ENPS icon on the top left corner of the screen.

2. Select **Fourth Folder rover** → **System Maintenance** → **MAC Addresses**.

3. Click *New* to create a new entry. When you are prompted for the *ID* enter the client workstation's MAC address.

4. In the *Server* column select the server where you want the workstation to connect via private channel then re-enter the server name in the *Private Channels* column.

In rare cases when updates from multiple servers are required you can enter multiple server names separated by a semicolon in the *Private Channels* column. There should be no more than five Private Channels for each set of Primary and Buddy Servers.

5. The *AcctCode* field cannot be left blank. You can enter a single character such as a period "."or you can enter a unique number in this field that will help you identify the channel later.

6. Check the *Active* column.

7. Click *Save* and close the table.

8. On the server where you are creating the private channel click *Sync Now* in NOM Maintenance then restart the ENPS client on the private channel workstation.

At startup, an ENPS client attempts to open an IP socket to the NOM defined as its local server. If the connection cannot be made the client will start in off-line mode.

If a private channel connection is lost for any reason it will be re-established automatically. A dialog box will appear in the client stating that the connection was lost and suggesting that the open items (e.g., Rundowns, scripts) be manually refreshed in case updates arrived during the connection loss.

Private channels use port 10510 for communication with the NOM. The NWP does not support private channels. Workstations with private channels ignore standard UDP messages (directed and broadcast) from servers for which they have registered. If workstations have IP addresses in ranges also covered by reflectors the reflected messages will be ignored.

The ENPS client contacts a Windows Primary Domain Controller Server for login validation. Because MAC addresses vary for computers accessing via dial-up PPP, the MAC address table may also contain a list of pre-authorized dial-up IP addresses or IP ranges. If the MAC address cannot be found in the authorization table an attempt is made to validate the user's IP address in the same table. If it is not validated, ENPS network access is not allowed, and the user will be told to contact their help desk.

Dial-up Users

When an ENPS client issues a server command, the exchange is done through a point-to-point TCP stream via a socket on each end, similar to a telephone conversation. Similarly, an NWP acting as a concentrator (distribution method for ingesting news wires via socket) sends point-to-point TCP stream messages to designated NWP receivers.

ENPS will work through most types of network connections, including dial-in connections. The minimum connect rate supported by ENPS is 28.8 Kbps. Full connectivity is attained via any TCP/IP compatible transport, including dial-up PPP.

A downside for dial-up users may be a slower and/or a possibly faulty connection process unless the DNS setting for the TCP/IP Dial-Up Adapter is disabled. DNS resolution (as well as WINS name resolution) can fail. This can cause a problem interfacing with the Windows dial-up system. And if the Remote Access Service is in the same subnet as the ENPS server, users will not be able to receive Top Line or Urgent messages through a dial-up connection.

You can disable DNS by completing the following settings (these directions may vary slightly depending on the operating system you are using):

1. Select **Start → Settings → Control Panel**.

2. Double-click the Network icon.

3. Select the TCP/IP Dial-Up Adapter and then click *Properties.*

4. Click the DNS Configuration tab.

5. Click Disable DNS.

Disabling DNS for the Dial-Up Adapter will disable it for all other TCP/IP adapters on the workstation. If another user requires DNS (e.g. when connected directly to the network while on-site), the DNS setting must be re-enabled.

When in-progress information changes, such as updating a Rundown, the NOM sends a UDP broadcast to efficiently update all clients and eliminate the bandwidth and processing overhead necessary for the same information packet to be sent point-to-point to many users.

Although dependent on router configurations, UDPs are usually localized to the originating subnet. To overcome this limitation ENPS reflectors can relay UDP broadcasts between subnets. ENPS uses a range of ports beginning with 10501 for TCP and/or UDP messaging.

Because MAC addresses vary for computers accessing via dial-up PPP, you must add each of the MAC addresses available to dial-up users to the MAC Address table.

Chapter 11

Receiving and Sending Wires

This chapter describes how to receive wires into the NWP. You can also send wires to other newsrooms or publish them internally. Using the News Wire Profiler

The News Wire Profiler (NWP) ingests, categorizes and stores incoming serial data feeds. It can also forward or receive stories from another NWP server via a network socket connection. The NWP supports only eight-bit wires.

Categories, Providers, and other wire parameters are set in two places: the NWP application itself, running on the Primary Server and in the `NWP.INI`, located in the NWP directory on the Primary Server.

Wire Categories

You can create wire categories on a per-server basis to appear with other wire categories seen from the wire folder rover. Categories can be defined with standard forward search terms added to the bottom of the `[Categories]` section of `NWP.INI`. Any number greater than 400 may be used.

```
[Categories]
400=Stocks;Special;S;;Stock or Dow
401=Baseball;Special;S;;World Series
```

The example above will create a category called "Special" with sub-categories for Stocks and Baseball. Note that the search string is in the fifth position-using semi-colon as a delimiter. "`S`" should appear in the third position.

Receiving Wires via COM Port

Open the News Wire Profiler and select **File → New Wire**. Choose the appropriate COM port and click *OK*. A new wire window appears. Click *More* for configuration options.

ABC NewsOne (ABC) on COM4

Less | ☐ Active ☐ Monitor ☐ Process top stories   Stories: 0   Item Size:
☐ Create troubleshooting log ☐ Make a capture file

Connection
Provider [ABC NewsOne ▼]   Type [Serial ▼]   **Not Connected**

Port   Baud   Parity Data Stop Buffer
[COM4 ▼] [1200 ▼] [N ▼] [8 ▼] [1 ▼] [31744 ▼]

Story Format   Story Start Story Stop Folio Offset Headline Offset Slug Start Slug Stop Text Offset
[NAA ▼]   \001   \004   0

CharTrans   Category   Category Map
[(None) ▼] [(Default) ▼]   [APFTP ▼]

Prevent top line urgent notification for categories: [   ]   ☐ Extract slug from keyword field
Discard all stories for categories (careful!): [   ]   ⊙ Category-based kill
                                                                ○ Wire-based kill
☐ Category code search   ┌ Media Link Delimiters ┐
                           Left [<<]   Right [>>]

☐ BULLETIN,URGENT,RUSH,SNAP keyword triggers for urgents
☐ Use custom keywords: [   ]

☐ Disable extended reformatting (not recommended)
☐ Perform AP ANPA85 Spanish mapping   ☑ Convert underscore to hyphen   ☑ TLI/TFI cleanup
☑ Remove three spaces before tab   ☐ Reverse numeric sequences   Completely remove these
☐ Remove text before leading caret   ☑ Translate fractions   characters [^<>=@]
☑ Remove spaces after tabs   ☑ Convert " and `` to "   phrases [   ]

Election
Date: [   ]   Path: [   ]   Cat: [Advisories/Daybooks ▼] ☐ Active

Select the name of the wire provider from the *Provider* pull-down menu. Select the appropriate Baud, Parity, Data and Stop values. The Buffer field should remain at the default 31744, unless otherwise specified by Associated Press Broadcast Technology. The Category Map and Format settings should be set to those appropriate for the provider. Non-standard formats are supported via the Custom option. This setting allows for manual modification of the Folio Offset, Headline, Start and Stop fields.

Incoming news wire material in certain categories can be automatically discarded as it is received. This allows "test" material such as "keep alive" warnings and time checks, or material duplicated on redundant feeds from the same provider, to be ignored. For each news wire port on the NWP a semi-colon delimited list of NAA (one character) or IPTC (up to three characters) category codes can be entered.

News wire items filed by a provider as "urgent", "bulletin" or "flash" can be suppressed and lowered to "regular" priority. This stops "urgent" categorization of news wire material from certain providers and categories where the priority codes are being misused or abused. Thus, top-line urgent notifications are not provided, alert icons are not shown, and such items do not appear in the "Urgent" queue.

You can use the field *Completely remove these: characters* to discard certain characters from incoming wires. You can also enter a list of case-sensitive words to discard in the *Completely remove these: phrases* field. Words must be separated by commas.

Your custom settings are stored in the NWP.INI file. Settings for purge intervals, providers, categories, and publishing options are maintained in other sections in this file. You should consult the AP before you change them. If you are receiving non-English news wires, refer to Appendix A "ENPS Language Support."

It is possible to restrict users from reading the text of items from certain categories and agencies to enforce contractual access rights. For more information refer to Chapter 9 "Security and Staff Administration."

If a wire is not properly received for any reason, a log file will be created in the \NWP directory with the extension .log, with the filename depending on the connection type. This may help you to pinpoint connection problems, or can be useful if you contact the Associated Press for technical assistance with a wire setup issue.

The Wires Feed by Socket window shows the incoming wires, the date and time they were received and the socket they originated from. Upon connection, a receiver registers its IP address to receive data. Any previous sockets from that IP address are closed.

When data is ready, it is placed in an outbound queue for that IP address. If a connection is open to a machine matching an IP address in the queue table, data is sent. Otherwise, data is held until a connection for the address is open.

Data is not removed from the queue until the socket has signaled "Send Complete". If an IP address has no matching connection for 10 minutes, its data will be discarded. Queuing will not take place again until/unless the address is again registered. Pending queues are separate for each receiver; about 1 MB of material can be queued per "dead" receiver until timeout.

One benefit is that a remote, receiving NWP system can be intentionally taken off-line for maintenance with data queued by the sending NWP, until it is back online.

Receiving Wires via FTP

1. Follow the instructions in the previous section to create a category for the new wire in the `NWP.INI`. Then create a new section for that category in the format of `[Category_???]` with a three letter designation for the wire, such as `[Category_PRN]`. In this section you create mappings for the wire provider's category codes – which vary by geographic region – to the three digit category codes you created in the `[Category]` section:

```
[Category_STO]
; Default to PR Other Stories
Default=400
; ST Advisories
r=400
t=401
; PR Domestic/Washington
a=401
b=401
```

Restart the NWP when you are done making changes.

2. Open the News Wire Profiler and select **File → New Wire** and select FTP. When the wire window appears, click *More* to view additional options.

3. Enter the name of the FTP server the server box such as `ftp1.prnewswire.com`. Enter the *Port* number specified by the wire provider, usually 21. Select the *PASV* checkbox to enable Passive transfers.

4. Enter your user name and password in the appropriate fields. In some cases, you may have to enter the username "at" the server name, such as `UserID@ftp1.prnewswire.com`. Leave the codepage set to Western (ANSI).

In most cases you can leave the Directory field blank. However, if you are downloading wires from an FTP site with multiple story directories, you can optimize this process by creating multiple wires with different target directories. First create one FTP with all of the wire details and select the first directory that you want to capture. Then restart the NWP, and create a new wire using the first FTP wire as the wire source. The new wire will inherit the server and login settings from the first wire.

5. Select the *Extract slug from keyword field* checkbox.

6. In the Category Map drop-down box select the Category Map code you created in the first step.

7. Make sure your NWP settings are only active on the Primary Server. If both the Primary and Buddy Servers are attempting to download wire data, it will only be saved to one of them. Since many wires via FTP also have a backup FTP site, you can set the Buddy Server to download wires from the backup.

Receiving Wires via E-Mail

POP e-mail is allowed as an NWP input, just as if it were a regular news wire feed. This feature is designed to allow reporters without access to a full ENPS client to file news from assignment locations or home via e-mail.

Received messages are formatted as if they are regular news wire stories, with the text (E-mail) added to each item's slug for easy identification. To help protect you from unwanted mail, mass distribution lists or junk mail, only e-mail in which the address specified in the *Require* field appears alone on the To line is ingested. The NWP cannot receive e-mail where the recipient is part of a CC or BCC address list or one of multiple addresses on the To line, and such messages will be deleted. For additional protection, you can add to a list of specific email addresses or domain names from which any and all messages should be considered junk mail and ignored.

By default, the email accounts for the designated addresses are polled every seven minutes, although this interval is configurable. The mail servers must be located on a network available to the ENPS server without special configuration. Do not attempt to access mail servers requiring special connections through firewalls, SOCKS servers, or dial-up connections.

Receiving WebFeeds Wires

If your station has a subscription to AP WebFeeds you can receive the wire in ENPS. First add the entry `Webfeeds=1` to the `[NWP]` section of `NWP.INI`. Restart the NWP. You will now see a new AP WebFeeds window.
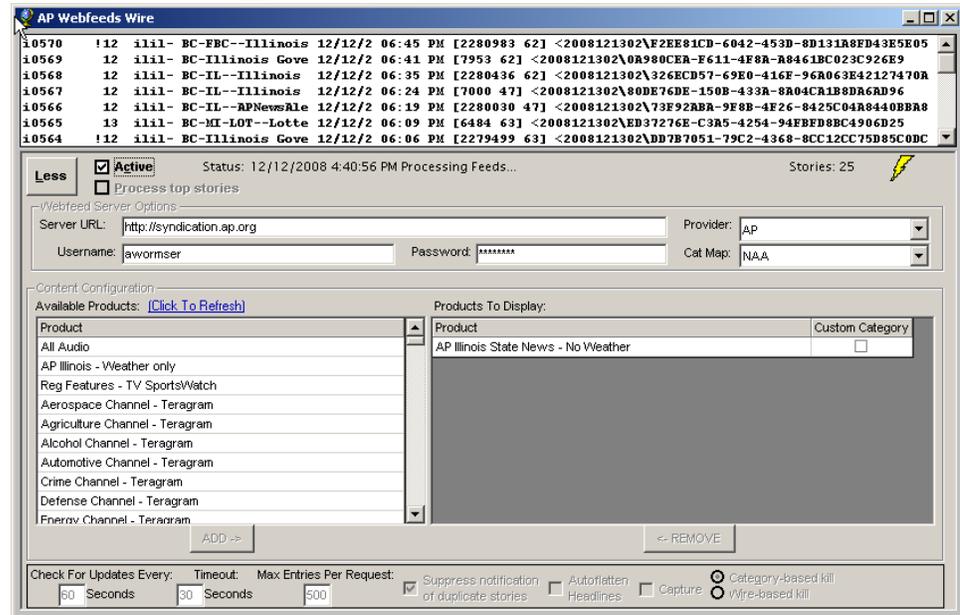
Enter the WebFeed's server URL provided by AP customer service and your WebFeeds credentials. Select the *Click to Refresh* link to display a category list.

Choose a feed categories you wish to receive then click *Add* for each category you want to receive. Check the *Custom Category* box to create an entry for that feed on the Wires rover in the ENPS client. Feed content will also be displayed under the standard category codes regardless of whether or not this box is checked. Once all selections are made click *Active* to enable the feed.

At the bottom of the window, there are several parameters that control how the feed is requested and processed:

Option	Description
Check For Updates Every *X* Seconds	How long the system will wait after receiving data before it requests the next batch.
Timeout	How long the system will wait for a response from the WebFeeds server
Max. Entries Per Request	The maximum number of stories that are downloaded at one time. The maximum allowed by WebFeeds is 500; any request higher than this will only return 500 stories.
Suppress notification of duplicate stories	If WebFeeds returns duplicate stories in response to the same request, the NWP will discard all but one copy of the story. If this box is checked, the NWP will not log when a duplicate has been discarded.
Autoflatten Headlines	If checked, then for any WebFeeds product that contains headlines packages (i.e. Top U.S. Headlines), WebFeeds will deliver not just the headlines package, but also the individual stories referenced in the headlines. If unchecked, WebFeeds will only deliver the headlines story, not the referenced stories (which are also contained in other feeds). Depending on which WebFeed products you are downloading, leaving this unchecked (default), can reduce story volumes and decrease download times.
Capture	Saves the raw WebFeeds XML to the server for troubleshooting purposes.
Category-based kill / Wire-based kill	Select *Category-based* to purge wires according to the wire's `Kill` setting in the `NWP.INI`. If you select *Wire-based* you can enter a specific number of hours and/or days before the Webfeed's wire data is purged from the server.

Several story fields are available in ENPS for the display of enhanced metadata available in WebFeeds:

Field	Description
Story Entities	People, places and organizations related to the story
Story Subjects	Topics related to the story
Wire Status	Usability of the story
Wire Release Time	When a story can be used

Receiving Wires in XML Format

You can receive a wire in XML format by creating a custom XSL transform. To create the XSL make a copy of one of the sample XSL transforms in the `NWP\XSL` folder on your Primary Server. Give the filename of the XSL transform the name of the wire so you will be able to identify the correct transform when you are selecting it in the NWP.

Using a text editor, modify the settings in the new file according to the format of the XML file to be ingested. Contact AP Broadcast Technology if you need help creating the XSL transform.

Once you have placed your XSL transform in the `NWP\XSL` directory add the setting `CustomXSLFiles=1` to the `[NWP]` section of `NWP.INI` and restart the NWP. Once the NWP is restarted it will automatically populate the *Story Format* pull-down menu with the XSL filenames in the `NWP\XSL` directory. When you are configuring the new wire in the NWP you will need to set the *Story Start* and *Story Stop* codes to match the root tag of the XML file.

The root tag is the first tag in the file after the XML header. In the following example, the Start Code would be `<NewsML` and `/NewsML>` would be the Story Stop code. Note that the close bracket > and open bracket < are omitted from the Start and Stop codes, respectively.

```
<?xml version="1.0" encoding="utf-8"?>
<NewsML Version="1.2">
  <NewsEnvelope>
    <TransmissionId>1025</TransmissionId>
    <DateAndTime>20090927T103318Z</DateAndTime>
           . . .
 </NewsML>
```

Receiving Wires from OPENS

If you are using OPENS you can use the OPENSCG application to output the closings data in XML format to an FTP server. An OPENS XSL transform is provided the `NWP\XSL` directory. The OPENS format can then be selected in the NWP's *Story Format* drop-down menu when configuring a new wire.

Special Setups for Receiving Wires

You can add special configuration options to modify how wires appear on the ENPS desktop.

Open a Wire with an ActiveX Plug-In

Wires can be configured so that they will open in an ActiveX plug-in rather than an Editing Window. To configure this feature, complete the following steps:

1. Select **Fourth Folder Rover → System Maintenance → MOS Configuration**.

2. Create an entry in the format of `name.xxx` where `name` is any name you assign and `xxx` matches the wire provider code that is listed in the `NWP.INI`. For example, the AP Global wire would have the MOSID of `GlobalWire.APG`.

3. In the ActiveX column, enter the name of the plug-in that you want to associate with this wire.

4. Click *Save* to store your changes.

You must restart the ENPS client for these changes to take affect.

Suppress Urgent Stories

Wire stories coded with "urgent" priority can be globally suppressed by category number to appear as non-urgent wire stories in the ENPS client. Stories will not appear in the Top Line Area and will not be displayed with the lightning-bolt icon. The following setting applies to the `[NWP]` section of `NWP.INI`:

```
PreventUrgent=XXX;XXX
```

where `XXX` is the internal numeric wire category as defined in the `NWP.INI`. Multiple categories must be semi-colon delimited.

Discard Wire Categories

Wire stories can be discarded on a global basis by category to eliminate chosen stories from appearing in the ENPS client. The following setting applies to the `[NWP]` section of `NWP.INI`:

```
Discard=XXX;XXX
```

`XXX` is the three digit wire category as defined in the `NWP.INI`. Multiple categories must be semi-colon delimited.

Delete Duplicate Copies

Wire stories can be filtered on a global basis to delete duplicate copies of a story. A duplicate wire story is defined as having identical slug and story text after the wire header is removed. To enable, add `DupeStoryThreshold=x` to the `[NWP]` section of `NWP.INI`, where `x` is the number of stories checked for duplicates (100 is the recommended setting).

Moving Copy to Wires

You can move copy to a category using a word such as `SPORT`, rather than an alpha or numeric category code, provided there is a certain amount of predictable structure where the word will be found in the incoming news wire.

On the NWP wire form, select *Category Code Search* and then fill in the fields *Tag, Delimiter*, and *Position.* For example, in the following string:

`?!?<<SPORT>>?!?,` you would set the following configurations:

```
Tag:?!? Delimiter:?!? Position: 2
```

Position is set to 2 because the category word is the second field after the tag. In `NWP.INI`, create a custom category mapping for the wire, such as:

```
[Category_test]
<<SPORT>>=9
```

There is a 30-character limit on the category length.

Choose this category mapping in the NWP wire form then restart the NWP.

Restricting Access to Wire Feeds

With news agency access options, it is possible to restrict users homed to certain groups from reading the text of items from certain categories and agencies, although they will be able to see slugs for such items, thus managing contractual access rights.

Under **Fourth Folder rover → System Maintenance → Groups**, the column *Allowed Wires* can be used to specify a semicolon-delimited list of agency ID tags (as established in the NWP configuration) to which read access should be allowed. Users of the specified group will not be able to see news wires that do not appear in this list. If this column is left blank, all agencies are allowed.

Purging Wires

You can set the length of time before news wires are removed from the server. The maximum value is 168 hours, which is one week.

Open the NWP and select the Configuration window. Click on the Expiration Times tab. Select a category name and then entire the expiration time in the *Hours* textbox. The values will be updated in the [KillClock] section of NWP.INI. If this field is blank, the default time of eight hours will be used.

Publishing Wires

Users may publish by selecting **Script rover** → **Publish to**. A user can also drag or save an item into a publishing-enabled folder to publish the item. In this scenario, the folder is actually a queue. When an item has been transmitted, it is removed from the folder. Such folders must be dedicated exclusively to publishing, and only text objects (such as scripts and news wire stories) may be published.

You will need to repeat these steps for the Buddy Server if you want users to be able to publish if there is a problem connecting to the Primary Server.

In the following steps, you will create a category that will be available from the client's Wires rover called "Publishing" (the parent category). You will then set up a sub-category called "Publish Test".

To enable publishing in ENPS, complete the following steps:

1. Create the publishing program/group from the ENPS client under System Administration: Groups. This is set up just like any other group, but the type is set to "Wire." Do not name the group "Wire."

2. In the NWP.INI file, add a category in the [Categories] section starting with the number 300. Categories 1-199 are internally hard-coded; 200-299 are for custom configurations. For example:

`300=Publish Test;Publishing;I;v.`

The same category can be set to simultaneously publish internally and externally; the "I" (uppercase required) sets the item to be internally published and "X" (uppercase required) sets the item to be published externally.

Set a priority code of "1" to enable the item to flash in all urgent lines.

In NAA/ANPA, "v" is an advisory. This character can be anything, but must be there in order for external publishing to work.

3. Set the [KillClock] for this new category (300=48). The new category 300 is now set to have items removed after 48 hours.

4. Create a Provider for the wire in the [Providers] section. This is a 2- or 3-letter code with the description. For example, PBT=Publish Test.

Internal Publishing means being able to distribute text objects, such as scripts and externally sourced news wire stories, just as if they were news wires, but only to colleagues on the same ENPS system.

External Publishing means publishing text objects outside of the system, just like a news agency wire such as the AP or Reuters. This allows journalists to publish to other systems, both on and off site.

The journalist will see no difference between the two. He or she simply drags a script or wire story into a publishing-enabled folder. In this scenario, the folder is actually a storage area where the stories are held in a queue. When an item has been transmitted, it is removed from that folder and sent to a custom Internal or External Publishing category off the Wires folder rover.

Publishing Wires Internally

Internal publishing features can be used to send documents (wire stories, notes, scripts) to a category available from the Wires folder rover. Stories published to this category are automatically deleted by the expiration time or `[KillClock]` setting from the NWP.

1. Restart the NOM, NWP, and client, and internal publishing will be active.

2. In the Publishing Subsystem window in the NWP, choose the Provider you have created and make sure the wire is set to "internal".

3. Users can now change the location to the group folder just created by selecting **Group Folder rover** → **Locations** and select the new group folder you created in System Maintenance.

4. Drag and drop an item to that folder to publish it.

Publishing Wires Externally

You may configure any Group Folder for external publishing at a client workstation. To create the folders for publishing news wires, complete the following steps:

1. Open the ENPS client. Select **Fourth Folder rover** → **System Maintenance** → **Groups**.

2. Create the desired group.

3. In the pull-down list, select the *Wire* pull-down in the Type column.

4. After creating or editing groups, restart both the NWP and the ENPS client to obtain updated group information from the NOM.

5. Group Folders can be configured for publishing using the NWP Publishing Subsystem window. For each entry, the following options are provided (all entries are required):

Option	Description
Group	A pull-down list for selecting the desired Group folder.
Description	The Group Folder's description, filled automatically.
Internal	May be set to On/Off. Set to On to store folder items in the local NWP database.
Category	A pull-down list of categories. Select one for local storage.
Provider	Allows text entry to name this provider.
External	May be set to On/Off. Set to On to allow folder items to be sent serially to external systems.
Category	A pull-down menu of categories.
Priority	The Priority with which stories go out.

Optionally, you may also create a section in the `NWP.INI` called `[PUBLISH_FORMAT_{xxxx}]` where `{xxxx}` is the name that you want to call the format. This will appear in the Publish Type in the Publishing Subsystem of the NWP program.

Sample wire types are as follows:

```
[Publish_Format_Sample1]
{1}ENP{StoryNumber\0000} {Priority} {Category}
{WordCount\####} {Provider}
{Title}
{2}{Text}{3}{TimeGMT\ddhhnn} GMT {TimeGMT\MMM}
{TimeGMT\YY}{4}
[Publish_Format_Sample2]
{1}ENP{StoryNumber\0000} {Priority} {Category}
{WordCount\####} {Provider}
{Title}
{2}{Text}{3}{TimeLocal\mm/dd/yy hh:nn:ss}{4}
```

At startup, the NWP will scan `NWP.INI` for publishing formats in section headers starting with "`Publish_Format_`". In the publishing window, in addition to the existing IPTC and Digispot (which remain hard coded for backward compatibility), these new publishing formats will appear and can be selected in the same manner as IPTC and Digispot.

If a publishing format from NWP.INI is selected, the items will be published externally in the given format in the `NWP.INI` with field substitution. Field substitution is from the predefined list below. Some fields accept an optional format. Where a format is allowed, the format allows all formatting options documented in Visual Basic's Format$ function. Formatting argument (after the \) is optional; if omitted, the default VB display for the data type will be used:

```
{Title} - slug or {Title\NoSpace;MaxLength=n}
```

where *n* is a number. To convert spaces in the keyword field to hyphens and limit the length of the keyword field output to 24 characters, the correct field to use in the layout is:

```
{Title\NoSpace;MaxLength=24}
{Text} - text (wrapped if a wrap width is specified in the
top grid)
{n} - where 'n' is a number - the associated Ascii value
will be substitute (e.g. {32} is a space)
{StoryNumber\format} - the story number will be placed in
the story (using the same numbering logic as in IPTC -
sequential numbers); again, format is optional; a format of
"0000" would give a zero left-padded our digit number
{WordCount\format} - count of words in story text using
same rule as in existing IPTC publishing
{Category} - as specified in the publishing grid
{Priority} - as specified in the publishing grid
{Provider} - the wire code as specified in the publishing
grid
{TimeLocal} - local time of server
{TimeGMT} - local time of server adjusted to GMT
```

Creating Dependent Wires

Dependent wires let you create virtual wires from existing serial wires or FTP feeds. To create a dependent wire open the NWP and select **File → New**. When the wire parameters window appears select *Dependent-Selector Codes* or *Dependent-FTP Directory* from the *Type* dropdown menu. These types are described below.

Dependent-Selector Codes

This option lets you create a virtual wire based on specific selector codes within another wire. In the Parent Feed dropdown menu select the wire from which you want to create a dependent wire. The dependent wire automatically inherits the connection settings from the parent wire.

Next, enter one or more selector codes separated by commas to specify what will be included in the dependent wire. These can either be entered manually or you can choose them from a dropdown menu of AP selector codes. A selector code may be added manually even if it is not already in the list. Enter the selector codes in the (Duplicate) field to retain the items in the parent wire. If you enter the selector codes in the (Extract) field the items will be removed from the parent wire.

If the parent wire contains AP selector codes you may also route dependent wire items to specific categories by mapping selector codes to categories in the NWP.INI:

```
[SIDCategory_TEST1]
; Radio Advisories 1
1rad-=1
; Television Advisories 1
1tel-=1
; General Advisories 1
anr--=1
; International 2
1tv--=2
; Domestic/Washington 3
0-----=3
; National Summaries 4
1alrt=4
; Politics 5
1ntp-=5
; Business 6
9-----=6
; Sports Scores 8
----h=8
; Sports Stories 9
1als-=9
0cnqd=9
0cnqh=9
----s=9
```

This selector code to category mapping can then be selected from the dependent wire from the Selector Category Map dropdown menu.

Dependent-FTP Directory

Use this dependent wire type when you want to create two FTP wires that originate from different folders on the same FTP server and can be accessed with the same credentials. This will allow the NWP to pull content for both wires without having to disconnect and reconnect to the same server unnecessarily.

Once you have created an NWP wire entry for the first FTP wire create the Dependent-FTP Directory wire. Specify the first FTP wire in the Parent Feed dropdown then enter the directory path for the dependent wire. Complete the other fields as you would for any other type of wire.

Special Publishing Capabilities

You can use the internal publishing feature of ENPS to perform two different functions. One, users can publish Rundowns from one group to another, and two, users can be notified of the change in status of a certain script.

Users can monitor stories in group folders to see if they will affect Rundowns. To enable this functionality, complete the following steps:

1. Select **Fourth folder rover** → **System maintenance** → **Groups**. Select the *Parent/Child* column for both of the groups.

2. Select **Target group folder** → **Group maintenance** → **Group settings** and set the options accordingly.

You can enable certain groups to receive a top line message when Rundowns are published by completing the following steps:

1. Select **Fourth folder rover** → **Group maintenance** → **Group Settings**. Set the desired users or groups to receive Top-Line Messages when Rundowns are published.

2. From a Rundown you can then select the option to publish to a certain group. The Rundown will be published with the title suffixed with HHMM (hours/minutes) based on the current time.

Customizing ENPS

This section will show you how to customize ENPS options for your station by setting options in global configuration settings and `.INI` file settings.

Global Configuration Options

These options control the way ENPS works throughout your enterprise. Select **Fourth Folder rover → System Maintenance → Global Configuration Options**. It is recommended that you examine all of the following options to evaluate whether they apply to your station.

Option and Description	Setting
`AddMosObjDuration` When enabled, actual time will reflect the sum of text time, manually added durations in the script, and `MOSObjectTime` from the MOS device. By default, `MOSObjectTime` is not included in the total computation. However, if the vendor does allow MOS Editorial Time to be entered when a MOS object is edited, that time will be added to the actual time by default, if there is a MOS object in the script. For voice-overs, this time should be set to :00 to reflect correct total time, and the clip length should be observed from the MOS Object Time column in the Rundown.	0=Disabled 1=Enabled (default)
`AllowTwoColumnScript` Give users the option to view scripts in two column mode. If this option is enabled users can switch between the normal view and the two column view using the script rover or the macros in the Script macros section of the *ENPS Advanced User's Guide*.	0=Disabled (default) 1=Enabled
`AutoArchiveDays` The number of days following a broadcast when Rundowns and Newsgathering Grids should be automatically archived, if this option has been selected in the Rundown or Newsgathering Grid template. The process occurs during regular automatic maintenance on the servers, typically at 2:00 a.m. each day. For Rundowns to be candidates for automatic archiving, users must activate the *AutoArchive* Rundown property.	0=Disabled (default) #=Number of days
`BaseDialect` Four letter dialect code. Local dialects take precedence over the setting for `BaseLanguage`.	Four letter dialect code, such as ENUS for American English. Refer to Appendix A "ENPS Language Support."

`BaseLanguage` Two letter language code for ENPS labels, menus and fields. English is `EN`.	Two letter language code such as EN for English. Refer to Appendix A "ENPS Language Support."
`BrowseFullRecords` Enable customization of how archive information is displayed in the List Window. When this option is enabled, modify the global configuration option `ListTextFormat` to format the information in the List Window.	0=Disabled (default) 1=Enabled
`CaseSensitiveMOS` ENPS will be case-sensitive for MOS IDs. This is useful for backward compatibility.	0=Disabled 1=Enabled (default)
`CentralPriv` Enable Security Profiles. Refer to Chapter 9 "Security and Staff Administration" for more information on how this functionality works.	0=Disabled (default) 1=Enabled
`ChineseCILocale` On Chinese language systems set this to `NEUTRAL` to ensure that forward searching and highlighting work correctly.	Refer to Appendix A "ENPS Language Support"
`CmdDurationColon` Use a colon in the duration length in scripts. Controls the display of durations in scripts. Durations would then appear as 1:30 rather than 1'30"	0=Disabled (default) 1=Enabled
`CorpID` Optional organizational identifier appears on the fourth folder, and is displayed in various menus and forms.	Station identifier. Default value is "ENPS."
`CTOS` CTOS is used as a master archive. If disabled, the NOM will no longer send extra copies of material to the separate Central Server. If the CTOS is enabled as a master archive, any material archived on a local server is also stored on the Central Server. The Central Server cannot be used for live programs and data. This option also needs to be enabled for individual Groups and individual Rundowns.	0=Disabled (default) 1=Enabled
`CVS` Used to generate the license key.	Do not modify this field.
`DefaultMOSVersion` Version of the MOS protocol to use by default.	2.5
`DefaultReadRate` Number of characters per second to be used as a system wide default read rate setting for script timing.	Default is 18.

`DetachedActiveX` Option on the media rover to open an ActiveX in a separate window. This feature useful for editing components that may need to run on a second monitor. Only three controls – one or more of which may be the integrated ENPS browser – may be opened in this window at one time. This setting may also be added to the `[ENPS]` section of the `ENPS.INI` on individual client workstations. The setting in the `ENPS.INI` will override the setting in the Global Configuration Options.	0 – Disabled (default) 1 – Enabled
`DetachedROMax` Maximum number of Rundowns and/or Newsgathering Grids that may be detached to their own windows. If users are working with Rundowns and Newsgathering Grids in the main window there is a limit of four allowed open. If a user tries to open an additional one they will be prompted to detach it.	Default is 10.
`EnableChat` Set whether the Chat option is enabled from the messaging icon in the client. Chat uses TCP port 10509. Confirm with your network administrator that this port is enabled throughout your organization.	0=Disabled (default) 1=Enabled
`EnableOfficeDocs` Groups can view `.txt`, `.doc`, and `.rtf` text documents from a network location and import them into scripts. Once you have added this setting restart ENPS. Select **Fourth Folder rover** → **System Maintenance** → **Groups**.	0=Disabled (default) 1=Enabled
`EnableSecurityLevels` Provides a more detailed level of security enforcement for specific roles in the organization. If this option is not selected you can create Approval Extension fields (refer to Chapter 9 "Creating Custom Fields") so that users could approve their role-specific fields and effectively give a Rundown final approval. With this option enabled, you could create a field for Copy Editor approval, and only Copy Editors will be able to select it.	0=Disabled (default) 1=Enabled
`ExternalDocuments` Store Word or Adobe Acrobat documents in the collection field of a Newsgathering Grid by dragging and dropping the document to the assignment "collection" field. This setting may also be added to the `[ENPS]` section of the `ENPS.INI` on individual client workstations. The setting in the `ENPS.INI` will override the setting in the Global Configuration Options.	0 – Disabled 1 – Enabled (default)

`FarsiTextBoxFont` If ENPS is unable to render a Farsi language character with the current font it will use the font set specified in this setting. This value can be set to either Tahoma or Arial, either of which will work with all Farsi characters. This setting will also take effect if the font specified in a script is not installed on the client workstation. This setting can also be added to the `ENPS.INI`.	Value can be *Tahoma* or *Arial*
`FastHighlight` Highlighting matches for search criteria are made by the client rather than the server. Variants of matching words such as "swam" and "swimming" also match the search term "swim") are not highlighted automatically. Users may manually trigger highlighting of any such additional words by pressing `Alt+H` in the Editing Window or by clicking on the rover option *Expand match highlights*. If disabled, highlighting is done automatically by the server, although it is not recommended. This option is not available in all languages.	0=Disabled 1=Enabled (default)
`FileDetect` Determines whether FTP paths are supported in in scripts, Rundowns, and Newsgathering Grids. Once this setting is enabled the client must be restarted for this change to take effect. In a script users will then be able to open paths such as `file://c:\temp`. See also `FTPDetect` and `UNCDetect` settings.	0=Disabled (default) 1=Enabled
`FolderSort` Arrange wires and agencies in the Search dialog box and the list of programs/groups in the **Third Folder rover → Locations** in alphabetical order.	0=Disabled (default) 1=Enabled

`FormatSubFieldValues`
 	
Use the MOS date and time format when exporting Newsgathering Grid data to MOS systems. For the field to be exported, set the validation to `MOSDateTime`. When the field is added to the Newsgathering Grid or to a Newsgathering Item form, the value will be exported in the MOS-Protocol based date and time format.
 	
With this setting in place, fields added to a Newsgathering Item sub-form will inherit the validation set for the main field. For example, if you have a field called "AssignmentStartTime," and it is set to `MOSDateTime` validation if you add that field to the "Schedule" portion of the Newsgathering Item (the "List" section of the Schedule field) such as:
 	
`Start Time,,,AssignmentStartTime`
 	
The field in the Newsgathering item would inherit the `MOSDateTime` validation from the original entry.
 	
Refer to *Creating Custom Fields* on page 55 for more information on field settings.
	0=Disabled (default)
	1=Enabled

`FTPDetect`
 	
Determines whether FTP paths are supported in in scripts, Rundowns, and Newsgathering Grids. Once this setting is enabled, the client must be restarted for this change to take effect. In a script users will then be able to open paths with the format:
`ftp://{ftp sitename}`
See also `FileDetect` and `UNCDetect` settings.
	0=Disabled (default)
	1=Enabled

`GridCellHighlightColor` Sets the highlight color for selected cells in Rundowns and Newsgathering Grids. This option only takes effect if the `GridCellHighlightEnable` option has been enabled in the client's `ENPS.INI`. Users can change this value for individual workstations in their Personal Settings.	Select from color picker.

`HardwareLayout`
 	
A semicolon-delimited list of fields to be used with the Broadcast Hardware interface. The special field *Default* corresponds to the current list:
`GUID;PageNum;Version;Title`
	For example, Default:Presenter exports the default columns and includes Presenter as a new column to the far right. GUID;Slug will only export only those two columns.

`ListTextFormat` Controls how items are displayed in the List Window if `BrowseFullRecords` is enabled. For example `{Title}{CrLf}Tape:{TapeNumber}`will show the title on line 1 and the `TapeNumber` field on the next line. Because `BrowseFullRecords` puts more load on servers, the default number of lines per item is set to 4 in this mode, versus 1 when `BrowseFullRecords` is disabled. Items that arrive in the List Window via real-time updates are unable to display in this enhanced format as described above. To view these changes, users have their client set to display at least two lines per item by selecting **List Window rover → Lines Displayed per Item → 2**.	Any standard or local field (case-sensitive) may be used in curly braces. The special value of {CrLf} (case-insensitive) may be used for a carriage return-line feed combination.
`ListTextFormatNews` Set the Wire display when Browse mode is used. This entry should be set to `{Title}{CRLF}{Text}`.	Any standard or local field will work.

`ListTextFormatMOS`
 	
Configure the content of any XML tag in a MOS object to be viewed using a browse mode. This configuration for this option uses a similar format to `ListTextFormat`. Here are some examples:
 	
`{/mos/mosObj/mosID}`
 	
`{mosID}`
 	
`{/mos/mosObj/mosExternalMetadata/Owner}`
 	
`{Owner}`
 	
`{/mos/mosObj/mosAbstract}`
 	
`{mosAbstract}`
 	
This browse format may be set separately for MOS Object folders.
	Instead of property fields enclosed in { } enter an XML tag or path within { }. It is assumed that the expression begins with "//"—which means the first instance of the element specified will be found regardless of level in the XML.

`ListTextFormatSMV` Configure how the metadata of the Script Media Viewer will be displayed, such as `{Title}{CRLF}{Text}`.	Any standard or local fields will work.
`LocalStaff` Client retrieves the entire staff list each time it starts up. If you have a large staff list and want to save server resources you can disable this option.	0=Disabled 1=Enabled (default)
`LowerCaseMacroKeys` By default, ENPS will interpret capital letters in a macro to mean that the `Shift` key is pressed which creates a potential problem with some macros. If this macro is enabled it forces the letters following the `Ctrl` key to lower case.	0=Disabled (default) 1=Enabled
`MaxBriefingTerms` If the number of operators in a Search query, including operators such as OR, AND, NOT, exceed the value of this setting, users will see a warning that results will take longer than normal to process.	Default value is 20.
`MaxExternalDocSize` Restrict the size of Word documents and `.PDF` files that are dragged into the collection field of Newsgathering Grids.	This value, in bytes, defaults to 500000, approximately half a megabyte. The maximum value is nearly three megabytes or 2999999.
`MaxMOSLinks` A "recurring" property is part of MOS object references which, if set, means that ENPS will not keep track of scripts in which the object appears and will not reflect object updates through to script item references. Setting the value MOSLINKS establishes a maximum number of scripts tracked when the "recurring" flag is not set.	Default is 500.

`MessageGateway` Follow-Me Messaging allows users to forward top line messages from ENPS to wireless devices. Refer to *Setting Up Follow-Me Messaging* on page 44 for more information.	0=Disabled (default) 1=Enabled
`MIRXMLTree` View MOS Item Reference tool tips in an XML tree view. This setting may also be placed in the `ENPS.INI` on an individual workstation, and will override the value you set in the Global Configuration Options.	0=Disabled (default) 1=Enabled
`MOSActiveDays` Set the number of days for the *MOS Control Active* property to turn off after midnight of the date on the Rundown or Newsgathering Grid.	Number of days.
`MOSBrowseMediaExtensions` By default, the ENPS script media viewer will automatically displays `.JPG` proxies if they exist in an item reference followed by proxy files with extensions `.WMV`, `.MOV`, and `.MPG`. This setting allows you specify a comma-delimited list of supported types, listed in their order of precedence. Any media extension that are supported in Windows Media Player or QuickTime are valid for this setting. If an media extension is set in list it will not be previewed. If `.JPG` is the first item in the list you will only be able to view `.JPG` proxies in the media viewer regardless of what other proxy formats may exists in the item reference. If you want to also be able to view an additional format when you click the play button in the media viewer, you should list those formats before `.JPG` in the list.	Example: WMV,MOV,JPG
`MOSChannelLockOverride` Allow changes to MOS channels in the Rundown when a script is locked for editing. If this option is enabled and a channel is assigned to an item reference, a buffered channel will be assigned as soon as the story is saved.	0=Disabled (default) 1=Enabled
`MOSItemRefColor` MOS Item References appear in a different color in scripts. This is designed to make the MOS references easier to see alongside other red production commands. You will be able to make your color choice from a pop-up color palette.	0=Disabled (default) 1=Enabled
`MOSJPGProxyPath` See `MOSBrowseMediaExtensions`.	

`MOSLeaseLockMax` Default amount of time that ENPS after a Rundown becomes MOS active that ENPS will allow external MOS devices to place a temporary "lease" on stories to create new material or update existing material. The MOS device must be using MOS version 2.82 or higher.	Number of seconds. The default is 60 and maximum value is 1200.
`MOSROAllow` Limit which MOS devices can be used from a Rundown. Once this setting is enabled and the client is restarted a user with sufficient privileges can open a Rundown's properties and select which MOS devices the Rundown can use from a *MOS Allow* list. MOS item references for devices which are not selected will be grayed out in scripts. If no entries are selected in the *MOS Allow* list all MOS devices will be allowed. Since the Rundown will only be able to trigger events on MOS devices specified in the *MOS Allow* list if a new MOS device is installed at your station it will have to be manually selected in every Rundown with devices specified in the *MOS Allow* list. If `MOSROAllow` is disabled all *MOS Allow* settings will be ignored and any Rundowns will be able to use any MOS device.	0=Disabled (default) 1=Enabled
`Multicast` Controls whether the NOM will use multicasting to send packets to clients. Refer to Chapter 10 "Network Communications" for more information.	0 – Disabled (default) 1 – Enabled
`MulticastBaseIP` During automatic population of the Servers table, this address is used as the base IP address. Addresses are assigned starting with this value and incremented, skipping any previously used values. Refer to Chapter 10 "Network Communications" for more information. This option requires that the `Multicast` setting is enabled.	Default IP address is 239.0.0.1
`MulticastBasePort` During automatic population of the Servers table, this address is used as the base port. Ports are assigned starting with this value and incremented, skipping any previously used values. Refer to Chapter 10 "Network Communications" for more information. This option requires that the `Multicast` setting is enabled.	Default port is 10601
`MulticastTTL` Time To Live value assigned to datagrams which sets the number of "hops" that a packet may take before it is discarded. Refer to Chapter 10 "Network Communications" for more information. This option requires that the `Multicast` setting is enabled.	Default is 16.

`MulticastAlsoBroadcast` Enable during rollout where some systems are upgraded and some are not. NOM and NWP will send both broadcast and multicast datagrams. This option should be disabled as soon as the rollout is complete. Refer to Chapter 10 "Network Communications" for more information. This option requires that the `Multicast` setting is enabled.	0 – Disabled (default) 1 – Enabled
`MyENPS` My ENPS icon on the client desktop to give users an overview of important wire stories, daily Rundowns, and assignments, and more. The Top Story Server (TSS) must be started from the NOM for this feature to work. Refer to *Enabling the My ENPS Feature* on page 41 for more information.	0=Disabled (default) 1=Enabled
`MyENPSRefreshMin` Users can configure My ENPS to automatically refresh content at a set interval. This value sets the minimum number of minutes that users may enter in the auto-refresh field.	Number of minutes. Minimum value is 1.
`NewMsgDays` Determine the number of days that unread group messages will be displayed in users' List Windows at startup. By default this option is disabled, so all new group messages will be displayed regardless of the date they were posted. This value is also used for unread group messages in My ENPS.	0=Disabled (default) To enable, set the number of days to a value between 1 and 999.
`NGCollectionThreshold` Number of items that can be added to a Newsgathering Grid collection before a warning appears.	Default is 10.
`NGItemThreshold` Maximum number of items that can be added to a Newsgathering Grid before a warning appears. Although there is no specific limit for the number of items allowed in Newsgathering Grids, grids that contain extremely large numbers of items can be difficult to open and maintain. The message appears when the threshold is exceeded, an applicable grid is opened, after the user inserts a new item, or copied lines from another Grid are added.	Default is 70.
`NGTimeOffset` Time added to control the time component of Newsgathering Grids. Using a setting of noon, users can be +/- 12 hours away from the server hosting the data and still see the grids anchored to the same date.	Default for existing installations is 01:00 which is 1:00 a.m. GMT. Default for new installations and suggested value for existing sites is 12:00 which is noon GMT.

NID A number used to generate your license key. This number is selected by Associated Press Broadcast Technology.	Do **NOT** modify this field.
NoMyENPSROScript Rundown scripts are allowed in users' My ENPS feature by default. Enable this option to disallow them.	0=Disabled (default) 1=Enabled
OnAirDragDropProtection When the timing bar is automatically advancing based on time cues from an automation system, ENPS will prevent an item from being dragged immediately below the item in PLAY based on this timing configuration. This means that if the PLAYING item is 1:00 long, once the item has been playing for :50 it will not be possible to drag an item immediately below it. This setting only takes effect if the *Prevent Manual Bar* Rundown property has been set. This configuration option is set in seconds.	Default value is 10.
PadROGrid If Rundown text is clipped in printouts this option inserts extra padding for the margins.	0=Disabled (default) 1=Enabled
PersonalCountThreshold Limit the number of items that users can keep in their personal folder. If a user exceeds the number of items set in this option, a warning screen is displayed when the user starts ENPS. This option can be used in conjunction with PersonalSpaceThreshold. Whichever threshold is reached first will present a warning to the user.	0=Disabled (default)
PersonalSpaceThreshold Limit the number of kilobytes of space users can keep in their personal folder. If a user exceeds the number of items set in this option, a warning screen is displayed when the user starts ENPS. This option can be used in conjunction with PersonalCountThreshold. Whichever threshold is reached first will present a warning to the user.	The default value is 0, which means that the option is disabled.
PrompterMOSLines Add line feeds where MOS Item References are listed in Rundowns and Newsgathering Grids.	0=Disabled 1=Enabled (default)
Pronouncer Control whether the Pronouncer feature is displayed. This may be important when using ENPS in languages which do not have a local version of this tool available.	0=Disabled 1=Enabled (default)

`ReadRateIgnoredChars`	The suggested default is: 0A-2F,3A-40,5B-60,7B-7E. This eliminates standard punctuation characters.
By default, in read-time calculations spaces, carriage returns, line feeds, and other punctuation characters are excluded and considered white space. This setting can be used to change which characters should be ignored when computing a script's read time. Hex settings should be specified, with ranges indicated by hyphens and multiple characters, or ranges separated by commas. This setting is available so that necessary language-specific changes can be considered.	
`RenumberSummaryMIR`	0 – Disabled (default)
By default, if an item reference is created in a Rundown via the Object Autocreate function and then moved below the script black line another Object Autocreate message is issued. You can override this behavior by by enabling this setting: the itemID of a summary item (which is normally 1) will automatically be changed to the next-highest available item ID when the item is moved below the script black line.	1 – Enabled
`ReportItemNo`	0=PageNumber (default)
Determines the first column in the global default Rundown layout.	1=ItemNumber
`ROItemThreshold`	Default is 125.
Determine when a warning message appears to discourage users from creating Rundowns than contain more than the specified item count. A warning appears when the threshold is exceeded, an applicable Rundown is opened, a user inserts a new line, or lines from another Rundown are added.	
`RTLPrint`	0 – Disabled (default)
An alternate print engine for the ENPS client. This option is required for right-to-left for languages such as Arabic. It also enables print options not available by default such as the ability to add page breaks to long Rundowns or Newsgathering Grids using the Page Break column. This setting may also be added to the `[ENPS]` section of the `ENPS.INI` on individual client workstations. The setting in the `ENPS.INI` will override the setting in the Global Configuration Options.	1 – Enabled
`RundownAlphaPages`	0=Pages numbered sequentially
Rundown pages can be numbered with alphabetic prefixes, such as A1, A2, A3, B0 (for a break), B1, etc or numbered sequentially, beginning with 1. Users can override this setting for a particular Rundown by selecting the *Rundown Numeric Pages* option in Rundown properties.	1=Page numbered with alphabetic prefixes (default)

RundownPageNumbers	0=Disabled
Force the system default layout to contain the fields Page Number and Break. This setting also renders it impossible to remove the Page field from the Rundown.	1=Enabled (default)

To enable page numbers, add the Page field to the Rundown. When present in the layout, the Page field appears at the far left column. Clicking the Break column causes the entire row to turn blue with white lettering, but does not otherwise affect the operation of the row. Operations such as timing, approval, and titling are still functional.

Page numbers are automatically generated by ENPS until the page numbers are frozen with the Rundown rover option. This allows page numbers to be edited (e.g., 10a), but re-sequencing the Rundown will not change the page numbers. However, they can be renumbered by simply unfreezing and re-freezing with the rover. When page numbers are frozen, they appear in bold print.

RundownTimeElapsed	0=Disabled (default)
Timing from an Elapsed timing field can be added to Rundowns.	1=Enabled

In addition to the current Actual and Estimated fields, the projected time of a Rundown component can be placed in the appropriate Elapsed cell. As a producer times a program using the yellow timing bar, the Elapsed field will reflect the total time the timing bar rests on each selected line, and this time will also be reflected in the Front Time and Back Time fields. The Elapsed time option allows producers to see how long a section actually ran, as opposed to the Estimated time a producer may have placed in a Rundown field. The Elapsed field reflects the time the timing bar rests on a line. If the producer fails to properly hit the space bar at the beginning of each line, the reflected "elapsed" time will not be accurate.

RundownTimeEstimated	0=Disabled (default)
Set the Rundown timing to use the estimated time rather than the actual time for timing purposes.	1=Enabled

If disabled, the Rundown will be timed based on estimated time until the user saves a script or enters an overriding time in the Actual field.

`ScriptMediaViewer`
 	
Preview pane for viewing MOS Item References in a script. The media must have an object path to the media, as specified by the MOS Protocol. The script pane can be toggled on or off from the script rover or the toolbar in the script window.
 	
The format of the MOS Item Reference must follow the rules set in the MOS Protocol, which can be found at `www.mosprotocol.com` in the section "objPaths— Unambiguous pointers to media files." Sample paths:
HTTP
`http://server/proxy/ clip3928cd20s0e.wmv`
FTP
`ftp://server/proxy/clip3928cd20s0e.wmv`
UNC
`\\server\media\ clip3928cd20s0e.mxf`
 	
This setting may also be added to the `[ENPS]` section of the `ENPS.INI` on individual client workstations. The setting in the `ENPS.INI` will override the setting in the Global Configuration Options.
	0 – Disabled
	1 – Enabled (default)

`SecureArchive` Retain security settings for archived Rundowns. If this setting is disabled, all users will be able to see all scripts in archived Rundowns. If this setting is enabled, users who do not have rights to see non-approved scripts in an in-progress Rundown will also not have access after the rundown is archived.	0=Disabled (default) 1=Enabled
`SK` Your ENPS license key.	Do not modify
`Speller` Control whether the Speller appears as a client menu option. This may be important when using ENPS in languages for which no local version of this tool is available.	0=Disabled 1=Enabled (default)

`StdActiveXRemove`	0 or 1

Provides ActiveX programmers with an alternative procedure call for terminating an ActiveX control running in ENPS. The ActiveX control implements the `NCSTerminate` procedure. It can then perform whatever operations it must prior to termination. This is designed for cases in which the control may not receive the terminate event, such as controls that include the Windows Media Player control. Setting this value will determine the sequence for removing and destroying the ActiveX control instance.
 	
When set to 0:
`Set MyForm.ctrlGuest = Nothing`
`MyForm.Controls.Remove`
 	
When set to 1:
`MyForm.Controls.Remove`
`Set MyForm.ctrlGuest = Nothing`	

`TerminateOnExit`	Name of the process to shut down.
Specify which external processes should automatically stop when the client is shut down. For the HP Universal PS driver, for example, which must be shut down before the client can be restarted, this setting should be set to `hpmup081.bin`. This setting can also be added to the `ENPS.INI` on individual workstations if a global solution is not desired.	
`Thesaurus`	0=Disabled 1=Enabled (default)
Control whether the thesaurus is available as a menu option. This may be important when using ENPS in languages for which no local version of this tool is available.	
`TimeFormat`	You can set this value to one of the following values: PAL, NTSCDF, NTSCNDF, or THOUSANDTHS.
Express time in formats for frame-accurate automation systems. Users may also set this value in the Rundown.	
`TitleSeparator`	Any character except the following cannot be used: _<>:/|*?"
The single hyphen used by default to separate Rundown Slugs and Segments may not be appropriate in some languages. This can be changed by setting `TitleSeparator` to one or more characters.	
`TrashDays`	Default value is 10
Number of days to retain items moved to the Waste Bin. This does not apply to Top Line Messages, which may be retained for 24 hours.	

UNCDetect	0=Disabled (default)
Determines whether UNC paths are supported in in scripts, Rundowns, and Newsgathering Grids. Once this setting is enabled the client must be restarted for this change to take effect. In a script users will then be able to open paths with the format of:	1=Enabled
`\\{machinename}` or `\\{IP address}`	
See also `FTPDetect` and `FileDetect` global configuration settings.	
UnicodeForwardSearch	0=Disabled (default)
Set whether Unicode is used. This is necessary in some languages, such as Chinese, to ensure that forward searching and highlighting is enabled on agency news copy.	1=Enabled
URLDetect	0=Disabled (default)
Automatically launch the ENPS Web browser control when a user clicks on HTTP hyperlinks appearing in news wire stories or scripts.	1=Enabled
UseMOSStartTime	0=Disabled (default)
Controls whether Rundowns can send messages to selected devices when *MOS Active* is selected. Until that time arrives the Rundown will not send messages to the selected device.	1=Enabled
Once this option is enabled a StorySend MOS table will appear in the Rundown properties window that lets you define when ENPS will start sending messages to each MOS device. In the *Start Date-Time* column you can enter a time when each MOS device becomes active.	
If you are creating a Rundown template, you can enter this value as an offset from the show's start time. For example, if you entered a *Start Date-Time* of -1:00 in the Rundown template when a Rundown is created with a *Start Time* of 5:00 PM ENPS would start communicating with the MOS device at 4:00 PM. The new time is calculated only once, so if the show's start time changes after the Rundown is created the MOS device's *Start Date-Time* will need to be changed manually.	
UseRoReqAllID	0 – Disabled (default)
How ENPS responds to `<roReqAll>` messages from MOS devices. By default, ENPS responds to `<roReqAll>` message with an `<roListAll>` listing all MOS-active Rundowns for all devices on the server. If this option is enabled then the `<roListAll>` will only contain MOS-active Rundowns for the requesting device.	1 – Enabled

`UseRTFtext`	0 – Disabled
Enhanced formatting options on script toolbars such as bold, italics, underline, and font colors.	1 – Enabled (default)
This option also requires `XMLstorage=1` in the `[NOM]` section of the `NOM.INI`.	
This setting may also be added to the `[ENPS]` section of the `ENPS.INI` on individual client workstations. The setting in the `ENPS.INI` will override the setting in the Global Configuration Options.	
`UseSingleFont`	0=Disabled (default)
Ensure that stories using certain characters from certain code pages such as Turkish and Russian open without a delay.	1=Enabled
`ValidateMOSObjects`	0=Disabled (default)
When enabled, allows users to see when a MOS Item Reference in a story refers to a MOS Object that has been deleted from the associated ENPS MOS folder. First enable this setting then open the MOS Configuration table and check the `ValidateMOSObject` column for each MOS device to which this should be applied.	1=Enabled
Once this value is set the ENPS client will then check for the existence of the MOS Object when an archive story is opened or when a non-Archive Rundown is MOS active. If the object is not in ENPS when the check is run the client will "grey out" the MOS Item Reference in the story. This setting should only be enabled for MOS devices which send object messages to ENPS but not for devices – including most CGs – that do not send MOS objects to ENPS.	

Configuration Settings in `NOM.INI`

The News Object Manager's `NOM.INI` file contains settings that allow you to customize how ENPS works. The following table highlights a number of these settings. Make sure to contact AP Broadcast technical support before you make any changes to these settings. Once you make a change to the `NOM.INI` you must restart the NOM for changes to take effect.

Setting	Description
[TCPIP]	
`PacketVersion`	1=English news wires (default)
Set the language version for the news wires received by the NOM.	1=Non-English news wires

`BroadcastPrivate` By default, changes in a user's personal area are not broadcast to other users. In some situations, however, such as when the same user is working on multiple machines at the same time, broadcasting these changes may be desired. If this setting is enabled it will be enabled for all users on that server.	0=Disabled (default) 1=Enabled
`BreakUDPPackets` Allow the NOM to send a greater or smaller number of UDP packets than the default 1024. If enabled, use the setting `MaxUDPSize` to configure the number of packets.	0=Disabled (default) 1=Enabled
`MaxUDPSize` Maximum number of UDP packets to be sent by the NOM. Recommended value is 1024. If you set this value too high for your network hardware your station might lose Rundown updates, especially if the Rundown is longer than 200 lines. For this setting to take effect you must also enable the setting `BreakUDPPackets`. Port 10517 may be automatically used in addition to 10512 and 10513 for UDP datagrams.	Default is 1024.
`UDPRepeats` Set the NOM to send all UDP packages multiple times to ensure that the client receives them. The client will ignore redundant messages. Using this option will increase network traffic. You should consult the ENPS Help Desk before you modify this option.	Set between 1 and 10. Default is 0.
[NOM]	
`AutoCreateDelay` Delay the Buddy Server from completing any AutoCreate actions for the specified number of minutes. This allows the Buddy Server queue to clear before it starts to AutoCreate Rundowns.	0=Disabled (default) 1=Enabled
`AutoCreateTimerInterval` The number of Newsgathering Grids or Rundowns automatically created up to one year in advance. This setting determines the interval of how many seconds it will wait between creating new Newsgathering Grids or Rundowns.	Maximum is 60, default is 20
`Broadcast` Prevent the NOM from sending UDP broadcast messages into the local subnet. Enable this option if clients are not receiving Rundown and wire updates properly.	0=Disabled (default) 1=Enabled

`Buddy`	0=Disabled
Control whether the Buddy Server is enabled. The Buddy Server is usually disabled when maintenance is being done on the Buddy Server.	1=Enabled (default)
`CentralServer`	Example: BNCTEST01
If you are working with multiple ENPS Primary Servers, this is the name of your Central Server.	
`FastSortList`	0=Disabled (default)
Allows the NOM to more sort items in a folder more quickly when there are large number of items, most commonly in MOS Object folders. The NOM uses this method automatically if the item count in a folder exceeds 32,000.	1=Enabled
`ListenOnBlock`	0=Disabled
When running the NOM in Block mode this option controls whether the NOM will re-enable its MOS listeners. By default, the NOM continues listening even in Block mode. To prevent the NOM from re-enabling the MOS listeners disable this option.	1=Enabled (default)
`MessageExpiration`	Default is 7 for short messages, 30 for longer messages
Number of days to preserve Top Line group or personal messages before they are automatically deleted during maintenance. This setting does not apply to scripts.	
`MOSRepeater`	0=Disabled (default)
Configure a server to operate as a MOS Repeater.	1=Enabled
`RemotePortTSS`	Default is 11800
Both NOM and NWP send updates to the Top Story Server via UDP packets on port 11800. This port can be changed by adding this setting with a value for the port number you want to use.	
`roReqRefreshMOSRefs`	0=Disabled
Eliminate MOS item refresh requests when the NOM receives a `roReq` for a MOS-active Rundown. Since MOS object updates are always automatically passed to MOS Item References in MOS-active Rundowns, any lists of objects generated from those Rundowns will already be up to date with the MOS objects held by ENPS.	1=Enabled (default)
`SocketTimeout`	Default is 10.
For each attempt by a MOS device to connect the NOM, the NOM checks for a free socket control to use. This value sets the number of minutes of inactivity before the socket is closed.	

`XMLstorage` Enable additional formatting options on script toolbars including bold, italics, underline, and font colors. Clients using the additional formatting features must also set the enable `UseRTFtext` in the `[ENPS]` section of their `ENPS.INI`.	0=Disabled 1=Enabled (default)
[Watch]	
`NOM, NWP, Maint, WalkCS, Publish, TopStories` Component will start automatically when enabled. You will have to restart Watch for changes to take effect.	0=Disabled 1=Enabled (default for all components)
[TopStories]	
`RefreshMax` Number of stories at which the Top Story Server will stop refreshing the Top Stories List. For example, if you set this value to 25 and the total number of stories is 26, the TSS will not refresh the list. Set to 1 to disable refreshing.	Default is 500; 1 to disable.
[Maint]	
`DeleteTimerInterval` Speeds up Maint processing by reducing time between deletions or other operations.	Default is 200 ms
`SyncExclude` Noise word lists are built automatically based on local lists for your locale.	If you want to avoid clients using this list set this value to `G_NOISE`
[MOS]	

For each MOS device define the number of seconds for timeouts. If an active link between ENPS and a MOS device times out due to no response from the external device, MOS control is deactivated, a `DISCONNECTED` indicator appears in the MOS Status column of a Rundown, and the Rundown is queued for a complete refresh when the connection is re-established.	Example:
	
	`TESTMOS1=10`
	
	`NC05=5`

`EdStartLocal`	0=Disabled (default)
Controls whether ENPS automatically adjusts the `roEdStart` tag in an `roCreate` message based on Daylight Savings Time.	1=Enabled

By default, this option is disabled, meaning ENPS will automatically adjust `roEdStart` to reflect the local time. For example, if the newscast's Editorial Start Time is 17:00 and the local server is set to Eastern Standard Time, ENPS will send an `roEdStart` of 22:00. If the server is set to Eastern Daylight Savings Time it will send an `roEdStart` of 21:00.

If this option is enabled ENPS will not adjust `roEdStart` based on Daylight Savings Time. In the example above, ENPS will send an `roEdStart` of 22:00 regardless of whether it is Standard Time or Daylight Savings Time. This may be necessary for backward compatibility with some MOS systems that are set to receive an unadjusted time in `roEdStart`.

`DisconnectWait`	Default is 30

Number of seconds the NOM will wait after processing all other messages for other MOS devices before attempting to again contact the non-responding MOS.

`StrictXMLValidate`	0=Disabled (default)
Enforce more rigorous XML validity checking on incoming MOS messages. If this option is disabled it is possible to have unusable MOS objects in ENPS because the underlying XML is invalid. This option is disabled by default for backward compatibility with older versions of MOS messages.	1=Enabled

`Timeout`	Default is 6

Global timeout in seconds for MOS devices if no value is specified for a particular MOS device (see the MOS Timeouts above), the global timeout will default to this value. Timeouts cannot be less than 1 second and no longer than 60 seconds. `Shift+Del` can be used on the server to delete the currently selected MOS message from the outbound queue on the NOM without confirmation. `Ctrl+Shift+D` deletes all items in the queue.

`Version`	Default is 2.6

ENPS can support multiple versions of MOS simultaneously, this value sets the default that will be used if a version number is not specified for each device.

[Reflectors]	
To enable servers to transmit packets directly to certain reflectors add the desired IP addresses.	IP addresses for reflectors
[Publish]	
`ConnectRetryInterval` Interval in seconds in which Publishing will retry the server connection.	Default is 5, maximum is 60
`ConnectTimeout` Number of seconds before a timeout to the Publisher database.	Default is 5, maximum is 60
`Provider` When using Publishing to output to databases this value must be set to `SQLOLEDB`. Other settings will result in errors and data not being correctly written to the database.	Set to SQLOLEDB when using Publishing
`PublishEnabled`	0=Disabled (default)
`PublishDBEnabled` Both of these values must be enabled to use Publishing.	1=Enabled
`PublishROs` Number of Rundowns or Newsgathering Grids which are enabled for Publishing.	Default is 50, maximum is 100

Many of these settings can also be changed in the NOM application by selecting **Window → NOM/Configuration Status**. Changing the settings from this window will not require a reset of the NOM for the changes to take effect.
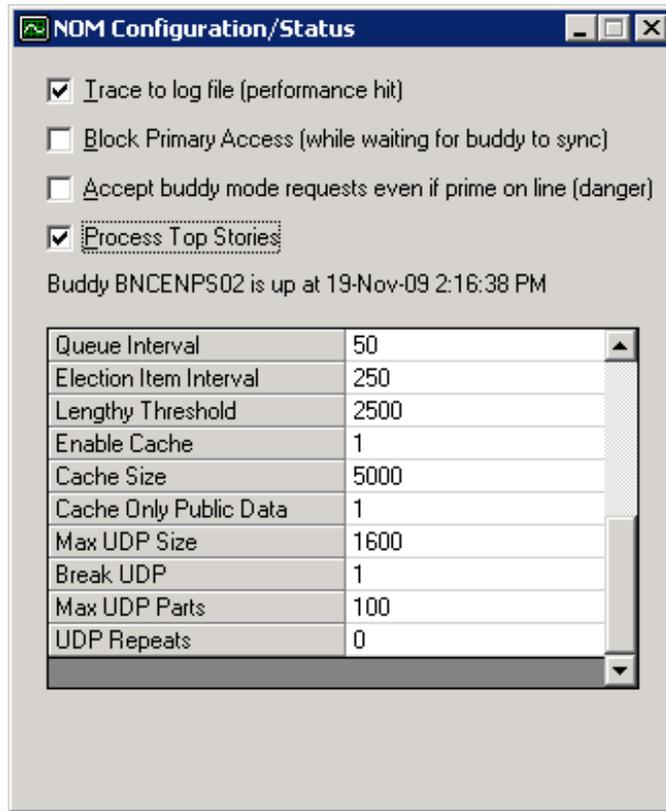
Configuration Settings in `NWP.INI`

Section/Description	Value
[TCPIP]	
`DatagramsPerSecond` Number of UDP messages transmitted per second to the NWP queue.	Default is 20
`PacketVersion` Set the language version for the news wires received by the NOM.	1=English news wires (default) 2=Non-English news wires
[NWP]	
`Broadcast` Prevents NWP from sending UDP broadcast messages into the local subnet. This option is disabled by default but should be enabled to ensure clients receive Rundown and wire updates properly.	0=Disabled (default) 1=Enabled
`CustomXSLFiles` Enables the NWP to ingest custom XML wires.	0=Disabled (default) 1=Enabled

`Discard` Wire stories can be discarded by category.	Wires' three digit category codes, separated by semi-colons.
`DupeStoryThreshold` Wire stories can be filtered to prevent duplicate copies of a story. Duplicates are defined as stories which have identical slugs and the same text after the wire header. This setting controls how many of the latest stories are checked for duplicates.	Default is 100
`FTPPollInterval` Number of minutes in which the NWP will attempt to download FTP wire files. For AP election wires this should not be set to pull data more than once every 3 minutes.	Default is 5, maximum is 2000
`MaxFTPCaptureFiles` Maximum number of files that can be saved into the capture directory when *Create capture file* is checked in the NWP FTP form.	Default is 9999
`MaxSocketPacket` Maximum packet size for UDP messages sent out from the News Wire Profiler when `Unicode=1`. This size is in characters, not bytes. The default value should be changed in consultation with AP Support and should not have any effect on how wires are received or viewed by the client workstation.	Default is 1024
`NID` Enter a value if you are using AP wire service.	ID number for the programming tables.
`NNTP` Enable News Tickers.	0=Disabled (default) 1=Enabled
`PreventUrgent` Wire stories coded with "urgent" priority can be globally suppressed by category to appear as non-urgent wire stories in the ENPS client.	Values for this field are the wires' three digit category codes, separated by semi-colons.
`Unicode` Enables Unicode formatting. When enabled, change the `MaxSocketPacket` setting to 1024.	0=Disabled (default) 1=Enabled

`UnicodeViewer` For wires using Unicode characters beyond `&h58F` enable this value to preview those wires in the NWP window.	0=Disabled (default) 1=Enabled
`Webfeeds` Enable the NWP to receive WebFeeds wires. Once this setting is enabled you will see a new AP WebFeeds window when the NWP is restarted. Refer to "Receiving WebFeeds Wires" on page 72 for more information.	0=Disabled (default) 1=Enabled
[NNTP]	
`NNTPFaultRestartInterval` Restart the NWP's NNTP process if the process stops for a specified number of minutes. It is recommended that you set this value to 10 initially then change it as needed.	Number of minutes
[KillClock]	
Number of hours until wires are removed from the server.	Maximum is 168 (1 week)
[Reflectors]	
To enable servers to transmit packets directly to certain reflectors, add the desired IP addresses.	IP addresses to reflectors
[ReflectUrgents]	
Enable real-time urgent news wire updates only for workstations connecting via modem. With this setting, only urgent items will be transmitted to those points, which means that *Forward Search* alerts will not be available to those users.	IP addresses for workstations
[Providers]	
Set the wire's provider code.	Examples: APX=AP Express APD=AP Datafeature APJ=AP-Dow Jones BBC=BBC AMS
[TopStories]	
`ExcludedCategories` Exclude certain categories of stories from being sent to the Top Stories Server even if the news wire is configured for TSS processing.	NWP category numbers, separated by semi-colons.

[Wire#] sections for specific wires	
`AllowExtendedWireSave` Enable extended save periods for wire copy.	Number of hours. Maximum is 8784 or 366 days.
`AllowedExtension` Restrict which files can be sent via FTP by setting this value to a filename extension. For example, if you set `AllowedExtension=XML` then only filenames with the `.XML` extension can be transferred.	By default all file types are allowed.
`AssumeUTF8XML` In some cases, XML-based wires in UTF-8 format are sent without a byte order mark indicating they are UTF-8. To allow the NWP to properly ingest these wires, use this setting to indicate that incoming files are in UTF-8 format.	0=Disabled (default) 1=Enabled

MOS Protocol Configuration

The Media Object Server (MOS) protocol is an evolving protocol for communication between newsroom computer systems and video servers, audio servers, still stores, character generators, and other broadcast equipment. Read more about the MOS protocol, including details about MOS message structure on the MOS Protocol Web site: `http://www.mosprotocol.com`.

You can perform the steps in this section after you have installed the ENPS server and the ENPS client. Refer to the Chapter 15 "Configuring Other Peripherals" for information about using MOS to connect your prompter and broadcast hardware.

ENPS supports the following MOS versions of: 2.5, 2.6, 2.8, 2.8.1, 2.8.2, 2.8.3, 3.8.3.

See the *ENPS Advanced User's Guide* for information about using the MOS protocol in your newsroom.

MOS Versions

ENPS can support multiple versions of MOS simultaneously. The following entry in the `NOM.INI` file sets the default:

```
[MOS]
Version=2.5
```

You can set the MOS version for each device. Select **Fourth Folder rover** → **System Maintenance** → **MOS Configuration**. For any device, select the drop-down box in "MOS Version" column and choose the correct version number, such as 2.5, 2.6, 2.8, or 2.8.1. If you leave this column blank the default value in the `NOM.INI` file will be used.

For users to be able to search for content on a MOS device using Search you must set the MOS version for that device to at least 2.8.1. This version of MOS sends messages from the ENPS client to the MOS server through port 10542 which means that in some cases you may need to modify your router and/or firewall settings.

MOS Configuration Settings

ENPS comes with a simple ActiveX plug-in that turns the lower Editing Window into a Web browser. ActiveX plug-in controls act as portals to other applications and functions so that other applications can run as if they were part of ENPS. It is possible to create custom controls that provide desktop access to routing switchers, ENG antennas, external databases, archives, etc.

ActiveX plug-Ins are provided by Video and Audio Server manufacturers just as printer drivers are provided by printer makers. The plug-ins allow the user to view and/or edit material on the media object server, such as the video or audio server, from within ENPS.

MOS functionality and ActiveX controls in ENPS are enabled and configured via an ENPS client. All configuration information is saved through the ENPS client on the ENPS Server.

Open the ENPS client while logged in as Administrator. Create a group for MOS objects by selecting **Fourth Folder rover** → **System Maintenance** → **Groups** → **New** and enter a name for the folder such as "`MOS Objects`." To view the contents of this new group folder select **Fourth Folder rover** → **Locations** → **{Primary Server Name}** → **MOS Objects.**

ID	Description	IP	ActiveX
ADGW2	SONY Atsugi	43.0.163.86	Sony.C3.CCC
BDLPROMPTER	BDL remote Control	1.1.1.1	wprem.wpremote
DALET	Dalet	1.1.1.1	COENPS.CoEnpsCtrl.1
ENCO	ENCO Systems	1.1.1.1	
IEXPLORER	Internet Explorer	1.1.1.1	Shell.Explorer.2
INFORMIX	Informix	1.1.1.1	M3Viewer.M3View
KCNC	Palmer Test	24.5.84.103	
LIGHTNING.PINNACLESYS.COM	Pinnacle	207.82.209.36	LIGHTNINGX.LightningXCt
NC04	NC04	208.6.222.164	
NC11	NC11	208.6.222.171	
NC14	NC14	208.6.222.174	
NETIA	Netia	1.1.1.1	
NetMeeting	NetMeeting	1.1.1.1	ObjNM
OMNIBUSMOSGATE	Omnibus	194.201.223.143	

Find   New   Delete   Print   Save   Cancel

2. Select **Fourth Folder rover** → **System Maintenance** → **MOS Configuration**.

3. Select *New* and enter the following information:

Setting	Description
ID	Name of your MOS server exactly as it will appear in MOS messages. This name is case-sensitive (preferably upper case) and must follow the following naming convention: `<family>.<machine>.<location>.<enterprise>.<mos>` Both `<location>` and `<enterprise>` are optional.
Description	Description of your control as it will appear in ENPS menus.
IP	For earlier MOS versions, the IP Address of your MOS server. If you are configuring an ActiveX control which does not attach to a media object server that sends MOS object pointers to ENPS do **NOT** enter an IP address in this field. If you are using MOS version 3.8.3 or higher this field will be a URL pointing to the `.ASMX` file on the MOS device. It is recommended that for 3.8.3 that you set up secure sockets for the connection. Refer to `http://support.microsoft.com/kb/299875` for information on how to configure secure socket connections.
ActiveX	Registered name of your standard ActiveX control as it appears in the Windows Registry. This control will be loaded into the lower ENPS Editing Window when a MOS Item in a list window is double-clicked, when a MOS item in the List window is dragged into an empty Editing window, or when this control is selected from the Media Control rover at the bottom of the screen. You can also configure wires to be opened using an ActiveX control.

	Refer to Chapter 11 "Receiving and Sending Wires" for more information.
	Consult the provider of the ActiveX control for the registered name if you need more information.
	Example: `NCWeb.ctrlBrowse`
Program	Name of the Program Folder within ENPS in which MOS Obj messages will be stored. By default this is *System.* If you have already defined other program folders you can select one of them from the pull down list.
	If you are configuring a standalone ActiveX control that does not connect to a server which sends MOS object pointers to ENPS, do **NOT** select a program folder.
Default Settings	Additional settings used by the ActiveX control (optional).
MOS Version	Select the version of the MOS protocol to use with this device: 2.5, 2.6, 2.8, 2.8.1, 2.8.2, 2.8.3, or 3.8.3. For users to be able to use Search on MOS devices this field must be set to at least 2.8.1.
Local DragDrop	In most configurations, this option should be set to Off. Turning this on can result in interference with mouse related events in your ActiveX Control.
Modal UI ActiveX	Each MOS device that has a valid ProgID in this column will be displayed when users select **Editing Window rover → MOS Commands**. The ActiveX that users select will be run when they click on a MOS Item Reference in the script.
	This control differs from the Standard ActiveX control in that it is NOT loaded in the lower edit window, but instead it appears over the main ENPS window. It cannot be hidden or minimized until it is closed.
	Example: `NCWeb.ctrlBrowse`
Modal UI Default Settings	Additional settings used by the Model Active X control (optional).
Auto Create	Determines if a MOS device is included in the list of MOS devices with the ability to AutoCreate MOS objects in response to messages from ENPS.
Username	Username that is passed to the Active X control from ENPS.
Password	Optional password that is passed to the Active X control from ENPS.
Read Only	Prevents outbound messages, but allows inbound ones. This is necessary for applications like ENPS FAX, in which no outgoing messages should be allowed.
Alias	Short user-friendly name of the specified MOS device. Once this name is entered, it will appear in the dropdown boxes for the *Autocreate* and *Object Placeholder Create* columns in Rundowns and Newsgathering Grids.

Story Send	Determines if the specified MOS device is included in a list of MOS StorySend devices.
RORO Limit	Limits the number of Read Only Rundowns that can be created in a group.
Object Type	Select Audio, Still, or Video.
Object Groups	Specifies the name of groups, typically for different shows, that will be sorted into different sub-folders on the MOS server. In this way, a MOS clip can be routed to a number of different folders automatically. Each entry is separated with the	character. When users add the Object Placeholder Create column to their Rundown layouts, the values in this column will populate the pull-down menu options.
Archive Only	Send a Rundown of Story Send messages to the archive when the Rundown or Newsgathering Grid is archived. This option is useful for organizations using MOS-enabled content management systems.
	To use this feature set the MOS-enabled archive device to Story Send and Archive Only in its ENPS MOS configuration. Select the archive device under MOS Story Send in the Rundown properties. The Rundown must be MOS Control Active when it is archived.
	If you have a situation where auto-archiving is set to a greater number of days than the value of MOS Active Days, auto-archived Rundowns will not be sent to the archive device. In this situation, you would need to manually archive Rundowns for this feature to work.
Detached ActiveX	If the detached ActiveX has a different registered name than that of the default ActiveX control, enter it here.
Detached Default Settings	If the detached ActiveX has different default settings than that of the default ActiveX control, enter it here.
Use Detached	Display the ActiveX in a separate window, regardless of whether the client has selected to view ActiveX controls separately.
Raw Content	Send all content below the black line to the MOS device including all MOS pointers and text.
Icons	In this column you can associate icons to specific MOS object types such as audio, video, or stills. Click the ... icon for a list of icon choices. These icons will be displayed in the List Window.
	You can create your own 16x16 pixel icons in the \ENPS\BITMAPS\MOS directory on the server. These images will be copied to the \ENPS\BITMAPS\MOS directory on the client machine.
Color	When you click the ... icon you can select a color from a palette to associate with MOS Item References for a particular ID. The numbers displayed represent the RGB values for the color you have chosen.
Export Formatted	Determine what type of story markup such as bold,

Text	underline, italics, and strikethrough ENPS will send to the MOS device. This column is a drop-down menu with three choices: • **Off:** No rich text formatting (bold, italics, etc.) is included in story send messages. Strikethrough text in the story is not sent. • **Basic:** Only basic rich text formatting (bold, italics and underline) is included in story send messages, in accordance with the MOS Protocol. Strikethrough text is not sent. • **Extended:** Includes the same content as Basic, but also includes strikethrough text, marked with <strike> tags such as <strike>This strikethrough text. </strike>.
Validate MOS Objects	ENPS client will then check for the existence of the MOS Object when an archive story is opened or when a non-Archive running order is made MOS active. If the object is not in ENPS when the check is run, the client will "grey out" the MOS Item Reference in the story. An optional feature has been added to allow users to see when a MOS Item Reference (MIR) in a story refers to a MOS Object that has been deleted from the associated ENPS MOS folder. To use this feature, first enable the setting `ValidateMOSObjects` in the ENPS Global Configuration options, then check this field for each MOS device to which this should be applied. This setting should only be enabled for MOS devices which send object messages to ENPS, and not for devices (including most CGs) which do not send MOS objects to ENPS.
Block ItemChannel	Prevent ENPS from processing the channel assignments created by the MOS device. If this option is selected, it will be necessary to manually enter channel numbers in the Rundown for each MOS item reference.
Status time local	Determines how ENPS treats time values in an inbound MOS status message which has no time zone specified. When this option is enabled for a MOS device, ENPS will treat unknown time zones to be the same time zone as the ENPS server. If this option is not enabled the GMT time zone will be used.

4. Save your settings.

5. Restart the ENPS client and the NOM any time you add a MOS entry.

Creating Fully Qualified MOS IDs

When you choose a MOS ID, you should consult your MOS vendor, but it is strongly recommended that you follow this standard MOS naming convention:

```
<vendor>.<product>.<station>.<enterprise>.<mos>
```

This is called a Fully Qualified MOS ID and will enable your ENPS system to interoperate with other MOS 2.8/Profile 6-enabled systems. A MOS ID is case-sensitive, and must match the MOS ID used by the MOS vendor. If your station is

---

part of a larger ENPS enterprise, do not make your MOS ID something generic like "video."

Here are some examples of Fully Qualified MOS IDs:

```
aveed.server2.camden.wtn.mos
Quantum1.VidServ2.mos
Sonny.point77.city.company.mos
```

Using this naming convention, it is possible for a Media Object Server to determine whether an object is stored locally or on another machine of the same family or compatible family, and for that machine to make separate arrangements for the transfer of the referenced object to the local machine. This enables an ENPS drag-and-drop operation copying a story between Rundowns to also trigger a copy operation between associated media object servers, if the story contains an Item Reference to a Media Object Server which uses a Fully Qualified MOS ID. In other words, dragging a story within ENPS can also enable transfer of media between different locations. This functionality can be extended to transfer material between machines located in the same building, different buildings or different cities. The transfer mechanism for media objects is separate from the MOS Protocol and ENPS, which only provide and allow for communication of the Fully Qualified MOS ID.

New installations should use a Fully Qualified MOS ID even if they do not intend to immediately use devices which support MOS 2.8/Profile 6.

Using MOS Aliases

Because Fully Qualified MOS IDs can be very long they can also be difficult to display and read within the ENPS user interface. To simplify the display of MOS IDs, each MOS ID can be assigned a shorter alias, similar to a "nickname".

The user-friendly MOS Alias will then be displayed in the ENPS UI instead of the potentially much longer Fully Qualified MOS ID.

ID	Auto Create	Username	Password	Read Only	Alias	Story Send	RORO Limit
bdl.prompter1.bnc.ap.mos					BDL	✠	

By default, ENPS is case-sensitive to MOS IDs, but this can be disabled. Select **Fourth Folder rover → System Maintenance → Global Configuration Table** and add the entry CASESENSITIVEMOS=0.

Using ActiveX Controls

1. ActiveX controls must be registered per the vendor's instructions or automatically by the vendor's installation program.

2. Open the ENPS client.

3. Select the **Media Control rover**. A list of ActiveX controls appears. Only the ActiveX controls which are defined on the ENPS server and registered on the ENPS client workstation will appear in this list.

4. Select the control you want to run. The ActiveX control is loaded into the lower Editing Window. Any material previously loaded into the lower Editing Window is moved to the upper Editing Window.

5. Select the **Media Control rover** again. You will see the same list, but with a check next to the ActiveX control which is currently loaded and running.

ActiveX Configuration: Internet Explorer

The following example shows you how to configure the default custom Microsoft Internet Explorer control that ships with ENPS. It can be used as a model for how to implement your own ActiveX controls. These instructions assume that the Microsoft Internet Explorer ActiveX control is installed and registered on the workstation.

To enter the configuration parameters, open the ENPS client and select **Fourth folder rover** → **System Maintenance** → **MOS Configuration** and set the following parameters:

Setting	Value
ID	IEXPLORER
Description	Internet Explorer
IP	Do **NOT** enter an IP address as this ActiveX will not communicate with a Media Object Server.
ActiveX	NCWeb.ctrlBrowse
Program	Do **NOT** enter a program name as this ActiveX is not associated with a Media Object Server which will send pointers to MOS objects.
Default Settings	You can insert any URL here in the following format: `URL=<address>`. For example: `URL=<http://www.enps.com>`

You can hide the browser address bar and/or status bar by adding the following settings to the Default Settings entry, using pipes between settings:

`URL=http://www.enps.com|ToolBar=False|StatusBar=False`

ActiveX Configuration: AP PrimeCuts

You must have an AP PrimeCuts account to use this service.

ENPS can automatically detect links to AP PrimeCuts audio in incoming AP news wire stories. Such links will be converted to MOS Item References which can be clicked to automatically download the desired file.

Once you install this control on the ENPS server it will be automatically installed on client PCs as part of future updates. Set up the PrimeCuts ActiveX configuration parameters by selecting **Fourth folder rover** → **System Maintenance** → **MOS Configuration**. Create a configuration with the following parameters:

Setting	Value
ID	APPC.MOS
Description	AP PrimeCuts
IP	Do <u>not</u> enter an IP address as this ActiveX will not communicate with a Media Object Server.
ActiveX	PrimeCuts.PrimeCutsControl

Program	Do <u>not</u> enter a program name as this ActiveX is not associated with a Media Object Server which will send pointers to MOS objects.
Default Settings	URL=http://apprimecuts.com/texis/sound/bank/ autodownload.bin/+/<objID>?User=<Username> &Pass=<Password>|URLtext=http://apprimecuts .com/texis/sound/bank/results.html?User= <Username>&Pass=<Password>&query=<Cut> &whatfield=F&byrank=0
	Do not enter any spaces.
MOS Version	2.8
Local DragDrop	Off
Modal UI ActiveX	N/A
Modal UI ActiveX Default Settings	N/A
AutoCreate	Unchecked
Username	Enter your PrimeCuts username.
Password	Enter your PrimeCuts password.
Read Only	Checked

Users should refer to the *ENPS Advanced User's Guide* for information on using AP PrimeCuts.

To install the ActiveX, you must run the setup application `SETUPPC.EXE` from the root directory of your Primary Server. Once the installation is complete, clients must be reinstalled to use the ActiveX functionality.

ActiveX Configuration: AP GraphicsBank

You must have an AP GraphicsBank account to use this service. Remember that GraphicsBank accounts are allowed a set number of downloads per month. All downloads after your allocated number of downloads are charged a fee.

It is recommended that you set up a GraphicsBank account that allows users to only download preview images to prevent unintentional downloads and charges. Contact AP Member Services at 1-800-342-5127 to set up a preview only account.

To enter the GraphicsBank ActiveX configuration parameters, open the ENPS client and select **Fourth folder rover → System Maintenance → MOS Configuration** and set the following parameters:

Setting	Value
ID	APGB.MOS

Description	AP GraphicsBank
IP	Do <u>not</u> enter an IP address as this ActiveX will not communicate with a Media Object Server.
ActiveX	Gbank.GbankControl
Program	Do <u>not</u> enter a program name as this ActiveX is not associated with a Media Object Server which will send pointers to MOS objects.
Default Settings	URL=http://gb.ap.org/texis/gb/results.html?&User=<Username>&Pass=<Password>&query=<GraphicsBankSearch> Do not enter any spaces.
MOS Version	2.8
Local DragDrop	Off
Modal UI ActiveX	N/A
Modal UI ActiveX Default Settings	N/A
AutoCreate	Unchecked
Username	Enter your GraphicsBank username.
Password	Enter your GraphicsBank password.
Read Only	Checked

Refer to the *ENPS Advanced User's Guide* for information on using GraphicsBank.

To install the ActiveX, you must run the setup application SETUPGB.EXE from the root directory of your Primary Server. Once the installation is complete, clients must be reinstalled to use the ActiveX functionality.

Setting MOS Active Days

You can automatically shut off MOS-active Rundowns after a desired number of days after the editorial end time of the Rundown has expired. This is a server-wide option, affecting all of the Rundowns that are homed to that machine. To enable this option, select **Fourth Folder rover** → **System Maintenance** → **Servers** and enter the number in the MOS Active Days column.

If this setting is enabled, Rundowns will stop being MOS active that number of days after the Rundown airs. However, NOM Maintenance needs to run for this to take effect. For example, if MOS Active Days is set to 1, then Monday's 6:00 p.m. newscast will be eligible to have MOS deactivated on Tuesday after the show. However, if Maintenance is schedule to run at 2:00 a.m., the Rundown would not turn deactivate MOS until 2:00 a.m. on Wednesday morning.

Changing Approval on MOS Change

You can add a Rundown configuration option that will prevent the story approval flag from reset by changes to embedded MOS Item References. This is particularly useful for sites where late changes may be made to the duration of a media clip which, although it triggers an update to an embedded MOS object, does not require a reset of the approval flag. Additional details are provided in the *ENPS Advanced User's Guide.*

To enable this setting, you must add a custom field. Select **Fourth Folder rover** → **System Maintenance** → **[Your enterprise name] fields**. Add a field with the ID `KeepApproveOnMOSChg`. In the Default Caption field, enter "Prevent Approval Reset," set Justification to Left, set the Validation column to CheckBox, then set the Type to "RO Property."

Once the NOM is restarted, users will see the "Prevent Approval Reset" option in their Rundown properties.

MOS Repeater

The NOM can be configured for use as a "repeater" of MOS Story Send messages. All MOS Control Active Rundowns will send Story Send messages to the MOS Repeater. A typical use for this functionality would be to provide multiple non-linear editing clients with scripts from a MOS Active Rundown, so that the script can be viewed while video or audio editing is taking place. A Rundown property setting does not need to be set for this to happen.

To create a MOS Repeater, complete the following steps:

1. Designate a machine with a minimum of 18 GB free partitioned space and 512 MB RAM running Windows 2000 Server or Windows 2003 Server, Windows 2000 Professional or Windows XP Professional. The operating system must have the latest Service Packs and critical updates from Microsoft installed. This cannot be the same machine as your Primary or Buddy servers. Then install a copy of the ENPS server applications.

You will need to install IIS and create a separate partition from the C: drive to install the ENPS server applications on this machine. When you install the server applications you need to identify the MOS Repeater server as a Primary Server. You also need to enter the machine name of your station's actual Primary Server or Central Server when you are prompted during the installation process.

Enable the NOM and MAINT applications. This can be done by updating the `[Watch]` section of the `NOM.INI` with the following settings:

```
NOM=1
NWP=0
Maint=1
Extract=0
```

The Maint application is used to synchronize ENPS configuration tables but does not perform any Buddy or delete functions. For this reason, in the `[Maint]` section of the MOS Repeater's `NOM.INI` add the following settings:

```
Delete=0
Sync=1
Buddy=0
```

This means that Maint will replicate only the global tables and will neither delete material nor pass buddy transactions. These settings must not be used on your Primary or Buddy ENPS servers.

Add the line `MOSRepeater=1` to the `[NOM]` section of the `NOM.INI` and restart the NOM and Maint applications.

Restart the Watch application and close the NWP application.

2. In ENPS from your main ENPS server, select **Fourth Folder rover → System Maintenance → Servers** and add the new MOS Repeater machine name for the ID and give it a descriptive name under Description. Enter the machine name again in the "MOS" column and enter the IP address of this machine in the "IP" column. In the "MOS Server" column enter the server name of the "Parent" NOM from which it will receive its MOS story send messages. Then select the checkbox in the column for "MOS Repeater."

On startup, the MOS Repeater will issue a `roReqAll` message to its Parent NOM, and will receive a `roListAll` in return. All story send messages leaving the parent NOM will also be directed to the repeater.

Repeater targets (the machines onto which the repeater is passing the Story Send messages) are entered into the **Fourth Folder rover → System Maintenance → MOS Repeater Targets**. Enter the target ID, a description, IP address, and the Repeater ID of each repeater target.

`Target ID` = Machine name of the repeater target.

`Description` = Descriptive name of the repeater target.

`IP` = IP address of the repeater target.

`Repeater ID` = Machine name of MOS Repeater.

To ensure that the repeater stays in sync with the NOM, MOS Story Send messages will be numbered coming out of the parent. If the Repeater target receives a message out of the expected order, it will request a re-sync for the affected Rundown. To enable this, on the ENPS server open the News Object Manager and choose **Window 5 → MOS**. Check the box *Number roConstruction Messages.* Sync the Repeater with the central server and restart the NOM on the repeater and ENPS machines.

From this screen you can also set the number of minutes to purge the MOS Repeater's message queue after an editing station logs off.

Use of the Repeater function automatically enables the inclusion of an additional tag in all MOS messages sent by the NOM to all devices. This proprietary tag is included in MOS messages in a manner proscribed by the MOS Protocol for use of such tags and thus is compatible with the Protocol. Other machines which are compatible with the MOS Protocol are expected to ignore this tag if they have no specific use for it. If a machine cannot handle this tag, as proscribed by the MOS Protocol, that machine is not compatible with the Protocol and issues with the handling of this tag should be referred to the MOS vendor.

Read-Only Rundowns

ENPS can be configured to broadcast Read-only Rundowns. These are actively-updated copies of rundowns that are built on one ENPS server and can be broadcast to another ENPS server or to any other system (MOS device or NCS) that supports this functionality.

If you are sending a rundown from one ENPS server to another, the source NOM sends Rundown construction messages to the target NOM which builds read-only copies of the Rundowns in a specified folder on the target server.

Complete the following steps to configure this feature:

1. On an ENPS client for the source server select **Fourth folder rover** → **System Maintenance** → **MOS configuration**.

2. Add a new entry. This should include the MOS ID and the IP address of the target server where ENPS will send the Read-Only Rundown. Make sure that this device is configured as a Story Send device.

3. Click *Save.*

4. Restart the source server's NOM.

5. On an ENPS client for the target server select **Fourth folder rover** → **System Maintenance** → **MOS configuration**. Add a new entry. Enter the target server's MOS ID and IP address. You do not have to select Story Send on the target server. In the *Program* column select the folder where you want the Read-Only Rundowns to be stored; do not use your station's News or Desk folders. Specify an RORO limit which is the maximum number of Read Only Rundowns that can be created from the source system.

6. Restart the target server's NOM.

7. On the client for the source NOM create a new Rundown. In the Rundown properties select the target server as a MOS Story Send Device. Turn on *MOS Control Active*.

8. The Read-Only Rundown will be located in the folder you configured for the target server.

Character Generators

This chapter will show you how to setup your Character Generator for a serial interface with ENPS. Some CG devices can communicate with ENPS via the MOS protocol instead of a serial connection. Refer to your CG documentation for more information.

Step 1: Verifying CG Support

ENPS CG support includes, but is not limited to, the following CGs:

- Aston Motif, Ethos, Moto, Red, Blue, and Green
- Chyron family (including the Codi, MAX!, MAXINE!, iNFiNiT!, Duet)
- Pinnacle's Deko, FX Deko (in iNFiNiT! emulation mode)
- Pixel Power's Collage (in iNFiNiT! emulation mode)
- Dubner/Grass Valley (the 20k, 30k, Graphics Factory and Halo)
- Inscriber VMP Studio, CG Supreme, CG Xtreme, Inca CG, Inca Studio (you must have the AutoCGMax option for Inscriber CGs to work with ENPS)

ENPS will work with CGs that support the Chyron Intelligent Interface option.

An ENPS workstation with one serial port should be connected to the character generator. The CG operator must be able to log into ENPS, have a minimum read-only access to the desired Rundown, select the desired Rundown, and enable CG control from within that Rundown for automated control.

The file `CG.INI` in the `C:\Documents and Settings\All Users\Application Data\ENPS` directory on client workstations contains configuration definitions. Generally, only the AP should modify this file as new device types are added.

You can set the CG directory by selecting **List Window rover** → **Set CG Directory**.

Step 2: Configuring your CG with ENPS

Configure the character generator for external serial input and connect it to the designated ENPS workstation. Look for any unique cabling configurations, as some CGs require pin signals to be reversed at one end to enable hardware flow control. Consult your CG manufacturer's technical or user manual for specifics about wiring standards.

A number of initialization file settings control CG behavior and features. Refer to *Configuration Settings in `ENPS.INI`* on page 32 for a list of CG-related settings in `ENPS.INI`.

In the `[ENPS]` section in the `ENPS.INI` file on the workstation physically connected to the character generator, add or modify the following line:

```
CG=1
```

This enables the local CG functionality on that workstation, and the following must be set in the `[CG]` section of `ENPS.INI`:

```
CG=a;b;c;d;e;f
```

a	Driver type: Aston;AstonUnicode;Infinit!;Max;Maxine;Dubner;Codi;Duet
b	Video standard: NTSC or PAL
c	Serial port settings: Valid settings are COM1: through COM4: followed by speed, parity, word length and stop bits settings matching those of the external CG device
d	Machine ID of the CG device. You can find this value in your CG Setup program.
e	Default page: the starting location/page number in the character generator's memory that will be used by ENPS to begin recording CGs. If pages will be preloaded into the Chyron, this value will determine the starting page number; otherwise, the default value is `5000`. If pages are not preloaded, make sure you leave this value blank
f	Page number prefix (optional).

Examples:

```
CG=Aston;PAL;COM1:19200,e,7,1
CG=iNFiNiT!;NTSC;COM1:19200,n,8,1;16;5000
CG=Maxine;NTSC;COM1:19200,n,8,1;16;5000
CG=Max;NTSC;COM1:19200,n,8,1;16;5000
CG=Codi;NTSC;COM1:19200,n,8,1
CG=Dubner;NTSC;COM1:19200,n,8,1;16;;AP
CG=Duet;NTSC;COM1:19200,n,8,1;16;5000
```

If you are using a Pinnacle Deko, it is suggested that you use the iNFiNiT! Driver. However, if you want to support Unicode output on a Pinnacle Deko, add the following to the `CG.INI` file in the ENPS folder on the workstation connected to the CG:

```
[Deko]
Driver=6
```

In the `[CG]` section of the local `ENPS.INI` file, here is an example of how you would reference the Deko driver:

```
[CG]
CG=Deko;;COM3:19200,N,8,1;1;5000
Preload=0
Timeout=2000
Unicode=1
BigEndian=1
```

To support a mix of Unicode and ANSI on a number of Aston CGs, including the Aston Blue, add the following lines to the `CG.INI`:

```
[AstonUnicode]
Driver=7
```

Here is an example of how you would reference the driver in the `[CG]` section of the local `ENPS.INI`:

```
[CG]
CG=AstonUnicode;;COM3:19200,N,8,1;1;5000
Preload=0
Timeout=2000
Unicode=0
```

Note that the `Unicode=0` setting is required for this driver to work correctly. Refer to *Configuration Settings in `ENPS.INI`* on page 32 for a list of CG-related settings in `ENPS.INI`.

Step 3: Creating CG Macros

You can create CG macros that will allow you to trigger pause events and transforms from the ENPS CG workstation. ENPS will be able to feed CG captions to a preview channel before moving them to the air channel.

To enable this functionality, add the line `CGMacro=1` to the `[ENPS]` section of the `ENPS.INI` file in the ENPS directory on the CG workstation. The line `CG=1` should also be present in this section once the set-up steps are completed.

Restart the ENPS client. Open a Rundown and select **Rundown rover → CG Device Control**. You will see the CG macro keys on the right of the list window, next to the CG text.

On the group rover of the person logged into the CG workstation, there will be an entry called CG macros, into which you may type the macros which will be sent when the corresponding F key is pressed.

Note that these macros can include {Pause} so that a portion of the macro executes, and the remainder is executed when the button is again pressed.

Also, for this workstation only and only in the CG mode, these CG macros will replace the personal macros, i.e., those stored at F2 to F12. Ability to run these macros is available only to supervisors and those who have approver status in the Rundown, in other words, only to those who can make these selections from the Rundown Properties.

Copying CG Templates to other Groups

A group Folder Manager may create a CG Template that may be needed in other groups. To copy CG Templates from one group to another, complete the following steps:

1. On the Primary Server, go the D: or F: drive and select the directory with the Primary Server name, such as `\BNC_ENPS01`.

2. Select the subdirectory with the name of the Group you want to copy from.

3. Open the G subdirectory of that Group Folder.

4. Highlight the template names you want to copy and press `Ctrl+C` to copy them to the clipboard.

5. Return to the directory with Primary Server name, e.g. `\BNC_ENPS01`. Open the directory with the name of the group to which you want to copy the templates.

6. If the group directory does not have a `\G` subdirectory, create one.

7. Open the \G subdirectory and press `Ctrl+V` to paste the CG Templates.

Character Generator Mapping

Character Generator character mapping supports different languages and character sets and general "string swapping" is available with embedded unprintable character support. In the local `ENPS.INI` file on the workstation controlling the CG device add the following in the `[CG]` section:

```
[CG]
CharMap=CG_Map
```

Create a new `[CG_Map]` section and use the following format for the new character map:

```
[CG_Map]
SourceString=TargetString
```

For example:

```
[CG_Map]
Dog=Cat
```

Swaps the string "Dog" with the string "Cat."

More often, however, the requirement will be to map certain foreign language or unprintable characters. Accordingly, source and target string formats are enhanced to contain the following "escape" options:

`&Hhhhh`; -- "BASIC"-style hex string; convert the "hhhh" value to a Unicode character represented by that hex value. Note that if the &Hhhhh is at the end of the Source or Target string, the semicolon is optional (thus providing backward compatibility with prior ENPS versions which used the Aston driver character mapping capability). Otherwise, the semi-colon is required because the "hhhh" is a variable-length string consisting of from one to four hex digits.

`0xhhhh`; -- "C"-style hex string; identical to &H above.

`%hh` -- "HTML"-style "byte" escape string; must have two hex digits.

`%uhhhh` -- "HTML"- style "word" escape string; must have four hex digits.

`\nnn` -- "Lotus"-style "byte" escape string; must have three decimal digits.

For example:

`&H20=\160` maps a space into a Windows non-breakable space.

`%20=xxx` map spaces to the string "xxx".

`%20=ho0x21`; maps all spaces to the string "ho!".

Due to the above escapes, the "&", "%", and "\" characters if required must be escaped using one of the methods above. For example:

```
% = %25
& = %26
\ = %5C
```

This map is supported in all drivers. For compatibility with prior ENPS versions, the Aston driver maps prefixes a CRLF and suffixes `AstonBufferString` to the TargetString so these values should not be included in the TargetString portion of the defined map.

The number of characters in a mapping must agree only with the same number of characters in the incoming data's category field, in effect allowing wildcarding and shorter lists of mappings for similar category groupings.

Operators can jump between items by recalling the first page of each story and easily make changes by opening the script within the Rundown, then editing the CG information. Once the script is saved, the updated information is sent to the CG. This is the safest control method, since any changes made via the CG

keyboard are downstream of the control PC, and later changes made to the ENPS Rundown can overwrite the CG operator's previous changes.

CG character mapping supports different languages and character sets. The `MapOneToOne` option handles possible "circular" mappings. For example, a map might include these settings:

```
0xCD=0xd6
0xD6=0x99
```

In this example, the hex value CD is mapped to D6, then D6 is mapped to 99. Essentially, then, CD is mapped to 99, which may not have been intended. This behavior can be changed in the [CG] section of the `ENPS.INI` file.

```
[CG]
MapOneToOne=x
```

When 1, mapping is one-to-one, and any "circular" references are not processed. If the value is set to 0 (the default), circular mapping is allowed for legacy CG support and also allows mapping single character to a string or a string to a string.

To support DBCS, you should modify `ENPS.INI` on a local workstation to include the following:

```
[CG]
CharMap=char_map_name
[char_map_name]
xxx=yyyyyyyy
xxx=yyyyyyyy
xxx=yyyyyyyy
```

In this example, `char_map_name` is a name given to a character map, `xxx` is the Unicode representation of the character in text, and `yyyyyyyy` represents the characters that must be sent to the CG to generate the character. The driver includes a linefeed to close the buffer string and will handle starting another buffer string for the remainder.

Considerations for Chyron Users

A checkmark toggle appears for character "preload" from that point. The initial preload will signal any directory change to the CG. Then, preload the rows from the grid, as appropriate. For other CGs that have their own keyboards, there are two control methods:

Under PC control, the Chyron operator uses the PC keyboard or mouse to control the CGs sent to the "A" channel of the Chyron. Once CG control is enabled, the operator can move forward or backward through the Rundown. Each CG command encountered within a script will load the appropriate template, fill input fields, and feed the air channel using the defined buffer page.

Under Chyron keyboard control, the Chyron operator pre-loads the entire Rundown using templates within the defined directory on the Chyron. The operator will record the entire newscast as a series of message pages beginning at a single pre-defined starting point (the default value is 5000). This enables the operator to play the CGs in either or both channels, or to apply "transform events" to the CGs under manual control. It also allows the operator to use the Next key on the Chyron keyboard to move forward through the newscast. With this option, the operator has full control over fonts, color, kerning, and placement.

All tab field pages must be built using machine fonts, not converted fonts, and tab stops must be set to Auto-Erase. Tab field order is extremely important, and duplicate tab field numbers will create problems.

In the Chyron, it is possible to have two fields incorrectly defined as the same tab stop number, which would disrupt any automated input.

The directory setting is stored with the Rundown and is saved with a template. A change will cause an immediate download to the CG if it is not in Preload mode (or, if in Preload mode and Preload had been checked from the rover). In `Preload` mode, nothing, including directory changes, is sent to the CG until the Preload flag is checked via the CG rover. Only then, and when the items have been preloaded, does the Send button in the CG grid become active. This allows for re-downloading a single row to the appropriate page in the grid. This is useful if a single page in the CG device has been accidentally erased.

Here is an example of what the `ENPS.INI` would look like for the Chyron Codi:

```
[ENPS]
CG=1

[CG]
; for CG output (if CG=1 in ENPS section above)
CG=CODI;NTSC;COM1:9600,n,8,1;1;
Preload=0
; Number of milliseconds to wait for timeout
Timeout=5000
; number of times to retry before abort
Retries=3
; Test mode (ignores timeout and retries)
Test=0
; Force RTS
RTS=0
; Error logging
Trace=0
```

Using International Characters on the Chyron

The settings for the ENPS.INI file below show an example of how to use international characters with the Chyron. These settings may not work if they have mapped these accent marks to different keys on the Chyron. You should refer to your Chyron documentation for more information.

```
[CG]
CharMap=CG_MAP

[CG_MAP]
;Chyron accents mapping, French
; the Ï needs to come before other letters in the table
because
; of its hex value of 0xCF. (Pierre Gilbert; Global-TV
Montreal, Quebec)
Î=I0x1A;
Ï=I%CF%22;
î=i0x1A;
ï=i%CF%22;

À=A0x92;
Â=A0x1A;
```

```
à=a0x92;
â=a0x1A;

È=E0x92;
Ê=E0x1A;
É=E0x94;
Ë=E%CF%22;
è=e0x92;
ê=e0x1A;
é=e0x94;
ë=e%CF%22;

Ô=O0x1A;
ô=o0x1A;
ó=o0x94;

Ù=U0x92;
Û=U0x1A;
Ü=U%CF%22;
ù=u0x92;
û=u0x1A;
ú=u0x94;
ü=u%CF%22;

Ç=C%CF%3B;
ç=c%CF%3B;
[CG_MAP]
;Chyron accents mapping, Spanish

Í=I0x94;
í=i0x94;

Á=A0x94;
á=a0x94;

É=E0x94;
é=e0x94;

Ó=O0x94;
ó=o0x94;

Ú=U0x94;
Ü=U%CF%22;
ü=u%CF%22;
ú=u0x94;

Ñ=N0x1D;
ñ=n0x1D;

¿=0xBD;
¡=0x4;

[CG_MAP]
;Chyron accents mapping, Portuguese

Í=I0x94;
í=i0x94;
```

```
Á=A0x94;
á=a0x94;

ã=a0x1D;

É=E0x94;
é=e0x94;

Ó=O0x94;
ó=o0x94;

õ=o0x1D;

Ú=U0x94;
Ü=U%CF%22;
ü=u%CF%22;
ú=u0x94;

Ñ=N0x1D;
ñ=n0x1D;

¿=0xBD;
¡=0x4;

[CG_MAP]
;Chyron accents mapping, German
; Character map for inclusion in ENPS.INI for Aston CG
; Windows NT CODE PAGE 850 + Aston Roman/Greek font set
;
; Note - there is a mapping for every char from 128 to 255
to avoid ; loss of comms following a checksum ; error
caused by truncating ; 8-bit chars to 7-bit. ; ; Some
Unicode currency chars above 255 are included. ; This won't
work because ENPS cannot cope with comments after the
mapping

&H0080=00E1 ;€ Euro. Aston font may not contain character
&H20AC=00E1 ;€ Euro. Aston font may not contain character
&H0081=00AD ;  - dummy map
&H0082=00D3 ;,
&H0083=00AA ;ƒ
&H0084=00D0 ;„
&H0085=00CC ;…
&H0086=00AC ;†
&H0087=00AD ;‡ - char for many dummy maps
&H0088=005E ;^
&H0089=00AE ;‰
&H008A=013C0053 ;Š
&H008B=00BC ;‹
&H008C=0082 ;Œ
&H008D=00AD ;  - dummy map
&H008E=013C005A ;Ž
&H008F=00AD ;  - dummy map
&H0090=00AD ;  - dummy map
&H0091=00CE ;' - dummy map
&H0092=00CF ;' - dummy map
```

```
&H0093=00CE ;"
&H0094=00CF ;"
&H0095=00CA ;•
&H0096=00D4 ;–
&H0097=00D5 ;—
&H0098=007E ;˜
&H0099=00B2 ;™
&H009A=013C0073 ;š
&H009B=00BB ;›
&H009C=0083 ;œ
&H009D=00AD ;  - dummy map
&H009E=013C007A ;ž
&H009F=013B0059 ;Ÿ
&H00A0=00AD ; - dummy map
&H00A1=00B8 ;¡
&H00A2=00A8 ;¢
&H00A3=00A7 ;£ - Normal kbd £ sign
&H20A4=00A7 ;£ Unicode Pound sign
&H00A4=00AB ;¤
&H00A5=00A9 ;¥
&H00A6=007C ;¦
&H00A7=00CD ;§
&H00A8=00AD ;¨ - dummy map
&H00A0=00B0 ;©
&H00AA=00D8 ;ª
&H00AB=00BA ;«
&H00AC=00DF ;¬
&H00AD=00D1 ;
&H00AE=00B1 ;®
&H00AF=00AD ;¯ - dummy map
&H00B0=00B4 ;°
&H00B1=00D6 ;±
&H00B2=00C7 ;²
&H00B3=00C8 ;³
&H00B4=00OE ;´
&H00B5=018B ;µ
&H00B6=00A7 ;¶
&H00B7=00C9 ;·
&H00B8=00D3 ;¸
&H00B9=00C6 ;¹
&H00BA=00B4 ;º
&H00BB=00B9 ;»
&H00BC=00BD ;¼
&H00BD=00BE ;½
&H00BE=00BF ;¾
&H00BF=00B7 ;¿
&H00C0=01390041 ;À
&H00C1=01390041 ;Á
&H00C2=013A0041 ;Â
&H00C3=013D0041 ;Ã
&H00C4=013B0041 ;Ä
&H00C5=013D0041 ;Å
&H00C6=0080 ;Æ
&H00C7=01430043 ;Ç
&H00C8=01390045 ;È
&H00C9=01380045 ;É
&H00CA=013A0045 ;Ê
```

```
&H00CB=013B0045 ;Ë
&H00CC=01390049 ;Ì
&H00CD=01380049 ;Í
&H00CE=013A0049 ;Î
&H00CF=013B0049 ;Ï
&H00D0=00AD ;Ð - dummy map
&H00D1=013E004E ;Ñ
&H00D2=0139004F ;Ò
&H00D3=0138004F ;Ó
&H00D4=013A004F ;Ô
&H00D5=013E004F ;Õ
&H00D6=013B004F ;Ö
&H00D7=00B5 ;×
&H00D8=0086 ;Ø
&H00D9=01390055 ;Ù
&H00DA=01380055 ;Ú
&H00DB=013A0055 ;Û
&H00DC=013B0055 ;Ü
&H00DD=01380059 ;Ý
&H00DE=008F ;Þ
&H00DF=0181 ;ß
&H00E0=01390061 ;à
&H00E1=01380061 ;á
&H00E2=013A0061 ;â
&H00E3=013E0061 ;ã
&H00E4=013B0061 ;ä
&H00E5=013D0061 ;å
&H00E6=0081 ;æ
&H00E7=01430063 ;ç
&H00E8=01390065 ;è
&H00E9=01380065 ;é
&H00EA=013A0065 ;ê
&H00EB=013B0065 ;ë
&H00EC=01390069 ;ì
&H00ED=01380069 ;í
&H00EE=013A0069 ;î
&H00EF=013B0069 ;ï
&H00F0=008D ;ð
&H00F1=013E006E ;ñ
&H00F2=0139006F ;ò
&H00F3=0138006F ;ó
&H00F4=013A006F ;ô
&H00F5=013E006F ;õ
&H00F6=013B006F ;ö
&H00F7=00B6 ;÷
&H00F8=0087 ;ø
&H00F9=01390075 ;ù
&H00FA=01380075 ;ú
&H00FB=013A0075 ;û
&H00FC=013B0075 ;ü
&H00FD=01380079 ;ý
&H00FE=008E ;þ
&H00FF=013B0079 ;ÿ
```

Using a Dubner/Grass Valley CG

An external 20k, 30k, Graphics Factory or Halo with available serial ports, automation software should be connected to an ENPS-configured personal computer with one serial port. The CG operator must be able to log into ENPS, select the desired Rundown, and enable CG control from within that Rundown.

The Dubner operation is very different from the Chyron in that proper functionality depends heavily on "K" programs resident on the CG, as well as the correct template definitions within ENPS.

The "K" programs required for ENPS automation will be similar to those already in use for manual data entry, with the exception that where operator input is currently required, the entry type `$Field1,` type `$Field2,` etc., must be specified. We suggest taking existing "K" programs and copying them to new names for the automation interface to allow modification. The `$Field1,` `$Field2,` etc., entries are variables which will need to be defined within the "K" program.

The ENPS interface calls those "K" programs and passes information to the CG through defined variable names.

When building CG template definitions within ENPS, the graphics should be involved. Before starting, it is useful to create a list of all CGs currently in use. Templates within ENPS must match those CG tab field pages. In order to do so, you will need to know the drives, directories, tab field page numbers and tab order for all pages you wish to automate.

Dubner CGs are controlled from the Dubner keyboards. The CG operator must pre-load the entire Rundown to the defined drive on the CG, and record the entire newscast as a series of message pages beginning at the defined starting point. The starting page number in the `CG.INI` file is prefixed with "AP" within the automation software. For a starting page number of 5000, the actual page built and recalled is AP5000. Dubners require that all page names begin with an alpha character.

The CG page list is controlled by ENPS to be a contiguous block, allowing the operator to use the Next key on the CG keyboard to move forward through the newscast. Using the CG keyboard, the operator has final control over fonts, color, kerning, and placement.

Controlling Multiple CGs with ENPS

This requires two ENPS Client CG Workstations, each one configured to control a different CG. You could use the same machine but the `ENPS.INI` file would have to be changed each time you wanted to control a different Chyron.

The ;(Number); after the data rate is the Machine ID of the Chyron. The number at the end is the CG start page for preloading. 5000 is the default if no number is present.

Configuring Other Peripherals

Prompters

Prompter support is locally configured in the local `ENPS.INI` file. The prompter is enabled according to the `Driver` setting in the `[Prompter]` section. Settings are as follows:

```
[Prompter]
; Enables Prompter output and 'Dump to...' menu choice
Driver=x
; Disk path, if to be written to disk (WinCue, WinPlus, ;
AP Prompter). May specify a drive letter and a folder ; or
a UNC name/path.
Path=c:\prompter
Log=0
Unicode=1
```

Adding the setting `Log=1` to the `[Prompter]` section of the local `ENPS.INI` file will cause the file `C:\Documents and Settings\All Users\Application Data\ENPS\PROMPTER.LOG` to be generated, with overflow into `C:\Documents and Settings\All Users\Application Data\ENPS\PROMPTER.000`. The following are logged:

`*.DAT` (control) file updates, text writes, and file removals from the prompter share.

Failed writes of `*.DAT` files or text files.

The text `"FAILED!"` will be in the log for any write failures.

Setting `Unicode` = 1 makes output available in Unicode format. This affects the header `.DAT` file and the individual script files. The files must be read as Unicode text rather than 8-bit text, allowing for the standard two-byte Unicode marker at the top of each file. The default value 0 preserves backward compatibility.

Drivers are available for and may be set to any one of the following prompters:

- AutoCue
- WinCue
- WinPlus
- Simplicity
- AP Prompter

AutoCue is the only serial prompter supported and it requires the following serial port settings in the `[Prompter]` section:

```
; Prompter port (for AutoCue only)
; Port=1
; Serial port (defaults to 9600,n, 8,1)
; Settings=9600,n,8,1
; Test logging (1=Yes, 0=No)
```

Other prompters access shared directories, specified with the `Path` setting, which can refer to a drive and path, or a UNC path.

+WinPlus+ AP Prompter

To install +WinPlus+ AP prompting software, complete the following steps:

1. Open `ENPS.INI`. In the `[Prompter]` section, find the line beginning with `;Driver=Winplus`. Remove the semicolon.

2. In the same section, set Path to the location of the "published" prompter file area. For example:

`Path = \\<prompter_machine name> \shared directory>`

3. Save `ENPS.INI` and close the file.

4. Refer to the +*WinPlus+ AP Prompter User's Guide* for more information.

BDL Prompter

ENPS updates the BDL prompter by sending text files to the shared folder. BDL polls this folder for changes made by ENPS. For this process to work properly, remote polling must be turned on in BDL (this should turn on by default) and the *Dump to WinPlus* option must be active at all times in ENPS. In ENPS, a lightning bolt will appear in the bottom left-hand corner of the active Rundown when this feature is activated. To install the BDL prompter, complete the following steps:

1. On the BDL workstation, create a directory to dump show files to. The folder should be shared with Write access.

2. In the BDL interface, select **Options → Configuration → Constants**. Set the Remote Input Directory to the name of the shared folder. You are can use a UNC name if you prefer to dump show files to a folder on the ENPS server.

3. Under the PC-Card tab, set the Line Standard to `NTSC` or `PAL`.

4. Go to **Options → Newsroom** and select ENPS.

5. On an ENPS client, open `\Documents and Settings\All Users\Application Data\ENPS\ENPS.INI`.

6. In the `[Prompter]` section, remove the semicolon from the line `Driver=WinPlus`. Remove the semicolon from `Path=` line and enter the path to the shared folder.

7. In the BDL client, click the ENPS icon to bring up a list of shows dumped to WinPlus. Double-click on the show to prompt.

8. Press F9 to activate prompting.

MOS Prompter

The MOS prompter PC should be treated as a server which is never shut down and the WinPlus application should always be running so that the MOS message cue does not build up in ENPS.

To configure a MOS prompter select **System Maintenance → MOS Configuration** add the following settings for each prompter you install:

Setting	Description
MOS ID	Name of your MOS server. This name is case-sensitive and should follow the following naming convention:

	<family>.<location>.<station>.<mos>
Description	Autoscript MOS Prompter
IP	Static IP address of the MOS prompter machine.
ActiveX	If you are using the Autoscript ActiveX control, enter: `wpcontrol.wpremote`
Program	An existing MOS program group that is homed to the local ENPS server. This can be a MOS group for a video or still store device. This allows the MOS prompter to send a list of all messages to ENPS when requesting MOS-active Rundowns from the prompter and acts like a message cue.
	If you do not want to use an existing group you should create a new program group with your station's call letters in the ID and have it homed to the Primary Server. In the program group's description of the, enter several hyphens so users will know not to open or search the group.
MOS Version	2.8. This setting will not work properly with MOS version 2.5.
Local DragDrop	Off
Story Send	This must be checked so it can be selected from Rundown's MOS Story Send property.

Using the OmniBus System

These instructions apply to the OmniBus serial interface, not the MOS interface.

Because the OmniBus cannot be queried for status or playlist contents, ENPS assumes the OmniBus system state does not change from ENPS session to ENPS session. If the devices get out of sync, stop the automation control from all Rundowns and clear all playlists from the automation choice of the Rundown menu. Then reactivate automation on the Rundowns. Here are the serial automation control settings for ENPS.INI on the local client:

```
[Automation]
; Only choice now is OmniBus
Driver=OmniBus
; Port settings
Port=COM1:9600,e,7,1
; For diagnostics, logs all i/o to AUTOTRAC.LOG in the TEMP
folder.
Trace=1
; For diagnostics, pops up a message box each time a
command
; is sent to the device.
Debug=1
```

OmniBus does not send an acknowledgement for ENPS commands so ENPS waits 100 milliseconds before checking the return code from the device except when Debug=1 since the message box will provide the necessary delay.

ENPS allows multiple Rundowns to drive the device at the same time. The Rundowns are sent in the order in which automation was activated. Changes to the Rundown are reflected in the OmniBus system in real time. The following fields are required on automation dialogs:

```
Clip        Name Mandatory
Still       Name Mandatory
CG          Template Mandatory, Page Mandatory
Inset       Name Mandatory
Camera      Name Mandatory
Logo        Template Mandatory
Event       Length, Name Mandatory
OS          Name Mandatory
```

The field's entry pattern is expected to be in the format mm:ss, to which leading and trailing 00s are added (e.g. 00:mm:ss:00) for relaying to OmniBus. If the field is blank 00:00:00:00 is passed. Event Length is ignored for the purposes of Rundown calculations. You will *Manual* and *Automatic* buttons along with the fields: "In at:[mm:ss]" and "Event Length: [mm:ss]". The latter is sent as the "duration" field to OmniBus. When set to *Manual* the fields are hidden and the normal CLIPM OmniBus command structure is used. When it is set to *Automatic* the fields are visible and enabled and the CG command is sent to OmniBus using the CLIP+ command structure to define the event.

Automation error logging shows when the facility is activated/deactivated.

Using a Digispot

To interface correctly with Digispot, the IPTC 7 output from the News Wire Profiler must be modified.

1. Insert the characters "bd" in the Story Category field.

2. Insert an extra C/R L/F L/F before the Slug field. The first letter of the slug should immediately follow the second L/F.

As with prompting and automation, output is via a single workstation's serial port. To activate it, add the following to the [Caption] section of the local ENPS.INI file:

```
Driver=ENCAPS
```

With this, the choice "Dump to ENCAPS" will appear on the Rundown Rover, and such an action triggers a one-time dump, with no live updates, in the same format as the basic AutoCue, not WinCue, serial stream.

```
Start of text (x02)
Sequential ID (starting at 1)
Item Slug/Title
Carriage return (x0D)
Line feed (x0A)
Story text
```

Printers

Here are the procedures for printer configuration in ENPS.

Initial Printer Configuration

ENPS uses the printer configuration in the Windows Control Panel. Use the Control Panel to add or remove printers for ENPS. Follow your printer manufacturer's instructions for installing on Windows and make sure you can

print a test page from the Windows printer driver menu before you print from ENPS.

Standard script printing functions were designed for laser printers and are often too "rich" in borders and detail for most dot matrix printers. A special ability to print scripts only in "draft" format was added to the Editing Window and Rundown rovers. This option uses the current script report layout and print options for line spacing, reformatting, margins, header, and footer and can also use settings in the `[ENPS]` section of the local `ENPS.INI` if changes are desired or necessary. Default values are as follows:

```
[ENPS]
DraftPrintCharsPerLine=60
DraftPrintLinesPerPage=48
```

These settings take precedence over the margins in determining when a page or line ends. When printing in draft mode a small progress bar may appear in the upper left area of the screen.

To provide an option for faster startup, especially in locations with numerous printers or for users operating in remote locations, printers can be validated only the first time they are used. This option can be enabled by entering the line `LoadPrintersOnDemand=1` to the `[ENPS]` section of `ENPS.INI` file. By default this setting is disabled.

Two Column Printing

Two-column printing respects zones (left, center, and right) as specified in the `[ENPS]` section of the local `ENPS.INI` file, but in a way applicable to proportional fonts. Instead of specifying a number of fixed-width characters per zone, the zone values represent a number of units out of the total units in all three zones. These are used to calculate the percentage of available page width (not including right and left margins) to use for each zone. Any number from 1 to 32,000 may be used for each zone. For example:

```
LeftZoneWidth=40
CenterZoneWidth=20
RightZoneWidth=40
```

This will result in the same percentages for the left, center, and right columns (zones) as the following `ENPS.INI` settings:

```
LeftZoneWidth=20
CenterZoneWidth=10
RightZoneWidth=20
```

This means 40 percent, 20 percent, and 40 percent respectively. The left and right "zones" are areas in which text is printed; the center zone is the blank area between the two columns. If no settings exist, defaults are used (25, 2, 33) for the left, center, and right zones respectively.

The `ENPS.INI` settings for `LeftZoneWidth, CenterZoneWidth`, and `RightZoneWidth` are maintained locally rather than synchronized with the master `ENPS.INI` on the server. Server settings are only respected for the initial installation.

Setting Wire Printout Margins

The default left and right margins for wire story printouts are set to .25 inches, and the default font size is 12 pt. These settings can be adjusted with the following settings in the `[ENPS]` section of the `ENPS.INI`:

```
WireRptHMargin=x
WireRptFontSize=y
```

The value for x is the desired margin in twips (a twentieth of a point) where 1440 twips = 1 inch. The default value for x is 360 twips and the default value for y is 240 twips.

The width of the right and left margins and the font size used when printing generic grids can be customized with the following settings in the `[ENPS]` section of the local `ENPS.INI` file.

```
GridRptHMargin=x
GridRptFontSize=y
```

x is the desired margin in twips where 1440 twips = 1 inch. The default is 1440.

y is the desired font size, and 20 twips is equivalent to 1 point. The default is 240, or 12 points.

The settings for wire story printouts – `WireRptHMargin` and `WireRptFontSize` – are centrally managed. For each of these, if no master entries exist and local settings have been established the local settings will be used.

Hauppauge's WinTV PCI products

ENPS supports Hauppauge's WinTV PCI products, meaning users can watch almost any video source in the lower Editing Window of an ENPS client. This can help make the most of limited desk space in studios, control rooms, and crowded newsrooms. It can also help reduce heat in small areas since a video monitor can be eliminated. Through external audio/video inputs, you can connect to a regular antenna, a cable television feed, in-house video, or a satellite receiver, each with up to 125 channels, or a VTR or video camera.

From ENPS a command strip along the left-hand side of the window allows users to change channels, volume, and video source, or switch to full-screen video playback. Right-clicking will present pop-up menus to change source and channels, adjust the image (contrast, brightness, saturation, hue), freeze a frame, copy the current frame to the clipboard, print the current frame, or even save a frame to disk in `JPEG`, `BMP`, `TIFF` or `GIF` format. As with other ENPS objects, the window is resizable.

WinTV PCI boards work with most PCI VGA cards, although there are exceptions. For more information on the Hauppauge WinTV add-in boards go to `http://hauppauge.com`.

The WinTV card and version 2.0 or later of its drivers should be installed. Additionally, the `hcwWinTV.ocx` file must be copied from the `\ENPS\WINSYS` folder on the server to the `\WINDOWS\SYSTEM32` folder on the client. Register the file with the following command: `REGSVR32 hcwWinTV.ocx`

Select **Fourth folder rover** → **System Maintenance** → **MOS Configuration**, and add the following settings:

ID	WinTV
Description	WinTV
IP	(leave blank)
ActiveX	`hcwWinTVControl.hcwWinTVocx`
Program	(leave blank)
Default settings	(leave blank)
MOS Version	(leave blank)
Local DragDrop	(leave blank)
Modal UI ActiveX	(leave blank)
Modal UI Default Settings	(leave blank)

On workstations where the WinTV OCX is installed, a WinTV choice will appear on the Media Control icon's rover. If WinTV hardware is not installed, the option will have no effect.

Configuring a Cisco Router

ENPS uses UDP broadcasts to inform users of changes to the Rundown as well as messages they've received, urgent wire stories, etc. Routers must be configured to allow these UDP messages to pass through if ENPS workstations are located in subnets other than the subnet where the ENPS server resides.

To enable this on Cisco IOS 11.x +, you would enable the following on Ethernet interface 0 (or whichever interface is the LAN interface).

```
conf t
int e0
ip directed-broadcast
end
save
```

This will allow packets from any other interface (serial or Ethernet) to be sent directly to the broadcast address of the Ethernet 0 (e0) interface. Consult the Cisco documentation for more information on enabling UDP broadcasts.

Importing and Exporting Data

There are a number of different archives that can be converted to ENPS not listed in this section. Contact Technical Support for information about whether a specific archive can be converted to ENPS format.

Converting Archives from NewsCenter

When converting a station from NewsCenter to ENPS, it would be advantageous to take the `SUPP.DIC` file from the `DATASERVER` folder `\\<SERVERNAME>\DATA\NEWSCNTR\DICT` and transfer it to the new ENPS server such as `F:\ENPS\DICT`. Remember that NewsCenter allowed users to add words indiscriminately to its custom dictionary.

Until a utility is developed that would allow supervisors or managers to add words to the custom dictionary more easily, you may suggest that users bring their list of words into a script in NewsCenter and then run spell check allowing NewsCenter to do the work of actually adding the words with the `CrLf` at the end of the word, then transfer the `SUPP.DIC` file.

If you add a new word in all lower case letters, the spell check will allow the word if it is all upper case or if the first letter is capitalized. The exception is if you have a name such as MacDonald that has two capital letters.

If you do not have NewsCenter or you want to keep a more organized list of entries in the custom dictionary, it is a good idea to create a list in a Microsoft Excel spreadsheet, with all of your entries in a single column. This allows them to alphabetize the list so that they can more easily insure that they do not have duplicate items and then all they have to do is copy and paste back into the `SUPP.DIC`. Using Excel will also allow them to double check their manual entries using Excel's integrated spell checker.

The most important thing to remember with the supplemental dictionary is that it is only updated when setup is run (either the first time or when a forced setup is done) or when a new update is installed.

Rundown archives and contacts from AP NewsCenter can be converted to ENPS using the `NCIMPORT.EXE` program in the `\NOM` directory on the Buddy Server. Archives should be placed in the corresponding directory with the Buddy Server's computer name (i.e., `BNCENPS02`). Both archives and contacts should be placed in the directory corresponding to the Primary Server's computer name (i.e., `BNCENPS01`) on both the Primary and Buddy servers. The conversion process usually takes several hours.

System performance is not affected during archive conversion to the Buddy Server since users should still be working on the Primary Server. System performance may be affected while importing the contacts on the Primary server. It is advisable to do the contact conversion on the Primary server at a time when there is the least amount of traffic on the network.

1. Run `NCIMPORT.EXE` from the `\NOM` directory on the ENPS Server.

2. Fill in three entry fields:

NewsCenter Folder	Path to the `\NewsCntr` directory on the Dataserver such as `\\dataserv\data$\newscntr`
Target Path	Drive on the Primary or Buddy Server that contains the ENPS installation. This is usually the largest volume on the server (typically `F:`). This cannot be a UNC path.
Target Database	Name of the server you are running the `NCIMPORT.EXE` on (e.g. `BNCENPS02`).

3. Select what you would like to convert from NewsCenter to ENPS:

Rundown Archives	These should only be installed on both the Primary and Buddy Servers.
Contacts	These should be installed on both the Primary and the Buddy Servers.

4. Click *Go.* You will see a dialog box showing the paths for the conversion. If they are correct, click *Yes* to continue. If you notice an error, you may select *No* and make the appropriate changes. If you select *Yes* and the paths are not correct, you will receive an error from `NCIMPORT.EXE`. At this time, you will have to check the paths and make the appropriate changes.

Extract

Extract is a server component that allows you to transfer ENPS data to other applications. It resides on the same physical server as the NOM.

An Extract process runs on the server and handles requests by clients to resolve queries. It allows them to export archived material in a format that can be used by other applications.

To perform the extraction process, complete the following steps:

1. In the Search window, select your organization's content, then a date range, entering "from" and "to" dates.

2. In the server list select the CTOS (or any other server) and select *All content* or *Archives.*

3. Select the **Advanced** tab and the *Extract* button becomes visible. You can save the Search at this point if the task is going to be reused.

4. Click *Extract* and enter a name for the output job to dispatch the request to the server.

When the extraction is complete the user will receive a Top-Line Message. With the message in an Editing Window the first choice on the rover will allow the user to copy the resulting file to a local drive for use in other applications. Extract job files exist on the server for approximately 24 hours.

The file format is as follows, with fields delimited by the Tab character (`x09`):

```
First row
Start Date
End Date
Additional rows
Field Name/Description
Program Name
Start Date
```

```
Story Slug
Newsgathering Grid Name
Newsgathering Grid Piece Type
Newsgathering Grid First Use flag (0=No, 1=Yes)
Newsgathering Grid Live flag (0=No, 1=Yes)
Actual (duration)
```

Generic Import Facility

The ENPS Generic Import Facility (GIF) allows data from Access tables to be imported into ENPS database structures.

Microsoft Access is used because it can bind or import from many types of data such as Microsoft Excel, Lotus 1-2-3, text files, HTML, dBase, FoxPro, Paradox, and ODBC databases. Also, it is possible to access Oracle data via ODBC or a dBase table, or do an elaborate Join.

Any number of tables or updateable queries may be used, so the possibilities are endless for dynamic updates from a variety of sources. Note that by being able to import against queries, the underlying data structure can vary, with the query doing filtering and cleanup, for example.

The following fields must be in the Access table, although the first five and seventh need not be filled:

ID	Description	Format	Sample
GUID	Should be blank and will be automatically updated with the GUID of the resulting record. If this field is not blank, it is assumed that record was already imported. This allows an interrupted import to be restarted without duplicate data being posted.	Text, 50 characters	[blank]
Database	Must match the machine ID of an entry in the server table. GIF must be run on the server.	Text, 255 characters	BNCENPS01
Path	Either P_groupname or U_username that will be validated against the program/group or staff databases respectively.	Text, 50 characters	P_WCTRIAL or U_MARTIM10
Folder	ID of the subfolder where the data should be stored, excluding the F_ prefix. If not supplied, the main folder is used	Text, 50 characters	TEST
Owner	User ID, excluding the U_ prefix which must validate against the staff database.	Text, 50 characters	MARTIM10

Title	The item's title/slug, for which there should not be a field in the field definitions tables.	Text, 50 characters	STORYTITLE
Text	The item's associated text (optional), for which there should not be a field in the field definitions tables.	Memo	Sample text

The Database, Path, Folder and Owner settings may be specified for all records in the database by supplying them in the on-screen form. Additional fields must match IDs from the field definitions tables and will be validated, and only "script"-related fields may be used.

The ENPS Generic Import Facility (GIF) allows data from Microsoft Access tables to be imported into ENPS database structures. Microsoft Access is used to bind or import from many types of data (e.g., Excel, Lotus 1-2-3, text files, HTML, dBase, FoxPro, Paradox, and ODBC databases). Also, it is possible to access Oracle data via ODBC or a dBase table, or perform an elaborate Join. GIF will import as many matching fields as are specified and makes two passes, one to check the rows, and one to import. The import will not be executed unless all the rows pass checks.

Install GIF by running `SETUPGIF.EXE on an ENPS server`, which places an icon on the desktop.

`GIF` imports as many matching fields as are specified and makes two passes, one to check the rows, and one to import. The import will not be executed unless all the rows pass checks.

Any date fields must be in the format `YYYYMMDDHHNNSS`, and the time portion must be stated in GMT.

Warning and Error Messages

This section lists messages that users may see while using ENPS. Each message has an explanation of what caused the message and the steps you can take to resolve the issue.

Connection and Authentication

Message	The credentials supplied to ENPS conflict with an existing set of credentials. Please contact your System Administrator.
Solution	ENPS only allows connections if the user can be authenticated in the correct domain and there are no other sessions open to the same machine using other authenticated credentials. The user may already have a network session open to the ENPS server with different account information. This may be caused by one of the following: • A network drive mapped to the server. • A user account on the server with a password that does not match the one on the local client. • The same account in two different domains and ENPS is trying to authenticate in the wrong domain. The user should disconnect any mapped drives and reboot the PC before attempting to restart ENPS.

Message	BAD_PASSWORD followed by unsuccessful directory scan when accessing \\[SERVERNAME]\ENPS.
Solution	This may be caused by client authentication problems when communicating with the server, either because the server is not responding within the timeout period or there is a problem with users' logon credentials. Specifically, the password may not match the one the users' domain account or the user may not be logging on to the domain on the client PC while there is a local account on the server with a different password. Ensure that there are no local user accounts on the server and that the users are logging on to the domain for authentication. If the problem occurs intermittently at times of high usage on the system, the server may be momentarily busy satisfying client requests.

Message	**Socket error [10061] / Connection forcefully rejected.**
Solution	The user's laptop is attempting to connect to their server without a network connection. The user should complete the following steps: 1. Right-click on the ENPS shortcut and select *Properties*. 2. Select the *Shortcut* tab. At the end of the entry in the *Target* field but inside the quotations marks, add a space, then add the /local parameter. If the user is later connected to the network and wants to connect to their ENPS server they can select **Local Storage Folder → Connect to ENPS**.

Message	**GetAlMacAddress and/or SplashScreen_Load [372] Line = 70 Failed to load control MSComm from MSComm32.ocx.**
Solution	Check the network card on the client machine.

Message	**Form_load_splash_error [339] Line = 65 rich TX 32.OCX.**
Solution	This error typically appears after a user re-installs ENPS. A file that is part of the operating system has become corrupt or has been overwritten by a different version. Delete C:\Program Files\ENPS and then reinstall ENPS on the PC again. If this is unsuccessful, it may be necessary to reinstall the operating system.

Message	**Local Administrator rights are required.**
Solution	1. Check the server and clients for virus infection. 2. Ensure that the ENPS share on the server is set to *Read Only*. 3. Ensure that the date/time formats on the server and clients match. 4. Confirm that the ENPS shortcut on the affected workstations is pointing to the correct folder.

Message	**Form_Load frmUDP [10048] Address in use. Flow network connection has been detected.**
Solution	Check the server for any duplicate server processes such as multiple instances of the NOM.

Message	**Host not found.**
Solution	If you recently renamed the Primary Server make sure that you updated the CentralServer value in

the `NOM.INI`.

Message	Socket error [10061] Connection forcefully rejected.
Solution	Select **Fourth Folder Rover → System Maintenance → Servers** and ensure that the IP address for each server is correct.

Message	License Key Expiration Warning. The license for this product will expire on [date]. You may want to update your license before then.
Solution	If the license key is not due to expire ensure the date/time formats on the client and server match.

Search

Message	Unpack time [6] Overflow.
Solution	Reinstall ENPS on the client machine. You should also compare versions of installed DLLs on the workstation with those in `\<SERVER>\ENPS\WINSYS`.

Message	Socket unable to complete.
Solution	The Search parameters may be so wide that Index Server is taking too long to process the request and ENPS is dropping the connection due to a timeout. Amend the search to contain fewer search terms, perhaps by dividing it into two or more separate searches. It may also help to increase the `ReceiveTimeout` setting in the `[TCPIP]` section of the user's `ENPS.INI`.

Message	Socket closed by host.
Solution	May indicate an indexing problem on the server or that noise words like "so" were used in the search terms. Most noise words do not cause a problem but some may cause the Index Server to ignore the search and close the socket. Instruct users to omit the noise word from the search or enclose the search terms in square brackets so that ENPS will pass the term as an exact phrase. This can also be done by checking the *Exact Phrase* checkbox in the Search dialog.

Rundowns

Message	Resize column [381] Invalid property array index.

Solution	Occurs on workstations when opening a Rundown or Newsgathering Grid when columns preserved in a grid layout are not defined in the local server's field definitions. This error may indicate that the servers are not properly synchronized with the Primary or Central Server.
	On the Primary Server, open the News Object Manager and select **File → Reset time/date stamp**. Then choose *Sync now* from NOM Maintenance on each local server. This will force a synchronization of all master tables, including `G_FIELDLOC` `G_FIELDDEF`. Restart the client after these files have been synchronized.

Scripts

Message	**[32364] Bad Custom Dictionary**
Solution	This occurs if the `SUPP.DIC` dictionary file has been created incorrectly. The file should have one word per line with no spaces at the end of each word. In addition, there must be a carriage return after the last word in the file.

Message	**EditCtrl_ExtendSelOverFields [5] Invalid procedure call or argument', 'Run time error [28 Out of stack space."**
Solution	Make sure the script does not contain an orphaned square bracket, which could appear if text was pasted into the script from another document. Square brackets in ENPS are restricted to production commands and must always come in pairs.

Message	**Draw Tabs can't create auto redraw image.**
Solution	The resources on the user's PC may be low, perhaps because they have other applications running at the same time as ENPS, or because their PC has not been rebooted for some time. The user should reboot the PC and close any applications they do not need.

Troubleshooting

Character Generators

Subject: Difficulty connecting a Chyron CG to ENPS.

There are a number of steps you should perform when you are troubleshooting ENPS connectivity with a CG:

1. Check the `ENPS.INI` file on the CG workstation. The CG string should follow the following format:

```
CG=name of machine;ntsc;com#:baud rate,parity,bit
length,stop bits;machine id;page number
```

For example:

```
i.e.: CG=infinit!;ntsc;com1:9600,n,8,1;1;2000
```

2. Check the Intelligent Interface port settings. Go to the Chyron Loader Menu from the Message Compose module by pressing *Mode Select* and choose *Exit*. Mode Select is found on the upper left hand area of the Chyron keyboard. Chyron operators usually create their graphics in Message Compose; this is also the where automated CGs are copied.

Once at the loader menu press the "Set up" key on the Chyron keyboard. "Set up" is found on the left hand side second column next to the column with the F1 - F5 keys.

When the "Set up" menu appears you will be able to check for the Intelligent Interface settings by choosing "Set Com" or by pressing "C."

A window will appear with the Serial Port Data Parameters. The ports the Chyron uses for the Intelligent Interface are labeled differently depending on the Chyron model. The iNFiNiT! label is Serial Port 4, the Max! Serial Port 2 and the Maxine! INTEL.INTF Port.

A window will appear that will provide you with two fields one above the other. On top will be J1 and below it will be J2. If you only have J1 then this Chyron does not have the Intelligent Interface software. J2 is where you will find the Intelligent Interface. Here is where you can change J2's port settings for the Intelligent Interface:

Parameter	Value
Baud Rate	9600
Packet Size	8 bits
Parity	None
Stop bits	1

Hit the "Control" key to exit the Set Com window. When you close the window, the Chyron will prompt you to hit any key to exit and reset the COM settings.

Step 3: Check the Machine ID

From the Set Up menu Choose "Machine ID." Here you will find the Machine ID of this Chyron.

Step 4: Check the Cabling

Make sure the cable is connected to the correct port on the back of the Chyron unit. Use Serial Port 4 for the iNFiNiT!, serial port 2 for the Max!, and INTEL.INTF Port for the Maxine!.

If the cable is not wired as a null modem, it must have a null modem adapter connected to it at one end. Please refer to Chyron's Intelligent Interface manual for the correct cable pin-outs.

If the cable runs up to 50 feet then use RS-232 protocol cabling. If the cable runs over 50 feet then the RS-422 protocol must be used.

Please refer to the Chyron Intelligent Interface manual for RS-232 to RS-422 conversion. The jumpers that control interface type for the serial ports will have to be changed if RS-422 protocol is used. The jumpers are on the CPU Transition board at the rear of the chassis.

Step 5: Make sure the Chyron templates have auto erase tab fields

Please refer to Chyron website for INFiNiT! Family Tab Setup to learn how to create auto erase tab fields.

Client

Subject: Error message [9] Subscript out of Range

Occurs when a Rundown is updated with information that does not match the fields in `G_FIELDLOC` or `G_FIELDDEF`. This usually means a column or list information was deleted from the system but the templates have not been updated. To eliminate the error, adjust the incorrectly set up field or rebuild the template.

Subject: Some users are not receiving Top-Line messages

Dial-up users will not receive Top-Line messages if they are in a different subnet than the Remote Access Server.

Subject: After a power outage, Searches do not work properly.

It is likely that the power outage caused the Index file to become corrupt. Check to see if Search is not working from all clients and a sample query form. If not, run `INDEXDEL.EXE` from the `\NOM` folder.

Subject: ENPS launches into Local Storage mode.

ENPS cannot detect a network connection, or there is no entry in `G_STAFF`.

Subject: ActiveX controls are not working properly.

Check with the vendor of the device you are controlling. Make sure the client workstation's operating system is not Windows 95, which is no longer supported by ENPS.

Subject: Rundown is missing

Check the Waste Bin or use a Search to locate it. It is impossible to remove a Rundown from ENPS in less than ten days from the Rundown's air date. You

should check to see if you have changed the `TrashDays` setting in the Global Configuration Options.

Subject: Certain characters for a language (such as á, è, and ü) are not available on a standard keyboard.

Open the Control Panel and select Keyboard. Select the *Input Locales* tab and click *Add* to add your language. Changes to the keyboard layout in the operating system will be reflected in ENPS.

Subject: Rundown dates in the List Window do not appear in the local format.

Change the following setting in the applicable file in **Fourth Folder rover → System Maintenance → Language Resources**:

```
ENPSShortDateTime=mm/dd/yy hh:nn
ENPSLongDateTime=mm/dd/yyyy hh:nn
```

MOS Protocol

Subject: Troubleshooting connections to the NOM

To help detect and troubleshoot MOS connections to the NOM, there is a warning routine in the NOM as follows: for each attempt by a MOS device to connect the NOM, the NOM checks for a free socket control to use. If all are still active, it loads another Winsock control (and allocates other related elements) to receive the incoming messages.

Every few minutes, as defined by the `SocketTimeout` value in the `[NOM]` section of `NOM.INI` (the default value is 2), the NOM will close unresponsive connections. At this time, the NOM also counts the number of connections, and if greater than 20 will log a warning, noting the number of connections. This warning does not necessarily indicate anything is wrong or operationally impaired—it is just to provide warning if there is a possibly malfunctioning MOS device that initiates an unnecessarily high number of connections.

`WarnSocketsConnected` defaults to 20

`MaxSocketsClosed` defaults to 1000

At each `SocketTimeout` interval, the NOM will count the number of connected Winsock controls and log a warning if the number exceeds the setting for `WarnSocketsConnected`.

Note that this value will only cover the current `SocketTimeout` interval rather than the current behavior which would count the active sockets for any prior interval.

Also, at each `SocketTimeout` interval, the NOM will count the number of closed Winsock controls loaded and will ensure this value never exceeds `MaxSocketsClosed`, logging a warning when this occurs (i.e. "Warning: Detected xxxxxx closed MOS sockets. Excess unloaded." (3542)

Subject: General Communications Troubleshooting

After the Folder Manager has completed the troubleshooting steps in the *ENPS Advanced User's Guide*, if you suspect a communications problem, you will need to check the relevant ENPS Server. First, attempt to Ping the MOS Server from the Primary Server with its IP address (available from the MOS Configuration table in ENPS). If you cannot use Ping, the MOS Server is either down or off the network.

Locate the MOS Window in the NOM. This window is divided into two panes:

1. Outbound Items: From ENPS to the MOS Server, messages with Clips that have been added to Scripts in MOS Active Rundowns, that items were moved or deleted, etc. In a Story MOS system, the Script text (and any subsequent changes) also passes through this window.

2. Inbound Items: From the MOS Server to ENPS – mainly messages about new Clips, Clips that have been deleted, and changes to the status or duration of Clips.

You can turn Logging for both of these functions on – this is useful for troubleshooting ongoing problems without damaging performance, but it will not help if the system is not working at all. Diagnostic MOS logs are maintained for seven days.

Check both Log boxes and the Cap box (which picks up any incorrect/illegal MOS messages) for full logging. The logs are saved in `F:\NOM\LOGS`.

Normally you should see messages appear briefly next to the Status label, and at the top of the Inbound Items side. If there are a large number of messages at once, you may see a short list appear in one of the Queue windows – this is perfectly normal, but the queue should clear in a few seconds.

When there are no MOS messages to pass through, the MOS window will display "Not connected" at the top – again, this is normal. If the Outbound Queue list is very long and does not clear, this means the ENPS Server cannot communicate with the MOS Server. ENPS will keep re-trying to send them, but the messages will appear to be stuck. Each message in the queue shows the name of the MOS Server that cannot be contacted. Assuming the network connection is working and the MOS Server can be Pinged, this indicates a failure in the MOS Server that will be reported as "the ENPS Server keeps trying to send messages but is getting no response from the MOS Server".

You may also see a message next to the Status indicator: `Timeout on connect`, `Connection is Forcibly Rejected` and `Host Not Found` all indicate problems with the MOS Server or network. If the Log window displays `Rundown Disconnected` (different to the "Not Connected" status shown at the top left of the screen) this indicates a more serious failure that will require further investigation. The MOS Control Active flag will automatically drop from the Rundown in ENPS in this situation.

Subject: MOS ENPS Buddy Process

In the event of switching to the ENPS Buddy Server, the MOS process should continue without a break (though currently the OmniBus MOS system does not).

If the Primary fails and the Buddy takes over, the Buddy then knows to respond to the MOS Server as if it was the Primary. As a precaution, it is not recommended to switch back to Primary while a MOS Active program is on-air.

Buddy Process Sync

Subject: Unable to sync the file queue between the Primary and Buddy servers.

If one of the servers is down for more than 24 hours or the queue of files to sync between the two servers grows to 10,000 files the Primary and Buddy Server may no longer be able to sync on their own. If this is the case you will need to use a tool called NOMBACK to manually synchronize the servers.

Below are instructions for repairing the Primary and Buddy servers. You will only need to follow the instructions for the server that has built up a large queue. Users will be able to continue working on the other server while you complete this process.

Recovering the Buddy Server

1. Shut down all ENPS processes on the Buddy Server starting with NOM Watch.

2. On the Primary Server open the `\NOM\NOM.INI` on the ENPS Work drive, usually the F: drive. In the `[NOM]` section set `Buddy=0` then in the `[MAINT]` section set `Buddy=0`. This avoids redundant Buddy process transactions while you are running NOMBACK.

3. On the Primary Server delete the directory `\COMMON\BUDDY`. These files do not need to be copied.

4. To apply changes, close NOM Maintenance then let Watch automatically reopen it.

5. On the Primary Server open Windows Explorer and select **Tools → Map Network Drive**. Select a drive letter, "X:" for example, and add the path to the root of the Buddy Server's ENPS Work drive, which is usually "F:\"

6. On the Primary Server open the `\NOM` directory on the ENPS Work drive and run `NOMBACK.EXE`. Check the top three boxes: the names of the Primary Server, Buddy Server, and COMMON. If you know when the two servers got out of sync you can also check the box that says *Copy only files updated since* and enter the date and time. In the target path type enter the drive letter where you mapped the root of the Buddy's Work drive in the previous step.

7. Before you click *Go* make a note of the exact time on the server's clock. You will need to know this time later. Once you click *Go* NOMBACK updates the data on the Buddy Server. This process may take a few hours depending on the amount of data that is out of sync.

8. On the Primary Server open the `\NOM\NOM.INI` on the ENPS Work drive, usually the F: drive. In the `[NOM]` section set `Buddy=1` then in the `[MAINT]` section set `Buddy=1`.

9. On the Primary server run NOMBACK. In the *Copy only files updated since* box enter the time you recorded in step 7. This ensures that changes made during the initial copy are reflected in the Buddy Server's database. This should take approximately 10 to 30 minutes.

10. On the Buddy Server double click Watch to restart all of the processes.

11. Verify that the queue on the Primary Server is being sent to the Buddy Server by opening the NOM Maintenance window on the Primary Server and checking the Buddy Process window. You should see all of the built-up transactions in the top section of the **Queue** window moving into the **Completed Transactions** window. You can also verify that the Buddy queue is being sent by checking the `\COMMON\BUDDY` on the Primary Server's work drive. The number of files in this directory should be decreasing until it reaches a point where it only has a few files in it at any time.

12. On the Buddy Server's Work drive open the NOM folder. Run `INDEXDEL.EXE` to delete the index and rebuild it. The process may take several hours.

Recovering the Primary Server

1. Shut down all ENPS processes on the Primary Server starting with NOM Watch.

2. To avoid redundant Buddy process transactions add the following settings to the `\NOM\NOM.INI` on the Buddy Server's Work drive, usually the F: drive. In the `[NOM]` section set `Buddy=0`. Then in the `[MAINT]` section set `Buddy=0`.

3. On the Buddy Server, delete `\COMMON\BUDDY`. These files do not need to be copied.

4. On the Buddy Server open Windows Explorer and select **Tools** → **Map Network Drive**. Select a drive letter, "X:" for example, and add the path to the root of the Primary Server's ENPS Work drive, which is usually "F:\"

5. On the Buddy Server open the `\NOM` folder on the data drive and run `NOMBACK.EXE`. Check the top three boxes: the names of the Buddy Server, Primary Server, and COMMON. If you know when the two servers got out of sync you can also check the box that says *Copy only files updated since* and enter the date and time. In the target path type enter the drive letter where you mapped the root of the Buddy's Work drive in the previous step.

6. Make a note of the exact time on the server's clock before you click *Go.* You will need to know this time later. Once you Click *Go,* NOMBACK updates the data to the Primary Server. This process may take a few hours, depending on the amount of data.

7. When the NOMBACK process finishes, open the `\NOM\NOM.INI` on the Buddy Server's ENPS Work drive, usually the F: drive. In the `[NOM]` section set `Buddy=1` then in the `[MAINT]` section set `Buddy=1`.

8. With Watch running, close both the NOM and NOM Maintenance and allow them to restart automatically.

9. Run NOMBACK again, this time putting the time that you recorded in step 8 into the box *Copy only files updated since.* This ensures that any changes made during the copy are reflected in the Primary Server's database. This should only take 10-15 minutes.

10. On the Primary Server, open the NOM in Block mode by entering `\NOM\NOM.EXE /BLOCK` from the command prompt. This prevents users from moving back to the Primary before all of the information is in place.

11. Open NOM Maintenance on the Buddy Server. Verify that the queue on the Buddy Server is being sent to the Primary Server. To do this first go into NOM Maintenance on the Buddy and check the Buddy Process Window. You should see all of the built up transactions in the top **Queue** section moving into the bottom **Completed transactions** window. You can also verify that the Buddy queue is being sent by checking the `\COMMON\BUDDY` on the Primary Server's work drive. The number of files in this directory should be decreasing until it reaches a point where it only has a few files in it at any time.

12. On the Primary Server, go to the ENPS Work drive (F:\) and open up the NOM folder. Run `INDEXDEL.EXE`. This delete and rebuilds the content index. The process may take several hours. Keep users on the Buddy Server until this process is complete, otherwise users will have limited search capability. Users working on the Buddy will not be affected and will be able to search as usual. This will ensure that users will have full search functionality when they return back to the Primary Server.

14. After the index has been rebuilt, wire stories have populated the server, and you can safely test the server at least two hours prior to a newscast, open the NOM on the Primary Server. Select **Windows** → **NOM Configuration/Status** and uncheck *Block Primary Access* to allow users to return to the rebuilt Primary Server.

Subject: Network problems are preventing UDP message from being received by the ENPS clients.

You can set the NOM to send all UDP packages multiple times to ensure that the client receives them. The client will ignore redundant messages. To enable this option in the `[TCPIP]` section of `NOM.INI`, set `UDPRepeats` to the desired number between 1 and 10. The default is 0. Remember that using this option will increase network traffic.

Performance

Subject: Slow system performance on the servers and on the client workstations.

Make sure you are using the latest version of ENPS. Also, make sure that you do not have over 10,000 files in a single directory which causes the operating system to slow down. Back up these files and then move them into subdirectories or delete unnecessary files.

Subject: Why am I experiencing poor performance or freezing on workstations with Microsoft Office?

Users of Office 97 and Office 2000 may notice their PC becoming occasionally sluggish while the hard drive is seeking. The cause is likely to be Microsoft Office's Find Fast utility, which builds indexes of Office documents. These indexes speed up document searches in the suite's applications such as the searches done from the Advanced tab in a File Open dialog box. To keep these indexes current, Find Fast updates them every two hours by default. To disable Find Fast:

1. Open the Windows Control Panel.

2. Select *Find Fast*.

3. Select an entry in Index for documents in and below and click *Delete Index* from the Index menu. Click OK until the index is deleted.

4. Repeat step 2 until Index for documents in and below is empty.

5. On the Index menu, click *Close* and *Stop*.

6. Remove the Find Fast shortcut from the Startup group.

If you attempt to turn off the Find Fast control panel by simply removing the Microsoft Office program from the Startup folder, the index files will not be removed from the hard disk. The size of these index files depends on the number and size of Office documents and files stored on your computer. Also, Office programs will continue to use the existing index files whenever you click *Open* on the File menu. When you turn off Find Fast by removing the Office shortcut, the index files are not updated as you create, delete, or modify documents. This may prevent you from finding files you want or cause unnecessary delays when you open files.

Prompters

Subject: Prompter does not update.

Check to see if active polling is active. Check for a lightning bolt in the lower-left-hand corner of the ENPS Rundown. If you do not see one, you will not be able to update the prompter.

Subject: AP +WinPlus+ prompter is not being updated

This may happen when the producer dumps a show to the prompter, and then closes the show. The connection to the prompter has been lost, but the show files are still stored in the prompter. The producer must reactivate *Dump to WinPlus* when reopening the Rundown so that late breaking stories and sports updates are reflected in the prompter.

Network connectivity problems could also account for these files not being updated. However, if ENPS could not see the prompter share over the network, it would crash ENPS when you tried to *Dump to WinPlus*.

Private channels would ensure the ENPS workstation is receiving updates from the ENPS server. See the Chapter 10 "Network Communications" for more information.

Subject: The prompter is being used for closed captioning. Can it also include the contents of VOSOTs in so that it goes to closed captioning without going to the prompter?

Most prompter software allows VOSOTs to be placed in special characters such as <> or {} that prevent them from being displayed on the prompter. Check your prompter software documentation for more information.

Search

Subject: Users not getting search results or results are incomplete.

If a user is seeing an asterisk in the List Window without seeing an error message, the user should first make sure their search parameters are correct.

If multiple users are not getting search results or they are receiving the error message indicating the server is not available, complete the following steps:

1. On the Primary Server open Computer Management and make sure that the Indexing Service is running. Then open `ENPSWork` and click *Query the Catalog*.

2. Enter a common query term and click *Search.*

If no results are found, verify that the Indexing Service is set to index the correct directories.

If the index query does return results, expand Internet Information Services and ensure that the IIS extensions `.ida`, `.idq`, & `.htw` are configured and allowed for `ENPSWeb`. You should also make sure that the directories are correct.

If you receive a message indicating that the index is corrupt, you will need to re-index the server.

Re-indexing a Server

It is recommend that you complete the steps found in Chapter 19 "Routine Maintenance" to take your Primary Server offline and have users connect to the Buddy Server. This will allow your Primary Server to re-index more quickly. Depending on the server speed and the amount of data, the re-indexing process can take as long as 24 hours at some stations.

Open the server's `\NOM` folder and run `INDEXDEL.EXE`. Once you click *OK* on the confirmation screen, all indexes will be deleted and the re-indexing begins.

Once the indexes are rebuilt, unblock the primary and repeat the re-indexing process on the Buddy Server.

Networking

Subject: Socket closes unexpectedly

The NOM is tolerant of possible FIN_WAIT_2 errors, conditions under which an ACK may be lost due to network problems, or where network sockets on other devices can remain unexpectedly open or be unexpectedly closed. In isolated cases, for example, this could affect transactions between a Primary and Buddy Server, or between an ENPS server component and MOS-enabled devices.

All sockets are now checked on a timer, with the ports closed and reopened in the event of a timeout or if a status other than "listening" is detected. The socket timeout may be set in `NOM.INI`:

```
[NOM]
SocketTimeout=x
```

The default is 10 seconds. You should consult AP Broadcast Technology before you change this setting.

Users

Subject: An employee is gone and we want to remove them from the ENPS staff tables.

You should avoid doing this, if possible, because any templates or scripts created by that user will not be attributed to any owner, and this can cause instability in the system. Instead, select **Corporate Folder rover → Staff** and de-select the *Active* checkbox.

Wires

Subject: Client workstation is not receiving Rundowns and wire updates.

ENPS uses both TCP and UDP network protocols for exchanges with clients. While TCP is for one-to-one, point-to-point messaging, UDP is the standard for quickly broadcasting the same message once to many clients and is used in a variety of network applications when it is not possible time-wise or traffic-wise to repeat the same message dozens, hundred or thousands of times via TCP. UDP is highly reliable but not guaranteed, and ENPS has a connection-based private channel option for mission-critical clients.

The workstation may be experiencing packet loss because of network difficulties between the ENPS server and the workstation. In versions of ENPS having the `PacketVersion=2` attribute, UDP packet tracking can be enabled in order to track the receipt of UDP packets into ENPS.

A diagnostic UDP "packet tracking" feature can be enabled on ENPS clients by adding the following settings to the local `ENPS.INI` file:

```
[ENPS]
CtrlAlt=1
[TCPIP]
UDPInfo=1
```

When enabled, UDP packets received by the workstation will be recorded, and the command `Ctrl+Alt+U` displays a table of servers, packets received, and a reliability measure.

Only NOM UDP packets (not NWP packets) are tracked, and UDPs are sent only when public data (not private data) is manipulated (e.g., a script is saved or a

Rundown is re-sequenced). UDPs from servers on different subnets will not be received unless they are explicitly "reflected".

If a private channel is enabled, the UDPs will still be tracked even though they are not processed (because the packets are duplicated in the private channel).

The ENPS `PacketVersion` setting must be the same on the client and server (e.g. `PacketVersion=2`, which is required for extending support to non-English languages). Complete the following steps to test this feature:

1. Open a public script and make a change to it.

2. Save it by pressing `Ctrl+S`.

3. Press `Ctrl+Alt+U`, and look at the counter.

4. Press `Ctrl+Alt+U`, and look at the counter at the counter again. Each time you change the script and press `Ctrl+S`, you should see the UDP count increase.

Chapter 19

Routine Maintenance

This section includes maintenance techniques that will help ensure your ENPS system runs smoothly. The frequency with which you perform these checks will depend on the number of users using your system. Contact technical support for information pertinent to your enterprise.

Server Checks

These should be carried out daily.

1. Check the Buddy process is working correctly by checking that the Buddy Process queue in Maint on the ENPS Primary Server is not filling up. This would indicate a loss of communication with the Buddy Server, or a failure of the ENPS processes on the Buddy Server. If the queue contains more than 10,000 files you will have to use the NOMBACK utility to manually sync the servers. Refer to "Buddy Process Sync" on page 141 for more information.

2. Check Index Server is processing material (see **Computer Management →Services and Applications → Indexing Service**). If "Docs to Index" is greater than 1000 or is not going down, there may be a problem.

3. Check the time on the server is correct (and that any time synchronization software is running)

4. Check there are no MOS messages "stuck" in the outbound MOS queue on the NOM. This would indicate a failure of the MOS or a loss of communication.

5. Check the disk volumes (C:, D:, etc...) are not running out of space

6. Check the ENPS processes are running, including NOM Watcher (`WATCH.EXE`).

7. Check backup software to ensure that backups are completing successfully (backups must be full backups without resetting the archive bit, also known as a copy backup)

8. Check for disk fragmentation, and defragment if necessary (it is recommended that defragmentation should be carried out nightly, using Diskeeper)

9. Check the Application and System logs for any errors or warnings

10. Check the RAID array management software for any disk errors or failures

11. Check the G_SUPPORT files are in sync with the primary server

12. Check the Guest account is disabled and that there are no open read/write shares on the server. Shares with full access pose a virus risk. The only share normally required is the ENPS share - which should be "read only".

Additional Checks During Scheduled Downtime

These should be carried out at least monthly.

1. Run CHKNTFS which will report whether the volume is "dirty", requiring a CHKDSK.

2. If necessary, run CHKDSK. This can be run in read-only mode (without any parameters) to check for errors, and only run in full mode if necessary. However, be aware that files locked by users or Index Server may report as errors.

3. Check `DIRSIZE.TXT` (in the main `%Servername%` directory) to make sure the number of files in a folder is not causing a performance problem on the server. This can happen in folders not automatically maintained by NOM Maint such as Personal areas, and MOS folders. Directories should generally not contain more than several thousand files.

4. Check the number of directories in the NWS folder. There should be one per hour that news wires are retained (e.g. 96). Too many directories indicates that wires are not purging correctly.

5. Check for any critical or recommended updates/patches for the Microsoft OS at the Windows Update Website – but DO NOT install the IIS Lockdown utility.

6. Check the ENPS Support Forum for any ENPS Software Updates.

Optional/Occasional Checks

1. `CHKDSK /f` should be performed at a regular interval, especially during ENPS software upgrades.

2. Test MOS functionality during Buddy failover if your MOS vendor supports it.

3. Run a test restore from a backup of your ENPS servers, to be certain that you would be able to recover if you lose data on both servers (but ensure the target of the restore is not the production server. If it is you'll overwrite the new data with old information).

Backing Up Files

You should backup files regularly, depending on the size of your enterprise and the number of updates to your system.

Step 1: Disk error checking

1. Make sure you have valid data backups and copies of your operating system Emergency Repair Disks. The Emergency Repair Disk (ERD) is a vital tool for server administrators. It is used to repair an operating system if the files become corrupt, which would otherwise require re-installing the operating system. ERDs are unique for each workstation, so you must perform this step for each machine and store the disks in a safe place. Create the ERD by entering the following command at the command prompt:

```
RDISK /S
```

2. Run system diagnostics and, if possible, a disk volume CHKDSK to ensure filing system integrity.

3. Install the latest Windows Service Pack. Service Packs are available from `http://www.microsoft.com`.

4. Master File Tables (MFT) can become fragmented over time, resulting in slower performance. While much of the MFT can be cached so that disk I/O does not have to be processed every time a file is used, the MFT is still accessed more than any other file. This means that MFT fragmentation is likely to have more impact on the system than fragmentation of any other single file.

5. Since all MFT records are 1024 bytes, it is a good idea to match the allocation unit size to the MFT record size. Files that are small enough are stored entirely

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within their own MFT record. Do not enable any directory compression. Even though there may be a disk space savings benefit, significantly more memory and MFT space would be required, which would slow down other server processes.

6. Defragment the disk if time permits.

Step 2: Backup directories

The following folders should be backed up regularly:

```
\%PRIMARY-MACHINE-NAME%
\%PRIMARY-MACHINE-NAME%_H
\%PRIMARY-MACHINE-NAME%_Inactive
\%BUDDY-MACHINE-NAME%
\%BUDDY-MACHINE-NAME%_H
\ENPS
\NWP
\NOM
\COMMON
```

It is not necessary to back up \CATALOG.WCI, since this index is always rebuilt after a system rebuild. \NWS contains wire material and should not be backed up.

Performance Monitoring

You can monitor certain information on client workstations by activating the workstation's MAC address for local logging. Enter the MAC Address of the workstation in the **System → MAC Addresses** table of ENPS (G_MACS).

Enable monitoring for the MAC address in question by checking the "Monitor" box. Make sure the "Active" box is checked. You will have to enter something in the "AcctCode" box before you will be allowed to save this file. This can be anything.

Restart the NOM on the ENPS server. In [ENPS] section of the local ENPS.INI, enter the setting CtrlAlt=1. After restarting the ENPS client on the designated workstation and performing the operations to be benchmarked, the user can press Ctrl+Alt+M to open a window displaying statistics with an option to print a summary. Date/time, action, details, and elapsed time (in seconds, accurate to .001 seconds) are shown.

The following functions are monitored:

- Logins
- Opening a script
- Opening an agency news wire item
- Displaying an audio/video object
- Opening a folder list
- Searches
- Updating a Rundown
- Messaging

The log is cleared each time the ENPS client is restarted.

Audit logs

User session logs are maintained as a basic audit trail in either the `D:or F:` drive `\COMMON\AUDIT` folder. Files are stored in directories named as follows: `\YYYY\MM`

`YYYY` is a four-digit year and `MM` is a two-digit month. This directory contains files named in the format: `LOGOUT_YYYYMMDD.LOG`

`YYYY` is a four-digit year, `MM` is a two-digit month, and `DD` is a two-digit day. For example, the access logs for December 2, 2000, would be stored and named as follows:

`\COMMON\AUDIT\2000\12\LOGOUT_20001202.LOG`

This file contains the fields shown below, delimited by tabs, and can be imported into other applications for analysis, such as Microsoft Excel.

- Logout time
- Login time
- Session ID
- Computer name
- IP address
- User ID
- MAC address

The directory also contains a monthly log file showing the status of any Buddy Server, named in the format: `<servername>_YYYYMM.LOG`

ENPS Language Support

ENPS works with a large number of languages in countries all over the world. This section will help you set up ENPS to work with the needs of your station.

Customizing the Interface for Non-English Languages

You can customize the text in the ENPS interface to reflect the language spoken at your station by translating the entries in the language file on the Primary Server to match your local language.

1. On the Primary Server open the `\COMMON\G_SUPPORT` folder. Open the English language file `g_langen` in a text editor such as Notepad.

2. Locate a base language code or a dialect code from one of the following tables that best describes the language spoken at your station:

Base Language Codes

Language	Code	Language	Code
Afrikaans	AF	Latvian	LV
Albanian	SQ	Lithuanian	LT
Arabic	AR	Macedonian	MK
Basque	EU	Malay	MS
Belarusian	BE	Maltese	MT
Bulgarian	BG	Norwegian	NO
Catalan	CA	Polish	PL
Chinese	ZH	Portuguese	PT
Croatian	HR	Raeto-Romance	RM
Czech	CS	Romanian	RO
Danish	DA	Russian	RU
Dutch	NL	Serbian-Cyrillic	SR
English	EN	Setsuana	TN
Estonian	ET	Slovenian	SL
Farsi	FA	Slovak	SK
Finnish	FI	Sorbian	SB
Faeroese	FO	Spanish	ES
French	FR	Sutu	SX
Gaelic	GD	Swedish	SV
German	DE	Thai	TH
Greek	EL	Turkish	TR

Hebrew	HE	Tsonga	TS
Hindi	HI	Ukrainian	UK
Hungarian	HU	Urdu	UR
Icelandic	IS	Vietnamese	VI
Indonesian	IN	Xhosa	XH
Italian	IT	Yiddish	JI
Japanese	JA	Zulu	ZU
Korean	KO		

Base Dialect Codes

Language/ Dialect	Code	Language/ Dialect	Code
Arabic-U.A.E.	ARAE	French-Canada	FRCA
Arabic-Bahrain	ARBH	French-Luxembourg	FRLU
Arabic-Algeria	ARDZ	French-Switzerland	FRCH
Arabic-Egypt	AREQ	German-Austrian	DEAT
Arabic-Iraq	ARIQ	German-Lichtenstein	DELI
Arabic-Jordan	ARJO	German-Luxembourg	DELU
Arabic-Kuwait	ARKW	German-Switzerland	DECH
Arabic-Lebanon	ARLB	Italian-Switzerland	ITCH
Arabic-Libya	ARLY	Portuguese-Brazil	PTBR
Arabic-Morocco	ARMA	Romanian-Moldova	ROMO
Arabic-Oman	AROM	Russian-Moldova	RUMO
Arabic-Qatar	ARQA	Sami-Norway	SAMI
Arabic-Saudi Arabia	ARSA	Spanish-Argentina	ESAR
Arabic-Syria	ARSY	Spanish-Bolivia	ESBO
Arabic-Tunisia	ARTN	Spanish-Chile	ESCL
Arabic-Yemen	ARYE	Spanish-Columbia	ESCO
Chinese-PRC	ZHCN	Spanish-Costa Rica	ESCR
Chinese-Hong Kong	ZHHK	Spanish-Dominican Republic	ESDO
Chinese-Singapore	ZHSG	Spanish-Ecuador	ESEC
Chinese-Taiwan	ZHTW	Spanish-Guatemala	ESGT
Dutch-Belgium	NLBE	Spanish-Honduras	ESHN
English-Australia	ENAU	Spanish-Mexico	ESMX
English-Belize	ENBZ	Spanish-Nicaragua	ESNI

English-Canada	ENCA	Spanish-Panama	ESPA
English-Ireland	ENIE	Spanish-Peru	ESPE
English-Jamaica	ENJM	Spanish-Puerto Rico	ESPR
English-New Zealand	ENNZ	Spanish-Paraguay	ESPY
English-South Africa	ENZA	Spanish-El Salvador	ESSV
English-Trinidad	ENTT	Spanish-Uruguay	ESUY
English-United Kingdom	ENGB	Spanish-Venezuela	ESVE
French-Belgium	FRBE	Swedish-Finland	SVFI

3. Select **File → Save as** and save a copy of the language file, naming it `g_lang` followed by either the two characters of the base language or four characters of the base dialect you are using. For example, if language spoken is Chinese the language file would be named `g_langzh` or if the local dialect is Chinese-Taiwan the language file would be named `g_langzhtw`.

4. Restart ENPS and select **Fourth Folder rover → System Maintenance → Language Resources**. Highlight your language resource file in the list at the left, select *Edit* and then click *Validate*. Any changes to the master English file requiring translation will be added at the bottom of the file. Click *Save*. You will need to edit this file later to localize any necessary changes. Exit the ENPS client. When users restart the client on their workstations, they will be upgraded to the new client.

Dictionaries for spell-checking are available in U.S. English, U.K. English, Dutch, French and Spanish. U.S. English is the default. Run `DICT3000.EXE` from the installation package to install an alternate dictionary file for the clients.

The U.S. English language resource file `G_LANGEN` and the field definitions table `G_FIELDDEF` are always overwritten with the new masters when an update is installed. Other language files are preserved.

If you have a non-U.S. English language environment, you must validate the local language file against the new English master. Update software components before your users reconnect and then make any suggested changes.

If you want to accept the updated AP files for other languages, copy the new AP masters for those languages from the following directory `\COMMON\G_SUPPORT\MASTERS` to `\COMMON\G_SUPPORT`.

To fully support printing right-to-left languages such as Arabic you must add the following setting to the `[ENPS]` section for a workstation's local `ENPS.INI` file:

```
[ENPS]
RTLPrint = 1
```

Dictionary, Thesaurus and Pronouncer

AP provides dictionaries for checking spelling in English (U.S. and U.K.), Dutch, French, German, Italian, Norwegian, Polish and Spanish. The AP thesaurus is currently available only in U.S. English.

You may add more words specific to your locale or requirements, one word per line, to the file `SUPP.DIC` in the `\ENPS\DICT` directory on the server. Each

time the client software is updated or installation is manually executed, this supplemental file will be updated on client workstations for their use.

Language	Dictionary
Croatian	`SpellHR.lex`
Czech	`SpellCS.lex`
Danish	`SpellDA.lex`
Dutch	`SpellNL.lex`
German	`SpellDE.lex`
English (UK)	`SpellENGB.lex`
English (US)	`SpellENUS.lex`
French	`SpellFR.lex`
Italian	`SpellIT.lex`
Polish	`SpellPL.lex`
Slovenian	`SpellSL.lex`
Spanish	`SpellES.lex`
Swedish	`SpellSV.lex`

ENPS allows you to enable multiple dictionaries for simultaneous use.

Working in Two Languages

If one of the ENPS clients needs to work in two languages, you will need to configure Windows to support both languages on each workstation.

1. In Windows XP, open the Windows Control Panel and select *Regional and Language Options*. Click the *Languages* tab and then click *Details.* In earlier versions of Windows, these options can be found under *Keyboards.*

2. In the *Text Services and Input Languages* dialog, click *Add.* Select the language that you want to add to the current Windows language. Click *Ok.*

3. The language bar icon will appear in the Windows taskbar with a blue icon which you can use to switch to the other language. It is possible to switch between languages using left `Alt+Shift`, although this key combination is configurable.

4. Each language will have special its own combinations to produce characters. In Spanish, for example, to create an accented character press the single quote ` key plus a letter; plus and equal symbols generate: ¡ ¿ and the ; key produces ñ.

My ENPS Setup

The silver-colored separators in the My ENPS window can be changed in the ENPS language file by selecting **Fourth Folder rover** → **System Maintenance** → **Language Resources**. You can change the following settings:

```
SlugsTodaysRundowns=Today's Rundowns
SlugsTodaysNewsgathering=Today's Newsgathering Grids
SlugsReadIns=Read-Ins
SlugsMessages=Messages
SlugsAssignments=My Assignments
```

Notes on Language Support

- ENPS is compatible with international versions of Windows 2000 and Windows XP.

- It is up to the user to select the keyboard layout for a script. For new scripts, ENPS will use the currently active keyboard layout. Users can have multiple keyboard layouts, even for the same language. ENPS will attempt to find an installed keyboard layout for a language that is compatible with a selected script (rather than requiring the exact sub-language). For example, if a user selects a British English script but no British keyboard layout is installed, ENPS will use any available English keyboard layout.

- If you are not using U.S. English, open the Control Panel and double-click the Regional Settings icon. Make any changes appropriate for your region. ENPS reads language and keyboard settings from Windows. Language and keyboard selections are made using the Windows taskbar or hotkeys, as with most other Windows applications.

- ENPS can be translated into any single-byte character set language and ships with English (U.S. and British), Danish, French, German, Norwegian, Spanish, Portuguese, and Turkish tables. Contact Associated Press Broadcast Technology for information on how to customize these files.

- Some locale-specific script menu items (Upper/lower case, Fonts, and Dictionary/Thesaurus/Pronouncer) are automatically disabled and not visible for languages not using the ANSI (1252) code page.

- If you are using a double-byte character language and your output to the CG is being sent incorrectly, add the setting `UseSBCGOutput=1` to the `[CG]` section of the `ENPS.INI` file on clients connected to the CG device.

- Certain code pages such as Turkish and Russian may have a delay when opening stories. If this is the case, enable the UseSingleFont option in the global configuration options

Right-to-Left Languages

- Right-to-left language support is available only on versions of Windows that support it (e.g., Arabic, Hebrew), allowing users to view/edit scripts with Arabic and Pan-European text.

- Users in the Arabic locale have the option to view text either left to right (LTR) or right to left (RTL). To override the default of RTL, select Personal Settings and select LTR.

- In a right-to-left language environment, titles which include a number (e.g. "500 News") may sometimes display in the List Window in an incorrect sequence. This is due to a limitation of the Windows right-to-left conversion process.

- If your language is Farsi you should specify a font ENPS can use to display Farsi characters if a script's current font cannot be found or cannot properly render the Farsi character. You can either set the `FarsiTextBoxFont` for all clients in the Global Configuration Options or in the `ENPS.INI` to specify it for a particular workstation. Refer to *Global Configuration Options* on page 80 or *Configuration Settings in ENPS.INI* on page 32 for more information.

- An `ENPS.INI` setting `SearchAutoKeyboard` lets RTL language users override or specifically enable an ENPS feature which prevents an operating system level conflict that can cause the keyboard language being switched in some ENPS text boxes, such as the Search box. Refer to *Configuration Settings in ENPS.INI* on page 32 for more information.

Arabic

If you are having trouble displaying Arabic characters correctly add the following character mappings to the `NWP.INI`:

```
[StringTransEBU]
<Restrictions>=&H0052;&H0065;&H0073;&H0074;&H0072;&H0069;&H
0063;&H0074;&H0069;&H006f;&H006e;&H0073;&H000d;&H000a;&H000
d;&H000a
</Restrictions>=
<Dopesheet>=&H0044;&H006f;&H0070;&H0065;&H0073;&H0068;&H006
5;&H0065;&H0074;&H000d;&H000a;&H000d;&H000a
</Dopesheet>=
<Shotlist>=&H0053;&H0068;&H006f;&H0074;&H006c;&H0069;&H0073
;&H0074;&H000d;&H000a;&H000d;&H000a
</Shotlist>=
<ItemID>=&H0049;&H0074;&H0065;&H006d;&H0049;&H0044;&H000d;&
H000a;&H000d;&H000a
</ItemID>=
&H000d;&H000a;&H000d;&H000a;&H000d;&H000a=&H000d;&H000a;&H0
00d;&H000a
&H003c=
&H003d=
&H003e=
&H0040=
&H005e=

[StringTransAReA]
&H064d=&H0652
&H064c=&H0651
&H064b=&H0650
&H064a=&H064d
&H0649=&H064c
&H0645=&H0643
&H0644=&H0641
&H0639=&H063a
&H0638=&H0639
&H0637=&H0638
&H0646=&H0644
&H0648=&H0646
&H0647=&H0645
&H203a=&H0644;&H0627
&H00ac=&H060c
&H00bb=&H061b
&H00d7=&H0637
&H00e0=&H0640
&H00e2=&H0642
&H00e7=&H0647
&H00e8=&H0648
&H00e9=&H0649
&H00ea=&H064a
&H00eb=&H064b
&H00ee=&H064e
&H00ef=&H064f
&H003c=
&H003d=
&H003e=
```

```
&H0040=
&H005e=

[StringTransTAra]
&H0041=&H0621
&H0042=&H0622
&H0043=&H0623
&H0044=&H0624
&H0045=&H0625
&H0046=&H0626
&H0047=&H0627
&H0048=&H0628
&H0049=&H0629
&H004a=&H062a
&H004b=&H062b
&H004c=&H062c
&H004d=&H062d
&H004e=&H062e
&H004f=&H062f
&H0050=&H0630
&H0051=&H0631
&H0052=&H0632
&H0053=&H0633
&H0054=&H0634
&H0055=&H0635
&H0056=&H0636
&H0057=&H0637
&H0058=&H0638
&H0059=&H0639
&H005a=&H063a
&H0061=&H0641
&H0062=&H0642
&H0063=&H0643
&H0064=&H0644
&H0065=&H0645
&H0066=&H0646
&H0067=&H0647
&H0068=&H0648
&H0069=&H0649
&H006a=&H064a
&H003c=
&H003d=
&H003e=
&H0040=
&H005e=
&H000d;&H000a;&H000a=
```

Eastern Europe

- Some characters from the ANSI 1250 codepage such as the Polish "ñ", Slovak "ò" and Czech "ì", as well as other characters following them on the same line, may be displayed in an incorrect SimSun font after a script containing such characters is saved and reopened. This is due to a Microsoft limitation of the presentation of these Unicode characters.

Eurasia

- Windows XP is specifically required for clients using Azeri, Kazak, Uzbek and Kyrgyz language support. Earlier versions of Windows lack proper locale, codepage and character set/font support for these languages.

Swedish

- If you are in a Swedish locale, some instances of the date sort order of Search items may be displayed incorrectly. To correct this issue, add the entry `LocalSort=1` in the `[ENPS]` section of the `ENPS.INI`.

Chinese

- Far East language support is available only in the Far East versions of Windows, without which Chinese scripts cannot be viewed. With it, users can view/edit scripts with the respective Far East glyphs and Pan-European text.

- To ensure that forward search on agency copy and highlighting in Chinese works correctly, complete the following steps:

1. In the Global Configuration Settings add `ChineseCILocale=NEUTRAL` and `UnicodeForwardSearch=1`. Restart the ENPS client.

2. In the `NWP.INI`, ensure that the parameter `Unicode=1` is included in the `[NWP]` section.

3. Locate the following key in the registry on the server:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\
ContentIndex\Language\Neutral
```

If you are using Simplified Chinese, set the values for this key as follows:

NoiseFile	noise.chs
StemmerClass	{78fe669a-186e-4108-96e9-77b586c1332f}
WBreakerClass	{9717fc70-c1bc-11d0-9692-00a0c908146e}

These values should be consistent with the values in this key:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\
ContentIndex\Language\Chinese_Simplified
```

If you are using Traditional Chinese, set the values for this key as follows:

NoiseFile	noise.cht
StemmerClass	{78fe669a-186e-4108-96e9-77b586c1332f}
WBreakerClass	{954F1760-C1BC-11D0-9692-00A0C908146E}

4. Locate the following key:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\
ContentIndex
```

For the `DLLsToRegister` value, if it contains `Query.DLL`, remove it from the value data.

Database Structure

Each ENPS server hosts multiple tables that can be global, server-based, user-based, and program-based. Table structures are not defined here, as such information cannot be manipulated outside of ENPS.

Globally Replicated Tables

Global tables are stored in the `\COMMON\G_SUPPORT` directory on the Central Server and are replicated to all other ENPS servers as part of the Maintenance process. All changes, no matter what server a user is accessing while making changes, are made on the Central Server. The replication interval is defined as a *Maintenance* process option and defaults to 30 minutes.

G_AUTOMAC	Automation macros table
G_CONFIG	Global configuration table
G_FIELDDEF	System field definitions table
G_FIELDLOC	Local field definitions table
G_LANGEN	Master English resource table
G_LANG*	Other language resource tables
G_MACS and G_MACS.NEW	MAC address table
G_MOS	Media Object Server table
G_NOISE*	Noise word list table
G_PROGRAMS	Program/group table
G_SECURITY	Security level table
G_SERVERS	Server list table
G_STAFF	User table

Each group has its own tables on its home server containing stories, Rundowns, group messages and other group data in a directory with the same name as the server (e.g., `F:\BNCENPS01`). A directory with a "_H" suffix holds history data (i.e., previous versions of public scripts). NWP-related tables are stored in `F:\COMMON\C_SUPPORT`:

C_CATEGORIES	NWP categories table
C_PROVIDERS	NWP providers table

`C_CATEGORIES` and `C_PROVIDERS` are regenerated automatically at start-up, based on the contents of `\NWP\NWP.INI.`

ENPS clients communicate with the appropriate server. The directories displayed below are local to production servers and are not replicated.

S_ARCHIVE	Archived data
S_PRIV	User and program/group privileges tables

S_SUPPORT	User and program/group profiles table
U_*	User data
P_*	Program/group data
D_*	News wire story tables, by category and provider

User Folders

Each ENPS user has his/her own set of folders which store items such as current work in progress and incoming messages. A home server communicates with the user's ENPS client, wherever the user is working.

M	Received top-line messages
W	Private, work in progress data (including scripts, Rundowns, and other items)
T	Private deleted items/trash

Program/Group Folders

Each program or group has its own set of folders. Table names are generated from a unique program or group ID, such as BNCENPS01.

C	Contacts
G	Character generator templates
L	Rundown templates and Newsgathering Grid templates
R	Report layouts
T	Public deleted items/trash
V	Stored layouts for Rundowns and Newsgathering Grids
W	Public, work in progress data (including scripts, Rundowns, and other items)
X	Script and grid templates

Compound Storage

Compound storage lets you store archived Rundowns and Newsgathering Grids, along with their associated scripts and items, as a single delimited file rather than as separate records. Using compound storage reduces the number of files on servers by as much as 97%, greatly reducing the number of files to be indexed. This is especially important at stations that have millions of records.

Search Results with Compound Storage

Using compound storage users will continue be able to access archived material easily, without compromising their access to work in progress. Users will see the following differences with their search results if compound storage is used:

- Uncompressed archives stories and Newsgathering Grid items will be returned to the List Window as individual items.

- When an item is found with a search it will not appear in the List Window as an individual item. Instead, the Rundown or Newsgathering Grid will be returned. When the user opens the Rundown or Newsgathering Grid the search term will be highlighted in red.

Configuring Compound Storage

Compound storage is configured through an application on the ENPS server called `WALKCS.EXE`. This application reviews archive folders and converts Rundowns and Newsgathering Grids older than a certain number of days to the compound storage model.

Start the `WALKCS.EXE` on the server if it is not already running. In the box labeled *Convert items more than XX days old* enter the number of days before items should be converted to compound storage. The recommended value is 365; the maximum is 730. Lower volume sites may want to increase the number of days in this setting. If you stations is not running WalkCS or you have it set to a high number of days and you are experiencing index corruption or an excessive number of files contact the ENPS support team to review your WalkCS settings.

Additional options will also allow you to choose the day of the week, and the time that the compound storage utility will run. When the settings are activated, the application will review all files in the archive folder and compress those which are older than the configured time frame. The application will also produce a log file in the `\NOM\LOGS` directory.

Converting Legacy Archives

The `WALKCS.EXE` utility may be run on legacy archives by clicking on the *Run now* button. Especially if there are a large number of files to be converted, it is recommended that this operation be conducted at a time of low ENPS usage. The process must also be conducted on the Buddy Server as well.

Appendix D

Registry Settings

This section lists the changes that ENPS makes to the system registry on your Primary Server and Buddy Server.

```
HKLM\SYSTEM\CurrentControlSet\Control\contentindex
EventLogFlags=2
FilterDelayInterval=2
FilterFilesWithUnknownExtensions=1
FilterRemainingThreshold=5
FilterRetryInterval=2
GenerateCharacterization=1
IsapiMaxEntriesInQueryCache=0
IsapiMaxRecordsInResultSet=5000
MaxCharacterization=45
MaxFilesizeFiltered=4096
MaxFreshCount=40000
MaxRestrictionNodes=3000
MaxRunningWebHits=200
MaxWebhitsCpuTime=7200
PropertyStoreMappedCache=varies based on available RAM

HKLM\SYSTEM\CurrentControlSet\Control\FileSystem
NtfsDisable8dot3NameCreation=1 NtfsDisableLastAccessUpdate=1

HKLM\SYSTEM\CurrentControlSet\Services\Browser\Parameters
MaintainServerList=Auto

HKLM\SYSTEM\CurrentControlSet\Services\EventLog\Application
MaxSize=1048576
Retention=0

HKLM\SYSTEM\CurrentControlSet\Services\EventLog\Security
MaxSize=1048576
Retention=0

HKLM\SYSTEM\CurrentControlSet\Services\EventLog\System
MaxSize=1048576
Retention=0

HKLM\SYSTEM\CurrentControlSet\Control\contentindex
DelayUsnReadOnLowResource=0
DesiredIndexingPerf=3
DesiredQueryingPerf=3
LowResourceSleep=5
MaxWordlistIo=4294967295
MaxWordlistIoDiskPerf=100
ScanBackoff=0
ServiceUsage=4
StartupDelay=60000
UsnReadMinSize=1
WordListUserIdle=0

HKLM\SYSTEM\CurrentControlSet\Control\Services\cisvc
Start=2
```

Port Assignments

ENPS uses a range of ports beginning with 10501 for TCP and/or UDP messaging. The following ports are currently assigned, but are subject to change:

NOM	Purpose
10505/10506	Receive client TCP requests
10507/10508	UDP datagrams
10510	Private channel TCP messages
10509	Chat
NWP	**Purpose**
10511	NWP-to-NWP TCP connections
10512/10513/10517	Used for UDP datagrams
MOS	**Purpose**
10540, 10541, 10542	Used by the MOS Protocol
10543-10549	Reserved for future MOS functionality

The NOM sets the remote port to 10507 and then binds 10508. The client sets local port to 10508 and binds 10507.

The NWP sets remote port to 10512 or 10517 and binds 10513. The client sets local port to 10513 and binds 10512. The ENPS client must do a directory scan on the read-only \ENPS share on all ENPS servers. If the client has permission to read files on the \ENPS share then they have domain authentication. The client makes a request via TCP port 139 to the ENPS servers.

Set PacketVersion=2 in the [TCPIP] section of NWP.INI to support non-English news wire feeds, and port 10517 may be automatically used in addition to 10512 and 10513 for UDP datagrams. The Port entry has been removed from the socket configuration screen and is maintained manually in the NWP.INI file.

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