

AnyQueue®

Installation and User's Guide

V1.2

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Levi, Ray & Shoup, Inc.
2401 West Monroe Street
Springfield, IL 62704
Phone: 217-793-3800
Fax: 217-787-4014
<http://www.lrs.com>

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Technical Support

Levi, Ray and Shoup, Inc., offers technical support for each product. The fees for technical support are included in the maintenance charges for that product only. In order to provide you with the best technical support possible, it is recommended that you observe the following procedures:

What To Do Before You Call

Many questions can be answered by studying the proper sections of this manual. Also, review any README files on the product CD or help files created during the install process.

Verify that your hardware and software is configured according to the recommendations described in this manual. Due to the nature of the AnyQueue product, this process may require more than a single person. Please be sure to consult the proper persons to verify the configuration information. If you continue to experience difficulty in configuration or operation, please attempt to write down a detailed description of the problem, when it occurs, and the steps necessary to repeat it.

For example:

- Has the software worked correctly at any time before the problem?
If yes, what has been changed?

- Can you reproduce the problem?
If yes, what steps were taken to produce the problem?

- Did any messages appear?
If yes, record all of the information.

When You Call

Please have the following information ready when calling for technical support:

- A. Customer ID, Company name, and product name.
- B. Product version. The version for AnyQueue can be obtained by accessing the log; the General screen of the AnyQueue Configurator; the Connection screen of the AnyQueue Console; or from the original product CD.
- C. Computer brand, model, and the brands and model numbers of any additional hardware.
- D. Operating system and version number. This includes both the server operating system and any workstation operating systems.
- E. APPC or workstation emulation product name, vendor, and version number.
- F. Contents of your configuration file.

When and How to Call

Levi, Ray and Shoup, Inc., technical support is available Monday through Friday, from 8:00 A.M. to 5:00 P.M. Central time. Call 217-793-3800 and follow the menu instructions.

If all of the technicians are busy you can leave a message. Please include your name, customer ID, company name, telephone number, and a brief description of the question or problem.

Emergency Support

Technical support is also provided 24 hours a day, 7 days a week for emergency situations. An emergency situation is when a production LRS product is inoperable. The number to call for emergency technical support is 217-793-3800.

Fax Machine

The Levi, Ray and Shoup, Inc., fax machine is available for sending information that may be requested by the support technician. The fax number is 217-787-4014.

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Summary of Releases

The following table contains the release numbers assigned to AnyQueue.

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AnyQueue V1.2.000

Note: AnyQueue/WebTRAC 1.2.000 and later require LRS/Web Connect 1.0.005 or later.

- All AnyQueue Web screens and resources have been updated.
- AnyQueue configuration is now available via the Web interface.
- WebTRAC Job Rights and Mail Notification can now use Text matching.
- AnyQueue can now send to another AnyQueue or to DRS.
- AnyQueue can now send to TCP/IP printers.
- Encrypting to supported Lexmark printers now available.
- When receiving from AnyQueue, a PRQ (an overriding print queue selector) can be sent. To honor this for selection instead of using Jobname, Class, Dest, etc., select “Honor PRQ” on the Host definition.
- Outbound ASCII datasets now can be converted to ASA.
- Grouping received datasets is now possible.
- Redirected print can now select page and line ranges and alter the target e-mail ID, if applicable.
- Jobs in the **JobList** can now be sorted by Entry Date.
- Routes that can put output on hold, can now be held without specifying a Line or Page Limit.
- Connection Web page now displays:
 - 1) License count.
 - 2) Highest concurrent number of logged on users.
 - 3) Number of denied connections due to licensing limitations.
 - 4) Number of forced connections by administrators.These statistics are not kept between AnyQueue runs, but are dumped into the log at termination if the “Information” debug flag is set.
- You can now specify AnyQueue’s e-mail ID.
- Engine page enhancements include:
 - 1) Log Archive.
 - 2) Log Delete.
 - 3) Job Processors Statistics.
 - 4) Job Request Processors Statistics.
 - 5) Download Full Log.
- Multiple connections to a single defined TCPIP Host.

AnyQueue V1.2.001

- WebTRAC maintenance runs at midnight by default. You can now specify the time you want it to run.
- For TCP/IP printers, two new flags have been added - **Assured Delivery** and **WebTRAC Page Restart**. (These options must be supported by the target printer.)
Assured Delivery will not consider the job printed until the last piece of paper is sitting in the output tray.
WebTRAC Page Restart will monitor the actual number of pages printed and if restarting is required, will pick up with the next physical page.
- Ability to manually cancel jobs destined for LPR or TCP/IP has been added. WebTRAC will no longer force a max timeout of 15 minutes if it can not deliver to these destinations.

AnyQueue V1.2.005

Note: AnyQueue 1.2.005 will convert your **aqusr.dat** file to a new format, update your **aqusr01.idx** and **aqusr02.idx** files, and rebuild you **aqjobs02.idx** file. Backup all your TRAC files before starting AnyQueue 1.2.005.

- Folders have been created for organizing jobs.
- 80 byte notes can be assigned to jobs.
- 80 byte notes can be sent to WebTRAC users.
- Password limits have been added.
- LPR Extensions have been added to allow 'User Defined' data to be sent in the control file.
- Job List can now be filtered by Route.
- Job List can now be filtered by Job Status.
- **Prefix Line Length** route flag Added. This will put a 2 byte binary line length (not including the length field) in front of every line. Non binary only. Another flag, **Include size of Prefix**, will include the size of the length field.

AnyQueue V1.2.008

- Export/Import of configuration objects added.
- Built in mini Web Server added for quick setup.
- Default Route added to Preferences.
- Reprint option added. This will reprint to the original route. Multiple jobs can be selected.
- My Print option added. This will print to the Default Route in the User's Preferences. Multiple jobs can be selected.
- Report option added to WebTRAC.

AnyQueue V1.2.009

- Outbound LPR routes can now force the **Print Formatted File** flag to be set.

AnyQueue V1.2.010

- When configuring, you can now specify the **Move After** field for **Clone**, **Import**, and **New** requests.

AnyQueue V1.2.011

- Configuration files can now be printed.
- Configuration Lists can be filtered by a Name Mask.

AnyQueue V1.2.012

Note: AnyQueue/WebTRAC 1.2.012 and later require LRSAPI 1.0.020 or later.

- Global Temp File prefix can now be overridden.
- New variable, **+UNIQUE**, will return a 16 character unique value.
- A backup file can now be created when saving the configuration file.
- Route object can now be converted to different types.
- The log can now be set to **archive** every time AnyQueue starts, and/or after a specified number of concurrent days of operation.
- The Default Start Page can now be specified in the User Preferences.
- New user flags added to 1) prevent a password from expiring; 2) prevent a user from updating their profile information; and 3) prevent a user from changing their password.
- SAP support.
- SMTP result notification.
- Routes can now be held.
- Configuration objects can now be sorted by name.
Note: Sorting Route Assignment objects will modify the search sequence and may alter the selection process.
- New route types of **Emtex/VIP** and **FTP** added.

AnyQueue V1.2.016

- FCB support added.
- New flag “Bypass PCL ECHO Command” added for TCP/IP Printer Route types.
- “Top” and “Bottom” added to pages with lists.

AnyQueue V1.2.017

- TRAC subdirectory support added.

AnyQueue V1.2.018

- “Local Print” and “Save As” added to the Print option for browsers running on a Windows 32-bit platform. Plug-in installation required.

AnyQueue V1.2.019

- JIF Buffer support added for TCP/IP Printer Route Types.

AnyQueue V1.2.020

- “Find” added to Text file Browse.
- “Cancel” added to the Folder edit window.
- Added “Local Print Font Prompt” option for Local Print.
- New variable +**WTJOBID** will return the WebTRAC Job Id.

AnyQueue V1.2.021

- “Connection” page was modified from a single selection list to a multiple selection list. Multiple sessions can now be killed at once.
- The “WebTRAC Informational” debug flag has been REPLACED with two new system Debug flags: “WebTRAC Job Information” and “WebTRAC User Information”. The “WebTRAC Job Information” flag will log job related “WebTRAC Informational” messages, and the “WebTRAC User Information” flag will log user related “WebTRAC Informational” messages. All “WebTRAC Informational” messages can be captured in the system log by turning both flags on.
- A message is logged whenever a user account is locked due to unsuccessful user login.
- A message is logged if a user attempts to open a configuration file that has already been opened by another user.
- Added field “Default Timeout” to the “General” section of the AnyQueue Configuration file. The “Default Timeout” is initialized to 25 seconds, and as a general practice should be set to a value less than half of the “Error Retry” interval. The value specified in this field will be the default value entered into the “Timeout” field when adding new Emtex, LPR, or TCPIP printer routes.

AnyQueue V1.2.022

Note: AnyQueue version 1.2.022 requires version 1.0.28 of the LRS API.

- Added definitions for “Top” and “Bottom” to the online help web pages.
- A selected route is no longer returned from the Route Browse window if the user hits “Cancel”.
- The Form Name associated with a Route Assignment was displayed in the Writer field on the Configuration File Report.
- The Job Location associated with a File Host was displayed in the Wait Delay field on the Configuration File Report.
- The link associated with a Route on the Route Browse web page was removed.
- Jobs with an Error status will no longer “expire” from the Job List due to Retention Date expiration.
- Fixed a delay in AnyQueue Host processing.
- Changed the ROMS Name variable in the sapoms.txt file to ANYQ.
- Allows the user to schedule a reload for the AnyQueue engine. This is a one time event.
- Allows for a user to turn API or TCP tracing on or off without restarting the engine. It is controlled through the trace tab on the engine page. NOTE: API and TCP tracing is a Product Support problem debugging tool. Tracing should ONLY be turned on when instructed to do so by Product Support. Tracing will hinder system performance.
- Added new variable +**DSNAME**. DSNAME contains the JES generated dataset name.
- Added “Cancel” to the “Print” window.

AnyQueue V1.2.023

- The AnyQueue administrator can choose to be notified whenever a Report is generated from the “Report” page by selecting the email notification check box in the General section of the Configurator.
- “Port Number” for an LPD host and a TCPIP host, “TP Name” for an APPC host, and “Job Location” for a File host have been added to the “Host” tab on the “Engine” page and the “Host List” inside the Configurator.
- A clear icon has been added to all masking options.

AnyQueue V1.2.024

- Top and Bottom were documented twice on the route list help page.
- Added Prev, Next, Sort, and Select All to the configuration list help screen.
- Added a space on the configuration host help screen under the LPD section in sentences 3 and 4.
- The log message for turning on or off API and/or TCP/IP tracing was changed.
- Changed the report generated log message to be displayed when the WebTRAC Job Information or WebTRAC User Information debug flag is turned on. Previously, the report message was logged whenever the WebTRAC Status debug flag was set.
- The Note text on the “Notes” page would be cleared if you attempted to send a Note without specifying a User/Group, or if you typed the Note text before selecting a User/Group.
- If a Delete is performed from the “Notes” page without selecting a Note, an error message will be displayed.
- Changed the final name on the route list page from center justified to left justified.

AnyQueue V1.2.025

- The “Changes Pending” message was not being displayed on the “Configuration Menu” window if a Route was deleted.
- The title on the configuration menu screen was changed from “Configuration Name:” to “Configuration Menu for”.
- Changed the title on the cfgopen.htm page from “Open Configuration File” to “Configuration File List”.
- The “Command Help” dropdown list associated with a Route inside the Configurator was not being cleared after the clear icon (eraser) associated with the “Sequence Group” was selected.
- “Page” and “Line” range validation was not being performed on the “Print” page.
- Emtex Routes defined in AnyQueue running on Linux or UNIX may have generated an error whenever AnyQueue attempted to deliver a job to that destination.
- The return codes displayed in the AnyQueue log for synchronously executed backends that failed were incorrect.

AnyQueue V1.2.026

Notes: AnyQueue/WebTRAC 1.2.026 will convert your AnyQueue configuration files to a new format on start-up. Backup all of your configuration files (.cfg) before starting AnyQueue 1.2.026.

AnyQueue/WebTRAC 1.2.026 and later require LRSAPI 1.0.029 or later.

- “Fail Job on Backend Failure” flag was added as a new field to the Backend. This flag is ONLY applicable to a Synchronous Backend. When set and sending to a TRAC Route Assignment, the TRAC job will fail (status of error) if the Backend program fails to complete successfully (i.e. returns a non-zero return code). This feature is also supported for Standard Route Assignments that do not Group. If the Backend program fails to execute successfully, the Host Printer will EDRAIN. The “Fail Job on Backend Failure” feature is not supported for a Standard Route Assignment that Groups.

Bugs Fixed

- The Windows based AnyQueue Configurator application is no longer supported as of this release. Editing and saving files with this program could have caused corrupted configuration files.

HTML Changes

- Templates
 - cfgbe.htm
 - cfgls.htm
- Resources
 - cfgbeh.htm

AnyQueue Message Number Changes

- New
 - 1168
 - 4354
 - 4355
 - 10364
 - 10365

AnyQueue V1.2.027

Notes: AnyQueue 1.2.027 will convert your **aqusr.dat** and **aqjobs.dat** files to a new format. Perform a manual backup of ALL TRAC files and TRAC subdirectories before starting AnyQueue 1.2.027.

The time required to Convert Job data will vary depending on the number of jobs you have retained in TRAC. AnyQueue and WebTRAC will be UNAVAILABLE during the conversion run at startup. Please schedule your upgrades accordingly. The conversion utility will write informational messages to the AnyQueue log file while it is running. The conversion has completed whenever the following message is found in the log file: "Conversion 4 - User Conversion Ended."***

Enhancements:

- The following new columns have been added to the Job List: Page Count, Line Count (total lines in report), Job Name, Class, Dest, Form, and Writer. Page Count and Line Count will display "NA" if the TRAC file contains binary data. The new columns can be added to each individual's "Job List" by customizing their User Preferences.
- The "WebTRAC Job Name" and "WebTRAC Job Name Mask" fields have been expanded from 20 characters to 40 characters.

Bugs Fixed

- The "Destination" label on the "Route Assignment" window was changed to "Dest".
- System wide references to "Job Name" were changed to "WebTRAC Job Name".
- System wide references to "Job ID" were changed to "WebTRAC Job ID".
- System wide references to "Job Name Mask" were changed to "WebTRAC Job Name Mask".
- Attempting to view the "Host List" inside the Configurator could have caused a trap.
- Performing a Backup using the AnyQueue Management utility could have created an archive file that was not restorable if the configuration file specified during the Backup was corrupt or out of date.
- AnyQueue could have trapped if it failed to successfully read the AnyQueue configuration file on start-up.
- AnyQueue could have trapped if the Route processing a job without Carriage Control had its **Ignore CC** flag set.

AnyQueue V1.2.028

- AnyQueue may have failed to unlock certain job files when in an error state. This scenario would have caused subsequent lock failures to occur.

AnyQueue V1.2.029

Enhancements:

- Job ReRouting has been added to AnyQueue. The Route associated with a job can be changed from either the Job List (via the “ReRoute” link) or the Job Detail panel.

Bugs Fixed

- Attempting to generate the Group Relation Report using the AnyQueue Management utility could have caused a trap.
- The menu options displayed when browsing a job in a new window would have been incorrect after selecting cancel on the “Print” panel.
- Attach Type and Final Name were not included on the “Route Browse List” when attempting to associate a Route with TRAC Route Assignment.
- AnyQueue would trap on a Caldera (Intel) workstation when attempting to send jobs to AnyQueue, DRS File or DRS Queue Routes.
- AnyQueue was not catching and terminating after encountering a Segment Violation on a Caldera (Intel) workstation.
- First line on each page may have been suppressed when viewing a report that had been processed by a Route with the Convert ASCII to ASA flag set.
- The TRAC job expiration message was not specific as to why a job had expired.
- No warning messages were displayed on the TRAC Route window inside the Configurator if the Job Action flags were changed so that a job would not be retained in TRAC after delivery.

HTML Changes:

Templates

cfgbr.htm
jobdet.htm
joblist.htm
reports.htm
reprint.htm

Resources

cfgbeh.htm
jobdeth.htm
joblisth.htm
noteh.htm

AnyQueue Message Number Changes

New

1169
1170
1171
1172
3017
3018
4356
12019

AnyQueue V1.2.030

Note: AnyQueue/WebTRAC 1.2.030 and later require LRS/WebConnect 1.0.016 or later if using the compression option in LRS/WebConnect.

Enhancements:

- Minor change to compression algorithm used between AnyQueue and LRS/WebConnect.
- The file suffix range was changed from decimal (0-999) to hexadecimal (0-fff) when specifying a suffix of +TEMP.

Bugs Fixed:

- When performing a Backup using the AnyQueue Management utility, the user was not prompted with a warning message before replacing a previously archived backup file.
- AnyQueue could have lost jobs sent to it from LRSQueue if the Route Assignment processing the job had a Grouping variable specified.
- The AnyQueue viewer assumed that the TRAC file contained ASCII data if the file contained a null character (0x00).
- The Job Note added when ReRouting a job may not have been formatted correctly if the job did not have a Route associated with it in the Job List.

HTML Changes:

Resources:

[cfgwth.htm](#)

AnyQueue V1.2.031

Enhancements:

- Enhanced FCB Channel 1 support:
 1. WebTrac viewing - The definition in Channel 1 of the FCB will be used when a skip to channel 1 is encountered. If channel 1 is not defined in the FCB, then line 1 will be used.
 2. Delivery - An option was added to the route to honor the FCB channel 1 definition on outbound data. If this option is selected, then skip to channel 1 will advance to the correct line as defined within the FCB. Otherwise, line 1 will be used which is the current form of processing.
 3. Delivery to Printer that does not know how to process 0x0C (FF) character. An option was added to the route to not send the form feed character. Instead, blank lines will be added to advance the page determined by the form length within the FCB.
- Added a button to the configurator on the route assignment screen similar to the one on the route screen to convert a Standard route assignment to a TRAC route assignment. Converting from a TRAC route assignment to a standard route assignment will not be allowed.
- When a job is received with an FCB form length defined, the job will view with page breaks at the defined form length. Note: This change has no effect on delivery.

Bugs Fixed:

- AnyQueue may have entered a locked error state preventing new jobs from being processed. Multiple 0x21 Lock errors would have been logged in such a situation.
- Removed the assumption made by the AnyQueue viewer that the TRAC file contained ASCII data if the file contained characters between 0x00 and 0x1F.

AnyQueue V1.2.032

Bugs Fixed:

- When jobs were being grouped, the first line of the next job could be appended to the last line of the previous job.
- If a Form Feed was encountered past the FCB Form Length, the output may not have sent a new page.

AnyQueue V1.2.033

Bugs Fixed:

- When a Form Feed was encountered, an extra blank line could occur prior to the Form Feed during delivery.

AnyQueue V1.2.034

Enhancements:

- Added an Output Queue window to view jobs that are not in Complete status, i.e. - Printing, Pending, Error, or Paused.
- Added a link to each Route on the Route window. This link, when selected, will pass control to the Output Queue window. The Output Queue will display all non-complete jobs associated with the selected Route.
- Modified the Preferences to be a tabbed window allowing for the setting of general preferences applying to multiple screens, job list preferences, and output queue preferences.
- All references to Final Name and Final Name Override were changed to Destination and Destination Override, respectively.

Bugs Fixed:

- An error could occur when folders were being deleted.
- Some of the browse windows inside the configurator could have displayed two blank columns.
- When AnyQueue is running on a Windows 2003 server machine, the log could show a “?” for the Operating System.
- When cloning a Route, the folder associated with the original Route was not being associated with the clone.
- The message that gets displayed when a reload is requested, whether immediate or scheduled, will be displayed in the log regardless of the debug flags that are set. The message will contain the user ID, the date, and the time of the request.

AnyQueue V1.2.035

Enhancements:

- Added a pax file providing easier mainframe Web server access to the AnyQueue resource files. To use the pax file, copy the file (anyq.pax) to the mainframe in the Web server's document root directory. Then, unpx the file using a command similar to the following:

```
pax -rvf anyq.pax
```

Bugs Fixed:

- When small jobs were being sent to a TCPIP printer or through LPR, the printer could have ended up in an unrecoverable state. A disconnect wait time has been added to TCPIP printer and LPR route types. When specified, AnyQueue will wait a given number of seconds (0-255) prior to attempting another connection.
- When viewing a large file over a slow VPN connection, the connection could timeout not allowing the report to be viewed. A remote access checkbox has been added to the user maintenance screen to allow users to view large files over slow connections.
- Navigating from the engine page (tabs 4-7) to the preferences page could have caused a blank page to be displayed.
- Occasionally, multiple jobs would be delivered simultaneously to a serialized destination.

AnyQueue V1.2.036

Enhancements:

- Added checkpoint restart for files sent from a host supporting the restart of a file. If checkpointing is supported and transmission of a file to AnyQueue becomes interrupted, the file can be restarted from the point where the interruption occurred instead of resending the entire file. If the BDS changes before a restart can occur, then the job will be restarted from the beginning of the file. Inside the configurator is a new field called Checkpoint Restart Cleanup which tells AnyQueue how long (days) to allow a file used for checkpointing to remain in the restart directory. After the number of days (1-999), the files will be deleted. Checkpoint support requires VPS R.8.0 fix 610.
- Added support for the MDB file mime type in AnyQueue as well as the internal Web server contained within AnyQueue. If an MDB file is in WebTRAC and Access is installed, then the file can be browsed using Access.
- Added the jobname to the LPR control file. If a jobname does not exist, then NANYQ will be in place of the jobname. The file should appear inside the print manager as either <jobname> or ANYQ LPR FILE if there isn't a jobname.
- When a notification message is sent stating that the TRAC directory is becoming full, the message will include the IP address of the machine AnyQueue is running on.
- The user can select to view Paused jobs as a status filter in the joblist.
- Note: If a job is in WebTRAC as Pending **AND** Paused or as Error **AND** Paused, then the job will appear in the Pending or the Error list respectively as well.
- If text match is checked for a particular route assignment and the folder being matched does not exist, then the folder will be created automatically by AnyQueue so that the job will be stored in the assigned folder. If there are subfolders (or children) that also do not exist, these will be created also.
- When a terminate is requested, the user id who requested the terminate will be logged along with the terminate requested message. If the terminate is not performed by a user from WebTRAC then the message will display 'Unknown' as the user.
- When a scheduled reload is going to be performed, a message will be written to the log stating so. The user information will not be written to the log at this time since the reload could have been scheduled well in advance.

Bugs Fixed:

- Periodically, a job would get stuck in a Printing state even though it had been successfully delivered (processed).
- The management utility could cause a trap when rebuilding indexes.
- Occasionally, jobs would be delivered out of sequence to a serialized destination.
- Installation script modification (UNIX and Linux versions only).

AnyQueue V1.2.037

Enhancements:

- Enhanced system error detection and logging.

AnyQueue V1.2.038

Enhancements:

- Added the capability to view in WebTRAC LCDS data sent from VPS/LCDS. The page count and line count reported in the JobList and Output Queue correspond to the number of pages and the number of lines as determined by VPS/LCDS. When the job is viewed in WebTRAC, the contents will be listed as though the report were a single page.
- If a Memory Dump is requested via WebTRAC, a message noting the user making the request will be added to the AnyQueue log.

Bugs Fixed:

- The job “Reprint” action could have resulted in only a portion of the job being reprinted.
- Occasionally, jobs would get stuck in a Pending or Error State after an abnormal termination and restart of AnyQueue.
- When processing machine carriage control for viewing in WebTRAC, the line count for a skip to Channel could have been off by 1 line.
- The “ReRoute” and “Reprint” functions on the JobList and Output Queue pages could have caused jobs to be delivered out of sequence to serialized destinations.
- Sending a start or end sequence of {000}{000} instead of {NUL}{NUL} could have caused a trap on a non-Windows platform.
- Occasionally, the configuration file used to start AnyQueue was unnecessarily being saved (rewritten) to disk.

AnyQueue V1.2.039

Bugs Fixed:

- Sending multiple data files over a single connection to an LPD Host caused AnyQueue to trap.
- Occasionally, the jobname field inside an AnyQueue LPR control file would contain garbled data.

AnyQueue V1.2.040

Enhancements:

- Changed the current Job Detail page to a tabbed page. The first tab displays all of the original job detail information. The new tabs allow the user to view JES information associated with the job. The tabs are broken down into four categories:

- 1) Job Details (current view).
- 2) SYSOUT Attributes.
- 3) FCB Information.
- 4) Advanced Attributes.

Added the status of **cloned** to the Job Detail page. If a job was created via a clone, the status will show up in the job details panel as Complete/Clone, Error/Clone, etc.

Note: This will only be valid for new jobs added to WebTRAC.

- Added Thread ID to each message written to the AnyQueue log.

Bugs Fixed:

- Allow the user the ability to change the current working directory when using the command-line version of the management utility. Previously, the management utility needed to be ran from within the TRAC directory in order to work correctly.
- Added additional messages to the AnyQueue log to display system startup activity and progress.
- AnyQueue could have trapped when attempting to deliver a job if the TRAC file associated with the job did not exist.
- Added Admin Report Notification, Checkpoint Restart Cleanup, and Disconnect Wait Time to the Configuration File report.
- The message written to the log on an immediate reload and a scheduled reload were the same. Both cases were using the current date and time. A scheduled reload will now use the scheduled date and time.
- The message displayed when a dump was requested from the Engine page was producing an invalid message number entry in the log.

AnyQueue V1.2.041

Enhancements:

- Enhanced TRAC database validation performed at system startup resulting in a shorter startup interval.

Bugs Fixed:

- ReRouting a job in error from a serialized destination could have caused new jobs going to the serialized destination to get stuck in a pending state.
- The route activity counts (Paused/Pending/Printing/Error) displayed on the route page could have gotten out of sync if a new route was specified on the Job Detail page.

AnyQueue V1.2.042

Enhancements:

- Added support for the postscript PS and EPS file mime type in AnyQueue as well as the internal Web server contained within AnyQueue. If a postscript file is in WebTRAC and a postscript viewer is installed, the file can be browsed from AnyQueue.

Bugs Fixed:

- The Route activity counts (Paused/Pending/Printing/Error) displayed on the Route page could have gotten out of sync after selecting “Reset” or “RePrint” for jobs with a status of Error in the JobList or Output Queue.

AnyQueue V1.2.043

Bugs Fixed:

- When processing machine carriage control with an overprint (0x01 or 0x03), the line count for a skip to channel could have been off by 1 line.
- The Folder tree page may not have listed all defined folders.

AnyQueue V1.2.044

Enhancements:

- An Attach Type filter has been added to the Route list page inside the Configurator.

Bugs Fixed:

- Previously, multiple copies of AnyQueue could have referenced the same TRAC directory when running in a Linux or UNIX environment.
- The Enter key was not invoking the Refresh link on the Job Browse page.
- If a value was not specified in the Attachment field of a SMTP Mail Attachment Route, AnyQueue could have trapped when attempting to deliver to the destination.
- The thread ID displayed in the AnyQueue log may not have been formatted correctly.
- The Folder tree page may not have listed all defined folders.
- The Job List or Output Queue may have displayed the same job multiple times if an AnyQueue job contained a corrupt index.
- Modified Web Access Header message to include additional debugging information.

AnyQueue V1.2.045

Enhancements:

- Route Pooling has been added to AnyQueue. Any number of routes can be associated with a Pool; however, a route can only be assigned to a single Pool. AnyQueue will always attempt to deliver to the primary route (destination) first. The Route Pool will be traversed if the Primary destination is Paused or Busy (in the case of serialization). Route Pooling is not available to jobs that are delivered via a Standard Route Assignment. In order for the Route Pool to be traversed, the “Enable Pool” flag must be selected on the TRAC Route Assignment page or on the Clone Job page. Route Pooling is not available to jobs that have already been delivered to AnyQueue, ReRouted, Reprinted, Printed to an alternate destination, or for reports generated from the Report page. Routes in a pool will be traversed by either Route Sequence order, Job Load order, or Line Count Load order. Route Sequence order is the order the routes are defined on the Route Pool page inside the Configurator. Routes are traversed based on the lightest load first whenever Job Load ordering or Line Count Load ordering is associated with the Pool. Pool load statistics can be viewed and reset via the Active Pool tab that has been added to the Engine page.
- A common LRS product installation script (lrsinst) is available for use when installing AnyQueue in a non-Windows environment. Changes of note when using this script over the old AnyQueue install script (install) are as follows:
 1. A common installation directory is required. Previously, AnyQueue product files and common LRS shared libraries could have been installed in various directories. The new script will place the common files in a “slib” directory, and the AnyQueue files in an “anyq” directory, but both sets of files will reside in the same common location.
 2. HTML templates can still be optionally backed up, but they will be placed in a dated HTML directory in the “anyq” directory. A customized location cannot be specified.
 3. By default, the common LRS product installation script installs product sets. The AnyQueue product set includes the LRSQ application. If you do not wish to install LRSQ, run the **lrsinst** script with the **-p** option as follows: **./lrsinst -p anyq**
 4. The old install script prompted the user for a type of installation (product files, Web resource files, or both sets of files). The **lrsinst** script will always install the AnyQueue files and optionally install the Web resource files. If multiple copies of the Web resources are required, you will need to create soft links to the files installed during script execution, or you will need to copy these files to your other required locations.
 5. The common LRS installation script will modify the directory permissions associated with the “trac” directory to 755. The AnyQueue process must have write access to this directory, so these permissions may need to be modified after product installation if the owner of the AnyQueue process will not match the user ID associated with files during installation.

Bugs Fixed:

- The **Prev** link on the Job List and Output Queue pages may not have functioned after selecting the **Bottom** link.

AnyQueue V1.2.046

Bugs Fixed:

- When viewing the route list inside the configurator on a non-Windows machine, the attach type filter may not have worked correctly.
- Occasionally, AnyQueue would stop generating temporary files used in the delivery of jobs to LPR, SMTP and MAPI destinations. In these instances, the jobs would error with a return code of 0x50.
- Starting AnyQueue with a configuration file named with non-lowercase characters could have caused the conversion utility to error with a return code 0x03.

AnyQueue V1.2.047

Bugs Fixed:

- Defining start or end sequences on an AnyQueue route could have caused the receiving AnyQueue to trap during delivery.
- Attempting to Download the Log from the Engine page could have caused AnyQueue to repeatedly write Web Access Header error messages to the log.

AnyQueue V1.2.048

Enhancements:

- The upper limit for Max Data size associated with a Host was increased from 32512 to 32768.

Bugs Fixed:

- Routes returned via the Next, Prev, Top and Bottom actions on the Route list page inside the Configurator were not being filtered whenever an Attach Type was specified.
- AnyQueue could have trapped sending to an AnyQueue, DRS Queue or DRS File if the Route had a Start or End Sequence and the Ascii Line Data to ASA flag set.
- Start and End Sequences were not being processed correctly when defined on a Local File Route with the Create ANYQ File flag set.
- Start and End Sequences could have been translated when sending from AnyQueue to AnyQueue.
- AnyQueue may not have freed all system allocated resources if an error occurred while attempting to setup Assured Delivery to a TCP/IP Printer Route.

AnyQueue V1.2.049

Enhancements:

- When browsing a report, a new link has been added to change the current character set to either ASCII or EBCDIC.
- An **Attach Type** filter has been added to the Route Browse pages inside the Configurator.
- The AnyQueue Configurator main menu page now includes a brief text description for each of the menu options.
- The low value associated with the Max Data field on a Host in the configuration file was increased from 4096 to 6400.
- Mail routes can now send carbon copies (CC) and blind carbon copies (BCC).
- When creating a **.vpr** file using AnyQueue Create, you may use the following additional command-line arguments:

/mailfile	(mfile)	- Maximum of 60 characters.
/mailfrom	(mfrom)	- Maximum of 60 characters.
/mailreply	(mrply)	- Maximum of 60 characters.
/mailcharset	(mcset)	- Maximum of 40 characters.

The following arguments **MUST** be in quotation marks and separated by semicolons:
ex. (/mailto:"name@domain.com;name2@domain.com")

/mailto	(mto)	- Maximum of 32 recipients of 60 characters each.
/mailcc	(mcc)	- Maximum of 32 recipients of 60 characters each.
/mailbcc	(mbcc)	- Maximum of 32 recipients of 60 characters each.

- Mail records received from VPS, LRSQ, or AnyQueue Create can be viewed by job on the job details page. Mail record support requires VPS R.8.0 Fix 665 and LRSQueue 1.0.022.

Mail records can be sent from AnyQueue to DRS or another AnyQueue.

Mail records: (which may consist of any, or all, of the following):

file	- The name of the file being sent.
from	- The address of the sender.
reply	- The address to reply to.
char set	- The name of the character set for the email.
to	- The address(es) of the recipients.
cc	- The address(es) of the carbon copy recipients.
bcc	- The address(es) of the blind carbon copy recipients.

Bugs Fixed:

- When viewing a report that contains sequences, the report could have viewed incorrectly in TRAC.
- When trying to use variable substitution for a backend, AnyQueue could have caused a trap.
- Fixed a potential trap when delivering to an LPR route with a timeout value defined.
- When returning to the Route page from either the Control Data or Route Variables pages, the Route Pool may have been erased.
- When returning to the General Tab after setting the Admin Report Notification checkbox and having not saved the Config file, the checkbox may have been unchecked.
- When using +COPIES on a Unix version of AnyQueue, the value being substituted could have been incorrect.

AnyQueue V1.2.050

Enhancements:

- Added LRS dynamic key encryption and decryption.
- When creating a .vpr file using AnyQueue Create, you may use the following additional command-line arguments:

/k1 (16-byte static encryption) - Maximum of 32 characters.

/k2 (24-byte static encryption) - Maximum of 48 characters.

/k3 (32-byte static encryption) - Maximum of 64 characters.

/enc (LRS dynamic encryption)- No Value Required.

Notes: When using static encryption, the file host must have the **identical** key in order for AnyQueue to receive the job correctly.

LRS dynamic key encryption and decryption requires VPS V1R8.0.0694, DRS V1R3.4.0090, and LRS/Queue 1.2.0022.

Bugs Fixed:

- When importing a Windows, Novell NDS, or a SAP Logon type, corrupt data could have appeared in the server name field.
- Added additional debugging information when the .BDS record is populated for an outbound job.

AnyQueue V1.2.051

Enhancements:

- Added a Text File Configuration utility (_baqcfg.exe). This utility serves two purposes:
 1. To create an AnyQueue configuration file from a text based command file.
 2. To generate a text based command file from an existing AnyQueue configuration file.

The default behavior is to create the configuration file from the command file, but command files can be generated from existing configuration files when specifying the /generate flag. Run the program with /? for a list of allowable parameters. Specific utility documentation is included in the AnyQueue User Manual.

- Added a User Import utility (_baqusr.exe). This utility will create AnyQueue TRAC User files (or update existing ones). User records included in the input file must be formatted in a comma delimited fashion. Run the program with /? for a list of allowable parameters. Specific utility documentation is included in the AnyQueue User Manual.

Bugs Fixed:

- The AnyQueue process may have required extra CPU cycles after an Engine Reload when running on an AIX server.
- If email notifications are enabled and the NotifyPrefix field is blank inside the configurator, an invalid link could appear inside the email notification.
- If the directory name is changed while performing a restore, the command line version of the management utility could have trapped.
- When restoring an archive file using the Windows Management Utility, the aqjobs.dat file could have been overlaid if the archive file contained user files but no job files.

AnyQueue V1.2.052

Enhancements:

- Added an Error Retry Limit field to the Route, and an Error Retry counter column to the Route page. If an Error Retry Limit is specified on a Route, AnyQueue will automatically Error Pause that Route whenever the Limit is met. The Error Retry counter is reset each time a job is successfully delivered to the destination. Routes remain Error Paused until they are Resumed from the Route page. In addition, the Error Retry counter and the Error Pause status are cleared each time AnyQueue is restarted.
- When using AnyQueue Create, the input file and the output file no longer have to be the first and second arguments respectively. When creating a .vpr file using AnyQueue Create, you may use the following additional command-line arguments:
 - /ifile input file - maximum 256 characters
 - /ofile file to generate - maximum 256 characters
- Locked the row header associated with a table window on the following HTML pages: JobList, Output Queue, all Route panels and all list panels inside the Configurator. The row header on these pages will remain in a static position as you scroll down through the rows of data. This enhancement is only available when using the Microsoft Internet Explorer browser (version 5 or higher).

Bugs Fixed:

- When a file is received with checkpoint restart enabled, memory could be allocated to the process and not returned back to the operating system.
- If the URL prefix was previously defined and then deleted, the notification email could still contain an invalid URL.
- Added additional information to the message that gets displayed in the system log whenever an invalid data line is encountered.
- When an inbound LPD request matched a WebTRAC Route Assignment with no TRAC Routes defined, AnyQueue could have successfully acknowledged the transmission to the sender of the LPD request even though the job would never appear in the joblist.
- Jobs may not have always been rerouted during delivery whenever a Page Count or Line Count condition had been specified on the Route.
- Modified the TCPIP Printer Route to include additional debugging information.

AnyQueue V1.2.053

Enhancements:

- Added a 'Purge Jobs in Error on Expiration' flag to the General page inside the Configurator. Select this flag if you would like for AnyQueue to delete jobs that have a status of Error whenever the Retention period(date) has expired. The default functionality is to only delete an expired job if it has a status of Complete.
- Added a 60 second TCP/IP inactivity timeout when delivering to AnyQueue, DRS File, or DRS Queue routes. If no TCP/IP activity is detected by AnyQueue within 60 seconds when delivering to one of these destinations, AnyQueue will end the conversation and the job will fail (have a status of Error in the JobList).

Bugs Fixed:

- AnyQueue Job Processor could have hung while attempting to create a viewable TRAC job.
- Increased the maximum allowable size of any one megabyte AnyQueue configuration files to five megabytes.
- The Mail Exit could have been called during delivery to FTP and EMTEX routes.
- When using a mail exit, the substitution may have appeared correct in the log, even though the email was not sent.
- The header associated with an Emtex Route may have been truncated to 256 characters during delivery.
- On the Route screen within the configurator, the Route type of SMTP Mail Attachment was misspelled.
- The heading for the Error Retry Limit value in the config file report was 'Error Limit Retry'.
- A Paused Route having an Error Retry Limit could have automatically been reactivated after a currently printing job was successfully delivered to that destination.
- Added additional debugging information when communicating to DRS or another AnyQueue.

AnyQueue V1.2.054

Bugs Fixed:

- When delivering to a route with a page limit or line limit setting, the job may have been rerouted even though the limit was not met (Windows only).

AnyQueue V1.2.055

Enhancements:

- Added a 'Site Commands' component to the FTP Route. Site commands supported by the receiving FTP Server can be entered into this field. Multiple commands are allowed as long as each command is separated by a semicolon. The commands will be sent in the order entered, and prior to the transmission of the actual data.
- Added a 'Log FTP Server Responses' flag to the FTP Route. Select this flag if you would like for AnyQueue to log the responses received from the FTP Server during the delivery of a job.
- Added a 'Complete' link to the Job List and Output Queue pages. Select this link if you wish to change the status of a job from Pending or Error to Complete. Once the status is changed to Complete, AnyQueue will not attempt or re-attempt (in the case of an error) to deliver the job to its destination.
- Added access to User Id, Title, Hostname, Filename, Print Banner, and Mail Record control file records to the LPD Host. These records can be mapped to BDS variables. This enhancement necessitates the conversion of the AnyQueue configuration file which will occur automatically whenever referenced by the application.
- Added the source product name and version of a job to the log. The product name and version for a job can also be viewed through the job details page via the SYSOUT Attributes tab.

Bugs Fixed:

- Improved AnyQueue log writing throughput.
- Directory separators could have been embedded into folder names.
- Suppressed displaying the HOST information in the log when the job details for a particular job are viewed.
- During the delivery of a job to a mail Route, the subject and attachment name could have been blank even if they had been specified on the Route.

AnyQueue V1.2.056

Enhancements:

- Added a 60 second TCP/IP inactivity timeout when delivering to an FTP route. If no TCP/IP activity is detected by AnyQueue within 60 seconds during delivery, AnyQueue will end the conversation and the job will fail (have a status of Error in the Job List).
- When a user selects 'Save to File' or 'Local Print', a message displaying the User ID and the Job ID of the selected job will be written to the log.
- WebTRAC users can now email a job as an attachment directly from the Print page. The user MUST have an email address and reprint rights for the job.
- Added a customizable body to an SMTP or MAPI mail attachment route.
- The Folder list can now be specified as the WebTRAC Start Page on the General tab of the Preferences page.
- When a user selects the Sort option on the Route Assignment list, they will be asked to confirm the action.

Bugs Fixed:

- AnyQueue could have trapped after selecting the Cancel link from the Job Processor tab on the Engine page.
- The Cancel link on the Job List and Output Queue pages may not have attempted to cancel job delivery.
- The last character specified in the User Name, Password, and Site Command fields associated with an FTP Route, or the Subject and Attachment fields associated with a Mail Route may have been lost during delivery. This problem would have only occurred whenever the maximum amount of data had been specified in the aforementioned fields.
- Occasionally, the contents displayed in the Last Message column on the Route page were not cleared after delivery and therefore invalid.
- Added User ID to the log message for Job Cancellation and Completion.
- The configuration file report listed various route attributes (Ebcidic Based Server, Log FTP Server Responses, Backup Copy, and Send JIF Buffer) on the Attach Type line of the report as opposed to an individual line.
- AnyQueue would not recycle itself after a "Reload" was performed if it was attempting to send data (via a Standard Route Assignment) to an AnyQueue, DRS File, or DRS Queue Route that was not responding. AnyQueue will now restart when performing a "Reload" or stop when performing a "Terminate" even if it is in the process of sending data to a device that is not responding. The time required to restart or stop the process should not exceed the Default Timeout setting as specified on the General Information tab on the General page.
- AnyQueue may not have ended the conversation to an FTP server if an error had occurred while sending data to the destination.
- The command line version of the Management Utility could have acted as though the user had hit the 'Enter' key twice causing various menu choices to be displayed two times in succession.
- An error message may have been displayed when running the Management Utility Defragment process if the aqjobs02.idx file did not exist in the TRAC directory.
- Substitution of variables referencing mail information did not occur during the execution of a Backend process.

AnyQueue V1.2.057

Enhancements:

- Added an “SMTP Features” panel to the Info tab on the Engine page. This panel will list the supported SMTP features associated with the SMTP Server as defined on the General Information tab on the General page inside the Configurator.
- Added a “Create Unique Filename” checkbox to an FTP Route component. Select this item if you wish to have the receiving FTP server create a unique file during job delivery from AnyQueue. The name of the file is determined by the FTP Server and is guaranteed to be unique within the directory specified in the Destination field on the FTP Route. The name of the file created on the FTP Server will be written to the AnyQueue log if the “Log FTP Server Responses” flag is set on the FTP Route. The Destination field on the FTP Route should only contain a valid directory name (i.e. do not include a file name in the Destination or delivery will fail).
- Added a “Bypass if Job in Error” checkbox to the Backend component. Select this item to skip Backend processing whenever the job fails to deliver successfully.
- Added a clear button to the Route Filter on the Job List and Output Queue pages.
- Added an alternate “Folder” page that displays folders in a drill down list format as opposed to the fully expanded tree. This alternate view also includes a Folder Find feature. To use the alternate view you will need to select the “View Collapsed Folder List” checkbox that has been added to the General tab on the Preferences page. The alternate Folder page will paint much quicker than the fully expanded tree if you have a large number of folders.

Bugs Fixed:

- If a Route had +MAILTO, +MAILCC, or +MAILBC within the Route definition, a job delivered through the Route may have substituted +MAILTO01, +MAILTO02, etc., even though the job did not have any mail information associated with it.
- Binary files sent from AnyQueue via SMTP to a Novell GroupWise email recipient may have viewed incorrectly.
- MailCc and MailBcc recipients could have gotten transposed during delivery.
- Completing a serialized job via the Complete link on the Job List page or the Output Queue page could cause other serialized jobs associated with the same destination to not be processed (i.e. stay in a Pending state).
- (Non-Windows only) Occasionally, the following error “ps: error: process ID out of range” would be displayed to Standard Output (i.e. the terminal session) whenever attempting to start AnyQueue.

AnyQueue V1.2.058

Enhancements:

NOTE: AnyQueue/WebTRAC 1.2.058 and later **require** LRSAPI (**_lrsapi2**) 1.0.034 or later, LRSTCP (**_lrstep2**) 1.0.16 or later and AnyQueue/Secure (**_anyqsec1**) 1.0.1 or later.

ANYONE RUNNING AnyQueue Secure WILL NEED TO UPGRADE THEIR SECURE LIBRARY!!!!

- Added large file support (file sizes > 4GB on Windows and 2GB on UNIX) for inbound and outbound job delivery. The following features are not supported when working with a large file: Viewing WebTRAC jobs with the AnyQueue internal viewer and page range printing from the Print screen.
- Added a “Timeout” field to the AnyQueue Route component. The default timeout value for an AnyQueue route will be 60 seconds.

Bugs Fixed:

- AnyQueue could have trapped after selecting the Engine link.

AnyQueue V1.2.059

Enhancements:

- Added install instructions for Océ PRISMA production.
- AnyQueue will auto archive up to ten memory dump files.

Bugs Fixed:

- Job delivery to an FTP Route may not have been cancelled after selecting the Cancel link from either the Job List or the Output Queue.
- AnyQueue was enforcing the “Disconnect Wait Time” associated with the TCP/IP Printer and LPR Routes even if the AnyQueue engine was attempting to reload or terminate. This wait time would have caused AnyQueue to delay in the initiation of the reload or termination request.
- The **Delete** action should not have been available from either the Job List or Output Queue for jobs that were actively being printed.
- Occasionally, the “Fail Job on Backend Failure” flag associated with a Backend would not cause the job to fail if the Backend failed to execute. This situation occurred primarily whenever an invalid path was specified in either of the “Program Name” or “Working Directory” fields.



Section 1 Overview

Description

AnyQueue[®] is a product that runs in a LAN environment and its purpose is to receive files from the mainframe JES2 or JES3 spool, via VPS[®], LPR data, files created with AnyQueue Create, or LRS/Queue, and distribute those files to a variety of destinations (print files; print queues, DRS, E-mail, etc.). The files can also be placed into the AnyQueue/WebTRAC[®] (Temporary Retention and Control) area.

AnyQueue runs on a workstation that can be located anywhere on a large internetwork of LANs. The AnyQueue/WebTRAC feature is accessible by end users via a Web Browser. To utilize this feature will require a Window based Web server, and LRS/Web Connect. LRS/Web Connect is an LRS product that provides the connection from the Web server to the LRS application server.

The only definitions required on the host are:

- one VTAM LU definition or one TCP/IP definition,
- and one VPS printer definition.

After the initial host definitions are defined, the LAN administrator retains a great deal of flexibility to reconfigure the LAN environment and redirect files to new or modified network print queues. The printers used to print these host files are the same printers used for the normal printing of LAN files.

Communication Link

AnyQueue requires a communications link to the host in order to communicate with VPS. The chart below indicates the type of link that is supported by the different flavors of AnyQueue.

	Windows	UNIX
APPC LU 6.2	Yes	No
TCP/IP	Yes	Yes

License and Performance Issues

An AnyQueue license is defined as a single copy of AnyQueue running on a single workstation, providing a single, or multiple, connection (VTAM/LU or TCP/IP address) to the VPS system, LPR's, or AnyQueue formatted files.

As long as the appropriate licenses have been purchased, multiple host definitions and simultaneous host connections can be defined and operated, if needed in a heavily loaded network, to improve the performance of AnyQueue. If the proper licenses have been obtained, then multiple copies can be used by a LAN administrator to help organize and coordinate the host and LAN environments. Depending upon the abilities of the workstation used to support AnyQueue, and network topologies, additional copies of AnyQueue may be necessary to distribute network traffic and workload.

What can send output to AnyQueue?

AnyQueue can receive files from the following sources:

- VPS (VTAM Printer Support) - a Levi, Ray & Shoup product.
- VPS/Secure - a Levi, Ray & Shoup product.
- LPR
- AnyQueue File Host

Where can AnyQueue send output?

AnyQueue can send files to the following resources:

- Network or local print queues (for subsequent printing or viewing by normal LAN facilities).
- Network files or local files.
- E-mail recipient.
- LPD (Line Printer Daemon).
- Store the files in an AnyQueue formatted file.
- TCP/IP printers.
- DRS

What is AnyQueue/WebTRAC?

AnyQueue/WebTRAC (Temporary Retention and Control) is a feature that adds the following capabilities to AnyQueue.

- Datasets received are stored before they are delivered.
- Datasets can be delivered to multiple destinations. Each different destination is assigned a different WebTRAC Job ID.
- Jobs have a retention period, can be reprinted, and cloned. For line data, reprinting can specify a start and end page/line.
- Details are viewable via a Web browser. Line data can be browsed. Various other file formats can also be viewed if the appropriate plug-in is installed.
- Jobs can be organized into folders.

What is AnyQueue/Secure?

AnyQueue/Secure can decrypt data received from VPS/Secure that has been encrypted. (For more information on VPS/Secure see [page 3.12](#), or refer to the VPS V1 R8.0 Installation and Operation Manual - document number S010-0800-4.)

AnyQueue/Secure can also send encrypted data to HP LaserJet printers and Lexmark printers to be decrypted by the printer. The HP LaserJet printers must be equipped with the Secure DIMM or SecureDIMM II from Capella Technologies. SecureDIMM products install easily in the memory expansion socket of most DIMM-based HP LaserJet model printers.

What is AnyQueue/Text to PDF?

AnyQueue/Text to PDF converts AnyQueue-provided text files to Adobe PDF format.

What is LRS/Queue?

LRS/Queue is a client that enables users on multiple platforms to exploit the features of the DRS/OutputManager range of products. The LRS/Queue client is available for most execution platforms and provides a simple command line interface to the following functions:

- Output submission
- Queue Query
- Print Query
- Print cancellation

The LRS/Queue client has been designed to provide a common interface to both the LRS host and LAN based output management solutions. This document will only describe the command in relation to the DRS/TCPIP product.

It is possible to use the LRS/Queue client to submit a print request to DRS/TCPIP with complete control over the SYSOUT attributes and then monitor and control the output using the Query and cancel functions. The client can also be used to route output to a DASD dataset or a Hierarchical File System (HFS) file.

What is LRS/Windows Port Monitor?

The port monitor provides a virtual network port enabling Windows clients (Windows 2000 or XP) to send any kind of application data through AnyQueue or DRS/TCPIP. Users simply print their files to a configured virtual printer. The port monitor makes it very easy to route PC-based business documents into the Enterprise Output Server. The port monitor supports LRS/Queue keywords to extend file automation as necessary. It allows you to manage PC document output and provide a centralized place for online viewing, distribution, and printing. It also allows you to capture these documents using LAN-based AnyQueue or mainframe-based DRS/TCPIP solutions.

AnyQueue Utilities

- Engine** The Engine uses a configuration file that is created via the Web interface to control and route data to the proper location or device.
- The Engine interfaces with APPC or TCP/IP software to communicate with VPS on the host, TCP/IP for LPR/LPD support, and local file services to process AnyQueue formatted files.
- The AnyQueue Engine can run as a service on Windows operating systems that support services or as a regular application. Unix version runs as a daemon. When running as a service, it can be partially controlled by the services application located in the Control Panel.
- A command utility is also supplied with AnyQueue for a command line interface to the Engine.
- Command Utility** This is a command line interface that allows you to issue commands to the engine. It can be located on the same workstation or it can run across a LAN and connect via TCP/IP.
- Create Utility** This program will take any file as input and create an AnyQueue formatted file that can be picked up by an AnyQueue host object (host objects are explained on [page 4.85](#)). Once selected it will be delivered like any file received from VPS. The name of the create utility is xANYQCR (see [page 3.46](#) for more information on the xANYQCR program).
- Management** This program has the following functions:
- File backup and restore.
 - Conversion of release 1.0 configuration files for use with release 1.1.
 - AnyQueue/WebTRAC file defragmentation.
 - AnyQueue/WebTRAC index file regeneration.
 - Print a Group Relations report.

Features and Benefits

FEATURES	BENEFITS
Complete software solution for host-to-LAN print management.	No new hardware to buy or manage.
Supports an unlimited number of printers, files, and queues.	Promises unlimited expansion of your printing resources.
Only one printer definition is required for VPS and VTAM or TCP/IP on the host, but multiple definitions can be used (with proper licenses).	Simple configuration and administration. Powerful enough to expand.
Data can be received from any standard LPR and sent to any standard LPD.	Allows data input and output from non-VPS systems.
AnyQueue Host.	Provides retry capability, and processing of any file.
Print jobs are passed directly to LAN print queues that may be located locally or anywhere in the corporate LAN environment.	Improves processing speed and reduces resource requirements.
Reports exceeding user-defined limits can be held, delayed, deleted, or re-routed to another print queue.	Offers real-time flexibility in print job management.
AnyQueue runs on a single workstation to communicate with VPS on the host.	No terminal emulation product or other special hardware is required for LAN-attached printers.
Print jobs can be routed to LAN printers based on any combination of host criteria, including JOBNAME, CLASS, DESTINATION, FORM, and WRITER.	Enhances flexibility for users.
Reports can be placed in data files to be viewed, saved, or used as input for workstation applications.	Makes enterprise-wide file sharing as easy as printing.
Transparent (non-translating) options allow transmission of data streams containing ASCII, HP PCL, PostScript, or other binary data.	Leverages your investments in existing applications and printers.
Backend processing.	Events can be triggered, and further processing of received files can be initiated.
AnyQueue events can be monitored using statistics, debugging, and audit trail controls.	Expands control capabilities.
Reports can be put into the AnyQueue/WebTRAC system.	Allows report viewing, reprinting, and temporary retention.
Encrypted data can be sent to AnyQueue/Secure and/or DRS/Secure.	Maintain confidentiality and integrity of sensitive data.
Multiple datasets can be grouped together.	Allow concatenation of files from the same job.



Section 2 Requirements

Workstation Requirements

AnyQueue® that runs on Windows

Hardware

- Pentium 120 processor or higher
- 32 MB of RAM or more
- CD-ROM drive or active network connection (to run the install program)
- Host connection

Software

- 32-bit Windows operating system (NT, 2000, XP or 2003)
- Microsoft IIS or
- IBM HTTP Server 1.3 or 2.0

If using an APPC connection to the host you must have **one** of the following products:

- Microsoft SNA Server V2.1 or higher
- IBM Personal Communication V4.2 or higher
- Microsoft Host Integration Server

If using a TCP/IP connection to the host:

- TCP/IP software on the workstation
- To monitor and control jobs that are processed with AnyQueue/WebTRAC, a Windows based Web server and LRS/Web Connect are required.

NetWare support

If NetWare support is needed, then Novell's NetWare Client for NT must be installed. This must be the NT Client provided by Novell; Microsoft's Client Services for NetWare will **not** work.

NetWare 3.12 or later must be installed on the servers that AnyQueue will be accessing.

Requirements to run AnyQueue on a Novell network:

To function properly on a Novell network, AnyQueue must be logged on as a user account with certain rights. The network administrator must set up a user account for AnyQueue with the following rights:

- **Queue User and Queue Operator** for any print queue that will be accessed by AnyQueue.

To specify the Novell user ID for AnyQueue, see ["Configuration - Logon" on page 4.89](#).

AnyQueue that runs on HP-UX

Hardware

- HP 9000 workstation.
- CD-ROM drive or active network connection (to run the install program).
- Host connection.

Software

- HP-UX Version 11.11 or higher
- Apache 1.3 or 2.0 Binaries shipped with HP-UX.

AnyQueue that runs on AIX

Hardware

- AIX workstation.
- CD-ROM drive or active network connection (to run the install program).
- Host connection.

Software

- AIX 4.3.3 or higher
- IBM HTTP Server 1.3 or 2.0

AnyQueue that runs on Sun Solaris

Hardware

- Sun SPARC workstation.
- CD-ROM drive or active network connection (to run the install program).
- Host connection.

Software

- Sun Solaris 2.8 or higher.
- Apache 1.3 Binaries shipped with Solaris or IBM HTTP Server 1.3 or 2.0.

AnyQueue that runs on S390 Linux

Hardware

- IBM Multiprise 3000 or greater running SuSE Linux.
- Host connection.

Software

- Linux Kernel 2.4.7 or greater.
- IBM HTTP Server 1.3 or 2.0 or Apache 1.3 Binaries shipped with OS.

AnyQueue that runs on Intel Linux

Hardware

- Intel based workstation running Linux.
- CD-ROM drive or active network connection (to run the install program).
- Host connection.

Software

- Linux Kernel 2.4.7 or greater.
- Apache 1.3 Binaries shipped with Linux.

Host Requirements

For all flavors of AnyQueue (if AnyQueue will be receiving datasets from VPS).

- VPS V1 R7.0.111 (or higher).
- VPS/TCPIP (if using TCP/IP to communicate with AnyQueue).
- DRS V1 R3.4 if using AnyQueue to send data to the host.
- VPS/Secure if using AnyQueue/Secure to receive encrypted data from VPS.
- DRS/Secure if using AnyQueue/Secure to send encrypted data to DRS.
- VTAM definitions (if using APPC to communicate with AnyQueue).

Requirements to run AnyQueue as a Windows service

To function properly in a Windows environment, AnyQueue must be logged on as a user account with certain rights. The network administrator must set up a user account for AnyQueue with the following rights:

- **Act as part of the operating system.**
- **Log on as a service.**
- **Full Control** of any Windows directory or print queue accessed by AnyQueue.

To specify the Windows 2000 or Windows NT user ID for AnyQueue:

1. For Windows NT -
 - Go to **Control Panel/Services**.For Windows 2000 -
 - Go to **Control Panel/Administrative Tools/Services**.
2. Highlight the **AnyQueue - ANYQ** service.
3. For Windows NT -
 - Select **Startup**.For Windows 2000 -
 - Select **Properties**.
4. Under **Log On As:**, select **This Account**.
5. Enter the AnyQueue user ID and password that the network administrator has created for AnyQueue. (See **Figure 2-1 on page 2.5**.)

DO NOT select **System Account** or **Allow Service to Interact with Desktop**.

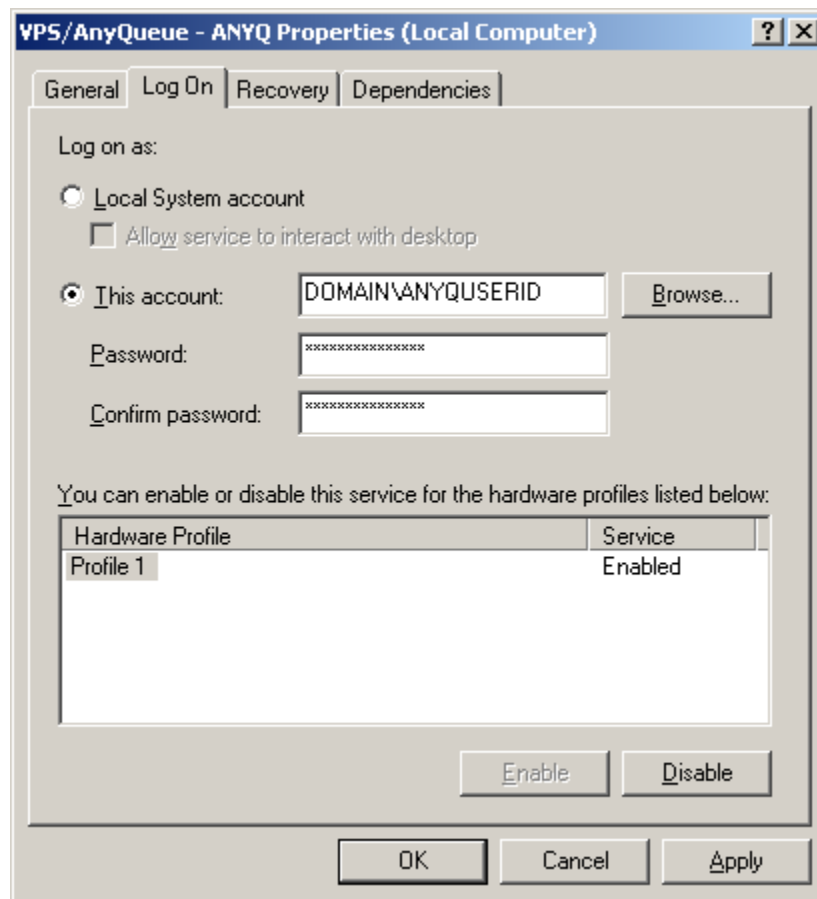


Figure 2-1: Service dialog

Where are the AnyQueue utilities installed?

The AnyQueue Engine and Command Utility may be installed on the same dedicated PC or the Command Utility may be installed on a user's workstation to allow remote control access to the Engine.

Remote Access

Once a configuration file has been created, the AnyQueue Command utility allows you to start, stop, reload, and control the AnyQueue Engine.

Web Access

The best way to monitor and control AnyQueue is via a Web browser. This is how configuration will be done.

Section 3 Installation

The following provides a general overview of the steps necessary to implement the AnyQueue® product. Implementation of AnyQueue requires a coordinated effort between the LAN administrator and a mainframe systems programmer.

Step #1 – MVS Preparation Before AnyQueue can be successfully installed to communicate with VPS®, VPS must be installed and operational on the MVS system.

Step #2 – TCP/IP Preparation In order to communicate from VPS to AnyQueue using TCP/IP, TCP/IP software must be installed on MVS and on the PC where AnyQueue will run. In addition, VPS and VPS/TCPIP must be installed at R1 V7.0.111 or later on the MVS system.

For more information concerning TCP/IP installation, see page 3.6.

Step #3 – VTAM Preparation LU definition Figure 3-1 shows an example of definitions required in the mainframe SYS1.VTAMLST for LU 6.2 devices that will maintain a session between the mainframe and AnyQueue.

In Figure 3-1, the item of particular significance is the one labeled **L591002**. This is the logical unit defined for the APPC communications between the mainframe and AnyQueue. The other logical units are the terminal emulation definitions typically found on gateways.

```
*-----*
*           NEW 3174 TOKEN RING FUNCTIONS           *
*                   NOVELL GATEWAY                   *
*-----*
*           VBUILD TYPE=LOCAL                       *
*-----*
* PU DEFINITION                                     *
*-----*
L591001  PU  CUADDR=591                               *
          SSCPFM=USSSCS ,                             *
          PUTYPE=2 ,                                   *
          MAXBFRU=10 ,                                *
          VPACING=0 ,                                 *
          PACING=0 ,                                  *
          MODETAB=LRSMODE ,                           *
          DLOGMOD=D4A32782 ,                          *
          USSTAB=LRSUSSV                               *
*-----*
* LU DEFINITIONS                                     *
*-----*
L591001  LU  LOCADDR=2                                 *
* THIS LU IS FOR ANYQUEUE                            *
L591002  LU  LOCADDR=3 , MODETAB=LRSMODE , DLOGMOD=LRSAPPC , *
          SSCPFM=FSS , VPACING=2 , PACING=2 , USSTAB=ISTINCDT
L591003  LU  LOCADDR=4
L591004  LU  LOCADDR=5
L591005  LU  LOCADDR=6
L591006  LU  LOCADDR=7
```

Figure 3-1: SYS1.VTAMLST (PU and LU Definition)

Step #4 – Mode Table definition The mode table referenced in the VTAM LU definition (**MODETAB=LRSMODE**) is a special one for the LU 6.2 connection and should appear similar to the example in [Figure 3-2](#) below.

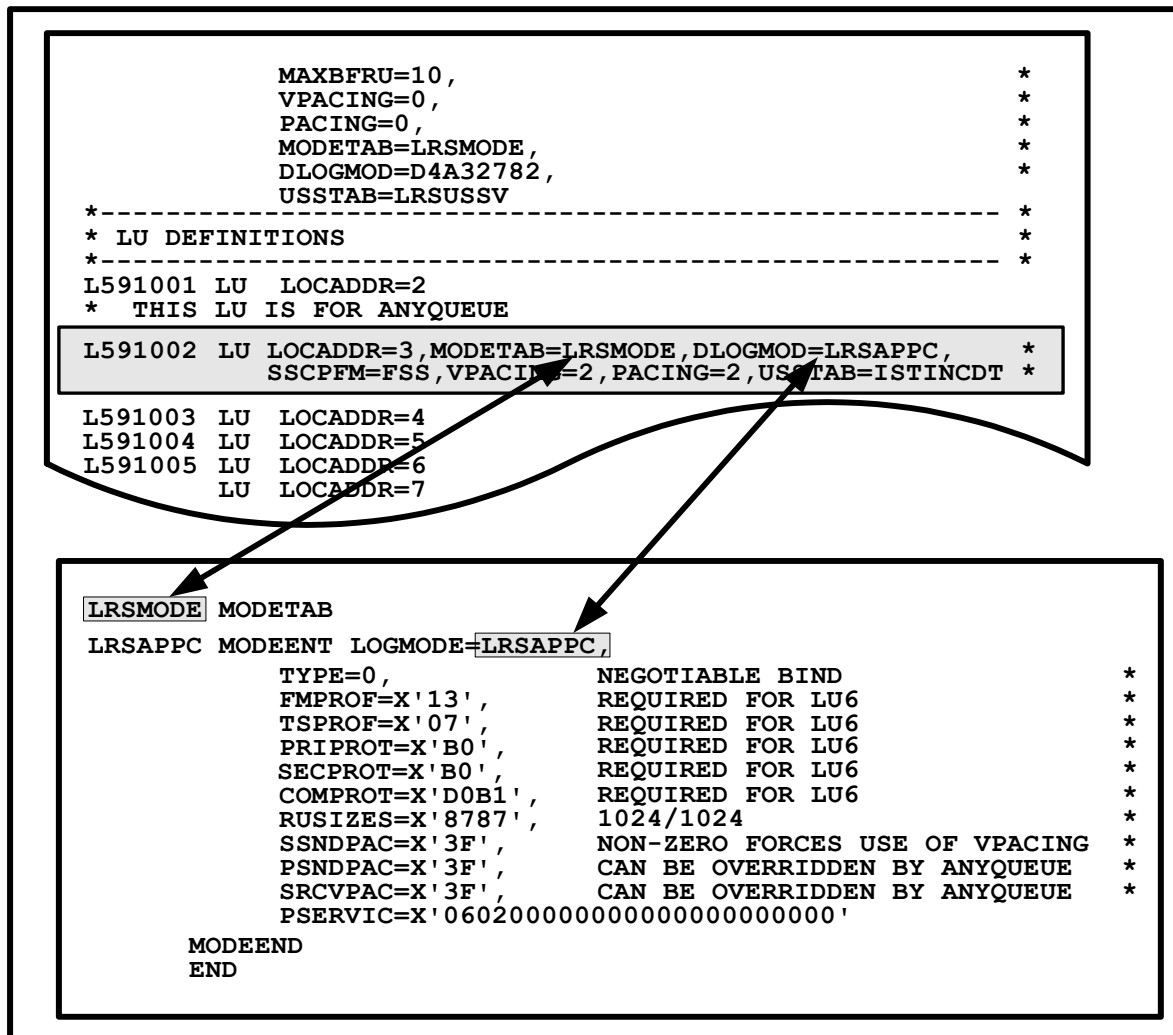


Figure 3-2: Mode Table

Step #5 – Change the VTAM application definition (APPL) for VPS to add APPC keywords as shown in below.
APPL definition

For more information on VTAM definitions, see ‘**VTAM Definition Requirements**’ in the *VPS Installation and Operation Manual*.

```
          VBUILD TYPE=APPL
VPS  APPL  ACBNAME=VPS ,
          EAS=200 ,
          AUTH=( ACQ ,VPACE ) ,
          APPC=YES ,           ALLOW VPS TO ISSUE APPCCMD MACROS
          PARSESS=YES ,       MUST BE YES , EVEN IF SESSION LIMIT IS 1
          DMINWNL=1 ,        VPS WILL WIN IF SESSION CONTENTION
          DMINWNR=0 ,       AnyQueue WILL LOSE IF SESSION
          DSESLIM=1         CONTENTION SESSION LIMIT OF 1
```

Figure 3-3: VPS Application definition

Step #6 –
VPS Preparation
KEYANYQ

The basic VPS product and each of the optional add-on products require that a unique key value be specified in the VPS System Initialization Member. This encrypted key value supplies information to VPS concerning your license status. Without the correct value in the appropriate keyword, the product will not function.

The values for these keys are unique to each installation, and are supplied in file #1 on the VPS product distribution cartridge. The product key parameter for AnyQueue is KEYANYQ.

KEYANYQ= Specifies the trial/license code for the AnyQueue product. This keyword **MUST** be present in order to use this product.

Example: KEYANYQ=0123456789ABCDEF01234567

License issues if VPS is out-sourced to other sites.

Scenario:

LRS customer AA0000 is licensed to run VPS on their mainframe. LRS customers BB1111 and CC2222 connect to VPS through AA0000.

BB1111 and CC2222 each purchase AnyQueue. They each received a letter from LRS indicating two keys:

- one key should be placed in the VPSSTART member of VPS;
- one key will be used when AnyQueue is installed on the PC.

Site AA0000 will use only **one** of the host keys from either of the letters received by BB1111 or CC2222. This one key will allow both sites to connect to VPS.

One site with multiple copies of AnyQueue

Scenario:

Site AA0000 is running VPS on their mainframe. Three copies of AnyQueue have been purchased.

The following keys will be received:

- one key to be placed in the VPSSTART member of VPS;
- one key for each copy of AnyQueue to be used when each copy of AnyQueue is installed on each PC.

**Step #7 –
VPS Printer
Definition using
VTAM APPC**

(continue to Step #8
if using TCP/IP)

VPS is responsible for retrieving files from the mainframe JES spool and sending those files to AnyQueue. To accomplish this, there must be a member in the VPS control file that describes which reports are to be retrieved and which VTAM LU is to be used to communicate with AnyQueue.

VPS also needs to know that it is communicating with AnyQueue and not a 'real' printer.

The parameters shown in [Figure 3-4](#) are typical of those you might see in the VPS printer definition used for communicating with AnyQueue.

ALOGMODE=LRSAPPC,	See Note 1 on page 3.4
CLASS=A,	See Note 2 on page 3.4
DEST=U6999,	See Note 2 on page 3.4
COMMTYPE=(APPC,ANYQUEUE,)	See Note 3 on page 3.5
LUNAME=L591002,	See Note 4 on page 3.5
RUSIZE=1024,	See Note 5 on page 3.5
PRTROPTS=0000400	See Note 6 on page 3.5

Figure 3-4: VPS Printer Definition for AnyQueue (APPC)

Note 1 **ALOGMODE** is required and must specify the name of a valid VTAM logon mode table entry which is located in the logon mode table (MODETAB) associated with the AnyQueue device by VTAM. The parameters in the logon mode table entry must be those required for APPC/LU 6.2. (See [Figure 3-2 on page 3.2](#) for the Mode Table definition.)

The sample logon mode table entry creates a logon mode table entry named LRSAPPC. If you use the example, then code **ALOGMODE=LRSAPPC** in your VPS printer definition.

Note 2 The JES spool normally contains many reports (SYSOUT datasets) destined for a variety of host-attached and PC-attached printers. Each report on the JES spool has certain identifying information associated with it, including class, destination, form, writer name, and job name. Batch jobs, online applications, and TSO users assign the values of these identifying characteristics at the time the report is created.

VPS can use any combination of class, destination, form, and writer name to identify which reports should be sent to AnyQueue. AnyQueue can route the reports to the proper print queues or files based on class, destination, form, writer name, and/or job name.

For example, if all reports with **DEST=ANYQ** and **CLASS=A** are to be sent to AnyQueue, the VPS printer definition would contain these parameters:

```
DEST=ANYQ  
CLASS=A
```

Note 2 (cont.) In this case, because all of the reports selected have the same class and destination, the reports could have different form names, writer names, or job names to be used by AnyQueue to determine how the report is to be routed.

In another example, if all reports with **WRITER=VPSANYQ** are to be sent to AnyQueue, the VPS printer definition would contain this parameter:

WRITER=VPSANYQ

In this case, because all of the reports selected have the same writer name, the reports could have different classes, destinations, forms, or job names to be used by AnyQueue to determine how the report is to be routed on the LAN.

Note 3 **COMMTYPE=** Specifies, via three positional parameters, the type of communications connection that VPS R1 V8.0 will use to send data to this printer. Use this keyword to specify the connection type.

Example: COMMTYPE=(APPC,ANYQUEUE,)

This specification indicates an APPC (LU-6) connection.

See the VPS V1 R8.0 *Installation and Operation Manual* for further information.

Note 4 **LUNAME** is required and must specify the VTAM LU name which was defined for the AnyQueue product.

Note 5 **RUSIZE** for a VPS printer defaults to 768. If you wish to use a different **RUSIZE** to send data to AnyQueue, you should specify that value here.

Note 6 **Defining Multiple TPNAME's for AnyQueue**

AnyQueue is designed to allow multiple connections to VPS printers. By default, VPS sends a TPNAME (transaction program name) of VPSLAN60 to AnyQueue.

But since AnyQueue needs a unique TPNAME for each connection, the VPS **PRTROPTS** keyword **must** be added to the VPS printer definitions for AnyQueue.

Example:

```
ALOGMODE=LRSAPPC,  
CLASS=A,  
DEST=U6999,  
COMMTYPE=(APPC,ANYQUEUE,),  
LUNAME=L591002,  
PRTROPTS=00000400
```

The TPNAME for the above definition would be 'L591002' instead of the default 'VPSLAN60'.

See the *VPS Installation and Operation Manual* for further information on the **PRTROPTS** keyword.

**Step #8 –
VPS Preparation
using TCP/IP**

Figure 3-5 is an example of the entry in the VPS control file that must be made to define the remote TCP/IP device which will communicate with AnyQueue. VPS/TCPIP must be installed and operational on the host. Other entries may be required in your installation that are not specific to TCP/IP communications used by VPS and AnyQueue.

CLASS=A,	(see Note 1 on page 3.6)
DEST=U7017,	(see Note 1 on page 3.6)
COMMTYPE=(TCPIP,ANYQUEUE,)	(see Note 2 on page 3.6)
RUSIZE=2048,	(see Note 3 on page 3.7)
TCPHOST=192.5.252.94,	(see Note 4 on page 3.7)
TCPPORT=1234	(see Note 5 on page 3.7)

Figure 3-5: VPS Printer Definition for AnyQueue (TCP/IP)

Note 1 The JES spool normally contains many reports (SYSOUT datasets) destined for a variety of host-attached and PC-attached printers. Each report on the JES spool has certain identifying information associated with it, including class, destination, form, writer name, and job name. Batch jobs, online applications, and TSO users assign the values of these identifying characteristics at the time the report is created.

VPS can use any combination of class, destination, form, and writer name to identify which of those reports should be sent to AnyQueue. AnyQueue can route the reports to the proper print queues or files based on class, destination, form, writer name, and/or job name.

For example, if all reports with **DEST=R195** and **CLASS=A** are to be sent to AnyQueue, the VPS printer definition would contain these parameters:

```
DEST=R195  
CLASS=A
```

In this case, because all of the reports selected have the same class and destination, the reports could have different form names, writer names, or job names to be used by AnyQueue to determine how the report is to be routed.

In another example, if all reports with **WRITER=VPSANYQ** are to be sent to AnyQueue, the VPS printer definition would contain this parameter:

```
WRITER=VPSANYQ
```

In this case, because all of the reports selected have the same writer name, the reports could have different classes, destinations, forms, or job names to be used by AnyQueue to determine how the report is to be routed.

Note 2 **COMMTYPE=** Specifies, via three positional parameters, the type of communications connection that VPS R1 V8.0 will use to send data to this printer. Use this keyword to specify the connection type.

Example: **COMMTYPE=(TCPIP,ANYQUEUE,)**

This specification indicates a connection to AnyQueue using TCP/IP.

See the VPS V1 R8.0 Installation and Operation Manual for further information.

Note 3 **RUSIZE** for a VPS printer defaults to 768. If you wish to use a different RUSIZE to send data to AnyQueue, you should specify that value here.

Note 4 **TCPHOST** is required. This specifies the Internet address of a remote TCP/IP host (the PC running AnyQueue is considered the remote TCP/IP host) in 'dotted decimal' format. The host address is specified as a series of 4 numbers, separated by periods. Each number must be in the range 0-255.

Example: 199.99.4.99

Note 5 **TCPPORT** is required and specifies the TCP/IP port address to use. The TCPPORT value must match the 'TCP/IP Port ID Number' defined in the Host Information dialog box of AnyQueue Configurator.

Using AnyQueue to Receive Binary Files

EBCDIC to ASCII

AnyQueue is normally used to receive print line data from VPS on MVS and send the print lines to a print queue or file on the LAN. When the print lines arrive, they contain EBCDIC data and any carriage control characters that were stored in the lines on the JES spool. AnyQueue uses the carriage control characters to add form feed or line feed sequences, unless carriage control processing is bypassed for that print queue. The print data is translated using the EBCDIC to ASCII translate table, unless TRANSLATE=N is set.

Binary Files

In addition to normal print lines, VPS and AnyQueue can be used to transmit binary files. These may be print data with printer control commands or standard ASCII files. For example, printer-ready files in PCL or PostScript format can be placed on the JES spool and then transmitted to AnyQueue, or AnyQueue could be used to transfer an ASCII file that had been uploaded to MVS.

Using Transparency Class to Send Binary Data

When the file on the JES spool is already in binary format and ready to be printed, it can be sent transparently through VPS and AnyQueue to the receiving file or print queue. This is done by using the transparency class keyword in the VPS printer member for AnyQueue.

TRNCLASS

The TRNCLASS specifies, **via four positional parameters**, when transparency should be used for this printer.

Positional parameter 1 specifies from 1 to 8 SYSOUT classes to indicate when transparency is to be used.

Setting the first parameter of the TRNCLASS keyword indicates to VPS that the files in those classes should be sent to AnyQueue as transparent data. The first parameter can be null to indicate there are no special SYSOUT classes that are to be treated as transparent data. The first parameter can be set to '*' to indicate that all SYSOUT classes are transparent data.

Positional parameter 2 specifies the method of transparency to be used for this printer. Valid values are:

- C (character)
- B (buffer)
- S (start/stop transparency)
- T (TCP/IP transparency)

Positional parameter 3 is a 1 to 8 byte hex representation that specifies the character(s) to use to begin transparency.

Positional parameter 4 is a 1 to 8 byte hex representation that specifies the character(s) to use to end transparency.

The second and third parameters of the TRNCLASS keyword should be set to C and 35. (The fourth parameter is not allowed if the second parameter value is C.)

Example For example, if you want all files in SYSOUT CLASS Z sent to AnyQueue as transparent data, you should set the following in the VPS printer definition:

TRNCLASS=(Z,C,35)

AnyQueue will not process carriage control for a print file received as transparent data or do any translation from EBCDIC to ASCII. The SCS transparency characters and length fields that were inserted by VPS will be removed. **The binary data will be exactly as it appeared in the file on the JES spool.**

Using the VPS/PCL Product

ASCII to Binary

In addition to files which are already on the spool in ASCII format with or without printer control commands, it is possible for VPS to create files that are delivered to AnyQueue as binary data.

The VPS/PCL product allows converting a SYSOUT file from the JES spool into files which contain formatting commands for PCL printers. The input file must be either an AFPDS (Advanced Function Presentation Data Stream) dataset or normal print lines with PAGEDEF and FORMDEF. VPS/PCL converts these files into PCL macros and text to be delivered to a PCL printer. The data is formatted for the printer on the MVS system by VPS and is delivered as a binary file to AnyQueue. AnyQueue will not process carriage control, add line feeds or form feeds, or translate the data.

VPS printer definition keywords

The following keywords should be verified in the VPS printer member to be sure that conversion to a PCL datastream is done.

COMMTYPE
CONVTYPE
TRNCLASS
AFPOPTS

Continue to the next page for a description of each keyword.

COMMTYPE

For an APPC connection, use

COMMTYPE=(APPC,ANYQUEUE,)

For a TCP/IP connection, use

COMMTYPE=(TCPIP,ANYQUEUE,)

See the *VPS V1 R8.0 Installation and Operation Manual* for further information.

CONVTYPE

The CONVTYPE keyword should specify **PCL** to indicate that files shipped to AnyQueue will be delivered to printers which are capable of receiving PCL commands. When VPS encounters a file which contains AFPDS and/or for which PAGEDEF and FORMDEF are specified, the VPS/PCL product will convert the data and send it to AnyQueue.

For PCL conversion, use

CONVTYPE=PCL

TRNCLASS

The second and third subfields of the TRNCLASS keyword are used to add transparency keywords to the PCL data delivered by VPS/PCL. The values of these two subfields should be set or allowed to default to 'C' and '35'. If no SYSOUT files are going to be sent as binary data except those which are processed by VPS/PCL, the first field may be null; for example:

TRNCLASS=(,C,35)

AFPOPTS

Since VPS and AnyQueue will be sharing the PCL printer with other users on the LAN, it is not possible to know which resources loaded by VPS are still available in the printer. Therefore it is recommended that the options for VPS/PCL be set to clear and re-send resources for each file printed; for example:

AFPOPTS=4000

Using the VPS/Secure Product

VPS/Secure allows users to distribute output over open TCP/IP networks, including the Internet while maintaining confidentiality and integrity of sensitive data.

Using the Rijndael encryption algorithm, VPS/Secure enables users to encrypt output retrieved from the JES spool and route the output to AnyQueue/Secure or a printer equipped with decrypting hardware. Encrypted output routed by VPS/Secure can currently be decrypted by AnyQueue/Secure and by HP LaserJet printers equipped with the SecureDIMM or SecureDIMM II from Capella Technologies. SecureDIMM products install easily in the memory expansion socket of most DIMM-based HP LaserJet model printers.

VPS/Secure Requirements

- VPS Release V1 R8.0.246 or higher; and
- Printers equipped with appropriate decrypting hardware; or
- AnyQueue/Secure (V1.1.10 or higher).

VPS/Secure printer definition keywords

The following keywords should be verified in the VPS/Secure printer member:

- EKEY=** Specifies the encryption key to be used if ENCRYPT=Y is specified for this printer. This key must match the decrypting key value supplied in the Host object in the AnyQueue Configurator (see [page 4.85](#)).
- ENCRYPT=** Specifies whether encryption should be performed for this printer, the type of encryption, and the type of device that will do the decrypting.

Using the DRS/Secure Product

DRS/Secure allows users to receive output over open TCP/IP networks, including the Internet, while maintaining confidentiality and integrity of sensitive data.

Encrypted output can be decrypted by AnyQueue/Secure, DRS/Secure, and by HP LaserJet printers equipped with the SecureDIMM or SecureDIMM II from Capella Technologies. SecureDIMM products install easily in the memory expansion socket of most DIMM-based HP LaserJet model printers.

DRS/Secure Requirements

- DRS V1 R3.4 or higher; and
- Printers equipped with appropriate encrypting hardware; or
- AnyQueue/Secure (V1.1.10 or higher).

Adding System Keywords for DRS/Secure

The KEYDSECR system keyword specifies the trial/license code for the DRS/Secure product. This keyword **MUST** be added to the DRS Start Member in order to use the DRS/Secure product. This key is generated by LRS and is supplied in file 28 of the DRS distribution cartridge (LRS.DRS.V1R34.CNTL).

Building DRS/Secure Printer Definitions

The following keywords are used when defining DRS/Secure printers:

- DKEY=** Specifies the decryption key to be used if DECRYPT=Y is specified for this printer. This key must match the encrypting key used for the sending device.
- DECRYPT=** Specifies whether decryption should be performed for this printer, the type of decryption, and the type of device that will do the encrypting.

Adding DRS/Secure Printers to the Printer Activation Inclusion List

If you are using the Printer Activation Inclusion list (MLISTMEM) to automatically activate DRS printers at system initialization, you should add the member name of the DRS/Secure printers to that list. For more information, see the DRS V1 R3.4 manual.

If you are simply adding the DRS/Secure keywords to an existing DRS printer definition, this step is not needed.

Operation

DRS/Secure executes as an extension of the base DRS product. DRS/Secure uses standard DRS facilities to route reports from batch jobs, online applications, local area networks and remote TCP/IP hosts to the JES spool or to a DASD file on the MVS host system. As the SYSOUT is received, it is decrypted using the Rijndael decryption algorithm and the decryption key provided by the hardware manufacturer who supplied the DIMM for the printer. Note that the key provided **MUST** match the DKEY= value in the DRS/Secure printer definition. If these keys do not match, the printer may “hang” and not print anything.

Using AnyQueue with OCÉ PRISMAproduction™

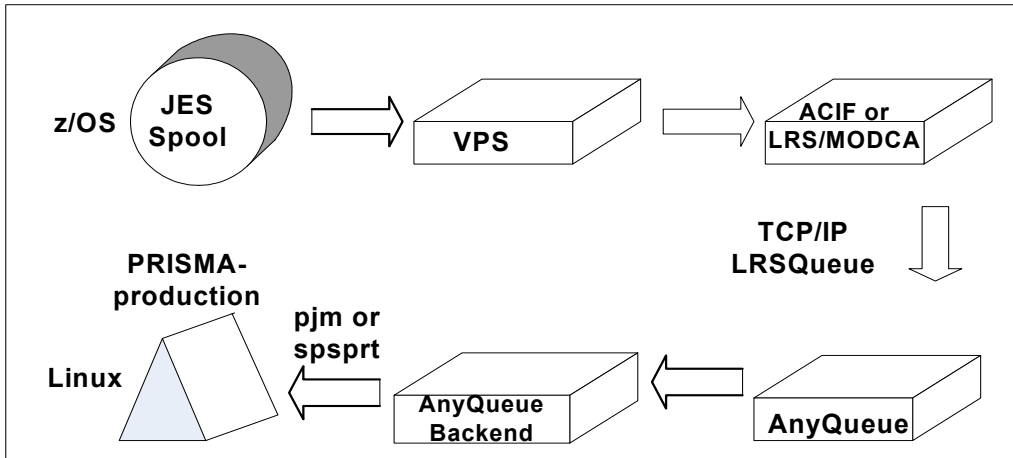


Figure 3-6: PRISMAproduction™ environment

In a PRISMAproduction™ environment, AnyQueue acts as a bridge between VPS (running on z/OS) and PRISMAproduction™ (running on Linux), placing the data from the z/OS JES spool into PRISMAproduction™ via a backend command (usually `pjm`) preserving required JES attributes.

VPS and AnyQueue ensure the delivery of data to PRISMAproduction™, in that the JES spool dataset will not be deleted until the data is successfully delivered to PRISMAproduction™. VPS can deliver line data, mixed mode data, or MOD:CA data to PRISMAproduction™.

VPS can also fully compose line or mixed mode data into MOD:CA before sending it to PRISMAproduction™. This allows continuing to manage AFP resources on z/OS and not having to distribute them. VPS calls the IBM ACIF product to do this, but the LRS/MODCA product can be used instead by using the parameter `MODCOPTS=8000000` in the VPS printer definition.

VPS can encrypt or compress or encrypt and compress the data before sending it to AnyQueue where it will be decrypted and uncompressed before being passed to the Backend.

The AnyQueue backend that places the data into PRISMAproduction™ can be a program (e.g., `pjm` or `spsprt`) or a script or other program that calls one of these programs. Common reasons for using scripts include requirements for job grouping and routing.

Installation

A sample AnyQueue configuration together with sample scripts and job tickets are included in the AnyQueue for PRISMAproduction™ distribution.

When AnyQueue is installed for PRISMAproduction™ the sample configuration file **prisma.cfg** will be created if it does not exist and the following directory structure will also be created and filled.

```
euoprisma:/u/cust/lrs du # Install Base
962  ./anyq/html # static html pages
169  ./anyq/trac # webtrac files
0    ./anyq/daemon #
6892 ./anyq # anyq dist
364  ./slib # lrs shared libs
0    ./spool # spool (empty)
20   ./scripts # sample scripts
36   ./tickets # sample tickets
14158 .
```

As the contents of the scripts and tickets directory will ALWAYS be updated by a re-install or upgrade, it is advisable to either create new directories for the production scripts and tickets or use names for the scripts and tickets that start with the word LIVE. (No sample scripts or tickets will ever be supplied that start with the word LIVE.)

A link in the directory **/etc/rc.d/rc5.d/S99anyqpr -> /u/cust/lrs/canyqctl**) is also created to ensure that AnyQueue is automatically started when Linux is booted and stopped when it is shut down.

After running the install script, log on to AnyQueue using the built in (configuration) Web server listening on port 9901 to complete the customizing.

If AnyQueue is upgraded or re-installed, the AnyQueue configuration file (prisma.cfg) or the file containing the product keys (anyq.key) will not be replaced.

To start the install process, execute the **lrsprinst** script that is located in the **/AnyQueue_for_iLinux** directory on the installation CD or received from EFT download process.

```

europrisma:/u/cust/newdir # ls
. .. anyqprisma.tar.gz lrsprinst
europrisma:/u/cust/newdir # ./lrsprinst
Creating target directory (/u/cust/lrs)
Extracting contents of distribution file (/u/cust/newdir/anyqprisma.tar.gz)
./
./anyq.tar
./licread
./prisma.tar
./slib.tar
./web.tar

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Copyright law and international treaties protect this software program.
Further, you may not use this software program unless there is a valid
license agreement with Levi, Ray & Shoup, Inc. which authorizes you to
do so. This software program is the property of Levi, Ray & Shoup, Inc.
and contains trade secrets and confidential information.

Unauthorized use, distribution or reproduction of this software program
will be prosecuted to the maximum extent possible under law.

Are you an authorized user? To install AnyQueue, you must be an authorized
user.

To accept the terms and conditions of this agreement enter "accept"
To decline the terms and conditions of this agreement enter "decline"

Please type "accept" or "decline"

accept
Terms and conditions were accepted. Install continues
Extracting contents of tar file (anyq.tar)
Extracting contents of tar file (slib.tar)
Extracting contents of tar file (web.tar)
Extracting contents of tar file (prisma.tar)
Creating Any Queue configuration file (prisma.cfg)
Please enter the Any Queue product key

T++++++XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Please enter the Any Queue WebTRAC product key

T++++++XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Creating startup links in (/etc/rc.d)
Any Queue succesfully installed
The command to start AnyQueue is:

    /u/cust/lrs/canyqctl start

Would you like to start AnyQueue now ? (default: [y]):
y
AnyQueue Engine for Linux Version 2.6.5-7.139-smp #1 SMP Fri Jan 14 15:41:33 UTC
2005
Version 1.2.057
Copyright 2002 Levi, Ray & Shoup, Inc. All rights reserved.
Use and disclosure of software governed by license.
AnyQueue is a Trademark of Levi, Ray & Shoup Inc.
Starting.....
Server started, process (1690)

AnyQueue is now active and ready for use. To access the Web interface, open
the following URL with your Internet browser:
http://<hostname>:9901/lrs/anyqweb.dll?trid=logon

<hostname> is this computer

```

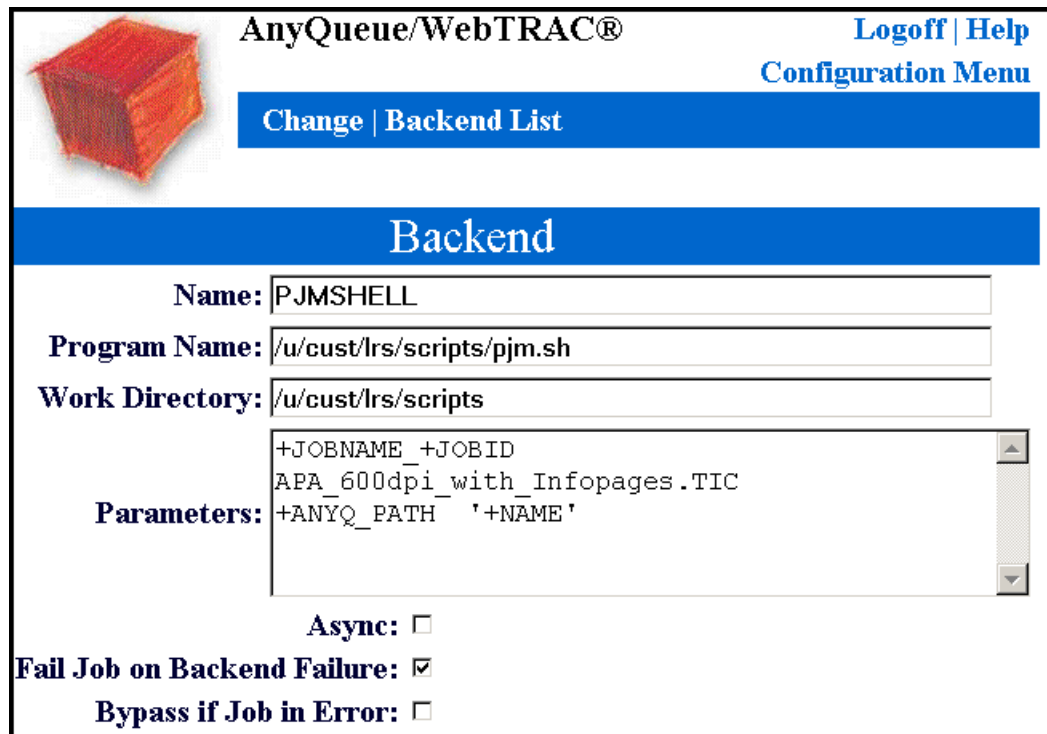
Configuration

Standard Configuration (MOD:CA with compression and DirectPJM)

For a standard installation the route DirectPJM should be used. This calls the `pjm` command via the backend `pjmshell` with parameters from the `SYSOUT` received by AnyQueue from z/OS. A simple ticket is used. The parameter values on the `pjm` command issued from the script override those specified in the ticket.

- Copy the PRISMAproduction™ ticket being used into the ticket directory; use a name beginning with LIVE.
- Copy the script `pjmshell` to a name beginning with LIVE.
- Sign on to AnyQueue and go to the configuration panel Backend.
- Choose the Backend DirectPJM and change the ticket name and the script name to the ones you created.
- Click on **Change**.

Before:



AnyQueue/WebTRAC® [Logoff](#) | [Help](#)
[Configuration Menu](#)

[Change](#) | [Backend List](#)

Backend

Name:

Program Name:

Work Directory:

Parameters:

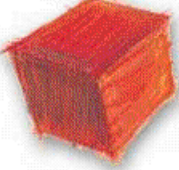
Async:

Fail Job on Backend Failure:

Bypass if Job in Error:

Figure 3-7: PRISMAproduction™ Backend

After:

**AnyQueue/WebTRAC®**[Logoff](#) | [Help](#)

[Configuration Menu](#)

[Change](#) | [Backend List](#)

Backend

Name:

Program Name:

Work Directory:

Parameters:

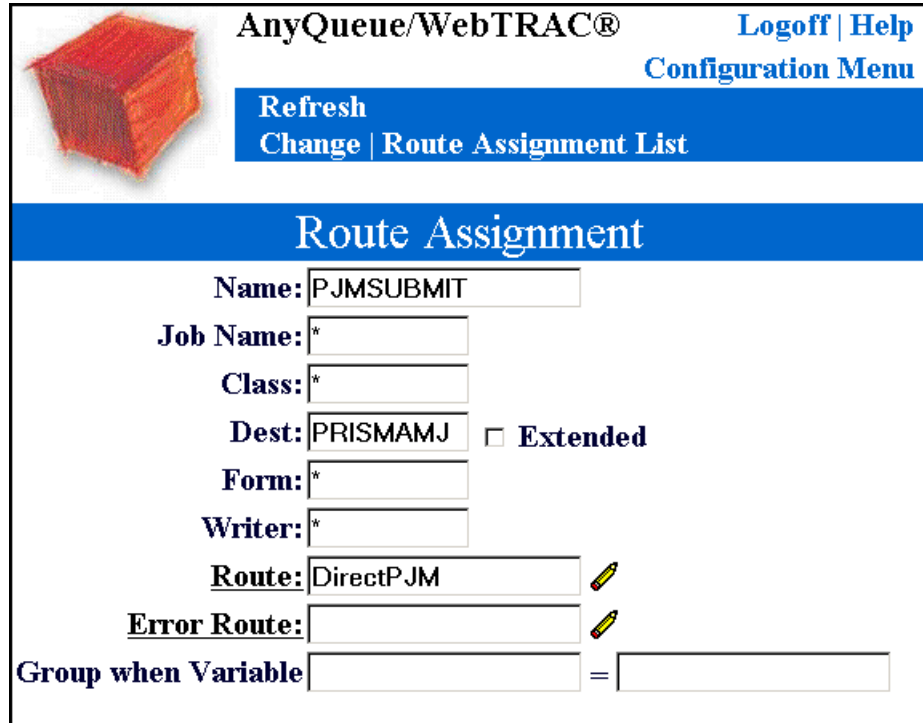
Async:

Fail Job on Backend Failure:

Bypass if Job in Error:

Go to the route assignment configuration panel and match the route assignment criteria for the DirectPJM route to the VPS selection criteria (for example DEST) and either delete the other route assignments or choose criteria that will never be met.

Before:



AnyQueue/WebTRAC® [Logoff](#) | [Help](#)
Configuration Menu

Refresh
Change | Route Assignment List

Route Assignment

Name: PJMSUBMIT


Job Name: *


Class: *

Dest: PRISMAMJ Extended

Form: *

Writer: *

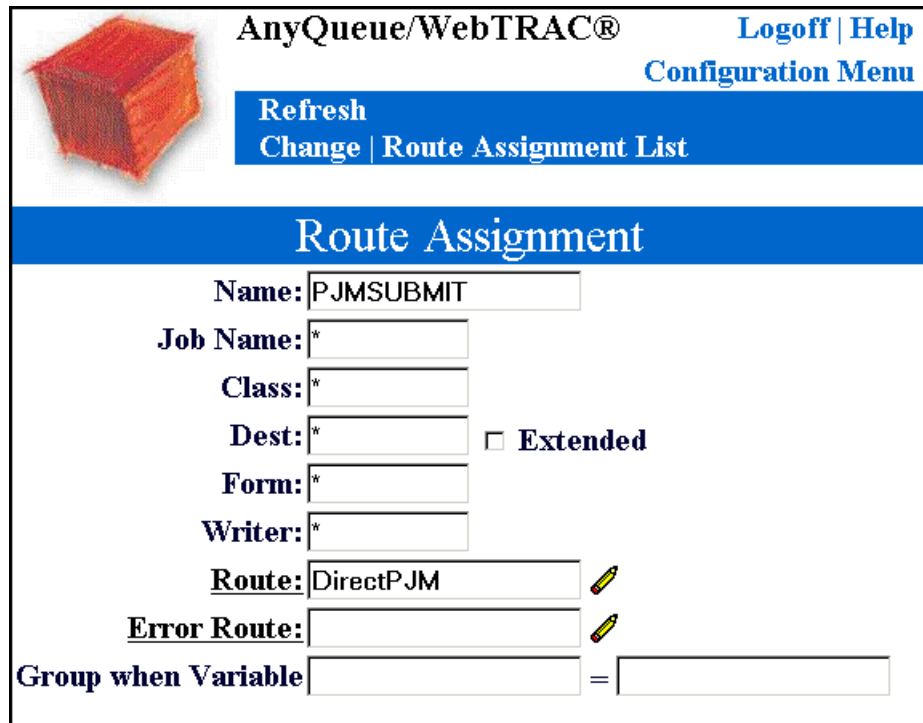
Route: DirectPJM 

Error Route: 

Group when Variable =

Figure 3-8: PRISMAproduction™ Route Assignment

After:



AnyQueue/WebTRAC® [Logoff](#) | [Help](#)
Configuration Menu

Refresh
Change | Route Assignment List

Route Assignment

Name: PJMSUBMIT


Job Name: *


Class: *

Dest: * Extended

Form: *

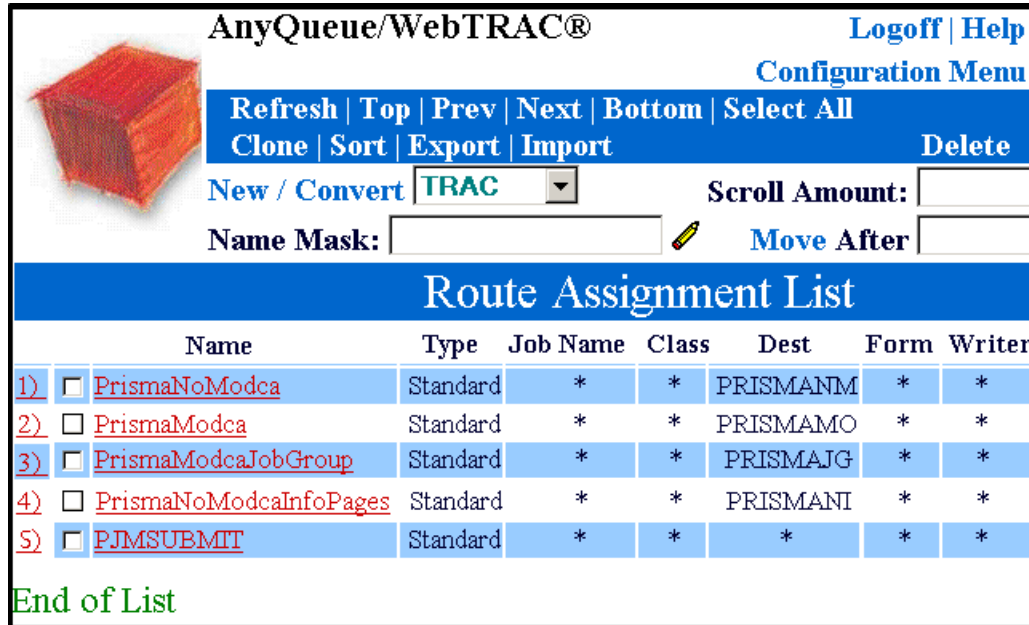
Writer: *

Route: DirectPJM 

Error Route: 


Group when Variable =

Click on **Change**.



AnyQueue/WebTRAC® [Logoff](#) | [Help](#)
[Configuration Menu](#)

[Refresh](#) | [Top](#) | [Prev](#) | [Next](#) | [Bottom](#) | [Select All](#)
[Clone](#) | [Sort](#) | [Export](#) | [Import](#) [Delete](#)

New / Convert **TRAC** Scroll Amount:
Name Mask:  Move After

Route Assignment List

	Name	Type	Job Name	Class	Dest	Form	Writer
1) <input type="checkbox"/>	PrismaNoModca	Standard	*	*	PRISMANM	*	*
2) <input type="checkbox"/>	PrismaModca	Standard	*	*	PRISMAMO	*	*
3) <input type="checkbox"/>	PrismaModcaJobGroup	Standard	*	*	PRISMAJG	*	*
4) <input type="checkbox"/>	PrismaNoModcaInfoPages	Standard	*	*	PRISMANI	*	*
5) <input type="checkbox"/>	PJMSUBMIT	Standard	*	*	*	*	*

End of List

Figure 3-9: PRISMAproduction™ Route Assignment List

Verify that the encryption key¹ and the port number specified in the HOST panel matches the one you are going to use in the VPS printer definition.

The screenshot shows the 'AnyQueue/WebTRAC' configuration interface. At the top, there is a logo of a red wooden crate and the text 'AnyQueue/WebTRAC®'. To the right are links for 'Logoff | Help' and 'Configuration Menu'. Below this is a blue bar with 'Change | Host List'. The main configuration area is titled 'Host' and contains the following fields:

- Name:** z/OS
- Host Type:** TCP/IP
- Max Data:** 32768
- Start Paused:**
- Honor PRQ:**
- 128 Bit Key:** F1F2F3F4F5F6F7F8F9F0FAFBFCFDFF
- 192 Bit Key:** 0000000000000000000000000000000000000000000000000000000000000000
- 256 Bit Key:** 0000000000000000000000000000000000000000000000000000000000000000
- Port ID Number:** 9903

Figure 3-10: PRISMAproduction™ Host

Return to the configuration main screen and save the configuration, then go to the ENGINE panel and restart AnyQueue.

1. At the moment, the distribution does not contain VPS Secure so do not fill in the key.

Place the following definition in the VPSLIB on z/OS. This definition is used to fully compose AFP data sent to AnyQueue and compress and encrypt it. Note that the encryption key is commented out as the install does not contain VPS Secure at present.

```
PRTNAME='AnyQueue for Caldera',
AUTOEJCT=(N,N,N,N),
DEST=U1234,                # Check this
COMPRESS=Y,
FCB=N,
PAGEDEF=X06683,
FORMDEF=A10110,
CHARS=GT15,
QSPACE=(C,100,10),
DSPACE=(C,100,10),
COMMTYPE=(TCP,IP,ANYQUEUE),
PRTROPTS=000001C0,
CONVTYPE=MODCA,
FONTDD=FONT300,
ENCRYPT=(Y,AES16,LRSQUEUE),
*EKEY=F1F2F3F4F5F6F7F8F9F0FAFBFCFDFEFF, # Must Match
PRTXLATE=N,
QBUFSIZE=23552,
RELREQ=I,
RUSIZE=4096,
SEPAR=N,
TCPHOST=xxx.xxx.xxx.xxx,    # Must Match
TCPRT=9903,                 # Must Match
TRACE=(Y,FF),
TRNCLASS=(T,C)
```

Adjust the selection criteria as required to match those chosen in the route assignment panels (e.g., DEST) and the TCPHOST hostname to match that of the PRISMAproduction™ server and then activate this printer. Please see the VPS Installation and Operation manual for a full discussion of the parameters available.

Send a test AFP job to the printer.

Check that the job appears in the PRISMAproduction™ queue with the required attributes. Click on the job in PRISMAproduction™ Job Queue and check that the job ticket contains the required information

Print the job and ensure it prints correctly, with or without PRISMAproduction™ info pages.

Use the VPS log and the AnyQueue Log (available through the ENGINE panel) to assist with any problems.

Non Standard Configuration

No documentation can ever hope to cover all the possible reasons for non standard configurations, but here are a few scenarios that may help meet your requirements.

First of all, a few simple guidelines:

- Always use the directory **/u/cust/lrs/spool** for the temporary files, not **/tmp**.
- Always start the names of the tickets and scripts with the word **LIVE**.
- If using **pjm** to submit jobs to PRISMAproduction™, remember to delete the input files after checking the return code from **pjm** (**pjm** copies the input file). There is no 'erase' option.
- It is generally better to use **pjm** instead of **spsprt** because more can be done with **pjm** and a ticket.
- Check the return codes. Pass a non zero return code back to AnyQueue if a non recoverable failure has occurred; this will drain the VPS printer in z/OS.
- Pass the JES variables which you want to use or make decisions on to the script; make sure that variables that can be missing or that have spaces in them are quoted.
- Do as much work in the script as possible because the script can be changed without restarting AnyQueue. Changing Backend parameters will require a restart of AnyQueue, which is disruptive.

Scenario 1

There are three production Océ printers attached to the PRISMAproduction™ system and an Imagestream connected to the archiving system.

In the JCL the OUTPUT NAME card is set to Imagestream if the print is to be sent to the archive.

The JCL output class dictates which printer is to be used. Class A is for the printer PD2000, class B is for the printer PD2001, and class C is for the printer PD2002.

The pseudo code might be:

```
If name="Imagestream" then dest="Imagestream" else
    if class="A" then dest="PD2000" else
        if class="N" then dest="PD2001" else
            if class="C" then dest="PD2002"
```

Scenario 2

You wish to combine output from a single z/OS job which generates more than one SYSOUT dataset into a single job in PRISMAproduction™ (job grouping).

The basic tactic is to switch on the VPS separators and ensure DSBATCH=(Y,Y,Y) is set, so you can tell when the end of a job occurs, via the AnyQueue separator variable.

The pseudo code might be:

Case separator=start

 Create start part of ticket for this job, named

 JOBNAME.JOBNUMBER.STEPNAME.DDNAME.STIC

Case separator=none

 Create middle (can occur more than once) part ticket for this job, named

 JOBNAME. JOBNUMBER.STEPNAME.DDNAME.TIC

 Save Data as

 JOBNAME. JOBNUMBER.STEPNAME.DDNAME

Case separator=end

 Create end separator ticket for this job, named

 JOBNAME. JOBNUMBER.STEPNAME.DDNAME.ETIC

 Join together the ticket parts and submit the ticket.

 Delete the (temporary) data JOBNAME.JOBNUMBER*

Note that due to the naming convention, the problem of repeated data (which might occur in the unlikely event of a z/OS system failure) is sidestepped as the file will be overwritten with the complete data using the same name.

There are working examples of scripts that do this in the **/home/cust/lrs/scripts** directory. Please use the index in this directory to locate this example.

Scenario 3

You wish to send line data and mixed mode data to PRISMAproduction™ and compose the data there, while still gaining the benefits of AnyQueue transmission (encryption and compression).

Change the VPS AnyQueue printer definition by removing the CONVTYPE parameter and making sure FCB=N.

Make sure the following flags are set in the route definition.

IGNORE Carriage Control

KEEP Carriage Control

STANDARD Format (i.e., add an ASCII CR,LF to the end of each host data line).

The screenshot shows the AnyQueue/WebTRAC Configuration Menu. At the top left is a red cube icon. The title bar contains 'AnyQueue/WebTRAC®' and 'Logoff | Help Configuration Menu'. Below the title bar is a blue bar with 'Refresh' and 'Change | Route List'. A navigation bar contains tabs for 'Basic', 'Controls', 'Flags', 'Sequences', and 'AnyQueue/Secure®'. The 'Route' section is highlighted in blue. Below it is a table titled 'Route Flags' with 16 rows, each containing a checkbox and a label.

Route Flags	
<input type="checkbox"/>	Append To File
<input type="checkbox"/>	Create Info Files
<input type="checkbox"/>	Discard DRS Separators
<input type="checkbox"/>	Remove 1st Form Feed
<input type="checkbox"/>	Translate
<input checked="" type="checkbox"/>	Ignore CC
<input checked="" type="checkbox"/>	Keep CC
<input checked="" type="checkbox"/>	Standard Format
<input type="checkbox"/>	Remove Single Space
<input type="checkbox"/>	Create ANYQ File
<input type="checkbox"/>	Serialize Output
<input type="checkbox"/>	Prefix Line Length
<input type="checkbox"/>	Include size of Prefix
<input type="checkbox"/>	Honor FCB Channel 1
<input type="checkbox"/>	Don't Send Form Feed Sequence

Figure 3-11: PRISMAproduction™ Route Flags

Pass at least the AnyQueue CC flag to the Backend script and submit the job to PRISMAproduction™ ensuring that the spsprt cc parm is correctly set or the job ticket variable cc as required.

The pseudo code might be:

If cc=ansii

 Pjm -tic ticket with ansii cc set and datatype line.

If cc=machine

 Pjm -tic ticket with machine cc set and datatype line.

If cc=none

 Pjm -tic ticket with no cc set and datatype line.

A working example of a script that does this is in the **/home/cust/lrs/scripts** directory, but note that it uses the **spsprt** command. Please use the index in this directory to locate this example.

Other Sources of Information

If more information is needed about functions available in PRISMAproduction™, such as the relationship of info page variables to JES JCL values, the options available on the `pjm` or `spsprt` commands, or methods of logging information in the PRISMAproduction™ message log, please refer to the OCÉ PRISMAproduction™ Administration Guide.

Please contact LRS technical support staff if you need assistance in installing or customizing this product.

If you create a script that you believe will be of use to others, please send it to LRS. LRS will review it and decide if it should be included in the scripts directory.

AnyQueue Installation

This section of the manual gives instructions on installing AnyQueue. Before installing AnyQueue, please verify that all of the pre-requisites listed in [“Requirements” on page 2.1](#) have been completed.

Note: AnyQueue requires a Web server for configuration and to monitor and control jobs retained in WebTRAC. Various Web servers provided by other vendors are supported for this functionality (e.g., IIS from Microsoft, Apache binaries from Sun and HP, IBM HTTP Server, etc.).

However, AnyQueue provides an internal Web server that can be used for configuring AnyQueue. The internal Web server is only supported for configuring the AnyQueue system. It is not supported for production access to the WebTRAC system.

To activate AnyQueue's internal Web server, you need to execute AnyQueue from the command line and include the parameter **/cfgport:8888** along with any other parameters. (8888 is just an example. If you don't have a Web server running on the same machine as AnyQueue, you can specify the standard port 80.) For example:

```
AIX      - ./anyq /f:usample.cfg /cfgport:80
HP-UX    - ./hanyq /f:usample.cfg /cfgport:80
Solaris  - ./sanyq /f:usample.cfg /cfgport:80
Windows - nanyq /f:sample.cfg /cfgport:80 /nosvc
```

During installation, a subdirectory called **'html'** will be created and populated with all of the Web resources. When utilizing the internal Web server, this subdirectory must exist in the same directory where the configuration file is loaded.

Although all of the Web screens are accessible through this internal Web server, it is not intended to be an industrial strength Web server. Only problems encountered during configuration will be supported. All other transactions are only supported via one of the Web servers that work in conjunction with LRS/Web Connect.

A pax file is provided for easier mainframe Web server access to the AnyQueue resource files. To use the pax file, copy the file (anyq.pax) to the mainframe in the Web server's document root directory. Then, unpax the file using a command similar to the following:

```
pax -rvf anyq.pax
```

Installing on Windows

Depending on what features of AnyQueue you are installing, you may need to run the installation two times - once on the workstation AnyQueue will execute from, and once on the workstation that LRS/Web Connect will be installed on.

LRS/Web Connect is a product that works with your Web server to enable access to LRS products. LRS/Web Connect runs as a loaded module within Microsoft Internet Information Server. Regardless of how many LRS products you need to communicate with over the Web, you only need to run one copy of LRS/Web Connect on each Web server you wish to communicate through.

To execute the install, insert the product CD. When the LRS Products Setup list displays, select “AnyQueue for Windows” (see [Figure 3-12](#)). Or, you can directly execute the **anyqinst.exe** program.

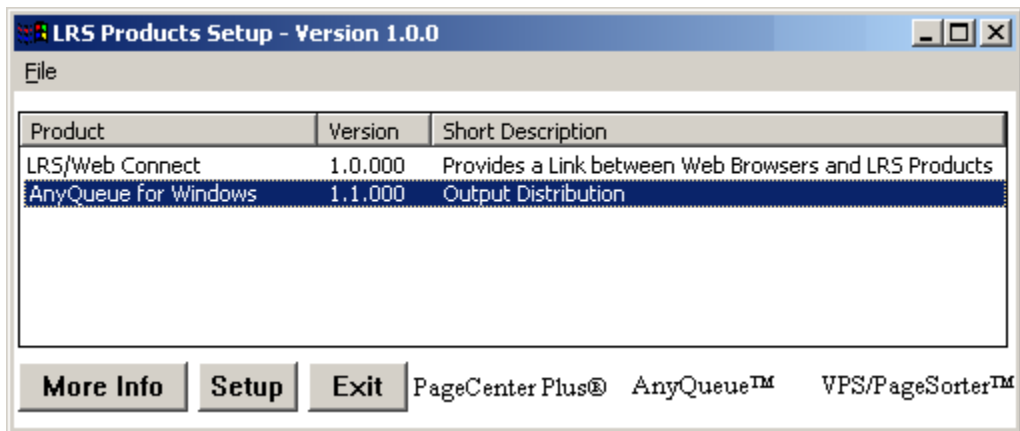


Figure 3-12: LRS Products Setup dialog

AnyQueue Installation on HP-UX, Sun Solaris, AIX, S390 Linux, or Intel Linux

This section will guide you through the installation of the AnyQueue components. The installation process can be executed from a standard telnet session to the target host.

The AnyQueue product-set consists of the following components:

- AnyQueue - Primary product components.
- LRSQueue - Print submission command line interface.

The above components communicate via TCP/IP so they could be installed on different hosts.

Common Function Library (LRSAPI)

In addition to the above major components, a common function library (LRSAPI) must also be installed on the platforms running the AnyQueue or LRSQueue components. LRSAPI is a shared library that contains common functions and operating system interface routines. This library is automatically installed along with either of the major product components. It's contents will reside in an **slib** directory found in the LRS product home directory.

Distribution Material

Each of the above components will be supplied as a compressed TAR file and can be shipped on CD or distributed electronically using the LRS EFT shipping system. The CD and the zipped EFT download file will contain the following directory structure:

Irsinst	Common Product Installation Processor
/AnyQueue_for_AIX	AnyQueue installation material for AIX.
/AnyQueue_for_HPUX	AnyQueue installation material for HPUX.
/AnyQueue_for_SUN	AnyQueue installation material for SUN.
/AnyQueue_for_S390_Linux	AnyQueue installation material for S390 Linux.
/AnyQueue_for_iLinux	AnyQueue installation material for Intel Linux.
/LRSQueue	LRSQueue client for all platforms.

Each product TAR file has a common naming standard where the first character of the file name indicates the execution platform.

- A - AIX 4.3 or above.
- H - HP-UX 11.11 or above.
- S - Sun Solaris 5.8 or 5.9.
- L - SuSe Linux for Z series (kernel 2.4.7 or higher).
- C - Intel Linux (kernel 2.4.7 or higher).

For example, the installation material for the HP-UX platform will be named:

- hanyqueue.tar.Z
- hlrsqueue.tar.Z

Product Name Abbreviations

Throughout the installation instructions the following abbreviated product names will appear in file names and selection menus:

- ANYQ - AnyQueue
- LRSQ - LRSQueue print submission client.

Product Installation

The product installation process is controlled via the LRSINST common installation routine that is supplied in the root directory of the installation CD or the EFT download package. The LRSINST routine will inspect your system and locate the appropriate installation material for your platform and will guide you through the installation process.

Installation from CD

If you have a product installation CD then it is possible to mount the CD and execute the installation process directly from the CD.

Installation from EFT Download

If you have downloaded an EFT distribution package you will need to unzip the distribution files and copy the required installation material to a temporary directory on the target system. For example, if you plan to install on an AIX system you will need to create a temporary directory on the target system and copy the following installation material from the EFT package using a BINARY file transfer.

Installation File	Location in EFT package
lrsinst	Install/
aanyqueue.tar.Z	Install/AnyQueue_for_AIX
alrsqueue.tar.Z	Install/LRSQueue

Note: It is not necessary to preserve the directory structure when copying the required files to the target host. The installation process will search for product installation material in the current working directory and any subdirectories below this location.

Installation Process

Once the product installation CD has been mounted or the required installation files have been copied to a temporary directory, you are now ready to run the installation process, but please read the remainder of this section before continuing. The LRSINST routine is a very flexible installation tool and can be used to install Product-Sets (groups of related product components) or individual product components. The following text describes the installation of the AnyQueue product-set, which includes LRSAPI and LRSQueue. If you wish to install individual product components please execute LRSINST with the **-h** option for detailed usage information.

Installation Directories

The LRSINST process will install all selected products under a common installation directory with a separate subdirectory for each component. The default installation location is **/opt/lrs** for installations run under the root userid and **/tmp/lrs** for non-root users. The installation process will prompt for the installation location on execution. If the default locations are used, the installation process will create the following directory structure when installing the AnyQueue product-set.

<code>/opt/lrs/anyq</code>	AnyQueue executables.
<code>/opt/lrs/anyq/daemon</code>	Sample files for running AnyQueue as a daemon process.
<code>/opt/lrs/anyq/html</code>	AnyQueue HTML resources for internal application web server.
<code>/opt/lrs/anyq/trac</code>	Default WebTRAC location.
<code>/opt/lrs/lrsq</code>	LRSQueue print submission client.
<code>/opt/lrs/slib</code>	Common function library.

Required Information

Before starting the installation process the following information is required:

Installation Location	Described in the previous section.
AnyQueue Product Key	This is a 60 byte key that is required to execute the AnyQueue product. This information is provided with the installation material or via e-mail.
WebTRAC Product Key	This is a 60 byte key that is required to execute the AnyQueue WebTRAC product. This information is provided with the installation material or via e-mail.
Document Root directory for Web Server	To present the Web interface for AnyQueue a Web server is required. If an Apache based Web server is available on the target host the installation process will provide you with the option of installing the AnyQueue Web Resources. These resources will need to be located in the Document Root directory of the Web Server.

Executing the Installation Process

You now have all the information required to start the installation process. To begin installation change to the CD root directory or the temporary directory containing the installation material. Then execute the following command:

`./lrsinst anyq`

Installation steps:

1. You will be asked to provide the directory under which the products will be installed (default /opt/lrs).
2. The installation routine will then install each of the product components into a subdirectory below the specified location.
3. You will be asked to supply the location of the Document Root directory of the Web Server if you wish to copy the AnyQueue Web Resources.

Starting AnyQueue

After completing the installation process, you will need to create a LRS product key file named “**anyq.key**” in the AnyQueue (anyq) files installation directory. A sample key file was created during the product installation named “**anyq.key-sample**”. Open this sample key file with a text editor and replace the invalid keys with your unique customer product key number. Save the file as “**anyq.key**”.

An AnyQueue quick start script named **sanyqcfg** (Sun version), **canyqcfg** (Intel Linux), **hanyqcfg** (HP version), **aanyqcfg** (AIX version) or **lanyqcfg** (S390 Linux version) resides in the AnyQueue (anyq) files installation directory. This script will start AnyQueue using the sample configuration file (usample.cfg) created during the install as well as an internal application Web server. The script will display an HTTP connect string that can be pasted into your browser to get quick access to the AnyQueue application. The internal Web server should NOT be used as the primary Web server to access the AnyQueue application. It provides quick access to AnyQueue for initial system configuration purposes only. Once AnyQueue and LRS/Web Connect are configured, you should discontinue using this quick start script as well as the internal application Web server.

Installing AnyQueue for Windows on a machine other than the Web Server

1. Launch the Install program.
2. Thoroughly read and reply to the informational screens that appear.
3. Select option “**1 – Standard**” for the Setup Type.
4. Accept the default Destination Folder to install AnyQueue, or provide your own location.
5. When asked if you would like to backup your current HTML files, select **Yes** if you have customized your own files. Select a location for your backup copy of the files when asked. If this is a first time install, or you have not modified the HTML files, select **No**.
6. Accept the default Destination Folder to install the Common LRS DLL's, or provide your own location.
7. Accept the default Service Name, and decide if you want AnyQueue to start automatically when the machine boots, or if you want to manually start it each time.
8. Accept the default Folder Location or provide your own location.

Installing AnyQueue for Windows on the same machine as the Web Server

1. Launch the Install Program.
2. Thoroughly read and reply to the informational screens that appear.
3. Select Option “**2 – Advanced**” for the Setup Type.
4. Accept the default Destination Folder to install AnyQueue, or provide your own location.
5. Accept the Components selected by default.
6. When asked if you would like to backup your current HTML files, select **Yes** if you have customized your own files. Select a location for your backup copy of the files when asked. If this is a first time install, or you have not modified the HTML files, select **No**.
7. Accept the default Destination Folder to install the Common LRS DLL’s, or provide your own location.
8. Accept the default Web Resources Path or provide your own location. Note that this location must be an alias (also known as a virtual directory) defined in your Web Server, and the alias name must be “**anyq**”.
9. Accept the default Service Name, and decide if you want AnyQueue to start automatically when the machine boots, or if you want to manually start it each time.
10. Accept the default Folder Location or provide your own location.

Installing AnyQueue for Windows resources on the Web Server

1. Launch the Install Program.
2. Thoroughly read and reply to the informational screens that appear.
3. Select option “**3 – LRS Web Resources only**” for the Setup Type.
4. Accept the default Web Resources Path or provide your own location. Note that this location must be an alias (also known as a virtual directory) defined in the Web Server, and the alias name must be “**anyq**”.

Uninstalling AnyQueue

Run the AnyQueue Uninstall from the program folder or from the Add/Remove Programs under the Control Panel.

LRS/Web Connect Installation on a Windows machine

Overview For AnyQueue/WebTRAC (Temporary Retention and Control) to allow Web browser access, LRS/Web Connect needs to be installed and configured to be able to locate AnyQueue. If LRS/Web Connect is not installed, refer to its documentation and install it on the same machine as the Web Server. After LRS/Web Connect has been installed continue with the procedure below to configure it.

Installation • Execute **NLRSWCCF.EXE**.

The dialog illustrated below will display.

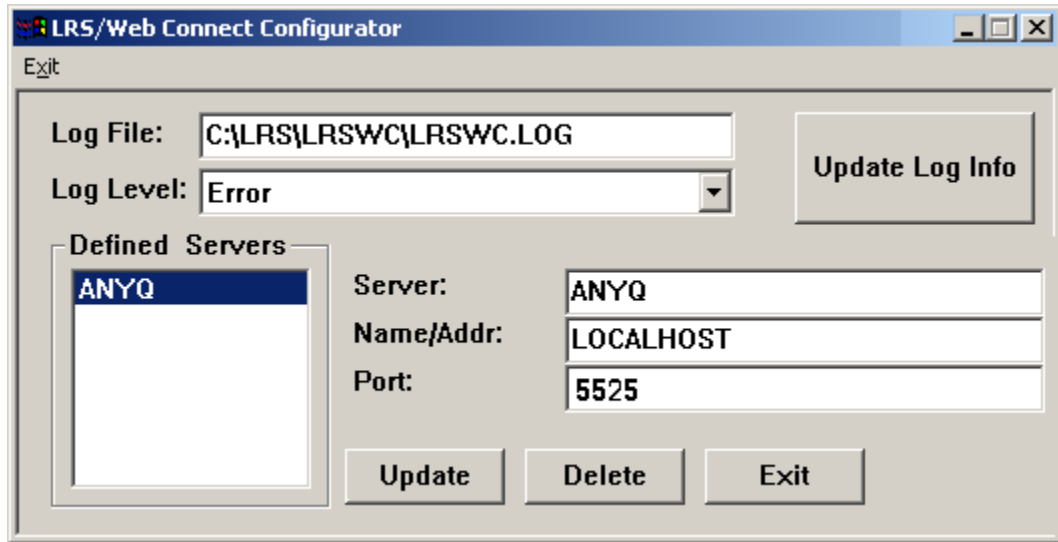


Figure 3-13:LRS/Web Connect Configurator

FIELDS	DESCRIPTION
Server:	Enter ANYQ in this field.
Name/Addr:	Enter the address or name of the machine AnyQueue will be running on.
Port:	Enter the Web Access port defined (or the port that you will define) in the AnyQueue configuration file.

- Select the **Update Log Info** button to save log information.
- Select the **Add** button to save the changes.

LRS/Web Connect Installation on a Unix machine

Add a line to the configuration file:

Example: **ANYQ,LOCALHOST,5525**

AnyQueue Configuration File

What does the configuration file do?

The configuration file is used by the AnyQueue Engine for start-up and during normal operation. This file is used to define a variety of operational parameters such as Host objects, Route objects, etc.

How do I create the configuration file?

A file called **sample.cfg** is shipped with AnyQueue. It can be copied to any name you desire to use as your main configuration file, or the AnyQueue Create Configuration File program can be used.

The default values in the Windows **sample.cfg** file are:

WebTRAC Location: c:\lrs\anyq\trac
Web Access Port: 5525

The default values in the Unix **sample.cfg** file are:

WebTRAC Location: (installed location)/trac
Web Access Port: 5525

This file is actually created during the installation.

These are the minimum values required to get AnyQueue up and running, and capable of allowing full configuration capabilities via a Web Browser.

Note that the **Location** folder must exist !

The AnyQueue **Create Configuration File** program (**_crtcfg.exe**) can be used to create a basic configuration file from scratch, or update some fields in an existing configuration file. The parameters it supports are:

- /f:configfile** - Name of configuration file.
- /wloc:WebTRACLoc** - Fully qualified location to store the WebTRAC files.
- /wport:WebTRACPort** - Port that LRS/Web Connect uses.
- /u** - Indicates that the **/f** parm points to an existing file, and to update it (optional).
- /tport:TcpipPort** - Port that **_anyqcmd** will use to send commands to AnyQueue (optional).

Modifying a configuration file

Start the AnyQueue engine, and log on through a Browser with a user that has Admin Maint authority.

On the first startup, a user ID called **ADMIN** with a password of **ADMIN** will be created.

Note: LRS/Web Connect must be configured and running on your Web Server machine.

From the Menu bar, select **Configure**.

From the **List of Configuration Files**, select the one to modify.

Engine

After AnyQueue is installed and before it is operational, you will need to enter the LRS keys that were provided with the product.

For Windows:

Execute **nanyqkey.exe**

Note: This is also how you update the runtime parameters. See “[Runtime Parameters](#)” on page 3.44.

For Unix:

Enter the keys in a file called **anyq.key**. A sample file is shipped that you can refer to for an example.

- The base AnyQueue key is named **KEYANYQ**.
- The AnyQueue/WebTRAC key is named **KEYWTRAC**.
- The AnyQueue/Secure key is named **KEYSECR**.

Example:

KEYANYQ,xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Runtime Parameters

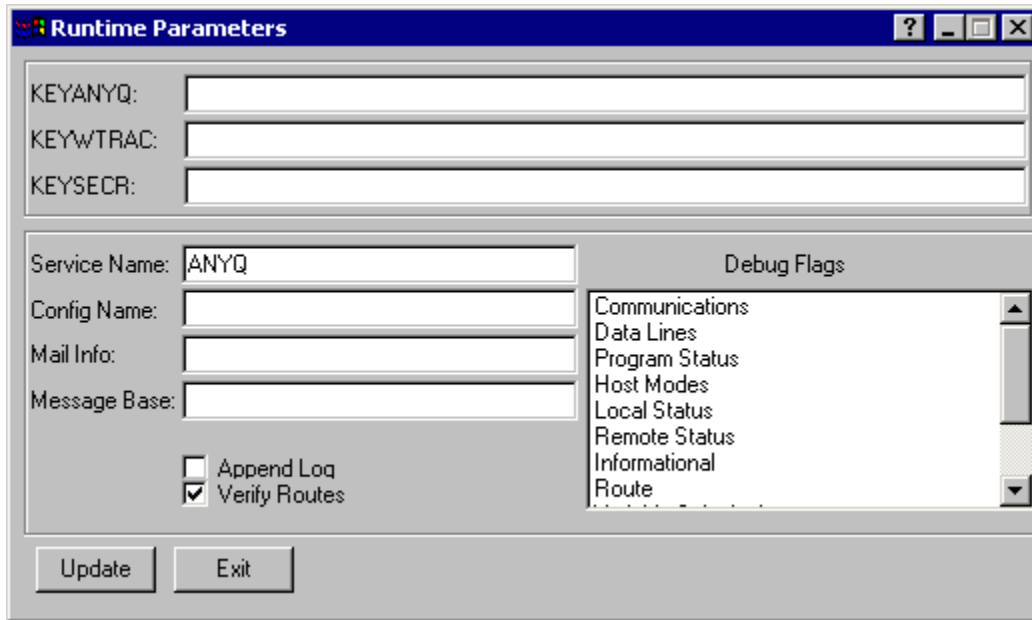


Figure 3-14: Runtime Parameters dialog

FIELDS	DESCRIPTION
KEYANYQ:	Enter the LRS product key.
KEYWTRAC	Enter the LRS product key. This encrypted key value supplies information to AnyQueue concerning your license status and user connection count. The key provided with the base version of AnyQueue will allow five user connections. Contact Levi, Ray & Shoup, Inc., to purchase additional seats.
KEYSECR	Enter the LRS product key. This encrypted key value supplies information to AnyQueue/Secure concerning your license status.
Service Name:	If you are running on Windows NT or Windows 2000, the Service Name field will be available. Enter the Service Name (usually ANYQ).
Config Name:	Enter the fully qualified location and name of the AnyQueue configuration file.
Mail Info:	Enter any mail information if you are using the exit supplied with AnyQueue (see "Exits" on page 4.7).
Message Base:	Sets the default category to pull messages from.
Append Log	Append to the log, do not delete it, each time the Engine is started.

FIELDS	DESCRIPTION
Verify Routes	Attempt to verify that each defined Route is available when the Engine is started.
Debug Flags	Select the debug flags that should be turned on when the Engine is started. (See page 4.3 for more information.)

BUTTONS	DESCRIPTION
Update	Select the Update button to save the changes.
Exit	Select the Exit button to quit this dialog without saving any changes.

Create Utility (xANYQCR)

This utility can be used to format any file type into a format that AnyQueue can read. Basically, xANYQCR is only compressing the file and adding host selection criteria to the file so it can be selected and routed with AnyQueue.

The syntax is:

xANYQCR infile outfile [/flag:value]

x = **n** for NT for Windows
h for HP-UX
s for Sun Solaris

infile = Name of input file.

outfile = Name of output file. (The file extension must be **.VPR** to be picked up by a Host File object. Also, if only a directory location is specified, or no target output file, the input file name will be used and the **.VPR** extension will be added automatically.)

/? = Help Screen

/ald = Flag as ASCII Line Data

Description	Keyword	Length	Description	Keyword	Length
Display Help	?	1	name	name	60
address1	ad1	60	node	node	8
address2	ad2	60	outputdest	odn	8
address3	ad3	60	outputname	onn	8
address4	ad4	60	outref	orf	8
Afpds	afpds	1	pagedef	pgd	6
Ascii Line Data	ald	1	prmode	prm	8
building	bld	60	procname	prn	8
chars1	ca1	4	room	room	60
chars2	ca2	4	separator	sep	1
chars3	ca3	4	stepname	stn	8
chars4	ca4	4	title	tt1	60
class	c	1	ucs	ucs	4
compacttbl	ctb	8	udata1	ud1	60
copies	cpy	3	udata2	ud2	60
copymod	cpm	4	udata3	ud3	60
ddname	ddn	8	udata4	ud4	60
dept	dept	60	udata5	ud5	60
dest	d	8	udata6	ud6	60
dsname	dsname	44	udata7	ud7	60
Extention	ext	3	udata8	ud8	60
fcb	fcb	4	udata9	ud9	60
flash	flash	4	udata10	ud10	60
form	f	8	udata11	ud11	60
FileType	ft	3	udata12	ud12	60
formdef	fmd	6	udata13	ud13	60
groupid	gid	8	udata14	ud14	60
Extended Help	help	1	udata15	ud15	60
hold	hld	1	udata16	ud16	60
jobid	jid	8	writer	w	8
jobname	j	8			

Example:

Within AnyQueue's configuration file there is a Host object defined that specifies **Host Type: File** and **Job Location: x:\anyqfile**.

Using xANYQCR a file is formatted with a class and writer, and copied to **x:\anyqfile\worddoc.vpr**.

The file 'worddoc.vpr' is selected by AnyQueue and processed according to a Route Assignment object that has been defined in AnyQueue.

LRS/Windows Port Monitor

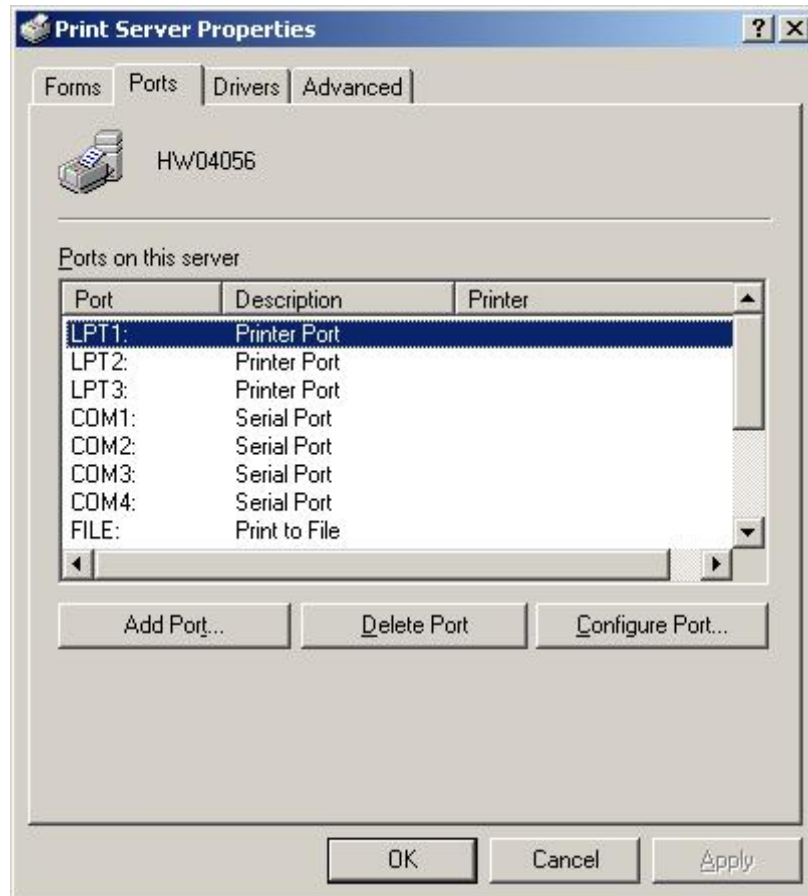
Overview

LRS/Windows Port Monitor provides a virtual network port enabling Windows clients (Windows 2000 or XP) to send any kind of application data through AnyQueue[®] or DRS/TCPIP. Users simply print their files to a configured virtual printer. The LRS/Windows Port Monitor makes it very easy to route PC-based business documents into the Enterprise Output Server. The LRS/Windows Port Monitor supports LRS/Queue keywords to extend file automation as necessary. It allows you to manage PC document output and provide a centralized place for online viewing, distribution, and printing. It also allows you to capture these documents using LAN-based AnyQueue or mainframe-based DRS/TCPIP solutions.

Adding a New Port

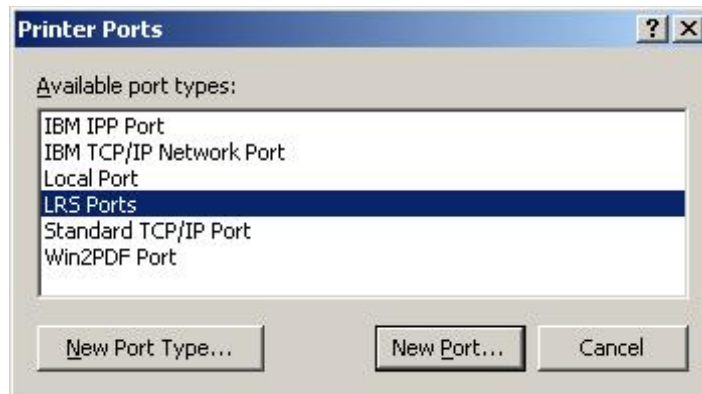
To add an “LRS Port”:

1. Install the LRS/Window Port Monitor using the **LRSQINST.EXE** InstallShield program.
2. Open the printers folder and select **File > Server Properties**.
3. Select the **Ports** tab on the **Print Server Properties** dialog.

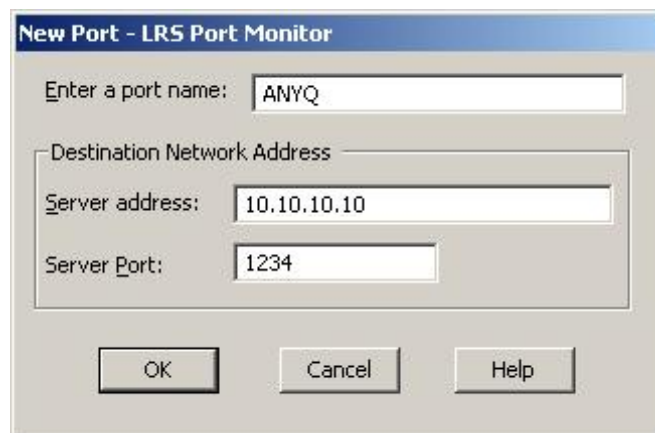


4. Select **Add Port...**

-
5. Select **LRS Ports** from the list of available port types.
 6. Select **New Port...**



7. In the **New Port – LRS/Windows Port Monitor** dialog, name the port a unique port name for this machine.
8. Enter the TCP/IP Server address and Server Port that the destination (ANYQ or DRS/TCPIP) is listening on and select **OK**. (Note: **:LRSQueue** will automatically be added to the name of the port.)



See [“Configuration” on page 3.51](#) for more information.

Configuration

LRS/Windows Port Monitor can be configured with:

- the simple configuration dialog that displays only a few of the LRS/Queue keywords,
- or the advanced configuration dialog that lists all available LRS/Queue keywords.

Simple configuration dialog:

Configure Port - LRSANYQ :LRSQueue 10.10.10.10:1234

Data Type: (i.e. PDF, PCL, AFP, TXT, etc.)
(Blank will be handled as text.)

Queue: (DRS printer definition or AnyQueue Route Assignment)

Class: Length: 1 Values: Alphanumeric

Destination: Length: 8 Values: Valid JES Syntax

Form: Length: 8 Values: Valid JES Syntax

Writer: Length: 8 Values: Valid JES Syntax

Compress Data for transmission

Prompt for attributes during print

Unattended Port

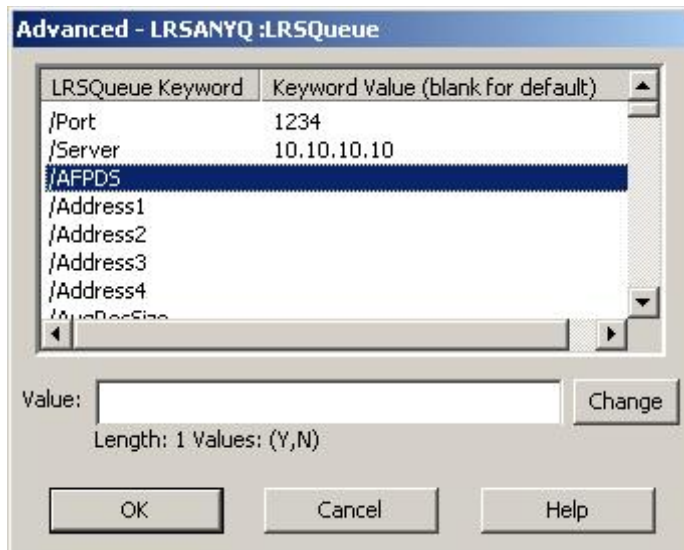
Advanced

OK Cancel Help

Version 0.0.000 Beta 1

- Data Type:** Enter the 3 byte type of data that the print driver will be sending to this port. (e.g. if an HP PCL print driver is printing to this port then enter **PCL**).
- Queue:** This should be the DRS printer definition or AnyQueue Route Assignment name.
- Class, Destination, Form, Writer:** JES attributes that are put on the job if DRS/TCPIP put the data on the JES Spool or the attributes used by AnyQueue for route selection.
- Compress Data for transmission:** The data will be compressed before it is transmitted to DRS/TCPIP or AnyQueue.
- Prompt for attributes during print:** This configuration dialog will be displayed before each print job so the user can change the settings for that job.
- Unattended Port:** Allows multiple users to share a single virtual printer configuration without requiring local owner intervention.

Advanced configuration dialog:



The advance configuration dialog lists all available LRS/Queue keywords that can be configured. The keywords that are set to a value will show up at the top of the list; the remaining keywords are in alphabetical order. To set a keyword, select the keyword then enter its value in the value field and select **Change**. After all the keywords have been changed to their desired values select **OK**. Please refer to the DRS or AnyQueue manuals for a complete description of all the keywords.

Dynamic Variables

Dynamic variables are special variable names that will automatically be replaced with information from the windows print job. To use these variables set any keyword value to one of these special values:

- +DOCUMENTNAME – Windows print job document name.
- +OWNERNAME – Windows print job owner name.
- +NOTIFYNAME – Windows print job notify name.



Section 4 Operation

Description	<p>AnyQueue[®] begins operation by accessing a configuration file (see “AnyQueue Configuration File” on page 3.42) to obtain installation-specific parameters.</p> <p>When a report appears on the mainframe JES spool destined for AnyQueue, VPS[®] allocates a conversation and begins transmission of the report by sending header information about the report. AnyQueue will examine the header information against specific parameters from the configuration file to determine where to direct the report. The appropriate print queue or file will then be opened on a server or, if specified, it will be put into AnyQueue/WebTRAC[®]. The report will then be received and written into the appropriate network queue or file. At completion of the transfer, the report is removed from the mainframe JES queue. AnyQueue then enters a wait state until another LAN-destined report appears on the JES spool. Normal network services are used to transfer the report to a printer when one is available, allowing complete sharing of printers with LAN functions. AnyQueue/WebTRAC will periodically evaluate the jobs in the system and perform the appropriate action, such as delivering or deleting them when necessary.</p>
APPC Connection	<p>If using APPC, an active LU 6.2 session will exist when both VPS and AnyQueue are active and ready. AnyQueue then monitors the communications link for the allocation of a conversation from VPS, which signals a report to be sent from the host to the LAN.</p>
TCP/IP Connection	<p>If using TCP/IP, VPS will automatically establish a connection with AnyQueue whenever a report is available for delivery.</p>
AnyQueue File Host	<p>If using an AnyQueue File Host, the directory specified will be monitored, looking for .VPR files. When a .VPR file is encountered, it will be renamed to a .VPW file and then be processed exactly as if it had come from a VPS host. Once delivered, the file will be deleted. If an error occurs, and the desired destination is unreachable, the file will be renamed to .VPE and retried after the defined Error Delay wait time has elapsed.</p>
LPD Connection	<p>If using the LPD, incoming LPR commands will be processed by matching the specified printer name with a Route Assignment object. If one is found, the data will be processed according to the Route pointed to by the Route Assignment with the following exception - the translate flag and all carriage control flags defined on the Route object will be ignored.</p>
LRS/Queue Client	<p>LRS/Queue is a general-purpose client that enables users on multiple platforms to exploit the features of the DRS/OutputManager range of products. The LRS/Queue client is available for most execution platforms and provides a simple command line interface</p>

Engine Operation

- What does the Engine do?** The Engine controls debug information and other control options. The Engine uses the configuration file to control and route data to the proper location or device. The Engine interfaces with SNA Server, Microsoft Host Integration Server, IBM Personal Communication 4.2 or TCP/IP software to communicate with VPS.
- How do I start the Engine?** A PC running a 32-bit Windows operating system must be operational.
- Microsoft Windows (versions that support Services)**
- If the **AnyQueue** service is not configured to start automatically, then log on to the server as a user with rights to control services.
 - Start the **AnyQueue** service from the Control Panel - Services applet.
- Windows 95/98 -**
- Select **AnyQueue** from the AnyQueue folder.
- Unix versions - AnyQueue should be run as a daemon but can be run from the command prompt.**
- `./anyq /f:configname`
- Engine Startup Parameters**
- When AnyQueue (the Engine) is started there are some start-up parameters that can be added that will take effect immediately. The following start-up parameters are available:
- /a** Log append. Optional. Upon initialization, this switch will cause the Engine to append logging information to the end of an existing log file. The default is to create a new log file.
- /b:<message base>** Sets the default category to pull messages from.
- /d=*n*** Debug level. Optional. Specifies which status messages are reported to the Console log. See “[Debug Numbers](#)” on page 4.3 for more information. If the debug flag is not added to the Engine properties they can be added from the AnyQueue Console.
- /f=<filename>** Configuration file name. **Required.** This is the AnyQueue configuration file, and is used by the Engine to setup operations.
- /l** Logging disabled. Optional. Disables message writing to the log file. Default is logging turned on.
- /m** Mail Info. Information to pass to the Mail Exit.
- /nosvc** Don’t try to start as a service. If running under a Windows version that supports Services as a program, this eliminates a delay when loading.
- /v** Do not do route verification. Optional.
- Note:** If, when running as a service, the **Startup Parameters** field is left blank then the Engine will read the registry for the start-up parameters.

**Debug
Numbers**

As previously stated, the Engine start-up parameter **/d=*n*** specifies the debug level. The number **n** is the sum of the options defined below and on the following pages.

Note: **During normal operation of AnyQueue, it is best *not* to add the debug flag to the Engine properties.**

1 **Communications Messages** - Messages which trace basic communication operation. Log entries will display the following lines:

- DLL Load Failures
- Begin Job
- Close Dest
- Create Info File
- End Job
- Get Data
- Link Cleanup
- Link Process
- Open Dest
- Put Line
- Send Command (start seq/end seq/file)

2 **Data Lines** - Data lines received from the host.

4 **Program Status** - Messages which trace basic internal program operations. Log entries will display the following lines:

- Check Limits
- Find Command
- Match Route

**Debug
Numbers**
(continued)

8 **Host Modes** - Messages which trace the host print modes for the print job currently being processed. Log entries will display the following lines:

Extract Bds

Bds fields:

CHARACTER ARRAY TABLE = ****
CHARACTER ARRAY TABLE = ****
CHARACTER ARRAY TABLE = ****
CHARACTER ARRAY TABLE = ****
CLASS =
COMPACT TABLE =
COPY MOD MOD =
DD NAME =
DESTINATION =
FCB = FXCB
FF OVERLAY = ****
FORM = STD
FORM DEF =
GROUP ID =
HOLD =
JES ADDRESS =
JES BUILDING =
JES DEPARTMENT =
JES NAME =
JES ROOM =
JES TITLE =
JOB ID =
JOB NAME =
NODE =
OUTPUT DESTINATION =
OUTPUT NODE =
OUTPUT REFERENCE =
PAGE DEF =
PR MODE =
PROC NAME =
STEP NAME =
TRANSPARENCY =
UCS =
WRITER =

Debug Numbers (continued)	16	Local Status - Messages which trace local file or output port writes.
	32	Remote Status - Messages regarding jobs routed to remote files or queues. Log entries will display the following lines: Dest Opened Backend Results
	64	Informational - Console requests.
	128	Route - Messages regarding routing. Line/Page limits exceeded Load Active Route Open destination xxxxxxxx
	256	Variable Substitution - Messages which indicate that variable substitution was performed. Variable Substitution Information Backend Information
	512	Dump Eng Memory at Termination - Automatically creates a .DMP file whenever the engine is terminated. This file does not append, it overwrites.
	1024	AnyQueue/WebTRAC Status - Log information about jobs being processed by AnyQueue/WebTRAC.
	2048	AnyQueue/WebTRAC Information - Log accounting information about AnyQueue/WebTRAC access.

Debug Default The default is 0, which indicates that all debug information is turned off.

Debug Example To activate the **Communications Messages** and **Program Status** settings, use:
`/d=5 (1 + 4 = 5)`

Message Overriding

AnyQueue allows the ability to override the standard messages and strings it displays by making entries into a file called “anyqmsgs.txt”. This file is loaded from the same directory as the .cfg file. It does not have to exist if default messages are desired.

A file called “anyqmsgs.org” is shipped with AnyQueue. It contains a list of all messages and strings that can be overridden. The messages and strings from this file are stored internally in AnyQueue and do not need to be copied to the “anyqmsgs.txt” file.

Each message is identified by a unique number. This makes it possible to specify what message to replace.

Messages below 10000 are destined for the log. Messages 10001 and greater are displayed in AnyQueue/WebTRAC.

The default Message Base is an eight character string of spaces. You can also insert messages into the “anyqmsgs.txt” file with a new message base. For example, you could create a complete set of alternate messages for another language by specifying a message base of “altlang”. Then by setting the Message Base at startup to “altlang”, those messages and strings would be displayed instead of the defaults.

AnyQueue/WebTRAC has a parameter that can be passed into the logon screen called “tridsfx”. By setting this, you can choose to display alternate strings to the AnyQueue/WebTRAC user. Using the example above, if you set tridsfx=altlang, then any message and string that is displayed in AnyQueue/WebTRAC would be pulled from your alternate message base.

Any string attempted to be retrieved from a message base that does not exist will default back to the internal default messages.

Syntax for anyqmsgs.txt records:

Columns	1-5	Overriding Message Number
	6-6	Blank (for readability)
	7-14	Message Base
	15-15	Blank (for readability)
	16-143	New or Overriding Message

All records in this file that do not start with a 5 number Message Number are treated as comments.

Only specify Overriding Message Numbers that match values from the anyqmsgs.org file. Some numbers not displayed are internal only messages.

Exits

Description This exit is provided to allow you to have a table of Mail users that are selectable by an alias. For the LRS supplied exit this should be a **CRLF** delimited file with the first 8 bytes being the data you are trying to match with the Input of Parm 1, and the remaining bytes (up to 255 more) being the data you wish to return in Parm 1.

nanyqext.dll A DLL called **NANYQEXT.DLL** contains the exits that are available to users of AnyQueue for Windows.

For HP-UX it is called **libhanyqext.sl**.

For Sun Solaris it is called **libsanyqext.so**.

The source is provided, and a description of the exits, the parameters they require, and their function is listed below. The parameters used to compile and link the exit are in the source itself.

Name: GetMailUserName

Parameter 1: Input: A name to look up for replacement.
Output: The new replaced name.

Parameter 2: Input: The data passed to the xANYQ.EXE with the /m: parameter.
Output: N/A

AnyQueue/Text to PDF

AnyQueue/Text to PDF is designed to convert ASCII text files to Adobe PDF format. AnyQueue/Text to PDF can be run as a command-line program, as an element of a batch file, or as a Backend defined in AnyQueue/WebTRAC®.

Setup

Before using AnyQueue/Text to PDF for the first time, run the key program “**nkeycfg.exe**” and enter the AnyQueue/Text to PDF product key.

Usage

AnyQueue/Text to PDF uses the following syntax for command-line or batch file operation:

```
[drive:\path\]txt2pdf /i:file.txt /o:file.pdf /f:Times-Roman /p:14 /c
```

Parameters

/a:author	- Author of PDF document.
/c	- Ignore JES carriage control byte.
/d0	- Turn off debug flags (default).
/d1	- Turn on debug flags (PDFOPTS=00000001).
/e:Encryption Key Len	- 40 or 128 bit encryption (default is 40).
/f:font name	- Document-wide font name (default = Courier).
	Valid fonts: Courier Courier-Bold Courier-Oblique Courier-BoldOblique Helvetica Helvetica-Bold Helvetica-Oblique Helvetica-BoldOblique Times-Roman Times-Bold Times-Italic Times-BoldItalic
/h:page-height	- Page height in hundredths of inches.
/i:infile.txt	- Input file name (required).
/k:keywords	- PDF indexing keywords.
/m:Master Password	- PDF ‘master’ password (if not specified one will be generated).
/o:outfile.pdf	- Output file name (required). The output file name defaults to the input file name with a .pdf extension.
/p:font size	- Document-wide font size (default = 12).
/r	- Retain input file after successful conversion.
/s:subject	- Subject of PDF document.
/t:title	- Title of PDF document.
/u:User Password	- PDF ‘user’ password.

/w:page-width

/x:Permission Flags

- Page width in hundredths of inches.
- PDF permission flags:
 - noprint Acrobat will prevent printing the file.
 - nomodify Acrobat will prevent users from adding form fields or making any other changes.
 - nocopy Acrobat will prevent copying and extracting text or graphics, and will disable the accessibility interface.
 - noannots Acrobat will prevent adding or changing comments or form fields.

NOTE: The following require 128 bit encryption (Acrobat 5.0 or greater required).

- noforms Acrobat will prevent form field filling, even if **noannots** hasn't been specified.
- noaccessible Acrobat will prevent extracting text or graphics for accessibility purposes (such as a screenreader program).
- noassemble Acrobat will prevent inserting, deleting, or rotating pages and creating bookmarks and thumbnails, even if **nomodify** hasn't been specified.
- nohighresprint Acrobat will prevent high-resolution printing. If **noprint** hasn't been specified, printing is restricted to the »**print as image**« feature which prints a low-resolution rendition of the page.

AnyQueue Integration

AnyQueue/WebTRAC has eight PDF-specific variables (in addition to the normal AnyQueue/WebTRAC variables) that can be used in an AnyQueue/Text to PDF Backend. During execution, all AnyQueue variables are replaced with their actual values just before the parameter field is passed to AnyQueue/Text to PDF. The following eight PDF-specific variables are available in a Backend:

+PDFTITLE	- Title of PDF document.
+PDFSUBJECT	- Subject of PDF document.
+PDFAUTHOR	- Author of PDF document.
+PDFPGWIDTH	- Page width in hundredths of inches.
+PDFPGHEIGHT	- Page height in hundredths of inches.
+PDFIDXKEYWDS	- PDF indexing keywords.
+PDFFONTSIZE	- Document-wide font size.
+PDFFONTNAME	- Document-wide font name.

It is recommended that AnyQueue variables be wrapped in double-quotes (“+variable”) so any spaces contained within them are correctly interpreted by AnyQueue/Text to PDF. A typical AnyQueue/WebTRAC Backend which calls AnyQueue/Text to PDF might look like this:

Program Name: [drive:\path\]txt2pdf.exe

Parameters: /i:“+ANYQ_PATH” /o:outfile.pdf /f:Times-Roman /p:14 /c
/t:“+PDFTITLE” /s:“+PDFSUBJECT” /a:“+PDFAUTHOR”

Notes:

1. All parameter flags are case insensitive.
2. The ‘/’ character is NOT allowed inside any of the parameters.
3. The AnyQueue/Text to PDF log file will be created in the AnyQueue/Text to PDF program directory in case of an error, or if otherwise specified.

AnyQueue/WebTRAC™ (Temporary Retention and Control)

AnyQueue/WebTRAC Database Location

When AnyQueue starts, and if there is no AnyQueue/WebTRAC database, one will be created in the location specified by the **AnyQueue/WebTRAC Location** field on the **General** dialog in the **Configurator**. **Note: The directory must already exist.**

AnyQueue/WebTRAC User ID and Password

When AnyQueue first creates the files, it creates a user ID of **'admin'** with a password of **'admin'**. This user has full rights to do everything. The first time you log on you should go into **User Maintenance** and create a new administrator ID and password. Then, log on with the new administrator ID and password and delete the default one. You can create as many administrator users as necessary. If you lose the password for the administrator ID, you will be locked out.

Description

AnyQueue/WebTRAC is a feature that allows you to:

- Store datasets received before they are delivered.
- Deliver datasets to multiple destinations.
- Assign a WebTRAC Job ID for each different destination.
- Retain jobs for a specified number of days.
- Reprint jobs (including 'To' and 'From' page and line specifications for line data).
- Update a job's retention date.
- Delete a job from AnyQueue/WebTRAC.
- Clone jobs. (Create a new job from an existing job, changing some of its attributes.)
- View job information via a Web browser.
- Browse line data.
- Assign a different user or group to the Clone, Update, Reprint and View function of a Job.
- Jobs can be organized into folders.

Maintenance and Security

All user, group and connection maintenance is done through a Web browser. Note that user IDs and passwords are passed in clear text. If you want to protect this you must run with SSL. Also, all job actions are performed via a Web browser as well.

Accessing AnyQueue/WebTRAC from the Web

Web Page Link Command

After installing and configuring LRS/Web Connect to communicate with AnyQueue, a link must be set up to access the AnyQueue/WebTRAC features. If you have a particular Web page that your users access, you can put the following link on it to gain access to AnyQueue/WebTRAC:

```
<a href="/DLL/nlrswc.dll/anyq?trid=logon">AnyQueue Logon</a>
```

The "DLL" in the link refers to an alias defined in your Web Server where NLRWC.DLL is located. Set this to the location where LRS/Web Connect is installed. The "anyq" prior to the "?" refers to a "Server" defined in LRS/Web Connect.

Another option when creating the link to AnyQueue is to do the following:

```
<a href="/DLL/nlrswc.dll/anyq?trid=logon&tridsfx=test">AnyQueue Logon</a>
```

The difference is the **&tridsfx=test**. This makes AnyQueue append the word "test" to each of the Web pages it loads. This way you can create an alternate set of pages.

The **tridsfx** is optional and, if specified, can be from 1 to 8 characters in length, allowing you to have as many simultaneous versions of the Web pages that you want.

Logging on to AnyQueue/WebTRAC

When the Logon page is displayed the first time, enter "admin" for the user ID and the password and select the **Logon** button.

You can update the password at any time by entering the new password in the New Password field and re-entering it in the Verify Password field during logon.

Notes:

- **/DLL/nlrswc.dll** will be **/webconnect** when connecting to a Unix Web Server.
- If the maximum WebTRAC license count is reached, logon will fail. An administrator with the global right "Connection Maintenance" can force a logon by specifying "\force" after the user ID. This will force the user off who has not refreshed their screen in the longest time. This action will be logged in the AnyQueue log.

Job List

The Job List is at the center of the WebTRAC user interface. Users will only see reports in the Job List they have been granted the **List** right to. Other report level rights control what commands or functions the user can do with reports they can see in the Job List. Report level rights are granted by the WebTRAC administrator in the Route Assignment for each report using the AnyQueue Configurator screens. See [“TRAC Route - Rights tab” on page 4.142](#) security.

The Job List page consists of three areas:

- **System Level Commands** (See [page 4.14.](#))

General system related commands, not specifically related to Job List page functions.

- **Job List Command Bar** (See [page 4.18.](#))

Commands and functions related specifically to reports in the Job List and the Job List page.

- **Job List** (See [page 4.21.](#))

List of jobs (reports) your user Id has access to. If more jobs are available than can be displayed on one page, **“More”** will be displayed at the bottom left of the page. User preferences can be set to control how many jobs are displayed per page.

Preferences also allow you to display the Job List sorted by Folder and Entry Date (in either ascending or descending order). When this option is selected, the currently selected Folder will display in the “Job List” bar (see the diagram below). To change Folders, click on the currently selected Folder and the Folder List will be displayed, enabling you to select a new Folder.

System Level Commands

New Window	Launches the current WebTRAC screen in a new browser window. The new window will be launched without browser toolbars, Address/URL bar, status bar, browser menus, etc. Once a New Window is launched, the current browser window can then be closed or used to access other websites.
Output Queue	List of jobs (reports) your user Id has access to. If more jobs are available than can be displayed on one page, “More” will be displayed at the bottom left of the page. User preferences can be set to control how many jobs are displayed per page.
Notes	<p>There are two types of Notes - Job Notes and User Notes.</p> <p>Job Notes - Certain events will cause Job Notes to be created automatically by AnyQueue. These Notes cannot be deleted. They will only be removed when the Job they are associated with is deleted.</p> <p>Any user that can List the job will be allowed to view and create notes. Only the creator of a Job Note can delete it.</p> <p>User Notes- Users can create Notes for other users. When an unread Note is available, the ‘Note’ menu option will change. A user can only see notes sent to them. A user can delete any Note that has been sent to them.</p>
Logoff	Logoff the WebTRAC system and return to the WebTRAC Logon page.
Preferences	Go to the User Preferences page (see page 4.41). Several options related to how the Job List page is presented can be set in User Preferences.
Routes	<p>The Route List allows you select the destination, or AnyQueue Route, that a report will be sent to when performing a Clone or Print.</p> <p>Only Routes that your User Id (or a Group you are a member of) have been granted the Job User Access right to will be displayed in the Route List when performing a Clone or Redirect, unless the user has been granted the Routes Global Right.</p> <p>You can scroll forward and backward through the list using the Prev and Next buttons.</p> <p>The Scroll Amount allows you to enter the number of lines you want to scroll forward or backward the next time you click Prev or Next. It is only in effect for one scroll and has to be reentered if you wish to specify an amount again.</p> <p>When the Routes page is accessed directly, and not when simply being used to select a new Route from a list, you can Pause and Resume a Route if you have the authority to do so.</p>

Reports

Use this option to generate AnyQueue specific reports. You can specify the Route and Folder to associate with the job that will be created, as well as specify the retention period or override the name of the generated report.

Reports will be available online for viewing but not printed automatically.

Requested reports are queued up for processing. Once generation is complete, the user will be sent an AnyQueue/WebTRAC note.

The following reports are available:

Configuration File Select this check box if you'd like to generate a report that will display all of the component definitions associated with the Configuration File.

WebTRAC

Job Name Specify a name up to 40 characters long. This is the name that will be displayed in the WebTRAC Job Name field in the Job List for this particular report.

File This is the Configuration File whose details will be listed in the report generated.

Group Relations

This will produce a list of User and Group relations. (This was previously available from the Maintenance utility.) This option will only be available for users with Admin Maintenance or User/Group Maintenance authority.

WebTRAC

Job Name Specify a name up to 40 characters long. This is the name that will be displayed in the WebTRAC Job Name field in the Job List for this particular report.

Groups Select this button if you would like to include Groups in the report detail.

Users Select this button if you would like to include Users in the report detail.

Both Select this button if you would like to include Groups and Users in the report detail.

User Notes This will produce a report of all Notes for the current user.

Reports
(continued)

Users within Group Select this check box if you'd like to generate a report that will display a list of Users contained within a Group. The report will display the direct User/Group relationships as well as all inherited User/Group combinations based on the Group selected.

WebTRAC

Job Name Specify a name up to 40 characters long. This is the name that will be displayed in the WebTRAC Job Name field in the Job List for this particular report.

Show Details Select this check box if you would like for the list of Users to be grouped by their associated Group Memberships.

Group This is the AnyQueue Group for which a list of associated Users will be generated.

Group Membership by User Select this check box if you'd like to generate a report that will display a list of Groups associated with a particular User. The report will display direct and inherited Group memberships.

WebTRAC

Job Name Specify a name up to 40 characters long. This is the name that will be displayed in the WebTRAC Job Name field in the Job List for this particular report.

User This is the AnyQueue User for which a list of associated Groups will be generated.

User Notes Select this check box if you'd like to generate a report that will display all of your Notes.

WebTRAC

Job Name Specify a name up to 40 characters long. This is the name that will be displayed in the WebTRAC Job Name field in the Job List for this particular report.

Sort Notes Causes the Notes to be sorted in descending order.

Reports (continued)	Job Notes	Select this check box if you'd like to generate a report that will display all Notes associated with a particular Job.
	WebTRAC Job Name	Specify a name up to 40 characters long. This is the name that will be displayed in the WebTRAC Job Name field in the Job List for this particular report.
	Sort Notes Descending	Causes the Notes to be sorted in descending order.
	WebTRAC Job Id	Specify the Job Id whose Notes you would like to see. The Job Id field will be populated with a valid Job Id if the Report page was activated by selecting the Reports link from the Job Notes page or by selecting the Reports link from the Job List page with a Job selected.
	Job List	Select this check box if you'd like to generate a report that will display job details for all jobs in the database.
	WebTRAC Job Name	Specify a name up to 40 characters long. This is the name that will be displayed in the WebTRAC Job Name field in the Job List for this particular report.
	Sort Descending	Causes the job detail records to be sorted in descending order by Job Id.
Users	Go to the User Maintenance page (see page 4.36). If you are not an AnyQueue/WebTRAC administrator, you will not see this option.	
Groups	Go to the Group Maintenance page (see page 4.51). If you are not an AnyQueue/WebTRAC administrator, you will not see this option.	
Connections	Go to the Connections page (see page 4.56). If you are not an AnyQueue/WebTRAC administrator, you will not see this option.	
Engine	Go to the Engine page (see page 4.57). If you are not an AnyQueue/WebTRAC administrator, you will not see this option.	
Folder	AnyQueue/WebTRAC jobs can be organized into Folders. To create and maintain Folders, you select Folder from the System Level Command Bar. Maintain Engine authority is required to be able to perform Folder maintenance.	
	The creation of Folders not only gives you a way to organize your Jobs, but will also improve performance for users when they are listing jobs.	
Configure	Open and modify/maintain an AnyQueue configuration file remotely. Only users with Maintain Engine rights (e.g. WebTRAC administrators) will see this option.	

Job List Command Bar

Refresh	Refreshes the Job List. This command will allow the user to see updates or changes that have been made to the Job List screen since it was last accessed or refreshed, including changes in the status of jobs in the list and reports that may have arrived or been deleted.
Top	Returns to the top of the Job List.
Prev	Go to the previous page in the Job List. Selecting Prev may bring jobs into view that have arrived in the Job List since the page was accessed. Selecting a Job and selecting Prev will attempt to scroll backward, making the job just before the checked one the last one on the screen.
Next	Go to the next page in the Job List. Selecting a job and selecting Next will scroll forward, making the job just after the checked one the first one on the screen.
Bottom	Returns to the bottom of the Job List.
Select All	This will select every job on the page. To clear all selections, select Refresh.
Detail	Go to the Detail page for the report. The Detail page displays all attributes associated with the selected report. The Detail page also allows the user to modify the Retention Date and Copies. Users must have the Update right for the selected report in order to modify the Copies, Retention Date, and Restart Page. The Clone function is also accessed via the Details page (requires the Clone right for the report).
Notes	Notes can be assigned to Jobs, or sent to Users.
Pause	Pauses the selected job(s) and places them on hold. Multiple jobs can be paused at once. Also see “Status” on page 4.21 .
Print	Print all or part of the selected report. The Print page allows you to print the entire report or a page or line range. The number of copies to reprint can also be specified. The reprint job will be sent to the report's original Route. You must have the Reprint right for a report in order to issue print requests. If you are authorized to Clone, you will be allowed to redirect the report to an alternate location if desired.
My Print	Print all of the selected reports. The jobs will be sent to the Default Route specified in your Preferences. You must have the Clone right for a report to issue My Print requests.
Reset	Resets the status of the selected jobs. Reset is only applicable to jobs in error status. Resetting a job puts it back into a pending state immediately, without waiting for the error retry interval (if applicable) to do so. See “Error” on page 4.21 .
Resume	Resumes (releases) the selected job. Resume is only applicable to jobs in Pause status. Multiple jobs can be resumed at the same time.
ReRoute	Change the route of the reports selected in the Job List. Multiple reports can be rerouted at the same time. A job cannot be rerouted if it is in a printing state. Users must have the Update right for a report in order to reroute it. The status of the selected jobs will be reset as part of the ReRoute. Resetting a job puts it back into a pending state immediately. The job will become serialized if the route selected on the “Routes” panel is serialized.

Complete Change the status of reports selected in the Job List to Complete. Multiple reports can be Completed at the same time. You will be asked for confirmation before the status change is actually performed. Reports must have a current status of Pending or Error to be marked Completed. Whenever the status is changed to Complete, delivery of the report is cancelled. Users must have the Update right for a report to Complete it.

Delete Delete the reports selected in the Job List. Multiple reports can be deleted at the same time. You will be asked for confirmation before the delete is actually performed. Users must have the **Update** right for a report in order to delete it.

WebTRAC Job Name Mask The WebTRAC Job Name Mask filters the Job List to display only reports meeting the mask value, allowing you to quickly and conveniently locate specific report names in the list. Wildcard characters (*) can be used at the beginning or end of the mask value to display only jobs that begin or end with a specific value. Wildcards can also be used at the beginning **and** end of the mask. Masks are not case sensitive.

Examples:	Mask Value	Reports Displayed
Display only reports beginning with "acc"	acc*	Accounting Accounts PayableAccessories
Display only reports ending with "summary"	*summary	Accounts Summary Inventory Summary Sales Summer
Display all reports that contain "out" in the job name	*out*	Payable Out Output Report DivOutSummary

Once a value is entered in the WebTRAC Job Name Mask, that value is maintained in your user profile and will be "remembered" and used anytime you logon to WebTRAC (from any location). The WebTRAC Job Name Mask can also be set directly under user Preferences. To display all reports in the Job List, simply blank out the Mask value and click Refresh.

Route Filter The Route Filter allows you to reduce the list down to only those jobs destined for a specific route.

Scroll Amount Entering a value in Scroll Amount will move the Job List forward or backward that number of lines the next time the user selects Next or Prev.

Group List Mask The Group List Mask works similar to the WebTRAC Job Name Mask, except that it filters the Job List based on the group name that has been granted the **List** right (displayed under the “List Group” column in the Job List). This is useful if you have inherited List access to various reports under different group names, but want to filter the list to show only reports for a specific group name.

Wildcard characters (*) can be used at the beginning or end of the mask value to display only groups that begin or end with a specific value. Wildcards can also be used at the beginning **and** end of the mask. Masks are not case sensitive.

Like the WebTRAC Job Name Mask, Group List Masks are also remembered in your user profile (Preferences).

Status Filter The Status Filter allows you to present the Job List similar to Queues. Pending Jobs are similar to Input Queues; Printing Jobs are similar to Active Queues; and Complete Jobs are similar to Output Queues.

To change the Status Filter, select the desired status and then click Refresh.

Job List

WebTRAC Job Name

The name of the job or report. The WebTRAC Job Name is defined in the Route Assignment for the report in the AnyQueue Configurator. This name can be set statically (so that it always has a set name) or dynamically (based on various SYSOUT and/or other attributes associated with the job). The WebTRAC Job Name will be underlined (a hyperlink) for jobs that are “browsable”. Reports are browsed by clicking on the WebTRAC Job Name. The report can be opened in the main window or in a separate browser window, depending on Browse Options set on the **Preferences** page.

WebTRAC Job ID

The WebTRAC Job ID.

WebTRAC ID

The WebTRAC ID.

Status

The current status of the job. Possible status include:

Complete If the Initial Action has been set for Send in the Route Assignment for the report in the AnyQueue Configurator, the job has been delivered to its intended destination on the network (the Print Count will indicate the number of copies sent). If a job has a status of “Complete” and the Print Count is “0”, then Send has not been set in the Initial Action for the report in the AnyQueue configuration. If the Initial Action is not set to Send for a report, then arrival in WebTRAC is considered complete.

Pending The report is waiting its turn to be processed.

Printing The report is in the process of being delivered to the network location (note that the term “printing” is used here in a generic sense and does not necessarily indicate the output is being sent to a physical printer, it could be destined for a file, email, etc.).

Error The system attempted to deliver the report to the network location, but was unable to reach the destination or an error occurred before the report was completed.

If Retry is selected in the Error Action for the report (in the Route Assignment for the report in the AnyQueue Configurator), AnyQueue will re-attempt delivery of the report. AnyQueue will re-attempt delivery of the report based on the Error Retry interval defined on the General section of the AnyQueue configuration.

Note that there are some errors that are deemed unrecoverable, and no automatic retry will be attempted.

Pause	<p>Delivery of the report has been temporarily halted or put on hold.</p> <p>Jobs that are not in a Printing status can be manually paused by selecting the report and clicking Pause. Reports can also be brought into the WebTRAC system in Pause status automatically by selecting “Pause” in the Initial Action of the Route Assignment for the report in the AnyQueue configuration. Users can then release the Reports from Pause by selecting the report and clicking Resume when they’re ready to release the report (essentially establishing a “pull” report delivery method). This pull delivery method may be useful when sending confidential reports to unsecured printers or locations.</p> <p>Note that jobs in a paused state will NOT be removed from WebTRAC!</p>
Error Action	<p>Indicates what action AnyQueue will take if the network destination is unreachable, resulting in a error status. Options are to either Retain the output (hold onto it) or Retain/Retry (hold onto it, and re-attempt delivery). Retries will be attempted based on the value (number of minutes) entered in the Error Retry field of the AnyQueue system configuration.</p>
Print Count	<p>Number of copies of the report that have actually printed (or been delivered).</p>
Copies	<p>Number of copies pending (copies generated that have not yet printed).</p>
Page Count	<p>Number of pages in the report if it is browseable. Page Count will display “NA” if the TRAC file contains binary data.</p>
Line Count	<p>Number of lines in the report if it is browseable. Line Count will display “NA” if the TRAC file contains binary data.</p>
Entry Date	<p>The date the report arrived in the WebTRAC system. Preferences can be set to display the time or not, and if displayed, whether or not to include hundredths of seconds.</p>
Retention Date	<p>When the report will expire and be deleted from WebTRAC. The delete will occur at midnight of the Retention Date. If the report will expire (and be deleted) at the end of the current day, the WebTRAC Job Name and the Retention Date will be displayed in red. If the report is within one week (7 days) of expiration, the WebTRAC Job Name and date will be displayed in yellow.</p> <p>Report retention periods, specified in numbers of days, are set in the Route Assignment for each report in the AnyQueue configuration. If you have the Update right for the report, the Retention Date can be modified (move up or pushed back) by selecting the report and going to the Details page for the report.</p>
Last Printed	<p>When the report was last printed (delivered). As with the Entry Date field, user Preferences determine whether of not this field includes the time (and whether time includes hundredths).</p>

Last Changed	Specifies when the Copies , Retention Date , or Restart Page was last modified (from the Details page). Users must have the Update right for the report in order to modify these attributes. As with the Entry Date field, user Preferences determine whether or not this field includes the time (and whether time includes hundredths).
Last Attempt	When the systems last attempted to deliver the report if the report is in Error status. As with the Entry Date field, user Preferences determine whether or not this field includes the time (and whether time includes hundredths).
Destination	Anytime the Destination has been altered from the original route, the new value will be displayed. This is not the resolved name, but the string that will be used to build the resolved name.
Owner	The User Id that is the owner of the job. If the Owner field is (None) then AnyQueue (i.e., the system) is the owner (this is the default). The owner of a job has full (all) rights to the job. The owner can be preset in the Route Assignment for a report in the AnyQueue configuration. When a job is cloned, the user performing the clone is automatically the owner.
Route Name	Name of the route the report has been sent to (or will be, if it is in Pause or Pending state).
Job Name	The JES Job Name on the report.
Class	The JES Class on the report.
Dest	The JES Dest on the report.
Form	The JES Form on the report.
Writer	The JES Writer on the report.
Clone Group	Group name (or User Id) that has the Clone right for the report.
Update Group	The Group name (or User ID) that has the Update right for the report.
Reprint Group	The Group name (or User ID) that has the Reprint right for the report.
List Group	The Group name (or User ID) that has the List right for the report.
View Group	The Group name (or User Id) that has the View right for the report.
Notify Group	The Group name (or User ID) that has been configured to receive an email notification. Email notifications can be sent by AnyQueue based on several report events, including: <ul style="list-style-type: none"> • Arrival (when the report arrived in WebTRAC). • Print (when AnyQueue delivered the report). • Error (if there is an error attempting to deliver the report - report is in Error status). • Delete (if the report is deleted, either manually (by a user) or automatically by WebTRAC (because the Retention Date expired). <p>Email notifications will include the WebTRAC Job Name (report), Retention Date, WebTRAC Job Number, and a hyperlink that will take the user into the report in browse mode. If the report is not browseable, then the Job List will be displayed.</p>

Output Queue

The Output Queue page consists of three areas:

- **System Level Commands** (See [page 4.25.](#))

General system related commands, not specifically related to Output Queue page functions.

- **Output Queue Command Bar** (See [page 4.29.](#))

Commands and functions related specifically to reports in the Job List and the Job List page.

- **Output Queue** (See [page 4.31.](#))

List of jobs (reports) your user Id has access to. If more jobs are available than can be displayed on one page, “**More**” will be displayed at the bottom left of the page. User preferences can be set to control how many jobs are displayed per page.

System Level Commands

New Window	Launches the current WebTRAC screen in a new browser window. The new window will be launched without browser toolbars, Address/URL bar, status bar, browser menus, etc. Once a New Window is launched, the current browser window can then be closed or used to access other websites.
Output Queue	List of jobs (reports) your user Id has access to. If more jobs are available than can be displayed on one page, “More” will be displayed at the bottom left of the page. User preferences can be set to control how many jobs are displayed per page.
Notes	<p>There are two types of Notes - Job Notes and User Notes.</p> <p>Job Notes - Certain events will cause Job Notes to be created automatically by AnyQueue. These Notes cannot be deleted. They will only be removed when the Job they are associated with is deleted.</p> <p>Any user that can List the job will be allowed to view and create notes. Only the creator of a Job Note can delete it.</p> <p>User Notes- Users can create Notes for other users. When an unread Note is available, the ‘Note’ menu option will change. A user can only see notes sent to them. A user can delete any Note that has been sent to them.</p>
Logoff	Logoff the WebTRAC system and return to the WebTRAC Logon page.
Preferences	Go to the User Preferences page (see page 4.41). Several options related to how the Job List page is presented can be set in User Preferences.
Routes	<p>The Route List allows you select the destination, or AnyQueue Route, that a report will be sent to when performing a Clone or Print.</p> <p>Only Routes that your User Id (or a Group you are a member of) have been granted the Job User Access right to will be displayed in the Route List when performing a Clone or Redirect, unless the user has been granted the Routes Global Right.</p> <p>You can scroll forward and backward through the list using the Prev and Next buttons.</p> <p>The Scroll Amount allows you to enter the number of lines you want to scroll forward or backward the next time you click Prev or Next. It is only in effect for one scroll and has to be reentered if you wish to specify an amount again.</p> <p>When the Routes page is accessed directly, and not when simply being used to select a new Route from a list, you can Pause and Resume a Route if you have the authority to do so.</p>

Reports

Use this option to generate AnyQueue specific reports. You can specify the Route and Folder to associate with the job that will be created, as well as specify the retention period or override the name of the generated report.

Reports will be available online for viewing but not printed automatically.

Requested reports are queued up for processing. Once generation is complete, the user will be sent an AnyQueue/WebTRAC note.

The following reports are available:

Configuration File Select this check box if you'd like to generate a report that will display all of the component definitions associated with the Configuration File.

WebTRAC

Job Name Specify a name up to 40 characters long. This is the name that will be displayed in the WebTRAC Job Name field in the Job List for this particular report.

File This is the Configuration File whose details will be listed in the report generated.

Group Relations

This will produce a list of User and Group relations. (This was previously available from the Maintenance utility.) This option will only be available for users with Admin Maintenance or User/Group Maintenance authority.

WebTRAC

Job Name Specify a name up to 40 characters long. This is the name that will be displayed in the WebTRAC Job Name field in the Job List for this particular report.

Groups Select this button if you would like to include Groups in the report detail.

Users Select this button if you would like to include Users in the report detail.

Both Select this button if you would like to include Groups and Users in the report detail.

User Notes This will produce a report of all Notes for the current user.

**Reports
(continued)**

Users within Group Select this check box if you'd like to generate a report that will display a list of Users contained within a Group. The report will display the direct User/Group relationships as well as all inherited User/Group combinations based on the Group selected.

WebTRAC

Job Name Specify a name up to 40 characters long. This is the name that will be displayed in the WebTRAC Job Name field in the Job List for this particular report.

Show Details Select this check box if you would like for the list of Users to be grouped by their associated Group Memberships.

Group This is the AnyQueue Group for which a list of associated Users will be generated.

Group Membership by User Select this check box if you'd like to generate a report that will display a list of Groups associated with a particular User. The report will display direct and inherited Group memberships.

WebTRAC

Job Name Specify a name up to 40 characters long. This is the name that will be displayed in the WebTRAC Job Name field in the Job List for this particular report.

User This is the AnyQueue User for which a list of associated Groups will be generated.

User Notes Select this check box if you'd like to generate a report that will display all of your Notes.

WebTRAC

Job Name Specify a name up to 40 characters long. This is the name that will be displayed in the WebTRAC Job Name field in the Job List for this particular report.

Sort Notes Causes the Notes to be sorted in descending order.

Reports (continued)	Job Notes	Select this check box if you'd like to generate a report that will display all Notes associated with a particular Job.
	WebTRAC Job Name	Specify a name up to 40 characters long. This is the name that will be displayed in the WebTRAC Job Name field in the Job List for this particular report.
	Sort Notes Descending	Causes the Notes to be sorted in descending order.
	WebTRAC Job Id	Specify the Job Id whose Notes you would like to see. The Job Id field will be populated with a valid Job Id if the Report page was activated by selecting the Reports link from the Job Notes page or by selecting the Reports link from the Job List page with a Job selected.
	Job List	Select this check box if you'd like to generate a report that will display job details for all jobs in the database.
	WebTRAC Job Name	Specify a name up to 40 characters long. This is the name that will be displayed in the WebTRAC Job Name field in the Job List for this particular report.
	Sort Descending	Causes the Job Detail records to be sorted in descending order by Job Id.
Users	Go to the User Maintenance page (see page 4.36). If you are not an AnyQueue/WebTRAC administrator, you will not see this option.	
Groups	Go to the Group Maintenance page (see page 4.51). If you are not an AnyQueue/WebTRAC administrator, you will not see this option.	
Connections	Go to the Connections page (see page 4.56). If you are not an AnyQueue/WebTRAC administrator, you will not see this option.	
Engine	Go to the Engine page (see page 4.57). If you are not an AnyQueue/WebTRAC administrator, you will not see this option.	
Folder	AnyQueue/WebTRAC jobs can be organized into Folders. To create and maintain Folders, you select Folder from the System Level Command Bar. Maintain Engine authority is required to be able to perform Folder maintenance.	
	The creation of Folders not only gives you a way to organize your Jobs, but will also improve performance for users when they are listing jobs.	
Configure	Open and modify/maintain an AnyQueue configuration file remotely. Only users with Maintain Engine rights (e.g. WebTRAC administrators) will see this option.	

Output Queue Command Bar

Refresh	Refreshes the Output Queue. This command will allow the user to see updates or changes that have been made to the Output Queue screen since it was last accessed or refreshed, including changes in the status of jobs in the list and reports that may have arrived or been deleted.
Top	Returns to the top of the Output Queue.
Prev	Go to the previous page in the Output Queue. Selecting Prev may bring jobs into view that have arrived in the Output Queue since the page was accessed. Selecting a Job and selecting Prev will attempt to scroll backward, making the job just before the checked one the last one on the screen.
Next	Go to the next page in the Output Queue. Selecting a job and selecting Next will scroll forward, making the job just after the checked one the first one on the screen.
Bottom	Returns to the bottom of the Output Queue.
Select All	This will select every job on the page. To clear all selections, select Refresh.
Pause	Pauses the selected job(s) and places them on hold. Multiple jobs can be paused at once. Also see “Status” on page 4.21.
Reset	Resets the status of the selected jobs. Reset is only applicable to jobs in error status. Resetting a job puts it back into a pending state immediately, without waiting for the error retry interval (if applicable) to do so. See “Error” on page 4.22.
Resume	Resumes (releases) the selected job. Resume is only applicable to jobs in Pause status. Multiple jobs can be resumed at the same time.
ReRoute	Change the route of the reports selected in the Output Queue. Multiple reports can be rerouted at the same time. A job cannot be rerouted if it is in a printing state. Users must have the Update right for a report in order to reroute it. The status of the selected jobs will be reset as part of the ReRoute. Resetting a job puts it back into a pending state immediately. The job will become serialized if the route selected on the “Routes” panel is serialized.
Delete	Delete the reports selected in the Output Queue. Multiple reports can be deleted at the same time. You will be asked for confirmation before the delete is actually performed. Users must have the Update right for a report in order to delete it.
Complete	Change the status of reports selected in the Output Queue to Complete. Multiple reports can be Completed at the same time. You will be asked for confirmation before the status change is actually performed. Reports must have a current status of Pending or Error to be marked Completed. Whenever the status is changed to Complete, delivery of the report is cancelled. Users must have the Update right for a report to Complete it.
Cancel	Cancel the reports selected in the Output Queue. Multiple reports can be cancelled at the same time. You will be asked for confirmation before the cancel is actually performed. Users must have the Update right for a report to delete it.

WebTRAC Job Name Mask

The WebTRAC Job Name Mask filters the Output Queue to display only reports meeting the mask value, allowing you to quickly and conveniently locate specific report names in the list. Wildcard characters (*) can be used at the beginning or end of the mask value to display only jobs that begin or end with a specific value.

Masks are not case sensitive.

Examples:	Mask Value	Reports Displayed
Display only reports beginning with "acc".	acc*	Accounting Accounts PayableAccessories
Display only reports ending with "summary".	*summary	Accounts Summary Inventory Summary Sales Summer
Display all reports that contain "out" in the job name.	*out*	Payable Out Output Report DivOutSummary

Once a value is entered in the WebTRAC Job Name Mask, that value is maintained in your user profile and will be "remembered" and used anytime you logon to WebTRAC (from any location). The WebTRAC Job Name Mask can also be set directly under user Preferences. To display all reports in the Output Queue, simply blank out the Mask value and click Refresh.

Route Filter

The Route Filter allows you to reduce the list down to only those jobs destined for a specific Route.

Scroll Amount

Entering a value in Scroll Amount will move the Output Queue forward or backward that number of lines the next time the user selects Next or Prev.

Destination Mask

The Destination Mask works similar to the WebTRAC Job Name Mask, except that it filters the Output Queue based on the Destination. This is useful if you wish to view jobs being delivered to a particular destination. Wildcard characters (*) can be used at the beginning or end of the mask value to display only Destinations that begin or end with a specific value. Masks are not case sensitive.

Like the WebTRAC Job Name Mask, Destination Masks are also remembered in your user profile (Preferences).

Output Queue

WebTRAC Job Name	The name of the job or report. The WebTRAC Job Name is defined in the Route Assignment for the report in the AnyQueue Configurator. This name can be set statically (so that it always has a set name) or dynamically (based on various SYSOUT and/or other attributes associated with the job). The WebTRAC Job Name will be underlined (a hyperlink) for jobs that are “browsable”. Reports are browsed by clicking on the WebTRAC Job Name. The report can be opened in the main window or in a separate browser window, depending on Browse Options set on the Preferences page.
WebTRAC Job ID	The WebTRAC Job ID.
WebTRAC ID	The WebTRAC ID.
Status	The current status of the job. Possible status include: <ul style="list-style-type: none">Complete If the Initial Action has been set for Send in the Route Assignment for the report in the AnyQueue Configurator, the job has been delivered to its intended destination on the network (the Print Count will indicate the number of copies sent). If a job has a status of “Complete” and the Print Count is “0”, then Send has not been set in the Initial Action for the report in the AnyQueue configuration. If the Initial Action is not set to Send for a report, then arrival in WebTRAC is considered complete.Pending The report is waiting its turn to be processed.Printing The report is in the process of being delivered to the network location (note that the term “printing” is used here in a generic sense and does not necessarily indicate the output is being sent to a physical printer, it could be destined for a file, email, etc.).Error The system attempted to deliver the report to the network location, but was unable to reach the destination or an error occurred before the report was completed. If Retry is selected in the Error Action for the report (in the Route Assignment for the report in the AnyQueue Configurator), AnyQueue will re-attempt delivery of the report. AnyQueue will re-attempt delivery of the report based on the Error Retry interval defined on the General section of the AnyQueue configuration. Note that there are some errors that are deemed unrecoverable, and no automatic retry will be attempted.

Pause	<p>Delivery of the report has been temporarily halted or put on hold.</p> <p>Jobs that are not in a Printing status can be manually paused by selecting the report and clicking Pause. Reports can also be brought into the WebTRAC system in Pause status automatically by selecting “Pause” in the Initial Action of the Route Assignment for the report in the AnyQueue configuration. Users can then release the Reports from Pause by selecting the report and clicking Resume when they’re ready to release the report (essentially establishing a “pull” report delivery method). This pull delivery method may be useful when sending confidential reports to unsecured printers or locations.</p> <p>Note that jobs in a paused state will NOT be removed from WebTRAC!</p>
Error Action	<p>Indicates what action AnyQueue will take if the network destination is unreachable, resulting in a error status. Options are to either Retain the output (hold onto it) or Retain/Retry (hold onto it, and re-attempt delivery). Retries will be attempted based on the value (number of minutes) entered in the Error Retry field of the AnyQueue system configuration.</p>
Print Count	<p>Number of copies of the report that have actually printed (or been delivered).</p>
Copies	<p>Number of copies pending (copies generated that have not yet printed).</p>
Page Count	<p>Number of pages in the report if it is browseable. Page Count will display “NA” if the TRAC file contains binary data.</p>
Line Count	<p>Number of lines in the report if it is browseable. Line Count will display “NA” if the TRAC file contains binary data.</p>
Entry Date	<p>The date the report arrived in the WebTRAC system. Preferences can be set to display the time or not, and if displayed, whether or not to include hundredths of seconds.</p>
Retention Date	<p>When the report will expire and be deleted from WebTRAC. The delete will occur at midnight of the Retention Date. If the report will expire (and be deleted) at the end of the current day, the WebTRAC Job Name and the Retention Date will be displayed in red. If the report is within one week (7 days) of expiration, the WebTRAC Job Name and date will be displayed in yellow.</p> <p>Report retention periods, specified in numbers of days, are set in the Route Assignment for each report in the AnyQueue configuration. If you have the Update right for the report, the Retention Date can be modified (move up or pushed back) by selecting the report and going to the Details page for the report.</p>
Last Printed	<p>When the report was last printed (delivered). As with the Entry Date field, user Preferences determine whether of not this field includes the time (and whether time includes hundredths).</p>

Last Changed	Specifies when the Copies , Retention Date , or Restart Page was last modified (from the Details page). Users must have the Update right for the report in order to modify these attributes. As with the Entry Date field, user Preferences determine whether or not this field includes the time (and whether time includes hundredths).
Last Attempt	When the systems last attempted to deliver the report if the report is in Error status. As with the Entry Date field, user Preferences determine whether or not this field includes the time (and whether time includes hundredths).
Destination	Anytime the Destination has been altered from the original route, the new value will be displayed. This is not the resolved name, but the string that will be used to build the resolved name.
Owner	The User Id that is the owner of the job. If the Owner field is (None) then AnyQueue (i.e., the system) is the owner (this is the default). The owner of a job has full (all) rights to the job. The owner can be preset in the Route Assignment for a report in the AnyQueue configuration. When a job is cloned, the user performing the clone is automatically the owner.
Route Name	Name of the route the report has been sent to (or will be, if it is in Pause or Pending state).
Job Name	The JES Job Name on the report.
Class	The JES Class on the report.
Dest	The JES Dest on the report.
Form	The JES Form on the report.
Writer	The JES Writer on the report.
Clone Group	Group name (or User Id) that has the Clone right for the report.
Update Group	The Group name (or User ID) that has the Update right for the report.
Reprint Group	The Group name (or User ID) that has the Reprint right for the report.
List Group	The Group name (or User ID) that has the List right for the report.
View Group	The Group name (or User Id) that has the View right for the report.
Notify Group	The Group name (or User ID) that has been configured to receive an email notification. Email notifications can be sent by AnyQueue based on several report events, including: <ul style="list-style-type: none"> • Arrival (when the report arrived in WebTRAC). • Print (when AnyQueue delivered the report). • Error (if there is an error attempting to deliver the report - report is in Error status). • Delete (if the report is deleted, either manually (by a user) or automatically by WebTRAC (because the Retention Date expired). <p>Email notifications will include the WebTRAC Job Name (report), Retention Date, WebTRAC Job Number, and a hyperlink that will take the user into the report in browse mode. If the report is not browseable, then the Job List will be displayed.</p>

Notes - System Level Command

Selecting **Notes** from the **System Level Command**, will let you view Notes sent to your WebTRAC User ID. This page is also used to create Notes. Notes can be assigned to jobs, or sent to users.

Users can create Notes for other users. When an unread Note is available, the **Note** menu option will change. A user can only see notes sent to them and can only delete Notes sent to them.

FIELD	DESCRIPTION
Refresh	Brings back that latest Notes. If you have selected to Sort Notes Descending from your Preferences , then you must select Prev to see the newest Notes.
Top	Goes to the top of the Note List.
Prev	Pages backward through the Notes. You can use the Scroll Amount to override how many Notes to page backwards.
Next	Pages forward through the Notes. You can use the Scroll Amount to override how many Notes to page forward.
Bottom	Goes to the bottom of the Note List.
Select All	This will select every job on the page. To clear all selections, select Refresh.
Send	Creates a new Note. If you are on the User Note screen, you must select the User or Group link to specify the User or Group of Users you want to send the Note too.
Delete	Delete the selected Notes.

Notes - Job List Command

When viewing the Job List page, select the box to the left of a job and then select the **Notes** command from the Job List Command bar to display any notes for the selected job.

Certain events will cause Job Notes to be created automatically by AnyQueue. These Notes can not be deleted. They will only be removed when the job they are associated with is deleted.

FIELD	DESCRIPTION
Refresh	Brings back that latest Notes. If you have selected to Sort Notes Descending from your Preferences , then you must select Prev to see the newest Notes.
Top	Goes to the top of the Job Notes list.
Prev	Pages backward through the Notes. You can use the Scroll Amount to override how many Notes to page backwards.
Next	Pages forward through the Notes. You can use the Scroll Amount to override how many Notes to page forward.
Bottom	Goes to the bottom of the Job Notes list.
Select All	This will select every Job Note on the page. To clear all selections, select Refresh.
Delete	Delete the selected Notes. For Job Notes, only the User that created the Note can delete it.
New	Creates a new Note.

User Maintenance

User Maintenance is used to create, modify, or delete WebTRAC user accounts. From the initial User Maintenance page you can:

- Create a new user account. (See [page 4.37.](#))
- Open (and modify and update) an existing account directly (if you know the user name). (See [page 4.38.](#))
- Access the entire list of users and search for and select a specific user. (See [page 4.39.](#))
- Clone an existing account. (See [page 4.40.](#))

See the **Group Maintenance** help page for additional information on the relationship between users and Groups, and how rights are inherited.

Create New User

The **User Maintenance** page initially comes up with all the fields blank. To create a new user account:

- Enter the new User ID (maximum of 20 characters).
- Enter a password for the user (the user can change their password when they logon), and verify the password (to ensure it is entered correctly). **Passwords are case sensitive!**

Passwords and Account lockout: A “recently used” password list is maintained to prevent a user from reusing the same password too soon.

If the **Password Expiration Days** field has been set on the General page of the Configuration file and you modify a user password, then the next time that user logs on, they will be required to change their password. To override this behavior on a per user basis, select the **Password Never Expires** check box. By selecting this option, the user will never be required to update their password regardless of the **Password Expiration Days** value.

When you select the **Cannot Change Password** check box, you can prevent the user from ever modifying their password. This is a useful feature in the event you have set up a guest account for various users. Likewise, the **Cannot Update Preferences** check box, prevents the user from updating account Preferences. This option does not prevent the user from viewing their Preferences.

If the **Maximum Invalid Attempts** field has been set on the General page in the Configuration file, then any consecutive unsuccessful attempts to logon, that equal this number, will cause the user to be locked out. To reset it, you can uncheck **Account Locked** on the User Maintenance page. To manually lock the account, you can check the **Account Locked** box.

- Enter a descriptive name for the user in the **User Name** field (this name is also displayed in the User dialog box when granting rights to the user in the AnyQueue Configurator).
- Enter the user's email address (this email address is used by AnyQueue to generate email notifications).
- Select the Global Rights to grant to this user.
- When all fields above have been completed, click on the **New** command. At this point the new user account has been created.

Note on Global Rights: Global Rights are applied to all reports. So if a user is granted the List Global Right, they can see all reports in the WebTRAC Job List whether they were explicitly granted that right at the report level or not.

The new user account can not be added to any Groups until the account has actually been created by selecting the **New** command. Once the account has been created, the **Create Membership** and **Remove Membership** links will be available. Click on the **Add** button to add the user to the desired group. Repeat this procedure to add the user to additional groups.

Once the **New** command is selected, additional commands will be available on the command bar that will enable you to modify the account (make changes, then click on **Update**), **Clone** the account, or set the user's initial **Preferences**.

Remote Access When the Remote Access check box is selected, the user is allowed to view large jobs inside WebTRAC from a slow, remote connection. This is a useful feature if the user is trying to view a large file (such as a PDF) from a slow connection (such as a dial-up).

Modify an Existing User Account

To access and modify an existing user account directly:

1. Enter the User ID in the **User ID** field on the **User Maintenance** page. You must know the User ID.
2. Select **Read** on the command bar. The user account will display.
3. Make the necessary changes.
4. Select **Update** on the command bar.

Search for an Existing User Account

To search for an existing user account directly from the **User Maintenance** page:

1. Select **Search** on the **User Maintenance** page.

The **User List** page will display. This page will list all of the currently defined users.

2. Select the radio button next to the User ID.

3. Select **OK**.

The user account will display.

You will be presented with a list of all user accounts listing the user id and user name, sorted alphabetically by user id.

Clone a User Account

The **Clone** command makes a copy of a user account. When an account is cloned, the new user account inherits all the properties of the original account (such as rights, groups assigned to, etc.). Cloning is often used to create new user accounts based on an existing “template” account.

1. Display the account you want to base the new account on.
2. Change the **User ID**, **Password** (passwords are case sensitive), **User Name** (description), and the **eMail Id** (if necessary) for the new user.
3. Select **Clone** on the command bar.

Preferences

Preferences allow you to customize the display of certain WebTRAC pages and the format of certain fields. User preferences are stored in a user profile so the preferences follow the user regardless of where that user logs onto the system. Select **Preferences** from the Command Bar for the user you are modifying. The Preferences option in the System Level Command area will display your ID.

Preferences - General tab

FIELD	DESCRIPTION
Browse Font Size	Specifies the starting font when browsing line data. Values of 1-7 are allowed.
Browse Line Count	Specifies the number of lines per page that will be displayed when browsing line data. Values of 1-99 are allowed. This value should usually be set as large as the longest page in the reports you will access. If a report you are browsing has more lines per page than the Browse Line Count field specifies, you will not be able to see the entire page at once when browsing.
Green Bar Count	A value greater than 0 will turn on green bar shading when browsing line data (simulating green bar paper). This is the number of lines to make color.
List Line Count	Specifies the number of lines that will be displayed for all lists (Job List, Group List, etc.). Values of 1-99 are allowed.
Date Format	Sets the display format of any date field within the WebTRAC system (such as the Job List). Note: It will not effect any data contained within a document being browsed or data retained in WebTRAC.
Entry Date	Specifies whether or not you want the time to be included in date fields (along with the date), and, if so, whether you want the time to include hundredths of seconds. Note: It will not effect any data contained within a document being browsed or data retained in WebTRAC.
Alternate Pages	<p>If you wish to have more than one version of the Web pages, to support multiple languages for instance, you can utilize Alternate Pages to accomplish this. By creating a copy of all of the .htm files installed in the AnyQueue Startup Location, and merely adding a suffix of 1 to 8 characters to the end of each of them, you can then modify them to be different from the original.</p> <p>Lets say you have created a second set of pages with the suffix of 02 (logon.htm copied to logon02.htm). There are two ways to invoke the new pages.</p> <ol style="list-style-type: none"> 1. On the link that takes you to the AnyQueue logon screen, add &tridsfx=02 to the url. <p>Example:</p> <pre>AnyQueue</pre> <ol style="list-style-type: none"> 2. For the Preferences of a specific user, set the Alternate Pages field to 02.
Alternate Scheme	If you want to provide different colors or fonts, you can create an Alternate Scheme. This information is contained in the css.htm file that is installed with the AnyQueue Web Resources. Copy the file and add a suffix of 1 to 8 characters (css02.htm for instance) and make your modifications. Then set the Alternate Scheme field to 02 in the Preferences for the user.

FIELD	DESCRIPTION
Default Route	Specifies the location where Jobs will be printed when utilizing the My Print option on the Job List page. A route must be specified here before the My Print option will appear in the Job List Command Bar
Start Page	The default Start Page is the Job List Page . You can specify a different page to load first by selecting a different page from the list.
Notify on Redirect	When you print a job to an alternate location, this will send an eMail notification when it is printed.
Sort Notes Descending	Causes the Note List to be sorted in descending order.

Preferences - Job List tab

FIELD	DESCRIPTION
List by Folder and Date	Causes the Job List page to be sorted by Folder.
Group List Mask	The Job List Mask is used to filter the Job List based on a Group name that has List rights for reports in the Job List. The Group List Mask can be set via user Preferences, or directly from the Job List. If the Mask is set via the Job List, the Mask value will be remembered and reflected in User Preferences (i.e., in the user profile). Wildcards can be used in the Group List Mask. Wildcards can be used at the beginning or at the end of the Mask value.
New Windows for Browse	If this box is checked a new window will be launched to browse the report in, otherwise, the report will be brought up in the current window.
WebTRAC Job Name Mask	The WebTRAC Job Name Mask is used to filter the Job List. When a WebTRAC Job Name Mask is in effect, only jobs that meet the Mask value will be displayed. The WebTRAC Job Name Mask can be set either via user Preferences, or directly from the Job List. If the Mask is set via the Job List, the Mask value will be remembered and reflected in User Preferences (i.e., in the user profile). Wildcards can be used in the WebTRAC Job Name Mask. Wildcards can be used at the beginning or at the end of the Mask value.
Sort Descending	Causes the Job List to be sorted in descending order.
WebTRAC Job Id	The WebTRAC Job Id. (Internal use.)
WebTRAC Id	The WebTRAC Id. (Internal use.)
Copies	Number of copies pending (copies generated that have not yet printed).
Retention Date	<p>When the report will expire and be deleted from WebTRAC. The delete will occur at midnight of the Retention Date. If the report will expire (and be deleted) at the end of the current day, the WebTRAC Job Name and the Retention Date will be displayed in red. If the report is within one week (7 days) of expiration, the WebTRAC Job Name and date will be displayed in yellow.</p> <p>Report retention periods, specified in numbers of days, are set in the Route Assignment for each report in the AnyQueue configuration. If you have the Update right for the report, the Retention Date can be modified (move up or pushed back) by selecting the report and going to the Details page for the report.</p>
Error Action	Indicates what action AnyQueue will take if the network destination is unreachable, resulting in a "error" status. Options are to either "Retain" the output (hold onto it) or "Retain/Retry" (hold onto it, and re-attempt delivery). Retries will be attempted based on the value (number of minutes) entered in the "Error Retry" field of the AnyQueue system configuration.

FIELD	DESCRIPTION
Status	<p>The current status of the job. Possible status include:</p> <p>Complete If the Initial Action has been set for Send in the Route Assignment for the report in the AnyQueue Configurator, the job has been delivered to it's intended destination on the network (the Print Count will indicate the number of copies sent). If a job has a status of "Complete" and the Print Count is "0," then Send has not been set in the Initial Action for the report in the AnyQueue configuration. If the Initial Action is not set to Send for a report, then arrival in WebTRAC is considered complete.</p> <p>Pending The report is waiting it's turn to be processed.</p> <p>Printing The report is in the process of being delivered to the network location (note that the term "printing" is used here in a generic sense and does not necessarily indicate the output is being sent to a physical printer, it could be destined for a file, email, etc.).</p> <p>Error The system attempted to deliver the report to the network location, but was unable to reach the destination or an error occurred before the report was completed. If Retry is selected in the Error Action for the report (in the Route Assignment for the report in the AnyQueue Configurator), AnyQueue will re-attempt delivery of the report. AnyQueue will re-attempt delivery of the report based on the Error Retry interval defined on the General section of the AnyQueue configuration. Note that there are some errors that are deemed unrecoverable, and no automatic retry will be attempted.</p> <p>Pause Delivery of the report has been temporarily halted or put on hold. Jobs that are not in a Printing status can be manually paused by selecting the report and clicking Pause. Reports can also be brought into the WebTRAC system in Pause status automatically by selecting "Pause" in the Initial Action of the Route Assignment for the report in the AnyQueue configuration. Users can then release the Reports from Pause by selecting the report and clicking Resume when they're ready to release the report (essentially establishing a "pull" report delivery method). This pull delivery method may be useful when sending confidential reports to unsecured printers or locations. Note that jobs in a paused state will NOT be removed from WebTRAC!</p>
Entry Date	When the report arrived in the WebTRAC system. Preferences can be set to display the time or not, and if displayed, whether or not to include hundredths of seconds.
Last Printed	When the report was last printed (delivered). As with the Entry Date field, user Preferences determine whether or not this field includes the time (and whether time includes hundredths).

FIELD	DESCRIPTION
Last Changed	When the Retention Date or Copies was last modified (from the Details page). Users must have the Update right for the report in order to modify these attributes. As with the Entry Date field, user Preferences determine whether or not this field includes the time (and whether time includes hundredths).
Print Count	Number of copies of the report that have actually printed (or been delivered).
Route Name	Name of the Route in the AnyQueue configuration the report has been sent to (or will be, if it is in Pause or Pending state).
List Group	The Group name (or User Id) that has the List right for the report.
View Group	The Group name (or User Id) that has the View right for the report.
Reprint Group	The Group name (or User Id) that has the Reprint right for the report.
Clone Group	Group name (or User Id) that has the Clone right for the report.
Update Group	The Group name (or User Id) that has the Update right for the report.
Notify Group	The Group name (or User Id) that has been configured to receive an email notification. Email notifications can be sent by AnyQueue based on several report events, including: Arrival (when the report arrived in WebTRAC), Print (when AnyQueue delivered the report), Error (if there is an error attempting to deliver the report - report is in Error status), and/or Delete (if the report is deleted, either manually (by a user), or automatically by WebTRAC (because the Retention Date expired). Email notifications will include the Job (report) Name, Retention Date, WebTRAC Job Number, and a hyperlink that will take the user into the report in browse mode. If the report is not browseable, then the Job List will be displayed.
Last Attempt	If the report is in Error status, when the systems last attempted to deliver the report. As with the Entry Date field, user Preferences determine whether or not this field includes the time (and whether time includes hundredths).
Destination Override	Anytime the Destination has been altered from the original Route, the new value will be displayed. This is not the resolved name, but the string that will be used to build the resolved name.
Owner Name	The User Id that is the owner of the job. If the Owner field is “(none)” then AnyQueue itself (i.e., the system) is the owner (this is the default). The owner of a job has full (all) rights to the job. The owner can be preset in the Route Assignment for a report in the AnyQueue configuration. When a job is cloned, the user performing the clone is automatically the owner.
Page Count	Number of pages in the report if it is browseable. Page Count will display “NA” if the TRAC file contains binary data.
Line Count	Number of lines in the report if it is browseable. Line Count will display “NA” if the TRAC file contains binary data.
Job Name	The JES Job Name on the report.
Class	The JES Class on the report.
Dest	The JES Dest on the report.
Form	The JES Form on the report.
Writer	The JES Writer on the report.

Preferences - Output Queue tab

FIELD	DESCRIPTION
Route Filter	The Route Filter allows you to reduce the list down to only those jobs destined for a specific Route.
Refresh Rate	The Refresh Rate is the amount of time that will elapse before the Output Queue gets refreshed.
WebTRAC Job Name Mask	The WebTRAC Job Name Mask is used to filter the Output Queue. When a WebTRAC Job Name Mask is in effect, only jobs that meet the Mask value will be displayed. The WebTRAC Job Name Mask can be set either via user Preferences, or directly from the Output Queue. If the Mask is set via the Output Queue, the Mask value will be remembered and reflected in User Preferences (i.e., in the user profile). Wildcards can be used in the WebTRAC Job Name Mask. Wildcards can be used at the beginning or at the end of the Mask value.
Destination Mask	The Destination Mask is used to filter the Output Queue. When a Destination Mask is in effect, only jobs headed towards the Mask value will be displayed. The Destination Mask can be set either via user Preferences, or directly from the Output Queue. If the Mask is set via the Output Queue, the Mask value will be remembered and reflected in User Preferences (i.e., in the user profile). Wildcards can be used in the Destination Mask. Wildcards can be used at the beginning or at the end of the Mask value.
Sort Descending	Causes the Job List to be sorted in descending order.
WebTRAC Job Id	The WebTRAC Job Id. (Internal use.)
WebTRAC Id	The WebTRAC Id. (Internal use.)

Status	<p>The current status of the job. Possible status include:</p> <p>Complete If the Initial Action has been set for Send in the Route Assignment for the report in the AnyQueue Configurator, the job has been delivered to it's intended destination on the network (the Print Count will indicate the number of copies sent). If a job has a status of "Complete" and the Print Count is "0," then Send has not been set in the Initial Action for the report in the AnyQueue configuration. If the Initial Action is not set to Send for a report, then arrival in WebTRAC is considered complete.</p> <p>Pending The report is waiting it's turn to be processed.</p> <p>Printing The report is in the process of being delivered to the network location (note that the term "printing" is used here in a generic sense and does not necessarily indicate the output is being sent to a physical printer, it could be destined for a file, email, etc.).</p> <p>Error The system attempted to deliver the report to the network location, but was unable to reach the destination or an error occurred before the report was completed. If Retry is selected in the Error Action for the report (in the Route Assignment for the report in the AnyQueue Configurator), AnyQueue will re-attempt delivery of the report. AnyQueue will re-attempt delivery of the report based on the Error Retry interval defined on the General section of the AnyQueue configuration. Note that there are some errors that are deemed unrecoverable, and no automatic retry will be attempted.</p> <p>Pause Delivery of the report has been temporarily halted or put on hold. Jobs that are not in a Printing status can be manually paused by selecting the report and clicking Pause. Reports can also be brought into the WebTRAC system in Pause status automatically by selecting "Pause" in the Initial Action of the Route Assignment for the report in the AnyQueue configuration. Users can then release the Reports from Pause by selecting the report and clicking Resume when they're ready to release the report (essentially establishing a "pull" report delivery method). This pull delivery method may be useful when sending confidential reports to unsecured printers or locations. Note that jobs in a paused state will NOT be removed from WebTRAC!</p>
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FIELD	DESCRIPTION
Error Action	Indicates what action AnyQueue will take if the network destination is unreachable, resulting in a "error" status. Options are to either "Retain" the output (hold onto it) or "Retain/Retry" (hold onto it, and re-attempt delivery). Retries will be attempted based on the value (number of minutes) entered in the "Error Retry" field of the AnyQueue system configuration.
Print Count	Number of copies of the report that have actually printed (or been delivered).
Copies	Number of copies pending (copies generated that have not yet printed).
Page Count	Number of pages in the report if it is browseable. Page Count will display "NA" if the TRAC file contains binary data.
Line Count	Number of lines in the report if it is browseable. Line Count will display "NA" if the TRAC file contains binary data.
Entry Date	This is used to set whether or not you want the time to be included in date fields (along with the date), and, if so, whether you want the time to include hundredths of seconds. Note: It will not effect any data contained within a document being Browsed or data retained in WebTRAC.
Retention Date	When the report will expire and be deleted from WebTRAC. The delete will occur at midnight of the Retention Date. If the report will expire (and be deleted) at the end of the current day, the WebTRAC Job Name and the Retention Date will be displayed in red. If the report is within one week (7 days) of expiration, the WebTRAC Job Name and date will be displayed in yellow. Report retention periods, specified in numbers of days, are set in the Route Assignment for each report in the AnyQueue configuration. If you have the Update right for the report, the Retention Date can be modified (move up or pushed back) by selecting the report and going to the Details page for the report.
Last Attempt	If the report is in Error status, when the systems last attempted to deliver the report. As with the Entry Date field, user Preferences determine whether of not this field includes the time (and whether time includes hundredths).
Route Name	Name of the Route in the AnyQueue configuration the report has been sent to (or will be, if it is in Pause or Pending state).
Destination	Name of the Destination inside the Route Assignment where the report has been sent to.
Destination Override	Destination of the Report. The Destination Override can be modified inside the Route Assignment inside the AnyQueue® configuration.
Owner	The User Id that is the owner of the job. If the Owner field is "(None)" then AnyQueue® itself (i.e., the system) is the owner (this is the default). The owner of a job has full (all) rights to the job. The owner can be preset in the Route Assignment for a report in the AnyQueue® configuration. When a job is cloned, the user performing the clone is automatically the owner.

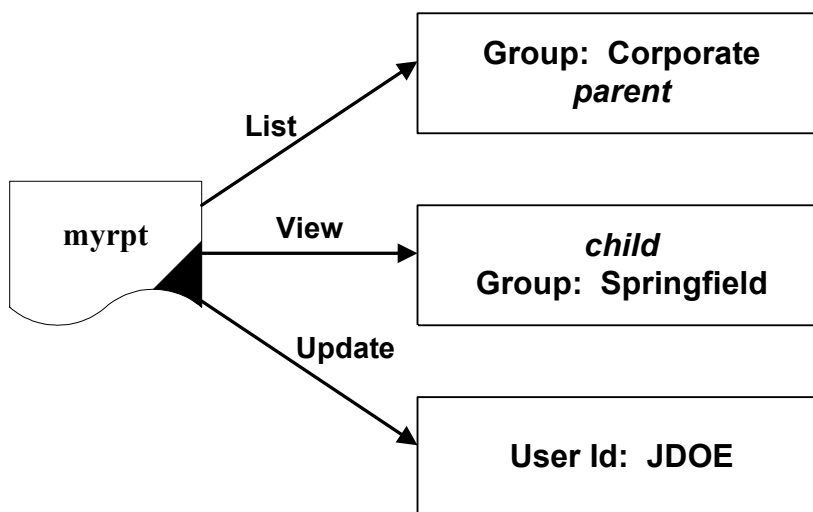
FIELD	DESCRIPTION
Job Name	The JES Job Name on the report.
Class	The JES Class on the report.
Dest	The JES Dest on the report.
Form	The JES Form on the report.
Writer	The JES Writer on the report.

Group Maintenance

WebTRAC Groups are a convenient way to grant rights (access to reports) to multiple users. Users may inherit rights from any groups they belong to (either directly or through group relationships). Users can belong to multiple groups. In addition, groups can be members of other groups (i.e., groups can be nested).

Groups also inherit rights from groups they belong to (their Parent Group). Users, therefore, will inherit rights from groups that may have inherited rights from another (Parent) group.

In the example shown here, user JDOE is a member of the Springfield group. The Springfield group is a member of the Corporate group (i.e., the Springfield group is a child of the Corporate group).



The Corporate Group has been granted the **List** right for the **myrpt** report. The Springfield Group has been granted the **View** right for **myrpt**.

User JDOE has been explicitly granted the **Update** right for the **myrpt** report.

JDOE's effective rights for the **myrpt** are: **List**, **View**, and **Update**.

It's best, if using nested groups when designing WebTRAC security, to grant the least specific rights at the top of the hierarchy - since the largest number of users will inherit these right through group relationships.

Group Maintenance is used to create, modify, or delete WebTRAC User Groups. From the initial **Group Maintenance** page you can:

- Create a new group.
- Open (and modify and update) an existing group directly (if you know the group name).
- Access the entire list of groups and search for and select a specific group name.

The Group Maintenance page initially comes up with all fields blank. The **Group Memberships** box displays Group Names this group is a member of (i.e., groups this group belongs to).

The **Group Members** box displays the names of groups that are a member of this group (i.e., groups that belong to this group). The **User Members** box will display a list of user Ids that are members of this group.

Create a New Group

- In the **Name** field enter a name for the new group (up to 20 characters).
- In the **Description** field enter a **Description** for the group (up to 40 characters).
- Select **New**. Before this group can be added to Parent or Child groups the **New** option must be selected to actually create the new group.
- Once the new group has been created, the **Add** and **Remove** options will be available for adding this group as a member of other groups.
- When the **Add** button is selected, the **Group List** page will display to select the **Group Name** to make this new group a member (child) of.

Open and Modify an Existing Group

If you know the exact name of a group, it can be read in directly from the **Group Maintenance** page:

- On the **Group Maintenance** page enter the name of the group in the **Name** field.
- Select **Read**. The group definition will display.
- Make the necessary changes.
- Select **Update** on the command bar.

If you're not sure of the exact name of the group, select **Search** on the **Group Maintenance** page and then the **Group List** will display. Select the radio button next to the appropriate group name and then select **OK**. The group definition will display.

Clone a Group

The **Clone** command makes a copy of the group. When a group is cloned, a new group will be created with the same Parent Groups, Child Groups, and Users.

To Clone an existing Group:

- **Read** or **Search** for the group definition you want to base the new group on.
- Change the **Name** and **Description** fields.
- Select **Clone** on the command bar.

Connection List

The **Connection List** indicates:

- All active logged on users.
- The User Id.
- The date and time when the user logged on.
- The date and time when the user last accessed the system.

The **Prev** and **Next** options will scroll back or forward through the **Connection List**.

To terminate a user connection, select the radio button next to the User Id and select the **Kill** option on the right-hand side of the command bar. **Note:** You can not Kill your own connection.

Select the **Refresh** option to update the Connection List.

The **Connection List** also maintains statistic counters related to user licenses:

- **License Count** - Total number of AnyQueue/WebTRAC™ user licenses you are licensed for.
- **Highest Count** - The maximum number of users that have been logged on since AnyQueue was started.
- **Denied Connections** - How many users attempted to logon, but were denied due to all available licenses being in use.
- **Forced Connections** - How many times an Administrator forced the oldest connection off so the Administrator could log on.

These indicators are reset when AnyQueue is terminated. They indicate numbers since AnyQueue was last started and are not maintained across system cycles.

Engine

The Engine page allows you to monitor and control the AnyQueue Engine remotely, via the WebTRAC interface. This page contains tabs - **Log, Host, (WebTRAC) Job Processors, (WebTRAC) Job Request Processors, Debug, Info, and Trace**. This page also provides a snapshot view of the active AnyQueue Log.

If your User ID has the right (assigned in Preferences) to **View Engine Info**, you can access this page and monitor the Engine, but can not issue commands to control the Engine or modify any operating parameters. Your User ID must have the right assigned to **Maintain Engine** to issue commands and control the AnyQueue Engine.

The Engine Command bar includes the following commands: **Refresh, Reload, and Terminate**.

Below is an explanation of each command.

FIELD	DESCRIPTION
Refresh	Refreshes the information on the Engine page.
Reload	<p>Restarts the AnyQueue Engine. The AnyQueue configuration file is read only at startup time. If changes are made to the configuration (and the configuration has been saved), reloading will restart the Engine and read the new configuration.</p> <p>There are 2 options - reload the engine immediately or schedule the next time that the engine should reload. The reload option is a one-time event. To continue to schedule reloads would require re-entering the date and time once the last reload has occurred.</p>
Terminate	Terminates the AnyQueue Engine. If the Engine is terminated from the WebTRAC Engine page, you will have to go to the server to manually restart it.

Engine - Log tab

The Engine Log window provides a snapshot view of the most current lines of the AnyQueue log. The details and amount of information written to the log is determined by which Engine Debug Flags are enabled (error messages are always logged, regardless of what Debug Flags are on). This log window is not scrollable. If you need to view other parts of the log you can open the entire log file in a separate browser window using the **Download Log** command.

The Engine Log window is color coded by message type:

- Normal messages are highlighted green.
- Error messages in red.
- Informational messages in yellow.

Selecting **Refresh** will refresh the Log window with the most current information.

FIELD	DESCRIPTION
Zoom In Zoom Out	Zoom in or zoom out on the Log window.
Download Log	Opens the entire log file in a separate browser window as a text file. The log file can then be scrolled, printed, or saved from that browser window.
Archive Log	Saves the current active log file with an incremental filename extension (e.g., anyq.000, anyq.001, etc.), and opens a new log. The new log will contain a message indicating the log was archived and the filename of the archived log file.
Delete Log	Closes the current active log file and restarts a new one (the old log file is not saved).

Engine - Host tab

FIELD	DESCRIPTION
Pause	Places the selected host(s) in a pause state. Hosts in pause will not process incoming jobs.
Resume	Resumes the selected hosts (if the host was paused).
Force Pause	Immediately places the selected Host(s) in a pause state. Any current job(s) being processed by the Host(s) will be cancelled whenever Force Pause is selected. In addition, Host(s) in pause will not process incoming jobs.
Cancel	Cancels the job(s) currently being processed by the selected Host(s).

Engine - Job Processors and Job Request Processors tabs

The Job Processor and Job Request Processor Statistics counters maintain a count of how many request each of these Processors have executed since AnyQueue® was last started. Since the first available Processor will be used, you can judge if the numbers you have selected are sufficient or excessive by comparing the statistics between the items at the top of the list, and those at the bottom. **These counters are reset and not maintained when the AnyQueue® Engine is terminated or reloaded.**

Job Processors perform WebTRAC job related work activities for the AnyQueue® Engine. Job Request Processors handle incoming requests for active WebTRAC user connections.

Engine - Active Pools

The Route Pool list will show a list of defined Route Pools. You can select a Route Pool or Pools and reset the load count on each by selecting the **Reset Load Count** link. Resetting the load count values will immediately affect the route traversal scheme used in Route Pooling. Load counts are used by Route Pools that are pooled by Job Load or Line Count Load. In these schemes, AnyQueue will attempt to deliver to the route with the lightest load first. If that route is paused or busy (in the case of serialization), AnyQueue will attempt to deliver to the route with the second lightest load, etc.

Engine - Debug tab

AnyQueue® maintains a log of Engine activity. AnyQueue® automatically writes errors encountered by the Engine to the log. Debug flags allow you to include additional detail in the log to trace various types of activities and operations for troubleshooting and audit purposes.

To enable Debug Flags, select the desired combination of flags from the list and click “Set Debug” on the Command Bar. Use CTL or Shift on the keyboard to select multiple flags at once. For normal (production) operation, the number of Debug Flags enabled should be kept to an absolute minimum. The more flags you enable, the more performance can be impacted (see **Data Lines**).

Communications	Basic communications operations. Not normally very useful. Generates additional overhead with generally minimal gain in useful information. You would turn this on if you need to see what communication support modules are loaded, and their versions.
Data Lines	All data lines (i.e., report content) received from the hosts is logged. This can have severe impact on performance and creates extremely large log files. AVOID THIS FLAG! Use for problem determination Only!
Program Status	Records basic internal program operations being initiated. Not extremely useful by itself. Use “Routes” for logging actual information regarding specific Route activities (such as Route names accessed, Destinations referenced, actions taken if line/page limits exceeded, etc.).
Host Modes	Logs all the JES SYSOUT attribute values received with report. These are your inbound Variables. Useful for determining the value of selection criteria attributes (Jobname, Class, Dest, Form, and Writer) received with a report if the report did not arrive where expected (or unsure what those values will be).
Local Status	This logs the Destination created for all Jobs, and the Backend used, if any (see Informational).
Remote Status	Basic communications operations. Not normally very useful. You would turn this on if you need to see what network support modules are loaded, and their versions.
Informational	Useful for tracing successful job deliveries, Engine commands issued, WebTRAC initialization process, etc.
Route	Details regarding specific route functions. Including: Line/Page Limits Exceeded, Route name, Destination used, etc.
Variable Substitution	Variable Substitution results (including before and after values). Useful for determining actual values (filename, etc.) used when Variable Substitution is in effect. Variable Substitution is commonly used in Destination and Start/End Sequence fields in Routes, and in Backend Parameters.
Dump Memory on Terminate	Generates a dump file when AnyQueue® terminates normally. Dump files (which have the same name as the active log file, except with a .dmp extension) can be sent to LRS Product Support for analysis. This debug flag is normally enabled at the request of LRS Product Support.

WebTRAC Status	General status and messages about WebTRAC system access (does not include user or report activities).
WebTRAC Informational	Logs accounting information about user and report activities, including: report access (browse), deletions, clones, etc. Log entries include userid of user performing the operation. Extremely useful as audit trail of user activity by date/time and report name. Setting this flag is the equivalent of setting both the WebTRAC Job Information and WebTRAC User Information flags.
SAP Status	Logs basic SAP communication operations.
WebTRAC Job Information	Logs accounting information about report specific activities only, including: report access (browse), deletions, clones, etc. Extremely useful as audit trail of report activity by name.
WebTRAC User Information	Logs accounting information about user specific activities only, including: deletions, clones, etc. Log entries include userid of user performing the operation. Extremely useful as audit trail of user activity by date/time.

Set Debug	Modify (set or clear) Engine debug flags.
Dump Memory	Generates a memory dump of the AnyQueue environment. This command is typically only performed at the request of LRS product support personnel.

Engine - Info tab

AnyQueue® Host objects can be monitored and controlled via the Engine Information page. AnyQueue® Host types include:

- APPC (VPS mainframe connection via SNA).
- TCPIP (VPS mainframe or AnyQueue® connection via TCP/IP).
- LPD (receives output from other TCP/IP platforms).
- File (picks up AnyQueue® format “VPR” files from a directory - used to process output from PageSorter).

Any (or all) of the Host objects can be paused by selecting the radio button next to the object(s) and clicking **Pause** on the Command Bar at the top of the page. This allows you to temporarily halt receiving output from host systems without terminating the engine (and killing all active user connections). The Host object(s) can be restarted by selecting the Host object and clicking **Resume**. **Force Pause** will pause the Host object(s) immediately. Any current job(s) being processed by the Host object(s) will be cancelled whenever **Force Pause** is selected. **Cancel** will cancel the job currently being processed by the Host object(s).

This section also lists various performance counters for each Host object. Information in this section of the page can be updated by clicking **Refresh**.

Engine - Trace tab

The Engine trace window provides a way to turn API or TCP/IP tracing on or off. Tracing should not be turned on unless instructed to do so by LRS Product Support. Tracing can produce very large files quickly and can have a severe impact on system performance.

Selecting **Refresh** will refresh the trace window with the most current information.

Selecting **Set Trace** along with the checkbox for the tracing desired, the filename to store the trace file into, and a management flag checked (if API tracing) will turn on tracing immediately.

Selecting **Cancel API Trace** will terminate API trace calls.

Selecting **Cancel TCP/IP Trace** will terminate TCP/IP trace calls.

FIELD	DESCRIPTION
API Tracing	Turn API tracing on.
TCP/IP Tracing	Turn TCP/IP tracing on.
Filename	Input the fully qualified path for the stored tracing file.
Memory Management (API only)	Trace memory management calls.
Semaphore Management (API only)	Trace semaphore usage.
File Management (API only)	Trace file access.

Folder

This screen is used to select a Folder.

Selecting **Folder** from a System Level Command will take you to Folder Maintenance.

Folder Maintenance

Folder Maintenance allows you to customize the hierarchy of Folders in AnyQueue. You must have **Maintain Engine** authority to modify the Folder hierarchy.

FIELD	DESCRIPTION
Refresh	Brings back the latest information about the selected Folder.
New Child	Creates a new Folder under the currently selected Folder. Enter a name in the Child Name field and select New Child . Note: You can create multiple occurrences of the same named Child, but it is highly discouraged.
Change Parent	Displays the Folder list to select a New Parent.
Rename	Allows you to change the name of the currently selected Folder. Enter the new name in the Name field and select Rename .
Cancel	Cancel the dialog box and does not save any changes.
Clone	
Delete	Deletes the currently selected Folder. Note: If the Folder has any Child Folders, or if there are any jobs currently in the Folder, then delete is not allowed.
Parent Name	Displays the Parent of the currently selected Folder.
Name	Displays the currently selected Folder.
Child Name	The name of the new Child Folder.

AnyQueue/WebTRAC Security

WebTRAC rights can be either **Report Level** rights or **Global** rights that are assigned at the user level. Report Level rights can be granted to individual users, or they can be granted to a Group. Users can gain one or more rights for individual reports explicitly, or they can inherit them from a Group they are a member of. Groups can also be nested. So rights can also be inherited from a Group that is a member of a Group the User ID is a member of.

In WebTRAC there are basically three types of rights:

1. **Report Control** (See [page 4.68.](#))
 - Assigned at the Report Level
 - Assigned Globally at the User Level
2. **System Control** (See [page 4.69.](#))
 - Assigned Globally at the User Level
3. **Route Access** (See [page 4.70.](#))
 - Assigned at the Route Level
 - Assigned Globally at the User Level

Report Control

Report level rights apply to individual reports and determine what reports a user has access to and what commands or operations the user can perform on each one. Report level rights are set during the configuration process of the AnyQueue/WebTRAC route, or during the cloning process.

In addition to these rights being granted, on a report-by-report basis, a user may be granted any of these rights globally. Global rights apply to all reports, whether the user was granted rights for a specific report or not. Global rights are granted to a user account via the AnyQueue/WebTRAC **User Maintenance** page.

View Allow the user to browse the content of a report. The report will be opened in the same browser window or a separate browser window will be opened for the report, depending on the users Preferences.

List List is the most basic report level right. List allows you see the report in the Job List. You must have List, in order to see the report exists.

Rerint Enables the user to reprint reports.

Clone Allows the user to clone the report. Cloning permits the user the following level of control:

- A new WebTRAC Job Name can be specified.
- Initial action (Send - Retain) can be specified.
- Error action (Retry - Retain) can be specified.
- Copies can be specified.
- Retention period can be specified.
- Cloned reports can be sent to any route the user has been granted **Job User Access** to.
- All report level rights can be assign to a user or group.
- Elect to receive print and/or error email notification.
- If the route selected is an email route, the **Destination** (i.e., email address) can be specified here directly (as opposed to using the email address configured in the route's **Destination** field).

The Clone function is accessed via the **Report Details** page. If the user does not have the Clone right for a report, they will not see the **Clone** command on the Job Details page for that report. The user cloning a job is automatically the "owner" of the cloned job. A job owner has full rights and control over the new job.

When Printing a job, if the user has Clone rights for the report, they will be able to specify an alternate location to Print the report, as long as they have been given rights to some other routes.

Update Allows the user to modify certain report attributes, including the Retention Date, the number of Copies to be printed, and the restart page. Report attributes are displayed on the Job Details page.

System Control

Global rights are generally system level rights and are granted to individual users in WebTRAC User Maintenance. Any of the report level rights listed above can be granted Globally. The following additional system level rights listed below may be assigned to users or groups.

Admin Maintenance	Allows access to User Maintenance, Group Maintenance, and Configuration options.
Connection Maintenance	Allows access to the Connection List. This is used to Determine what users are currently logged on to WebTRAC and kill user connections (i.e., force a user off).
Routes	The Routes right allows the user access to all AnyQueue Routes when performing a Clone.
View Engine Information	Allows access to the Engine Information screen. View Engine Information allows you to view the status of host connections, and see a snapshot view of the AnyQueue system log - but no Engine controls or commands can be issued
Control Engine	Allows access to control the Engine.
Maintain Engine	Provides access to the Engine information screen. Similar to “View Engine Information”, but also provides access to Engine control and command functions.
User/Group Maintenance	Allows access to the User Maintenance and Group Maintenance screens. It also provides that ability to add, delete, modify user accounts, and grant/remove user rights or add users to groups, as well as add, delete, modify groups, and assign groups to other groups.

Route Access

Job User Access is a special right that allows users access to AnyQueue Routes when performing a Clone. Since Job User Access is related to a specific Route (as opposed to a report or system level function), this right is granted in Route definitions in the AnyQueue Configurator. The Route object allows Job User Access to be granted to a User Id or a Group.

Users can only access a Route (when performing Clone) if they, or a Group they are a member of, has been granted the Job User Access right in that Route - or - the individual user has been granted the Routes Global Right, which lets them access all Routes (even if not explicitly granted this access in the Routes themselves).

Management Utility

Overview	This utility (xANYQMNT) enables users to maintain files used by AnyQueue.
Function	Functions include: <ul style="list-style-type: none">• File backup and restore.• Conversion of release 1.0 configuration files for use with release 1.1.• AnyQueue/WebTRAC file defragmentation.• AnyQueue/WebTRAC index file regeneration.• Print a Group Relations report.
Backup Feature	The backup feature enables users to selectively backup files used by AnyQueue. Files selected by the user for backup are compressed into a single backup file. The backup file name is derived from the configuration file name and receives the .arq extension. The restore feature is used to restore files from the backup.
Restore Feature	The restore feature enables users to restore files from a backup (.arq) or snapshot (.snp) file. Files may be restored to their original location or to the current directory. When restored to the original location, the directory tree must exist and will not be created.
Snapshot Feature	The snapshot feature enables users to compress the AnyQueue files into a single file that may be delivered to Product Support for analysis during problem resolution.
Convert Feature	The convert feature enables users to convert AnyQueue release 1.0 configuration files for use with release 1.1.
Defragment Feature	The Defragment feature enables users to reduce the size and increase the performance of AnyQueue/WebTRAC related files by reclaiming unused space in the files.
Rebuild Feature	The Rebuild feature enables users to reconstruct corrupt AnyQueue/WebTRAC index files.
Report Feature	The Report feature enables users to print a Group Relations report.
Stand-alone Conversion Program	A stand-alone conversion program (xCVTCFG) is also provided. It is a command line utility that converts Release 1.0 configuration files to Release 1.1 configuration files.

Configure

Select the **Configure** option on the AnyQueue/WebTRAC pages to configure the “.cfg” file. The .cfg file contains the information that instructs AnyQueue/WebTRAC how to process receiving jobs.

The **Configure** option will display the **Open Configuration File** page.

Select the file name from the list and select **Open**. If the file is already opened by someone else, you will get an error indicating who has it open.

Configuration

After the configuration file has been opened the Configuration page will display. This page allows you to configure the general system operating parameters and how AnyQueue/WebTRAC will process jobs.

Each of the options on this page are explained in greater detail on the following pages:

General	page 4.75
Backend List	page 4.80
Carriage Control List	page 4.84
Host List	page 4.85
Logon List	page 4.89
Sequence Group List	page 4.92
Translation Table List	page 4.99
Route List	page 4.101
Route Assignment List	page 4.119
Route Pool List	page 4.123

Configuration - Save

When saving a configuration file you will be supplied a default name to back up the original file also. You can choose not to create the backup, or specify a different name.

Note that the backup name supplied still has the .cfg file extension so it can be loaded from the Web Configurator.

Configuration - General

Parameters on the **General** page apply to general system operating parameters for AnyQueue and AnyQueue/WebTRAC™.

WebTRAC Information

FIELD	DESCRIPTION
Location	Location where all WebTRAC files will be located, this includes all jobs (reports) and the support database (which includes the various index files, User and Group definitions, etc.). This must be a fully qualified file path. The location should be on the same machine that is running the AnyQueue service, for performance reasons.
Notify URL Prefix	<p>If configured to do so, WebTRAC can send notification messages to users upon certain report events (such as Arrival, Print, Delete, or Error). In those messages there will be a hyperlink back to the report in WebTRAC. Since AnyQueue/WebTRAC™ has no way to determine what Web Servers that LRS/Web Connect will be running on, you must specify the URL Prefix here.</p> <p>The value entered for the prefix should include the web server, the directory (or directory alias) name LRS/Web Connect program was installed in, the file name for the LRS/Web Connect program (nlrswc.dll), and the “Server Name” configured in LRS/Web Connect to connect to AnyQueue.</p> <p>For Example:</p> <p style="text-align: center;">http://www.lrs.com/lrs/nlrswc.dll/anyq</p> <p>If Secure Sockets Layer (SSL) is enabled on the web server for WebTRAC, be sure to indicate as such in the prefix (e.g., https://www.lrs.com/lrs/nlrswc.dll/anyq).</p>
Disk Space Threshold %	This is the amount of Free Space that must be available in the WebTRAC Location for AnyQueue to continue to add jobs to WebTRAC. If available disk space falls below this threshold, AnyQueue will not add any additional jobs to WebTRAC.
Job Processors	This specifies the number of WebTRAC Processors you want to run. Job Processors are threads that perform WebTRAC job processing. Job Processors perform such functions as sending, deleting reports, etc. The WebTRAC Engine page includes statistic counters that indicate how many Job Processors have been busy since AnyQueue was last started. These may be checked periodically to determine if Job Processors need to be increased or decreased.

FIELD	DESCRIPTION
Cycle (Seconds)	This specifies how many seconds WebTRAC will wait between processing cycles. Setting Cycle too small can result in unnecessary processor overhead, but setting the value too high can result in delays for WebTRAC jobs getting sent.
Job Request Processors	This specifies the number of Web Access Job Request Processors you want to run. WebTRAC Job Request Processors are threads that handle incoming user requests. The WebTRAC Engine page includes statistic counters that indicate how many Job Request Processors have been busy since AnyQueue was last started. These indicators may be used to determine when (if) Job Request Processors need to be increased or decreased.
Error Retry (Minutes)	This specifies how many minutes WebTRAC will wait before attempting to redeliver a Job that was put into an Error status. This only applies to jobs that have "Retry" specified for the Error Action in the Route Assignment for the job in the AnyQueue configuration.
User Timeout (Minutes)	This determines the number of minutes a connected Web User can remain idle before their connection is terminated. A value of zero (0) indicates indefinite (use connections will never time out). Setting Timeout to zero may result in all available connections getting tied up (regardless of whether anyone is using them or not) and is not recommended.
Maximum Job Number	All reports (jobs) sent to WebTRAC are assigned a Job Number. This field sets the largest Job Number WebTRAC will assign before wrapping back around to 1. The minimum amount is 100, the maximum is 99999999. Note: If you specify a number smaller than the amount of Jobs you will put into the system, once that number is reached, WebTRAC will not be able to add any more Jobs until some expire and are deleted, or are deleted manually.
LRS/Web Connect Port	This is the port number that LRS/Web Connect will communicate with AnyQueue on. This port number is also used in the LRS/Web Connect Configurator when defining the Server connection for AnyQueue.
Group Reverse Index Search	This can be used if your User/Group relationships are too flat. This option can improve performance when building the Job List.
TRAC Maintenance Time (hh:mm):	WebTRAC maintenance runs at midnight by default. You can use this field to specify the time you want it to run.

See the LRS/Web Connect documentation for additional information on using and configuring LRS/Web Connect.

General Information

FIELD	DESCRIPTION
Temp Location	<p>This sets the directory used by AnyQueue for temporary working files. If left blank, it will default to the location the operating system considers “home” when services or daemons are started. You can also specify to use an environment variable here by specifying the environment variable name, preceded by an ampersand. (See “Variable Path Substitution” on page 4.125.)</p> <p>For example, setting Temp Location to “&TMP” would read the TMP system environment variable and use that value.</p>
SMTP Server	<p>This is the hostname or TCP/IP address of your corporate mail server. AnyQueue will use this address (i.e., mail server) for Routes configured to send output via SMTP email. It also uses this server for sending email notifications.</p> <p>If Admin Report Notification is checked, then an SMTP server must be listed.</p>
Admin eMail Id	<p>This is the email address that AnyQueue notification events will be sent to.</p> <p>If Admin Report Notification is checked, then an Admin email id must be listed.</p>
Admin Report Notification	<p>Check this box to send an email to the admin stating that a report was generated, who generated it, and what time the report was generated.</p>
AnyQueue eMail Id	<p>This sets the email address to be used as the sender address for SMTP email and notifications from AnyQueue.</p>
Command Port	<p>This is the TCPIP Port Number that the Command utility uses to communicate with AnyQueue. The Command utility is a command line program used for sending control commands to the AnyQueue Engine.</p>
Command Password	<p>By specifying a password here, any commands that are sent to AnyQueue from the Command utility will require this password to be entered there.</p>
Minimum Password Length	<p>Specifies the minimum length of new passwords created on the Logon Page.</p>
Maximum Invalid Attempts	<p>Specifies the number of consecutive unsuccessful logon attempts before the user is locked out.</p>
Password Expiration Days	<p>Specifies the number of days before users’ passwords expire.</p>
Require Alpha and Numeric Passwords	<p>Select this box to require passwords to contain at least one number and one letter.</p>

FIELD	DESCRIPTION
Archive Log File on Startup	Check this box if you would like to have the AnyQueue Log File automatically archived during startup. Note: The log file will not be archived during a reload.
Archive Log File Days	Setting this value will cause the AnyQueue Log File to automatically be archived after the specified number of days. The day interval is based on continuous AnyQueue use. If AnyQueue is re-started or if the log file is manually archived, the day interval will be reset.
Temp File Name Prefix	Specify this value if you would like to have temporary files prefixed with a value other than "anyq".
Default Timeout (Seconds):	This specifies, in seconds, a default timeout value that will be assigned to any new routes having timeouts that are created in a WebTRAC configuration file. The Default Timeout can be assigned any value between 15 and 300, but should normally be less than one half of the Error Retry interval.
Checkpoint Restart Cleanup:	Setting this value will cause a checkpoint restart file to expire after the specified number of days. This cleanup will be performed when TRAC maintenance is performed. The default value for this field is 30 days. Note: This value must be greater than 0 and less than 1000.

List

AnyQueue/WebTRAC pages that display objects in a list will have each object numbered consecutively. The number for each object is used to change the position of the object in the list.

Why would you want to change the object's position? Well, Route Assignment objects are used to determine what route will be chosen for the final output. Route Assignment objects are searched in order until a match is found or the end of the objects is reached. You should always define the Route Assignment objects with the most specific selection criteria first.

To change the position of an object:

- Select the box next to the object you want to move. (When you select the box, a checkmark is placed in the box.)
- Specify, in the “**Move After**” field, the number of the object you want this object placed after.
- Select **Move**.

Notes: If you want to move the object to the top of the list, specify **0** for the **Move After** value.

You can select more than one object but only the first checked item will be moved.

- To return the list to the first page, select **Top**.
- To go to the last page in the list, select **Bottom**.
- To copy an object, select the box next to the object and select **Clone**.
- To create a new object, select **New**. For some objects you must also select the type to create.
- To delete an object, select the box next to the object, and select **Delete**.
- To edit an object, select the object's name (a hyperlink) and the definition will display.
- To export objects, check the boxes next to the ones you wish to export, and select **Export**.
- To import objects, select **Import** and a screen will display to select files that have been previously exported. If you specify a location in the “**Move After**” field, that is where the item will be imported to.
- For **Sequence Group List** objects, you can rename the object.
- For **Sequence Command List** objects, you can change the **Name** and **Value** of the object.
- When creating New objects, Cloning objects, or Importing Objects, you can specify the location for the new objects by setting the **Move After** field before selecting **New** or **Clone**.
- You can filter the Object lists by name by specifying the **Mask** in the **Name Mask** field and selecting **Refresh**. A* for instance would return all routes that begin with 'A'.

Configuration - Backend List

Backends are programs, .BAT files, or scripts that get executed after completion, whether successful or not, of the processing of a print file. They can not be programs that need to interact with the user.

From the Configuration Main Menu, select **Backend List**.

This page will show the name of the backend (user defined); the location and the program name for the backend; the working directory for the backend; parameters that will be passed to the backend; and if the backend is asynchronous.

- To copy an object, select the box next to it, and select **Clone**. If you specify a location in the **Move After** field, that is where the item will be cloned too.
- Select **Sort** to sort the items in alphabetical order.
- To export objects, check the boxes next to the objects to export, and select **Export**.
- To import objects, select **Import**. On the next page that appears select files that have been previously exported. If you specify a location in the **Move After** field, that is where the item will be imported too.
- To delete an object, select the radio button next to the object and select **Delete**.
- To create a new object, select the **New** button.
- To change an object, select the name of the object in the **Name** column. Each object's name is a hyperlink to its definition.
- To return the list to the first page, select **Top**.
- To go to the last page in the list, select **Bottom**.

Create a Backend

From the Configuration Menu, select **Backend List**.

- Select the **New** button.
- A new backend will appear at the bottom of the Backend List page. It will be named **New Backend**.
- Select the **New Backend** hyperlink.

Name Specify a name for the Backend. By default it will be named **New Backend** but you should change this to a name that would be more descriptive.

Program Name This is the name of the program, bat file, or script to execute. It is recommended to fully qualify the location.

Work Directory If a Work Directory is specified, AnyQueue will change to that directory before executing the backend, and then change back to its current directory.

Parameters

The Parameters section allows you to pass parameters to the program being executed. Enter them exactly as you would if you executed the program from a command prompt. A set (static) of parameters and values can be entered, or you can use the variable substitution feature of AnyQueue to dynamically pass certain parameter values to the program being executed. (See [“Variable Path Substitution” on page 4.125.](#))

The following parameters/attributes are available for use in the Backend **Parameters** field via variable substitution:

+ADDRESS1	+OPTCD
+ADDRESS2	+PAGEDEF
+ADDRESS3	+PDFAUTHOR
+ADDRESS4	+PDFFONTNAME
+ANYQ_CFGNAME	+PDFFONTSIZE
+ANYQ_PATH	+PDFIDXKYWDS
+ANYQ_RC	+PDFPGHEIGHT
+ANYQ_ROUTENAME	+PDFPGMARGIN
+ANYQ_WORKFILE	+PDFPGWIDTH
+BUILDING	+PDFSUBJECT
+CC	+PDFTITLE
+CHARS1	+PRMODE
+CHARS2	+PROCNAME
+CHARS3	+ROOM
+CHARS4	+SEPARATOR
+CLASS	+STEPNAME
+COMPTBL	+TIME
+COPIES	+TITLE
+COPYMODMOD	+TRC
+DATE	+UCSNAME
+DDNAME	+UDATA1
+DEPT	+UDATA2
+DEST	+UDATA3
+DSNAME	+UDATA4
+FCBNAME	+UDATA5
+FILETYPE	+UDATA6
+FLASHFORMO	+UDATA7
+FORM	+UDATA8
+FORMDEF	+UDATA9
+GROUPID	+UDATA10
+HOSTNAME	+UDATA11
+JNODENAME	+UDATA12
+JOBID	+UDATA13
+JOBID_L3	+UDATA14
+JOBNAME	+UDATA15
+NAME	+UDATA16
+ODESTNAME	+WRITER
+ONODENAME	+WTJOBID

Async If checked, AnyQueue launches the Backend and continues.
 If not checked, AnyQueue waits for the completion of the Backend before continuing.

Fail Job on Backend Failure This will cause the report to be in error status if the backend fails. **This is only valid for a synchronous backend.**

Examples:

PageCenter Plus Crusher:

/pf:INPUT.CRR /pl:C:\PCPLUS

This example uses static values for all parameters (/pf: is always "INPUT.CRR" and /pl: is always "C:\PCPLUS").

AnyQueue/PageSorter:

/c:C:\LRS\PAGESORT\LRSRPT123.CFG /f:+ANYQ_PATH /delete

This example uses a static value for the '/c:' parameter, but uses variable substitution in the '/f:' parameter to dynamically pass the filespec (drive/dir/filename) of the file just created by the route executing this instance of the backend.

Batch File:

+TIME +DATE +ANYQ_PATH +WRITER

This example passes four variables into the batch file dynamically (time, date, filespec of output from Route, and the value of the WRITER field received with this report). These parameters are used as %1, %2, %3, and %4 input parameters for the batch file.

Configuration - Carriage Control

Output sent to AnyQueue normally has carriage control in it. If the output is coming from a VPS (i.e., from the mainframe), it will normally have ASA (ANSI) or Machine carriage control. If the output is coming from the LPD host, it will almost certainly contain ASCII carriage control.

Output containing mainframe carriage control will be converted to equivalent ASCII printer carriage controls. Carriage Control objects in the AnyQueue configuration allow you to override how that carriage control processing occurs. This is useful for converting output to various file formats (such as Rich Text Format - RTF), as well as accommodating any special carriage control requirements for other systems that AnyQueue is sending output to.

The following table lists the carriage control functions that can be modified in AnyQueue Carriage Control objects:

Carriage Control Type/Function	Meaning	Data
Machine No Operation	Suppress Print - Don't advance the Line	x'03' in col. 1
Machine Space 1 Line Immediate	Suppress Print -Advance 1 Line	x'0B' in col. 1
Machine Space 2 Lines Immediate	Suppress Print - Advance 2 Lines	x'13' in col. 1
Machine Space 3 Lines Immediate	Suppress Print -Advance 3 Lines	x'1B' in col. 1
Machine Skip To Channel 1 Immediate	Suppress Print - Advance to Next Page	x'8B' in col. 1
Machine Write Without Spacing	Print Line - Return to front of current Line	x'01' in col. 1
Machine Write and Space 1 Line	Print Line - Advance 1 Line	x'09' in col. 1
Machine Write and Space 2 Lines	Print Line -Advance 2 Lines	x'11' in col. 1
Machine Write and Space 3 Lines	Print Line -Advance 3 Lines	x'19' in col. 1
Machine Write and Skip To Channel 1	Print Line - Advance to Next Page	x'89' in col. 1
Machine Process Leading Form Feed	Used if the first character of the Report is a form feed, the Remove First Form Feed Route flag is set, and the incoming Carriage Control is Machine.	x'0d' in col. 1
ANSI (ASA) Space 1 Line	Advance 1 Line, then Print.	col. 1 blank
ANSI (ASA) Space 2 Lines	Advance 2 Lines, then Print	"0" in col. 1

Carriage Control Type/Function	Meaning	Data
ANSI (ASA) Space 3 Lines	Advance 3 Lines, then Print	“-” in col. 1
ANSI (ASA) Suppress Space	Return to front of current Line, then Print	“+” in col. 1
ANSI (ASA) Skip to Line 1 On New Page	Advance to Next Page, then Print	“1” in col. 1
ANSI (ASA) Process Leading Form Feed	Used if the first character of the Report is a form feed, the Remove First Form Feed Route flag is set, and the incoming Carriage Control is ASA.	x‘0d’ in col. 1
Standard Format	Used if the Standard Format Route flag is set	x‘0d0a’ in col. 1 and 2
LPD Form Feed	ASCII Form Feed	x‘0c’ in col. 1
LPD Leading Form Feed	Used if the first character of the Report is a form feed, the Remove First Form Feed Route flag is set, and the data is coming from an LPD host.	x‘0c’ in col. 1
LPD Input Line Delimiter	Used to identify the incoming line delimiter	n/a
LPD Output Line Delimiter	Used to replace the line delimiter	x‘0d0a’ in col. 1 and 2
Minimum Page Size	Will replace the inbound Machine or ASA Form Feeds with blank lines, using this number as the page size	0
Maximum Page Size	Will insert a Machine or ASA Form Feed after this many lines have been encountered without one (If specified with Minimum Page Size, this field is ignored)	0

To use a customized Carriage Control object, select the desired Carriage Control object in the route you wish to use custom carriage control processing for. For example, you might set up a Carriage Control definition to convert printer carriage controls to equivalent Rich Text Format (RTF) commands, then use the RTF Carriage Control definition in a route configured to create RTF files.

Configuration - Host

Hosts are definitions for connections to VPS, LPR's, or AnyQueue File Hosts. From the drop-down box next to the **New** option, select the type of host for this object. The host type is defined during creation of the host object and can not be changed. The supported types are:

- **Tcpip**
- **Appc**
- **File**
- **LPD**

Select the **New** option and the new object will be added to the bottom of the list. Use the **Next** option to go to the next page in the list if necessary.

Select the hyperlink for the new object in the **Name** column and the Host page will display.

- To copy an object, select the box next to it, and select **Clone**. If you specify a location in the **Move After** field, that is where the item will be cloned too.
- Select **Sort** to sort the items in alphabetical order.
- To export objects, check the boxes next to the ones you want to export, and select **Export**.
- To import objects, select **Import**. On the next page that appears select files that have been previously exported. If you specify a location in the **Move After** field, that is where the item will be imported too.
- To delete an object, select the button next to the object and select **Delete**.

FIELD	DESCRIPTION
Name	This is the name of the Host object.
Host Type	<p>This is the type of Host. It is set during creation of the Host object and can not be changed. The supported types are:</p> <p>APPC - This type is for connecting to VPS via APPC. The Transaction Name needs to be defined as follows. If on VPS in your printer definition, the PRTOPTS flag 00000400 is set, then this must be the LU Name. Otherwise, it should be VPSLAN60. The Mode Name must match what VPS is using.</p> <p>TCPIP - This type is for connecting to VPS via TCP/IP. The Port ID Number must match the TCPRPORT option in your corresponding VPS printer definition.</p> <p>File - This type is for connecting to an AnyQueue File Host. The Job Location is the location where the AnyQueue file format .VPR files will be put. The Wait Delay is used to specify a delay time between attempts to locate more files once the entire directory has been processed. The Error Delay is used to specify how often files that have been flagged as undeliverable will be re-tried.</p> <p>LPD - This type is for receiving data via an LPR. When the LPR is issued, the printer name specified will be matched up with a Route Assignment. The Port ID Number must match that of the LPR, which is usually 515. You can also specify what variables to map the incoming Class and Jobname to.</p>
Max Data	This specifies the work buffer size that AnyQueue will use. It must be in a range of 4096-32512. It also must be as large as your largest record you will be receiving.
Start Paused	If checked, when AnyQueue loads, this host will be in a paused state.
Honor PRQ	If checked, when AnyQueue encounters a PRQ record with a valid Queue name in it, it will select that Route Assignment directly. PRQ records are records generated when one AnyQueue is communicating with another AnyQueue, and a Queue name has been specified after the TCPIP Address or name of the Target AnyQueue.
128 Bit Key	This key must be entered in a hexadecimal format. If the host communicating to AnyQueue through this definition passes any encrypted data using a 128 Bit Key, it must match this 16 byte key value.
192 Bit Key	This key must be entered in a hexadecimal format. If the host communicating to AnyQueue through this definition passes any encrypted data using a 192 bit key, it must match this 24 byte key value.
256 Bit Key	This key must be entered in a hexadecimal format. If the host communicating to AnyQueue through this definition passes any encrypted data using a 256 bit key, it must match this 32 byte key value.

FIELD	DESCRIPTION
Job Location (File Hosts Only)	This can be a Local or Network file. For a Network location, once a valid logon has occurred, you will have access to it. Also, for Network locations, you can use a UNC name (form of \\server\alias) for the connections. For Local connections, a fully qualified name is recommended.
Wait Delay (sec) (File Hosts Only)	This value is specified in Seconds. It is used to specify a delay time between attempts to locate more files once the entire directory has been processed. It must be a value of 1 or greater.
Error Delay (cycle) (File Hosts Only)	This value is specified in units of "Wait Delays". It is used to specify how often files that have been flagged as errors will be retried. It must be a value of 1 or greater. For example, if the Error Delay is 5 units and the Wait Delay is 5 seconds, the total delay between retries would be 25 seconds.
Port ID Number (LPD and TCPIP Hosts Only)	This is the TCPIP port number that the inbound connections need to send too. 515 is the default for an LPD host.
Assign Class to (LPD Hosts Only)	This allows you to map the incoming Class that can be specified on the LPR to an AnyQueue variable.
Assign Jobname to (LPD Hosts Only)	This allows you to map the incoming Jobname that can be specified on the LPR to an AnyQueue variable.
Transaction Name (APPC Hosts Only)	This must be defined in your communications package under TP Name.
Mode Name (APPC Hosts Only)	This is the Mode that will be used for LU 6.2 communications. It must be defined on the AnyQueue Engine machine and the partner machine.

Configuration - Logon

Logon objects are used to define the logon credentials needed to access routes that will be defined for AnyQueue. (Logon objects are not applicable when running the Unix version of AnyQueue.)

For instance, AnyQueue may be sending files to a Windows domain; a logon object must be created that will provide the user name and password to access that domain.

Running AnyQueue as a Service When running as a Service it is recommended that you run the service as a logged on user, and do not define Windows logon objects.

Requirements to run AnyQueue as a Windows service In order to function properly in a Windows environment, AnyQueue must be logged on as a user account with certain rights. Your network administrator can set up a user account for AnyQueue with the following rights:

- **Act as part of the operating system**
- **Log on as a service**
- **Full Control** of any Windows directory or print queue accessed by AnyQueue.

To specify the Windows 2000 or Windows NT user ID for AnyQueue:

1. For Windows NT -
 - Go to **Control Panel/Services**.For Windows 2000 -
 - Go to **Control Panel/Administrative Tools/Services**.
2. Highlight the **AnyQueue - ANYQ** service.
3. For Windows NT -
 - Select **'Startup'**.For Windows 2000 -
 - Select **'Properties'**.
4. Under **'Log On As:'**, select **'This Account'**.
5. Enter the AnyQueue user ID and password that the network administrator has created for AnyQueue.
6. **DO NOT** select **'System Account'** or **'Allow Service to Interact with Desktop'**.

How do I create a Logon object?

1. Select **Logon List** on the Configuration page.
2. Select the type of logon from the drop down window.
3. Select **New**
4. A 'New' logon will be created. Select that link to make modifications.

**What is the
Default logon
type for?**

The Default logon type is used for specifying the common User Name and Password that will be used to access routes defined within AnyQueue.

For instance, you could define a Windows logon object and within that definition if you do not specify the user name and password, AnyQueue will look in the Default object to resolve the User Name and Password.

You can override the Default object's User Name and Password by entering different values in the new logon object.

FIELD	DESCRIPTION
Name	This is the name of the logon object.
Logon Type	<p>This is the type of logon. It is set during creation of the logon object and can not be changed. The supported types are:</p> <p>Default - This type is for defining your common user name, and password. In any of the other definitions, if these fields are missing, AnyQueue will look in the Default to resolve.</p> <p>Mapi Mail - The MAPI Logon is for communication with a MAPI mail system. The User Name and Password pertain to a profile, not the actual mail logon. If AnyQueue is running as a Windows service, you need to run it as a logged on user and the user ID and password in the profile must match this definition. If AnyQueue is running as a program, the user ID and password in the profile must match what you logged on to the box with.</p> <p>Novell Bindery - Connection to a Novell Bindery Server.</p> <p>Novell NDS - Connection to a Novell NDS Tree.</p> <p>Windows - Connection to a Windows Domain.</p> <p>Banyan - Connection to a Banyan Server.</p> <p>SAP - Connection to SAP.</p>
User Name	This is the user name or user ID for the logon.
Password	This is the password. It is hidden.
Domain (Windows Only)	The domain to logon to.
Server Name (Bindery and Banyan Only)	The server name to logon to.
Tree (NDS Only)	The NDS tree to logon to.
Context (NDS Only)	This is the context to the location of the user name.

Sequence Group List

Description Sequence Groups define groups of sequence commands. For instance, if you had an HP LaserJet 4 SI printer you might create a Sequence Group called HP4SI. Then you might create several sequence commands - one for portrait, one for landscape, etc.

Each Sequence Group can have as many sequence commands defined as desired. The commands are named by you and then selected by that name as a StartSequence and/or EndSequence in the route objects when the Sequence Group is specified in a route object.

This name could be changed by typing another name in the **New Name** field and then selecting the **RENAME** option.

To open the Sequence Group, select the name of the Sequence Group which is a hyperlink to its definition. For instance, in the example below you could select the hyperlink [HP4SI](#). The Sequence Command List page illustrated in [Figure 4-1 on page 4.93](#) will display.

- To copy an object, select the box next to it, and select **Clone**. If you specify a location in the **Move After** field, that is where the item will be cloned too.
- Select **Sort** to sort the items in alphabetical order.
- To export objects, check the boxes next to the objects to export, and select **Export**.
- To import objects, select **Import**. On the next page that appears select files that have been previously exported. If you specify a location in the **Move After** field, that is where the item will be imported too.
- To delete an object, select the radio button next to the object and select **Delete**.

AnyQueue/WebTRAC® Logoff | Help

Configuration Menu

Refresh | Top | Prev | Next | Bottom | Select All
Clone | Sort | Sequence Group List Delete

New Scroll Amount:

Name Mask: Move After

Sequence Command List

		Name	Value	
1)	<input checked="" type="checkbox"/>	<input type="text" value="Portrait"/>	<input type="text" value="{ESC}&I00"/>	UPDATE
2)	<input type="checkbox"/>	<input type="text" value="Landscape"/>	<input type="text" value="{ESC}&I10"/>	UPDATE
3)	<input type="checkbox"/>	<input type="text" value="Simplex"/>	<input type="text" value="{ESC}&I0S"/>	UPDATE
4)	<input type="checkbox"/>	<input type="text" value="Duplex_Long_Side"/>	<input type="text" value="{ESC}&I1S"/>	UPDATE
5)	<input type="checkbox"/>	<input type="text" value="Duplex_Short_Side"/>	<input type="text" value="{ESC}&I2S"/>	UPDATE

End of List

Figure 4-1: Sequence Command List page

FIELDS	DESCRIPTION
Name	This is the name you will give to the command that will be specified in the Value box. If this command name is found in a StartSequence or EndSequence field in a route object, the command in the Value box will be extracted and sent in the data stream of the job being processed.
Value	This is the value that will be used when the command name is specified in a StartSequence or EndSequence statement in a route object.
UPDATE	After making changes to the Name or Value fields, select the UPDATE option.

Using Sequence Groups in a route object

Figure 4-2 shows a route definition with some HP4SI sequence commands added to the beginning and end of the files sent to this route.

In Figure 4-2, the Start Sequence specified is **Start Landscape**. This indicates that there are actually two commands specified – **Start** and **Landscape**.

The **Start** command is specified as a reset ({ESC}E) command within the HP4SI Sequence Group. This reset command will be added to the beginning of each file sent to this route.

The **Landscape** command specifies the escape sequences to add after the Start (reset) command at the beginning of each file.

The End Sequence is specified as **End**. This will add another reset ({ESC}E) command at the end of each file sent to this route.

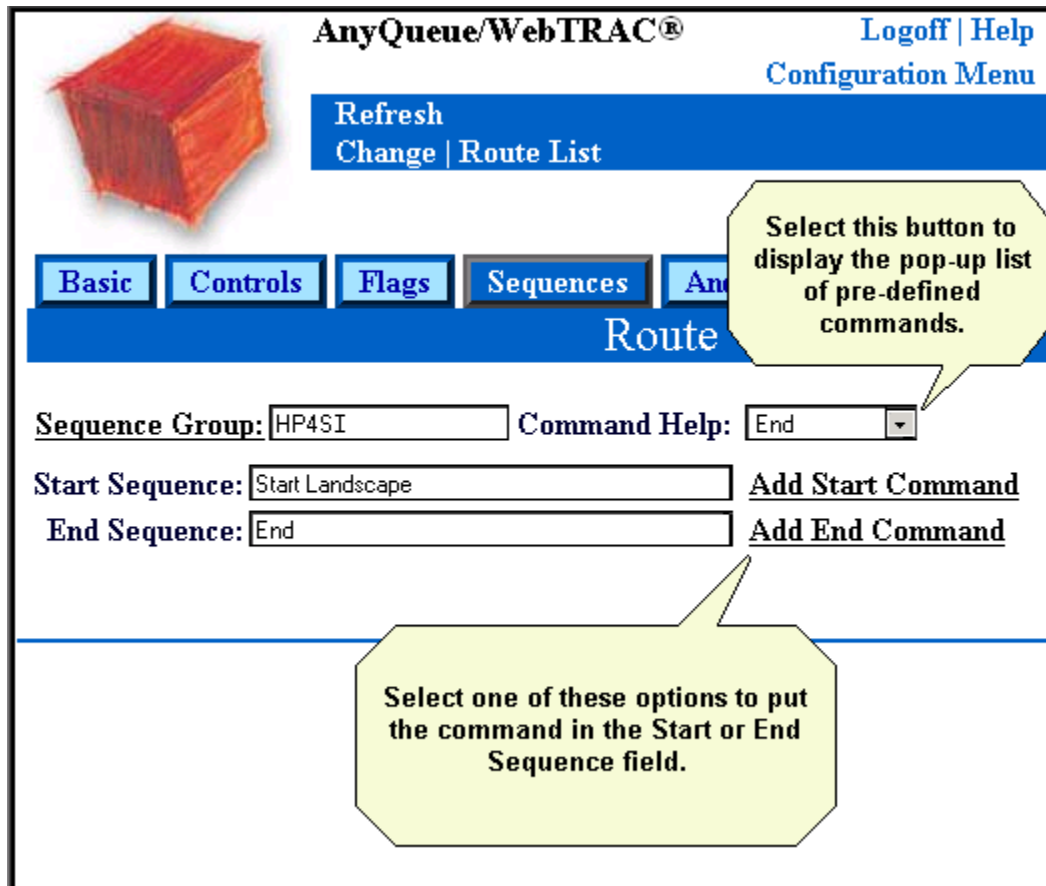


Figure 4-2: Using Sequence Commands

**Sample
Sequence
Commands**

In the specification of sequence commands, many printers use escape sequences and non-printable codes in their mode settings. A special coding technique is provided to permit the non-printable codes to be used in the escape sequence specifications. The escape codes and other non-printable codes can be indicated in a sequence command with a keyword character sequence enclosed in curly braces. The acceptable sequences are as follows.

Code	Decimal Value
{NUL}	0
{BEL}	7
{BS}	8
{TAB}	9
{HT}	9
{LF}	10
{VT}	11
{FF}	12
{CR}	13
{SO}	14
{SI}	15
{DC1}	17
{DC2}	18
{DC3}	19
{DC4}	20
{ESC}	27
{SP}	32

Figure 4-3: Sequence Command Table

The upper case shown is not required. Also, to accommodate numeric values, if the first character after the opening brace is a digit, the numeric value within the braces will be converted to binary and placed into the sequence command. For example, the sequence {50} will convert the data between braces to a binary value (hex 32) and place it into a single byte in the command sequence.

**IBM4019
Printer
Commands**

Landscape= {ESC}l
 Portrait= {ESC}k
 Small= {SI}
 Medium= {ESC}:
 Large= {DC2}
 6Lines= {ESC}A{11}{ESC}2
 8Lines= {ESC}A{8}{ESC}2
 LMargins= {ESC}X{3}{135}
 PMargins= {ESC}X{1}{80}
 FormFeed= {FF}

**HP4SI
Printer
Commands**

Start= {ESC}E
 Landscape= {ESC}&11o2e5.9C{ESC}(10U{ESC})(s0p8.5v0T
 Portrait= {ESC}&10o3e7.9C{ESC}(10U{ESC})(s0p12v3T
 Simplex= {ESC}&10S
 Leduplex= {ESC}&11S
 Seduplex= {ESC}&12S
 End= {ESC}E

**Format
DBOK
(Duplex)**

- 84 columns by 60 lines per page
- Placed on page so paper may be 3-hole punched on left side
- Font is Prestige Elite

Note: The escape sequences below are equivalent to the writer named DBOK. The command word length is limited to 40 characters. The actual command is limited to 80 characters.

START= {ESC}E
 LAND1= {ESC}&11S{ESC}&1180U{ESC}&15H{ESC}&10O{ESC}(8U
 LAND2= {ESC}(s0P{ESC})(s12H{ESC})(s10V{ESC})(s0S{ESC})(s0B
 LAND3= {ESC}(s8T{ESC}&16D{ESC}&13E{ESC}&160F
 LAND4= {ESC}&11L{ESC}&a6L{ESC}&a90M{ESC}&s0C{ESC}&a0R
 END= {ESC}E

**Format
DLET
(Duplex)**

- 72 columns by 54 lines per page
- Font is Prestige Elite
- Output is duplexed without offset

Note: The escape sequences below are equivalent to the writer named DLET. The command word length is limited to 40 characters. The actual command is limited to 80 characters.

START= {ESC}E
 LAND1= {ESC}&11S{ESC}&14H{ESC}&10O{ESC}(8U{ESC})(s0P
 LAND2= {ESC}(s12H{ESC})(s10V{ESC})(s0S{ESC})(s0B{ESC})(s8T
 LAND3= {ESC}&16D{ESC}&16E{ESC}&154F{ESC}&11L{ESC}&a12L
 LAND4= {ESC}&a84M{ESC}&s0C{ESC}&a0R
 END= {ESC}E

**Format
DSTD
(Duplex)**

- 132 columns by 66 lines per page
- Placed on page so paper may be 3-hole punched
- Offsetting is used because of the duplexing

Note: The escape sequences below are equivalent to the writer named DSTD. The command word length is limited to 40 characters. The actual command is limited to 80 characters.

START= {ESC}E
LAND1= {ESC}&11S{ESC}&1+235U{ESC}&15H{ESC}&11O{ESC}(8U
LAND2= {ESC}(s0P{ESC}(s15H{ESC}(s8.5V{ESC}(s0S{ESC}(s0B
LAND3= {ESC}(s0T{ESC}&15.2727C{ESC}&k8H{ESC}&15E
LAND4= {ESC}&a14L{ESC}&11L{ESC}&s0C{ESC}&a0R
END= {ESC}E

**Format
S132X100
(Simplex)**

- 132 columns by 100 lines per page in Portrait

Note: The escape sequences below are equivalent to the writer named S132X100. The command word length is limited to 40 characters. The actual command is limited to 80 characters.

START= {ESC}E
LAND1= {ESC}&10S{ESC}&15H{ESC}&100{ESC}(8U{ESC}(s0P
LAND2= {ESC}(s16.66H{ESC}(s7V{ESC}(s0S{ESC}(s0B{ESC}(s8T
LAND3= {ESC}&14.6516C{ESC}&l6E{ESC}&1100F{ESC}&11L
LAND4= {ESC}&a1L{ESC}&a136M{ESC}&s0C{ESC}&a0R
END= {ESC}E

**Format
D132X100
(Duplex)**

- 132 columns by 100 lines per page in Portrait

Note: The escape sequences below are equivalent to the writer named D132X100. The command word length is limited to 40 characters. The actual command is limited to 80 characters.

START= {ESC}E
LAND1= {ESC}&11S{ESC}&15H{ESC}&100{ESC}(8U{ESC}(s0P
LAND2= {ESC}(s16.66H{ESC}(s7V{ESC}(s0S{ESC}(s0B{ESC}(s8T
LAND3= {ESC}&14.6516C{ESC}&l6E{ESC}&1100F{ESC}&11L
LAND4= {ESC}&a1L{ESC}&a136M{ESC}&s0C{ESC}&a0R
END= {ESC}E

**Format SBOK
(Simplex)**

- 84 columns by 60 lines per page
- Font is Prestige Elite

Note: The escape sequences below are equivalent to the writer named SBOK. The command word length is limited to 40 characters. The actual command is limited to 80 characters.

START= {ESC}E
LAND1= {ESC}&10S{ESC}&15H{ESC}&10O{ESC}(8U{ESC})(s0P
LAND2= {ESC}(s12H{ESC})(s10V{ESC})(s0S{ESC})(s0B{ESC})(s8T
LAND3= {ESC}&16D{ESC}&13E{ESC}&160F{ESC}&11L{ESC}&a6L
LAND4= {ESC}&a90M{ESC}&s0C{ESC}&a0R
END= {ESC}E

**Format SLET
(Simplex)**

- 72 columns by 54 lines
- Font is Prestige Elite

Note: The escape sequences below are equivalent to the writer named SLET. The command word length is limited to 40 characters. The actual command is limited to 80 characters.

START= {ESC}E
LAND1= {ESC}&10S{ESC}&14H{ESC}&10O{ESC}(8U{ESC})(s0P
LAND2= {ESC}(s12H{ESC})(s10V{ESC})(s0S{ESC})(s0B{ESC})(s8T
LAND3= {ESC}&16D{ESC}&16E{ESC}&154F{ESC}&11L{ESC}&a12L
LAND4= {ESC}&a84M{ESC}&s0C{ESC}&a0R
END= {ESC}E

**Format SSTD
(Simplex)**

- 132 columns by 66 lines per page
- Placed on page so paper may be 3-hole punched

Note: The escape sequences below are equivalent to the writer named SSTD. The command word length is limited to 40 characters. The actual command is limited to 80 characters.

START= {ESC}E
LAND1= {ESC}&10S{ESC}&15H{ESC}&11O{ESC}(8U{ESC})(s0P
LAND2= {ESC}(s15H{ESC})(s8.5V{ESC})(s0S{ESC})(s0B{ESC})(s0T
LAND3= {ESC}&15.2727C{ESC}&k8H{ESC}&17E{ESC}&a14L
LAND4= {ESC}&11L{ESC}&s0C{ESC}&a0R
END= {ESC}E

Configuration - Translation Table

Translation tables are used to convert from one character set to another. There are two default character sets:

- **EBCDIC To ASCII** - Converts from EBCDIC to ASCII.
- **ASCII To EBCDIC** - Converts from ASCII to EBCDIC.

Note: Some data received by AnyQueue indicates whether it is ASCII or EBCDIC. When AnyQueue knows what type it is, it will ignore translation when it already matches the desired table.

In the example dialog below a new translation table was created and it was named **Remove Null**. The **Type** indicates that this is an **EBCDIC To ASCII** translation table.

Select a Translation Table

Select the hyperlink for the table name in the **Name** column.

Delete a Translation Table

Select the box next to the table name. A check mark will be placed in the box. Select the **Delete** option in the upper right-hand corner of the page.

Create a New Translation Table

Select, from the drop down box next to the **New** option at the top of the **Translation Table List** page, the type of table that will be created. After the type has been selected, select the **New** option. The new table will be added to the end of the list.

Select the hyperlink for the new table. The new table will be named either:

New ASCII To EBCDIC Translation Table

or

New EBCDIC To ASCII Translation Table

The table name can be changed on the **Translation Table** page.

EBCDIC To ASCII Translation Table

The name of the table can be changed by typing a new name in the **Name** field.

The grid rows and columns represent the incoming EBCDIC field, and the value in the cell is the outgoing translated field. Blue cells represent the default values; green cells represent a change to the default value.

- Select the **Change** option to save any changes made to the table.

ASCII To EBCDIC Translation Table

The name of the table can be changed by typing a new name in the **Name** field.

The grid rows and columns represent the incoming ASCII field, and the value in the cell is the outgoing translated field. Blue cells represent the default values; green cells represent a change to the default value.

- Select the **Change** option to save any changes made to the table.

Configuration - Route List

Routes are definitions that are used to define where the print file should be sent, and what actions to perform on the print file.

The **Route List** page displays all routes defined in the current AnyQueue configuration.

Use the **Prev** and **Next** options to go to the next page in the Route List if **More** is displayed at the bottom of the page.

The Route List page will number each route consecutively. The **Name**, **Attach**, and **Destination** information for each route will be shown on this page.

- Scroll forward and backward through the list using **Prev** and **Next**. The **Scroll Amount** box allows you set how many Routes forward or back the **Next** and **Prev** commands will go when selected. By default, the Route List will be advanced (or backed) one full page. The number of Routes displayed on one full page is determined by the value entered for “List Line Count” in your user Preferences.
- To select a Route, select the hyperlink for the route name in the **Name** column.
- To delete a Route, select the box next to the route name. A check mark will be placed in the box. Select the **Delete** option in the upper right-hand corner of the page.
- To copy an object, select the box next to it, and select **Clone**. If you specify a location in the **Move After** field, that is where the item will be cloned too.
- Select **Sort** to sort the items in alphabetical order.
- To export objects, check the boxes next to the objects to export, and select **Export**.
- To import objects, select **Import**. On the next page that appears select files that have been previously exported. If you specify a location in the **Move After** field, that is where the item will be imported too.
- To create a new object, select the **New** button.

Create a New Route

- Select the type of output that will be produced by this route using the drop down box next to the **New** option at the top of the **Route List** page.
- The attach type is assigned to the route when the route is created and the type cannot be changed.
- After the type has been selected, select the **New** option. The new route will be added to the end of the list. Use the **Next** option to move to the next page of routes if necessary.
- Select the hyperlink for the new route. In the example page below, **22** is the new route. Select the hyperlink (New Novell Bindery File Route) to display the **Route** page.

Route - New / Convert

Routes can be converted from one Attach type to another by selecting the new type from the New/Convert list, checking the Route(s) you want to convert, and then selecting **Convert**. This is seldom required, and will result in discarding any Route specific information that does not apply to the new attach type.

Route

The Route page consists of six tabs that are used to define certain aspects of each route:

- **Basic**
- **Controls**
- **Flags**
- **Sequences**
- **AnyQueue/Secure**
- **JIF Buffer (Tcpip Printer Routes only)**

The fields on each tab may vary depending on the **Attach** type for the route. Continue to the next pages for information on each tab and the fields associated with each tab.

Route - Basic tab

FIELD	DESCRIPTION
Name	Type the name that will be given to this route.
Attach	<p>The attach types are:</p> <p style="text-align: center;">Examples:</p> <p>Local File - C:\DATA\REPORT.DAT</p> <p>Local Queue - LPT1</p> <p>Banyan File - \\SERVER\VOL\REPORT.DAT</p> <p>Banyan Queue - \\SERVER\QNAME</p> <p>Novell Bindery File - \\SERVER\SYS\DATA\REPORT.DAT</p> <p>Novell Bindery Queue - \\SERVER\QNAME</p> <p>Novell NDS File - \\SERVER\SYS\DATA\REPORT.DAT</p> <p>Novell NDS Queue - \\TREE\CN=PRINTER.OU=ACCT.O=COMPANY</p> <p>Windows File - \\SERVER\ALIAS\REPORT.DAT</p> <p>Windows Queue - \\SERVER\QNAME</p> <p>MAPI Mail - John Smith</p> <p>MAPI Mail Attachment - John Smith</p> <p>DRS File - (200.99.9.5:2000)QName - Syntax: (Server address:Port)DRS Member - This is an EBCDIC target.</p> <p>DRS Queue - (200.99.9.5:2000)QName - Syntax: (Server address:Port)DRS Member - This is an EBCDIC target.</p> <p>AnyQueue - (200.99.9.5:2000)QName - Syntax: (Server address:Port)[AnyQueue Route Assignment] - Note: The QName is optional. If specified, AnyQueue will send a PRQ record specifying this name in it, along with the data. If the specified target AnyQueue host definition has "Honor PRQ" turned on, then the Route Assignment matching will be bypassed, and a Route Assignment with the same name as the PRQName will be selected. (Note: PRQ records are records generated when one AnyQueue is communicating with another AnyQueue, and a queue name has been specified after the TCPIP address or name of the target AnyQueue.) - This is an ASCII target.</p>

FIELD	DESCRIPTION
Attach	<p>Tcpip Printer - (200.99.9.5:9100)QName</p> <ul style="list-style-type: none"> - Syntax: (Server address:Port)print queue name - Note: Not all printers require 9100 as the port. Refer to your printer documentation for the corresponding port number to specify. <p>LPR</p> <ul style="list-style-type: none"> - (200.99.9.5:515)QName - Syntax: (Server address:Port)print queue name - Note: Placing an 'S' before the Port will force AnyQueue to send from a Standard Port. - Placing a 'T' before the Port will force AnyQueue to set the LPR 'f' flag (text data) instead of the 'l' flag (binary). <p>SMTP Mail - johnsmith@somecompany.com</p> <p>SMTP Mail Attachment - johnsmith@somecompany.com</p> <p>Emtex - (200.99.9.5:5000) Syntax: (Server Address:Port)</p> <p>FTP - (200.99.9.5) /dir/filename Syntax: (Server Address) Fully qualified file name.</p>
Destination	Specify the physical location where the output should be placed. For Print Queue Attach types, this is the UNC name for the server queue; for File Routes, this will be the filespec, for email Routes (either MAPI or SMTP) this will be the email address to send to. Variable Substitution can be used in the Destination. (See " Variable Path Substitution " on page 4.125.)
Error Retry Limit	If specified, AnyQueue will Error Pause the route after this many failed delivery attempts. The counter is NOT incremented if a job fails due to a Backend failure or if the failed delivery is attempted via a Standard route assignment. The Error Retry count associated with the route is reset each time a job is successfully delivered to the destination or whenever AnyQueue is restarted. If AnyQueue Error Pauses a route due to the Error Retry limit threshold, an email notification will be sent to the Admin eMail ID specified on the General page and a message will be written to the system log. Once Error Paused, the route will remain paused until the route is Resumed from the Route page or AnyQueue is restarted.
User Name (FTP Only)	Specify the name of the user attaching to the FTP Server specified in the Destination field.
Password (FTP Only)	Specify the password for the user specified in the User Name field.

Site Commands (FTP Only)	Use this field to specify any FTP site specific commands you wish to have sent to the receiving FTP Server prior to the report data being sent. Site commands provide a method to pass platform specific commands to the FTP Server. Multiple commands can be submitted but each parameter=value command must be separated by a semicolon. DO NOT specify the SITE keyword in the Site Command list. Check your FTP Server for a list of supported SITE commands. For example, the following is a sample Site Command string that would be processed by AnyQueue: RECFM=FB;LRECL=80;BLKSIZE=3120
CC (Mail only)	Specifies the address to send a carbon copy email to.
BCC (Mail only)	Specifies the address to send a blind carbon copy email to.
User	Select User to specify the user that will be able to select this route during a cloning process. (AnyQueue/WebTRAC feature.)
Comment (Queues Only)	Allows you to specify a Job Comment. If left blank, the default Job Comment will be used.
Form Override (Novell and Banyan Queues)	Overrides the Form for a print file.
Subject (Mail)	Allows you to specify a Subject Line on an email. Variables may be used for building this name. If left blank a default will be used.
Notify (SMTP)	If your SMTP Mail Server supports SMTP Notification, and you have specified an AnyQueue eMail ID in the General Information section, you can request that Success and Failure notifications be sent to the AnyQueue eMail ID.
Attachment (Mail Attachment only)	Allows you to specify the name of your Mail Attachment. Variables may be used for building this name. If left blank a default will be used.
Class (LPR printers)	Specify a value for the LPR Class. It can be up to 31 characters long, and variables may be used for building this name.
WebTRAC Job Name (LPR printers)	Specify a value for the LPR Jobname. It can be up to 99 characters long, and variables may be used for building this name.
Timeout (Emtex, LPR, and TCP/IP printers)	If you specify a Timeout value and the LPR does not respond in that many seconds, the connection will be terminated.
Disconnect Wait Time (LPR and TCPIP printers)	Disconnect Wait Time specifies the time in seconds that AnyQueue should wait after a TCPIP Printer or LPR connection has been terminated before attempting to reconnect to deliver another job. The wait time will only be applied to TCPIP printers or LPR routes that have been serialized.

FIELD	DESCRIPTION
Backend	If a Backend is selected, it will be executed after job processing is complete, regardless if it is successful or not. Click on the Backend link and select a previously defined Backend.
Carriage Control	If a Carriage Control is selected, it will be used to process Carriage Control instead of the internal default values. Click on the Carriage Control link and select a previously defined Carriage Control.
Translation	If a Translation Table is selected and if the “Translate” route flag is also selected, it will be used to convert the inbound data from EBCDIC to ASCII instead of the internal default table. Click on the Translation link and select a previously defined Translation Table
Error Route	If the route’s Final Destination is unable to be opened, and this is being driven from a Standard Route Assignment, then the output will be redirected to the Error Route if specified. If none is specified here, the Standard Route Assignments Error Route will be selected if it exists. Click on the Error Route link and select a previously defined Error Route.
Header (Emtex Only)	Emtex/VIP expects header information. This is where you specify that information. AnyQueue variables can be used.
Backup Copy (AnyQueue Only)	Check this if you want to make a backup copy of a job in another AnyQueue system. When it is received at the other system certain attributes will be modified. The “Initial Send” and “Initial Pause” flags for the job will be forced off, as well as the Mail Notification flags “Arrival” and “Delete”. These changes are to prevent receiving unwanted messages about the “backup copy” of the job. Also, any WebTRAC job definition that would create another “backup copy” will be skipped.
EBCDIC Based Server (FTP Only)	Check this if the FTP Server specified is running on an EBCDIC based system.
Log FTP Server Responses (FTP Only)	Check this if you would like to have the Responses returned from the FTP Server during delivery included in the AnyQueue log.
User/Group	Select a User or Group to specify the user or group that will be able to select this route during a cloning process. (AnyQueue/WebTRAC feature.) Click on the User/Group link and select a previously defined User/Group.
Variables	Attach types DRS File, DRS Queue, and AnyQueue can specify Variables. By default, any inbound variables will be copied over to the outbound variables to start with. Then you can override any variables you need to. Note: There are many new variables that are outbound only and are required for DRS File and DRS Queue. See page 4.132 section for details.

FIELD	DESCRIPTION
Control Data (LPR only)	<p>These LPR Extensions allow 'User Defined' data to be sent in the LPR control file.</p> <p>There are two fields, a Parm field and a Value field. The two fields will be combined and terminated with a line feed when passed in the control file. Variables can be specified for either field. If the Value field is blank, then neither field will be sent. If only the Parm field is blank, the Value field will be sent without the Parm field.</p>
Route Pool	<p>If this route is part of a Route Pool, then the pool name will be listed. If none is specified here, the Route is not currently part of a Route Pool. You can add this route to a Route Pool by selecting the Route Pool link and selecting the Route Pool from the Route Pool list.</p>
Site Commands (FTP only)	<p>Site commands supported by the receiving FTP Server can be entered into this field. Multiple commands are allowed as long as each command is separated by a semicolon. The commands will be sent in the order entered, and prior to the transmission of the actual data.</p>
Log FTP Server Responses (FTP only)	<p>Select this flag if you would like for AnyQueue to log the responses received from the FTP Server during the delivery of a job.</p>

Route - Controls tab

FIELDS	DESCRIPTION
Line Limit	This entry specifies the maximum number of lines, in a single report, that are to be placed into the queue or into a file.
Line Action	Specifies what action AnyQueue should take if the value specified for Line Limit is exceeded. None Do nothing. Delay Delay the output. Delete Delete the output. Hold Place the job on Hold in the LAN output queue. ReRoute Instead of sending the job to this route, send it to the route specified in the ReRoute field.
Page Limit	This entry specifies the maximum number of pages, in a single report, that are to be placed into the queue or into a file.
Page Action	Specifies what action AnyQueue should take if the value specified for Page Limit is exceeded. None Do nothing. Delay Delay the output. Delete Delete the output. Hold Place the job on Hold in the LAN output queue. ReRoute Instead of sending the job to this route, send it to the route specified in the ReRoute field.

Route - Flags tab

These flags define additional actions that should be performed on the output created.

Refer to [page 4.113](#) and [page 4.114](#) for information regarding flags that are appropriate for each Attach type.

FIELDS	DESCRIPTION
Route Flags	<p>Append To File – Don't delete the target file; append to the end of it. This flag only applies to files, and is ignored if the destination file is +TEMP, or the Create ANYQ File flag is set.</p> <p>Create Info Files – When the output specified is a file, this will create an information file in the same folder as the Destination. It will list the host information on the job such as WebTRAC Job Name, Class, Destination, Form, Writer, etc. It will also list the original configuration file information such as Attach, Destination, Printer etc. Information files are useful to determine where the job was originally destined if the job has been routed to an Error Route. This flag only applies to files.</p> <p>Discard DRS Separators – When sending output from DRS/PC to the DRS Virtual Printer Interface on MVS, a banner or separator can be added by DRS/VPI which identifies the LAN originator of the document when it is printed on a host printer. Some customers are using DRS/PC to send print output to MVS and then using VPS and AnyQueue to route that output to another LAN. The DRS separator may be unnecessary when the report is received by AnyQueue, and it can be removed or preserved by setting this flag. This flag does not apply to the DRS File, DRS Queue, or AnyQueue destinations.</p> <p>Remove 1st Form Feed – Specifies to AnyQueue that the first form feed at the beginning of the dataset is to be removed. Removal of the first form feed remains the default. The default now may be modified in a user-defined carriage control object. This flag does not apply to the DRS File, DRS Queue, or AnyQueue destination.</p> <p>Translate – EBCDIC to ASCII translation should be performed. (Some data streams will override this.) Also, if the inbound line data character set is known to be the same as the desired out line data, it will be ignored.</p> <p>Ignore CC – The incoming JES carriage control byte will be ignored. This flag does not apply to the DRS File, DRS Queue, or AnyQueue destinations.</p> <p>Keep CC – Keep the incoming JES carriage control byte and store it with the data at its final destination. This flag does not apply to the DRS File, DRS Queue, or AnyQueue destinations.</p> <p>Standard Format – CRLF (carriage return and line feed) will be added to each data line received. This flag is only valid if the Ignore CC flag is set. If host transparency is used, it will be ignored. The addition of CRLF remains the default. The default now may be modified in a user-defined carriage control object. This flag does not apply to the DRS File, DRS Queue, or AnyQueue destinations.</p> <p>Banner Page – If the file is going to a Novell or Banyan queue, a banner page should be printed. No other destinations support this flag.</p>

FIELDS	DESCRIPTION
Route Flags (continued)	<p>Suppress Form Feed – If the file is going to a Novell queue, the dataset will control its own page ejects instead of Novell. No other destinations support this flag.</p> <p>Remove Single Space – Specifies that a single space before a carriage return, line feed in each data line should be removed. This flag does not apply to the DRS File, DRS Queue, or AnyQueue destinations.</p> <p>Create ANYQ File – This will put the file in a format that can be read by an AnyQueue host. It should have the extension of .VPR. This flag applies to files only.</p> <p>Ascii Line Data to ASA – This translates inbound Ascii data to ASA format. The data must come from either an LPR, AnyQueue create with the /ADF flag, or AnyQueue/PageSorter. This flag only applies to DRS File, DRS Queue, and AnyQueue destinations.</p> <p>Start ASA with Form Feed – This will place an ASA form feed at the beginning of the ASA data. This flag is only applicable if the Ascii Line Data to ASA flag is also set. This flag only applies to DRS File, DRS Queue, and AnyQueue destinations.</p> <p>Confirm Receipt – This will request a confirmation that the data has been successfully delivered. This flag only applies to DRS File, DRS Queue, and AnyQueue destinations.</p> <p>Prefix Line Length – Places a 2-byte binary line length (not including the length field) in front of every line. Non binary only.</p> <p>Honor FCB Channel 1 – This will allow the route to use the FCB Channel 1 definition on delivery.</p> <p>Don't Send Form Feed Sequence – This will allow the route to process a form feed as line feeds up to the defined form length.</p> <p>Include size of Prefix – Include the size of the length field.</p> <p>Serialize Output – This will make sure that the specified Route is accessed sequentially, and that the WebTRAC Jobs are sent to it in the order they arrived. This flag is only honored for WebTRAC jobs.</p> <p>Assured Delivery – If this flag is selected, AnyQueue will not consider the job printed until the last piece of paper is sitting in the output tray.</p> <p>WebTRAC Page Restart – Select this flag to monitor the actual number of pages printed and, if restarting is required, will start with the next physical page.</p> <p>Add Block Header - This will put a 2-byte binary block length (not including the length) in front of every record. Non-binary only.</p> <p>Bypass PCL ECHO Command - This option is provided to allow the direct sockets interface to be used with devices that do not support the ECHO/STATUS command. If the remote device supports these commands, LRS does NOT recommend the use of this option. AnyQueue uses the ECHO/STATUS command to obtain confirmation from the remote device that the output has been successfully delivered to the device. If this option is enabled, no request for confirmation is obtained and AnyQueue cannot guarantee the successful delivery of the output. Consequently, this option should be enabled only when absolutely necessary.</p>

Route Flag	Attach Type									
	Local File	Local Queue	Banyan File	Banyan Queue	Novell Bindery File	Novell Bindery Queue	Novell NDS File	Novell NDS Queue	Windows File	Windows Queue
Append To File	X		X		X		X		X	
Create Info File	X		X		X		X		X	
Discard DRS Separators	X	X	X	X	X	X	X	X	X	X
Remove 1st Form Feed	X	X	X	X	X	X	X	X	X	X
Translate	X	X	X	X	X	X	X	X	X	X
Ignore CC	X	X	X	X	X	X	X	X	X	X
Keep CC	X	X	X	X	X	X	X	X	X	X
Standard Format	X	X	X	X	X	X	X	X	X	X
Banner Page				X		X		X		
Suppress Form Feed						X		X		
Remove Single Space	X	X	X	X	X	X	X	X	X	X
Create ANYQ File	X		X		X		X		X	
Serialize Output	X	X	X	X	X	X	X	X	X	X
Ascii Line Data to ASA										
Start ASA with Form Feed										
Confirm Receipt										
Prefix Line Length	X	X	X	X	X	X	X	X	X	X
Include size of Prefix	X	X	X	X	X	X	X	X	X	X
Honor FCB Channel 1	X	X	X	X	X	X	X	X	X	X
Don't Send Form Feed Sequence	X	X	X	X	X	X	X	X	X	X
Assured Delivery										
WebTRAC Page Restart										
Add Block Header										
Bypass PCL ECHO Command										

Figure 4-4: Attach types with Route Flags (page 1)

Route Flag	Attach Type										
	MAPI Mail	MAPI Mail Attachment	DRS File	DRS Queue	AnyQueue	Tcpip Printer	LPR	SMTP Mail	SMTP Mail Attachment	Emtex	FTP
Append To File											X
Create Info File											
Discard DRS Separators	X	X				X	X	X	X	X	X
Remove 1st Form Feed	X	X				X	X	X	X	X	X
Translate	X	X	X	X	X	X	X	X	X	X	X
Ignore CC	X	X				X	X	X	X	X	X
Keep CC	X	X				X	X	X	X	X	X
Standard Format	X	X				X	X	X	X	X	X
Banner Page											
Suppress Form Feed											
Remove Single Space	X	X				X	X	X	X	X	X
Create ANYQ File											
Serialize Output	X	X	X	X	X	X	X	X	X	X	X
Ascii Line Data to ASA			X	X	X						
Start ASA with Form Feed			X	X	X						
Confirm Receipt			X	X	X						
Prefix Line Length	X	X	X	X	X	X	X	X	X	X	X
Include size of Prefix	X	X	X	X	X	X	X	X	X	X	X
Honor FCB Channel 1	X	X	X	X	X	X	X	X	X	X	X
Don't Send Form Feed Sequence	X	X	X	X	X	X	X	X	X	X	X
Assured Delivery						X					
WebTRAC Page Restart						X					
Add Block Header										X	
Bypass PCL ECHO Command						X					

Figure 4-5: Attach types with Route Flags (page 2)

Route - Sequences tab

FIELDS	DESCRIPTION
Sequence Group:	<p>The name of the Sequence Group(s) previously defined (see page 4.92 for instructions on creating a Sequence Group).</p> <p>Select the link (Sequence Group:) and the Sequence Group Browse List will display. Select the radio button next to the appropriate Sequence Group. Then select the OK option.</p>
Command Help	<p>Lists the valid codes and variables that can be inserted into the Start or End Sequence field. This list will not only display common sequence commands provided by AnyQueue but it will also list any commands you have added to the Sequence Group.</p>
Start Sequence	<p>A command name or sequence of command names which have been defined in the Sequence Group. This statement will cause a startup sequence to be sent to the output destination before the received data.</p> <p>By using an '@' symbol, followed by a full path and file name, the entire contents of a file can be inserted. Once an '@' symbol is encountered, no more commands will be accepted. If you simply want to provide a file name here, or some commands from the drop down, no Sequence Group definition is required. Variable substitution is allowed here. (See "Variable Path Substitution" on page 4.125.)</p>
End Sequence	<p>A command name or sequence of command names which have been defined in the Sequence Group. This statement will cause an end sequence to be sent to the output destination after the received data.</p> <p>By using an '@' symbol, followed by a full path and file name, the entire contents of a file can be inserted. Once an '@' symbol is encountered, no more commands will be accepted.</p> <p>If you simply want to provide a file name here, or some commands from the drop down, no Sequence Group definition is required.</p> <p>Variable substitution is allowed here. (See "Variable Path Substitution" on page 4.125.)</p>
Job User Access	<p>This section of the dialog is only used if AnyQueue/WebTRAC has been enabled on the General dialog.</p> <p>Since users can clone jobs, they will possibly need to specify a different Route than the original one.</p>

Route - AnyQueue/Secure tab

This section of the dialog is only valid if you have purchased AnyQueue/Secure from Levi, Ray & Shoup, Inc.. It allows you to specify the type of encryption to apply to the outbound data stream.

FIELDS	DESCRIPTION
Secure Type	Specifies the protocol to use to encrypt the data. Valid options are: None - Do not encrypt the data. LRS - Used to communicate to other LRS products. HP - Used to communicate to an HP printer with a supported card installed. Lexmark - Used to communicate to a Lexmark printer with a supported card installed.
Secure Length	Specifies the length in bits of the key that the corresponding target device is using.
Secure Key	This is the actual key value specified in hexadecimal.

Route - JIF Buffer tab

If your printer allows connection using the direct TCP/IP connection to port 9400, you may need to send the special job information buffer to the device each time a connection is made. The job information buffer contains fields which describe the host, user, job name and queue name associated with the sender of the print file. The job information buffer is not printed, but the information is sent to any software which may be monitoring the printer. The job information buffer is made up of 8 fields:

FIELD	DESCRIPTION
1	Buffer length and number of fields (calculated).
2	Queue number at remote device.
3	NPAP flag byte. Always X'01'.
4	Sender's TCP/IP host name.
5	Sender's job name.
6	Sender's user name.
7	Sender's queue name.
8	NPAP alert string. Always X'FFFFFFFFFFFF'

AnyQueue builds the job information buffer from the fields supplied in the JIF buffer tab on the route. All fields are sent and if any field is left blank, or is blank after evaluated for variable substitution, the field's default value is used.

FIELD	DESCRIPTION
Send JIF Buffer	Select this box to send the special job information buffer to the device each time a connection is made.
Printer Queue Number	JIF field 2. Queue number at remote device. (Default: 1) (Length: 1 byte)
Sender's TCP/IP Host Name	JIF field 4. Sender's TCP/IP host name. (Default: TCP/IP host name of machine that AnyQueue is running on) (Length: 128 bytes)
Sender's User Name	JIF field 5. Sender's user name. (Default: AnyQueue) (Length: 128 bytes)
Sender's Job Name	JIF field 6. Sender's job name. (Default: AnyQueue Job) (Length: 128 bytes)
Sender's Queue Name	JIF field 7. Sender's queue name. (Default: Route name given to the route) (Length: 128 bytes)

Configuration - Route Assignment

Route Assignment objects are used to determine what Route will be chosen for the final output. Route Assignment objects are searched in order until a match is found or the end of the objects is reached (except for LPD hosts which use the LPR printer name, and TCP/IP hosts that have **Honor PRQ** selected, and an inbound PRQ is received).

You should always define the Route Assignments objects with the most specific selection criteria first.

You can always reorder your objects by checking them and using the **Move After** option on the Web page. (Note: **Move After 0** (zero) makes the object first in the list.)

Multiple Route Assignment objects with different selection criteria can point to the same route.

There are two types of Route Assignments, **Standard** and **TRAC**.

Select the type of Route Assignment for the new route and then select **New**. The new route will be added to the end of the list.

New / **Convert** - Route assignments can be converted from standard to TRAC by selecting TRAC from the New/Convert list, checking the Route assignment(s) to convert, and selecting Convert.

Select the hyperlink for the new Route Assignment to display the **Route Assignment** page if this is a **Standard** route. Use the **Next** option to move to the next page if necessary.

To copy an object, select the box next to it, and select **Clone**. If you specify a location in the **Move After** field, that is where the item will be cloned too.

Select **Sort** to sort the items in alphabetical order.

To export objects, check the boxes next to the objects to export, and select **Export**.

To import objects, select **Import**. On the next page that appears select files that have been previously exported. If you specify a location in the **Move After** field, that is where the item will be imported too.

Route Assignment - Standard

FIELD	DESCRIPTION
Name	<p>This is the name of the Route Assignment object.</p> <p>Using an LPR to send data</p> <p>When using an LPR to send data to AnyQueue, the Route Assignment Name field must match the name used for the printer.</p>
Selection Criteria	<p>Wildcard characters ? and * can be used in any of the five selection criteria to provide matching based upon a mask.</p> <p>For instance, an * in any of the five selection criteria indicates that anything is to be considered a match.</p> <p>*ANYQ used in the dest criteria would indicate that any name ending in the sequence ANYQ is to be considered a match.</p> <p>ACT* used in the jobname would indicate that any jobname starting with ACT is to be considered a match.</p> <p>Question marks(?) can be used to consider any single character to be a match.</p>
Length limits on the selection criteria	<p>There are established length limits on each of the selection criteria used by AnyQueue. These lengths include the use of wildcards (* and ?).</p> <ul style="list-style-type: none"> • Class is limited to 1 character. • Jobname, dest, writer, and form are limited to 8 characters.
Job Name	<p>This is an 8 position field. AnyQueue will match this against the print files Job Name. If an asterisk is specified, any value in the print file is a match.</p>
Class	<p>This is a 1 position field. AnyQueue will match this against the print files Class. If an asterisk is specified, any value in the print file is a match.</p>
Dest	<p>This is an 8 position field. AnyQueue will match this against the print files Dest. If an asterisk is specified, any value in the print file is a match.</p>
Extended	<p>If this field is checked, then the Destination field will match against the print files Extended Dest.</p>
Form	<p>This is an 8 position field. AnyQueue will match this against the print files Form. If an asterisk is specified, any value in the print file is a match.</p>
Writer	<p>This is an 8 position field. AnyQueue will match this against the print files Writer. If an asterisk is specified, any value in the print file is a match.</p>
Route (Standard Route only)	<p>This is the Route you want to deliver the print file too.</p>

FIELD	DESCRIPTION
Error Route (Standard Route only)	If AnyQueue is unable to deliver the output to the defined Route, and the defined Route does not have an Error Route defined in it, then AnyQueue will attempt to deliver the output to this Error Route. If AnyQueue is unable to deliver the output to the Error Route, then the host connection will be broken.
Group when Variable	<p>This allow you to group multiple inbound datasets from the same job together. By specifying a variable name in the first field, like +writer for instance, and a value like WRITER01 in the second field, while the consecutive datasets match all of the specified selection criteria, and the “Group when Variable” specification, then the datasets will be combined into one. Any break in the selection criteria, the Grouping information, a new job, or a break in the link, will terminate the group.</p> <p>Also note that Line and Page limits are not in effect for Grouped Datasets since there is no way to determine the total counts during the initial selection process.</p> <p>Also, a special value of “+PREVIOUS” can be specified in the second field. This will allow you to simply indicate that you want to “group” until the specified variable’s value changes.</p>

Configuration - Route Pooling

Creating and enabling Route Pools allows AnyQueue to deliver jobs to alternate destinations whenever the primary destination is paused or busy (in the case of serialization). AnyQueue will always attempt to deliver to the primary destination first. If a job cannot be delivered to the primary destination, AnyQueue will traverse the Routes associated with the Route Pool in an attempt to deliver to an alternate destination. Three Route Pool traversal schemes are available:

- 5. Route Sequence** - The routes associated with the Route Pool are traversed in the order in which they appear on the Route Pool page inside the Configurator.
- 6. Job Load** - The routes associated with the Route Pool are traversed based on Load Statistics associated with each Route. The route with the fewest number of jobs processed will be selected first.
- 7. Line Count Load** - The routes associated with the Route Pool are traversed based on Line Count Statistics associated with each route. The route with the fewest number of lines processed will be selected first. A Default Line Count can be associated with each Route Pool. The value specified in this field will be applied to the Route Pool Load Statistic in the event a job is processed for which no line count is available (i.e., jobs sent in binary format, jobs processed via an LPD host, etc.).

Route Pool Load Statistics can be viewed and reset from the **Active Pool** tab on the Engine page. Load Statistics are maintained indefinitely and not reset between AnyQueue startups. You will need to reset the load statistics from this tab in the event they become skewed (possibly due to the addition of a route to the Route Pool or the delivery of a large job in the case of Line Count Load traversal). Resetting the load statistics has an immediate impact on the delivery of jobs across the Route Pool (an AnyQueue reload or restart is not required).

Any number of routes can be associated with a Route Pool; however, no route can be included in multiple Route Pools. Route Pool changes made inside the Configurator will become active (or in effect) after an AnyQueue reload or restart.

In order to activate a Route Pool for a particular job, the Enable Pool flag associated with the TRAC Route Assignment must be selected. If this flag is not selected, AnyQueue will only attempt to deliver jobs picked up and processed by the Route Assignment to their primary destination. The Enable Pool flag can also be selected when cloning a job.

Route Pooling is not available for jobs processed by Standard Route Assignments. In addition, a job will not be delivered to an alternate Route Pool destination if the job is ReRouted, Reprinted, Printed via the Print page, or created via the Report page. In these instances, the request to send a job to a particular destination supersedes the Pooling feature.

Configuration - Route Pool List

- To copy an object, select the box next to it, and select **Clone**. If you specify a location in the **Move After** field, that is where the item will be cloned to.
- Select **Sort** to sort the items in alphabetical order.
- To export objects, check the boxes next to the objects to export, and select **Export**.
- To import objects, select **Import**. On the next page that appears, select files that have been previously exported. If you specify a location in the **Move After** field, that is where the item will be imported to.
- To delete an object, check the boxes next to the objects to delete, and select **Delete**.
- To create a new object, select the **New** button.
- To change an object, select the name of the object in the **Name** column. Each object's name is a hyperlink to its definition.
- To return the list to the first page, select **Top**.
- To go to the last page in the list, select **Bottom**.

Create a New Route Pool

From the Configuration Menu, select **Route Pool List**.

- Select the **New** button.
- A new route pool will appear at the bottom of the **Route Pool List** page. It will be named **New Route Pool**.
- Select the **New Route Pool** hyperlink.

Name Specify a name for the **Route Pool**. By default it will be named **New Route Pool**, but you should change this to a more descriptive name.

Pool By Select the way in which the route pool will select which route the incoming job will be delivered to. If **Route Sequence** is selected, the next route in the route list that is not busy will deliver the job. If either **Job Load** or **Line Count Load** is selected, the route with the lightest load will deliver the job.

Default Line Count Only valid when **Line Count Load** is selected as the **Pool By** attribute. Specify a line count for jobs that come in without a line count value.

Route List This is a current list of the routes in the route pool.

- To add a route or group of routes to the route pool, select **New**. On the next page that appears, check the boxes next to the routes that you wish to add, and select **OK**.
Note: A route can only be associated with one Route Pool.
- To delete a route or group of routes from a route pool, check the boxes next to the route or routes, and select **Delete**.

Variable Path Substitution

What is “variable path substitution”?

File and **Queue** paths can be created using variables which will, at report processing, be substituted with information from the host.

Variable path substitution is provided as a means to dynamically route reports to different file destinations with a single path declaration. In addition it may be used to dynamically select the ‘@filepath’ files in the Start and End Sequence printer command sequences.

Variable substitution rules

Variable substitution is only applicable when used in conjunction with certain keywords.

All variables must be prefaced with the ‘+’ character.

Variables must be spelled exactly as specified in the tables beginning on [page 4.126](#).

Variables can occur in any order, and as many times as desired (except +TEMP which can only appear at the end).

As with any file name, spaces should not be inserted into the path.

If a host variable entry is blank, AnyQueue will return the variable name, thus causing an error upon verification or file access. This is to ensure that files are not read from, or created in, random or unknown places.

Variable Substitution Table (In-Bound Data)

The variables in this table can be used for in-bound data to AnyQueue.

Variable	Max Length	Description
+ADDRESS1	60	1st ADDRESS keyword value from the OUTPUT JCL statement.
+ADDRESS2	60	2nd ADDRESS keyword value from the OUTPUT JCL statement.
+ADDRESS3	60	3rd ADDRESS keyword value from the OUTPUT JCL statement.
+ADDRESS4	60	4th ADDRESS keyword value from the OUTPUT JCL statement.
+BUILDING	60	BUILDING keyword value from the OUTPUT JCL statement.
+CC	1	Carriage control values. A-ASA, M-Machine, N-None
+CHARS1	4	The character arrangement table.
+CHARS2	4	The character arrangement table.
+CHARS3	4	The character arrangement table.
+CHARS4	4	The character arrangement table.
+CLASS	1	SYSOUT class.
+COMPACTTBL	8	COMPACT keyword value from the OUTPUT JCL statement.
+COPIES	3	Number of copies of the print dataset.
+COPYMOD	4	Copy modification module name from the MODIFY keyword.
+DATE	8	YYYYMMDD
+DEPT	60	DEPT keyword value from the OUTPUT JCL statement.
+DEST	8	Destination for the SYSOUT file.
+FCB	4	FCB value from the DD or OUTPUT JCL statement.
+FLASH	4	Overlay name from the FLASH keyword on the DD or OUTPUT statement.
+FORM	8	Form name for SYSOUT from the DD or OUTPUT statement.
+FORMDEF	6	FORMDEF keyword value from the OUTPUT JCL statement.
+GROUPID	8	GROUPID keyword value from the OUTPUT JCL statement.
+HOSTNAME		Name of AnyQueue host.
+JOBID	8	Job identifier (job number) for SYSOUT file.
+JOBID_L3	3	Last 3 characters of job identifier (job number).

Variable	Max Length	Description
+JOBNAME	8	JOBNAME for SYSOUT file.
+NAME	60	NAME keyword value from the OUTPUT JCL statement.
+NODE	8	NODE keyword value from the OUTPUT JCL statement.
+OPTCD	1	OPTCD=J (3800 Table reference character exist). Values Y/N.
+OUTPUTDEST	8	Destination from DEST keyword on the OUTPUT JCL statement.
+OUTPUTNODE	8	Node name from DEST keyword on OUTPUT JCL statement.
+PAGEDEF	6	PAGEDEF keyword value from the OUTPUT JCL statement.
+PDFAUTHOR	60	PDFAUTH keyword value from the OUTPUT JCL statement.
+PDFFONTNAME		The first subfield value of the PDFFONT keyword on the OUTPUT JCL statement.
+PDFFONTSIZE		The second subfield value of the PDFFONT keyword on the OUTPUT JCL statement.
+PDFIDXKYWDS	60	PDFIXKWD keyword value from the OUTPUT JCL statement.
+PDFPGHEIGHT		The first subfield value of the PDFPGSIZ keyword on the OUTPUT JCL statement.
+PDFPGMARGIN		
+PDFPGWIDTH		The second subfield value of the PDFPGSIZ keyword on the OUTPUT JCL statement.
+PDFSUBJECT	60	PDFSUBJ keyword value from the OUTPUT JCL statement.
+PDFTITLE	60	PDFTITLE keyword value from the OUTPUT JCL statement.
+PRMODE	8	Processing mode value from PRMODE on OUTPUT statement.
+ROOM	60	ROOM keyword value from the OUTPUT JCL statement.
+SEPARATOR	1	Indicates if VPS separator pages will be printed.
+TEMP		Temporary filename.
+TEMPLOC		Temporary location that was specified on the General dialog.
+TIME	6	HHMMSS
+TITLE	60	TITLE keyword value from the OUTPUT JCL statement.
+TRC	1	Table Reference Characters exist. Values: Y/N/blank

Variable	Max Length	Description
+UCS	4	UCS value from DD or OUTPUT JCL statement.
+UNIQUE	16	This is a 16 character unique number.
+WRITER	8	External writer name from DD or OUTPUT JCL statement.
+WTJOBID	8	Returns the WebTRAC Job ID.

Figure 4-6: Variable Substitution Table (In-bound Data)

Variable Substitution Table (Mail Data)

Variable	Max Length	Description
+MAILTO01	60	Address 1
+MAILTO02	60	Address 2
+MAILTO03	60	Address 3
+MAILTO04	60	Address 4
+MAILTO05	60	Address 5
+MAILTO06	60	Address 6
+MAILTO07	60	Address 7
+MAILTO08	60	Address 8
+MAILTO09	60	Address 9
+MAILTO10	60	Address 10
+MAILTO11	60	Address 11
+MAILTO12	60	Address 12
+MAILTO13	60	Address 13
+MAILTO14	60	Address 14
+MAILTO15	60	Address 15
+MAILTO16	60	Address 16
+MAILTO17	60	Address 17
+MAILTO18	60	Address 18
+MAILTO19	60	Address 19
+MAILTO20	60	Address 20
+MAILTO21	60	Address 21
+MAILTO22	60	Address 22
+MAILTO23	60	Address 23
+MAILTO24	60	Address 24
+MAILTO25	60	Address 25
+MAILTO26	60	Address 26
+MAILTO27	60	Address 27
+MAILTO28	60	Address 28
+MAILTO29	60	Address 29
+MAILTO30	60	Address 30
+MAILTO31	60	Address 31
+MAILTO32	60	Address 32
+MAILTO	1951	All +MAILTO addresses
+MAILCC01	60	Address 1
+MAILCC02	60	Address 2
+MAILCC03	60	Address 3
+MAILCC04	60	Address 4
+MAILCC05	60	Address 5
+MAILCC06	60	Address 6
+MAILCC07	60	Address 7

Variable	Max Length	Description
+MAILCC08	60	Address 8
+MAILCC09	60	Address 9
+MAILCC10	60	Address 10
+MAILCC11	60	Address 11
+MAILCC12	60	Address 12
+MAILCC13	60	Address 13
+MAILCC14	60	Address 14
+MAILCC15	60	Address 15
+MAILCC16	60	Address 16
+MAILCC17	60	Address 17
+MAILCC18	60	Address 18
+MAILCC19	60	Address 19
+MAILCC20	60	Address 20
+MAILCC21	60	Address 21
+MAILCC22	60	Address 22
+MAILCC23	60	Address 23
+MAILCC24	60	Address 24
+MAILCC25	60	Address 25
+MAILCC26	60	Address 26
+MAILCC27	60	Address 27
+MAILCC28	60	Address 28
+MAILCC29	60	Address 29
+MAILCC30	60	Address 30
+MAILCC31	60	Address 31
+MAILCC32	60	Address 32
+MAILCC	1951	All +MAILCC addresses
+MAILBC01	60	Address 1
+MAILBC02	60	Address 2
+MAILBC03	60	Address 3
+MAILBC04	60	Address 4
+MAILBC05	60	Address 5
+MAILBC06	60	Address 6
+MAILBC07	60	Address 7
+MAILBC08	60	Address 8
+MAILBC09	60	Address 9
+MAILBC10	60	Address 10
+MAILBC11	60	Address 11
+MAILBC12	60	Address 12
+MAILBC13	60	Address 13
+MAILBC14	60	Address 14
+MAILBC15	60	Address 15
+MAILBC16	60	Address 16

Variable	Max Length	Description
+MAILBC17	60	Address 17
+MAILBC18	60	Address 18
+MAILBC19	60	Address 19
+MAILBC20	60	Address 20
+MAILBC21	60	Address 21
+MAILBC22	60	Address 22
+MAILBC23	60	Address 23
+MAILBC24	60	Address 24
+MAILBC25	60	Address 25
+MAILBC26	60	Address 26
+MAILBC27	60	Address 27
+MAILBC28	60	Address 28
+MAILBC29	60	Address 29
+MAILBC30	60	Address 30
+MAILBC31	60	Address 31
+MAILBC32	60	Address 32
+MAILBC	1951	All +MAILBC addresses
+MAILRPLY	60	Reply address
+MAILFROM	60	Address of sender
+MAILFILE	60	Name of file being sent
+MAILCSET	40	Character set used for email

Figure 4-7: Variable Substitution Table (Mail Data)

Variable Substitution Table (Out-Bound Data)

Following is a list of out-bound Route Variables you can set or override. These variables are only valid for Attach types equal to **DRS Queue**, **DRS File**, or **AnyQueue**.

Variable	Max Length	Attach Type	Value
+ADDRESS1	60	DRS Queue / AnyQueue	
+ADDRESS2	60	DRS Queue / AnyQueue	
+ADDRESS3	60	DRS Queue / AnyQueue	
+ADDRESS4	60	DRS Queue / AnyQueue	
+AFPDS	1	DRS File / DRS Queue	Y/N
+AVGRECSIZE	5	DRS File	1-32760
+AVGRECUNIT	1	DRS File	K/M/U
+BANNERFILE	13	DRS Queue	
+BANNERNAME	13	DRS Queue	
+BLKSIZE	5	DRS File / DRS Queue	1-32760
+BUILDING	60	DRS Queue / AnyQueue	
+BURST	1	DRS Queue	Y/N
+CHARS1	4	DRS Queue / AnyQueue	
+CHARS2	4	DRS Queue / AnyQueue	
+CHARS3	4	DRS Queue / AnyQueue	
+CHARS4	4	DRS Queue / AnyQueue	
+CKPTLINE	5	DRS Queue	0-99999
+CKPTPAGE	5	DRS Queue	0-99999
+CKPTSEC	5	DRS Queue	0-99999
+CLASS	1	DRS Queue / AnyQueue	
+CMODTRC	1	DRS Queue	0-3
+COLOMAP	8	DRS Queue	
+COMPACTTBL	8	DRS Queue / AnyQueue	
+COMSETUP	8	DRS Queue	
+CONTROL	8	DRS Queue	SINGLE/DOUBLE/ TRIPLE/PROGRAM
+COPIES	3	DRS Queue / AnyQueue	1-255
+COPYG1	3	DRS Queue	
+COPYG2	3	DRS Queue	
+COPYG3	3	DRS Queue	

Variable	Max Length	Attach Type	Value
+COPYG4	3	DRS Queue	
+COPYG5	3	DRS Queue	
+COPYG6	3	DRS Queue	
+COPYG7	3	DRS Queue	
+COPYG8	3	DRS Queue	
+COPYMOD	8	DRS Queue / AnyQueue	
+DATAACK	8	DRS Queue	BLOCK/UNBLOCK/ BLKCHAR/BLKPOS
+DATACLASS	8	DRS File	
+DDNAME	8	DRS File / DRS Queue	
+DEPT	60	DRS Queue / AnyQueue	
+DEST	8	DRS Queue / AnyQueue	
+DPAGELBL	1	DRS Queue	Y/N
+DSN	60	DRS File	
+DSNAME	44	DRS Queue / AnyQueue	
+DSNTYPE	8	DRS File	
+DUPLEX	8	DRS Queue	Y/N
+EXPDATE	7	DRS File	
+FCB	4	DRS Queue / AnyQueue	
+FILETYPE	3	AnyQueue	
+FLASH	4	DRS Queue / AnyQueue	
+FLASHCNT	3	DRS Queue	1-999
+FORM	8	DRS Queue / AnyQueue	
+FORMDEF	6	DRS Queue / AnyQueue	
+FORMLEN	10	DRS Queue	
+GROUPLD	8	DRS Queue / AnyQueue	
+HOLD	1	DRS Queue / AnyQueue	Y/N
+INDEX	3	DRS Queue	1-999
+INTRAY	3	DRS Queue	1-255
+JOBID	8	AnyQueue	
+JOBNAME	8	DRS Queue / AnyQueue	
+LINDEX	3	DRS Queue	1-999
+LINECT	3	DRS Queue	1-999

Variable	Max Length	Attach Type	Value
+LONGDEST	127	DRS Queue	
+LRECL	5	DRS File	1-32760
+MEMBER	8	DRS File	
+MGMTCLASS	8	DRS File	
+NAME	60	DRS Queue / AnyQueue	
+NODE	8	DRS Queue / AnyQueue	
+NOTIFY1	17	DRS Queue	
+NOTIFY2	17	DRS Queue	
+NOTIFY3	17	DRS Queue	
+NOTIFY4	17	DRS Queue	
+OFFSETXB	13	DRS Queue	
+OFFSETXF	13	DRS Queue	
+OFFSETYB	13	DRS Queue	
+OFFSETYF	13	DRS Queue	
+OUTBIN	5	DRS Queue	0-99999
+OUTDISP	8	DRS Queue	
+OUTDISPAB	8	DRS Queue	
+OUTPUTDEST	8	AnyQueue	
+OUTPUTNODE	8	AnyQueue	
+OUTREF	8	DRS Queue	
+OVERLAYB	8	DRS Queue	
+OVERLAYF	8	DRS Queue	
+OVFL	8	DRS Queue	
+PAGEDEF	6	DRS Queue / AnyQueue	
+PIMSG	1	DRS Queue	Y/N
+PIMSGCT	5	DRS Queue	0-99999
+PRIMDISP	8	DRS File	NEW/OLD/SHR/MOD
+PRMODE	8	DRS Queue / AnyQueue	
+PROCNAME	8	AnyQueue	
+PRTERORR	8	DRS Queue	
+PRTOPTNS	16	DRS Queue	
+PRTQUEUE	127	DRS Queue	

Variable	Max Length	Attach Type	Value
+PRTY	3	DRS Queue	0-999
+RECFM	1	DRS File / DRS Queue	F/U/V
+RELUNUSED	1	DRS File	Y/N
+RETAINF	10	DRS Queue	
+RETAINS	10	DRS Queue	
+RETPERIOD	4	DRS File	0-9999
+RETRYL	5	DRS Queue	
+RETRYT	10	DRS Queue	
+ROOM	60	DRS Queue / AnyQueue	
+SECDISP	8	DRS File	DELETE/KEEP/PASS/ CATLG/UNCATLG
+SEPARATOR	1	AnyQueue	B/E/N/S
+SPACEDBLK	5	DRS File	0-32767
+SPACEPRI	5	DRS File	0-32767
+SPACESEC	5	DRS File	0-32767
+SPACETYPE	1	DRS File	B/C/R/T
+STEPNAME	8	AnyQueue	
+STORCLASS	8	DRS File	
+SYSAREA	1	DRS Queue	Y/N
+THRESHLD	10	DRS Queue	
+TITLE	60	DRS Queue / AnyQueue	
+TRC	1	DRS Queue	Y/N
+UCS	4	DRS Queue / AnyQueue	
+UDATA1	60	DRS Queue / AnyQueue	
+UDATA10	60	DRS Queue / AnyQueue	
+UDATA11	60	DRS Queue / AnyQueue	
+UDATA12	60	DRS Queue / AnyQueue	
+UDATA13	60	DRS Queue / AnyQueue	
+UDATA14	60	DRS Queue / AnyQueue	
+UDATA15	60	DRS Queue / AnyQueue	
+UDATA16	60	DRS Queue / AnyQueue	
+UDATA2	60	DRS Queue / AnyQueue	
+UDATA3	60	DRS Queue / AnyQueue	

Variable	Max Length	Attach Type	Value
+UDATA4	60	DRS Queue / AnyQueue	
+UDATA5	60	DRS Queue / AnyQueue	
+UDATA6	60	DRS Queue / AnyQueue	
+UDATA7	60	DRS Queue / AnyQueue	
+UDATA8	60	DRS Queue / AnyQueue	
+UDATA9	60	DRS Queue / AnyQueue	
+ULIB1	44	DRS Queue	
+ULIB2	44	DRS Queue	
+ULIB3	44	DRS Queue	
+ULIB4	44	DRS Queue	
+ULIB5	44	DRS Queue	
+ULIB6	44	DRS Queue	
+ULIB7	44	DRS Queue	
+ULIB8	44	DRS Queue	
+UNITCOUNT	2	DRS File	0-59
+UNITNAME	8	DRS File	
+VOLCOUNT	3	DRS File	0-255
+VOLNAME	6	DRS File	
+WRITER	8	DRS Queue / AnyQueue	

Example:

writer = ABCDEFGH
dest = ZYXWVUTS
jobname = 12345678
address1 =1.....2.....3.....4.....5.....6

to get the string:

abcdCDEFefghZYXWVUTS1234ijkl.3.....4.....5.....6

you would code

abcd+writer(3:4)efgh+dest+jobname(1:4)ijkl+address1(29:41)

+ TEMP Variable

What is the +TEMP variable? A temporary **file name** in the form of ANYQ####.TMP. The default suffix is .TMP but you can specify a different suffix.

C:\+TEMP = C:\ANYQ0000.TMP

C:\+TEMP. = C:\ANYQ0000

C:\+TEMP.xxx = C:\ANYQ0000.xxx

+TEMP is only valid at the end of a file path. +TEMP starts at ANYQ0000.TMP and fills all available entries up to ANYQ9999.TMP.

Example:

File Name =SERVERNAME\SHARED\SYSTEM\+JOBNAME\+TEMP

If the host JOBNAME is STC1892 this evaluates to:

SERVERNAME\SHARED\SYSTEM\STC1892\ANYQ0000.TMP

What is the .+TEMP variable? The .+TEMP variable will create variable extension files.

Examples: C:\Thename.+TEMP = C:\Thename.000

C:\+DEST.+TEMP = C:\U7920.000

C:\+TEMP.+TEMP = Error

Note: The .+TEMP extension cannot be longer than three characters.

PRTROPTS=2000 To emulate the PRTROPTS=2000 option in VPS, enable the **IgnoreCC**, **StandardFormat**, and **KeepCC** flags. The effect is to translate all data, skip any carriage control processing, keep the carriage control byte as data, and write the entire line to its destination followed by a carriage return and line feed.

Route Assignment - TRAC

WebTRAC Routes are destinations that WebTRAC-enabled Route Assignments will create jobs for.

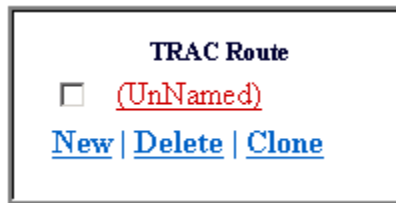
Creating a TRAC Route Assignment:

- On the **Route Assignment List** page, highlight **TRAC** and select the **New** option.
- **New TRAC Route Assignment** will appear in the list of routes.
- Select the hyperlink for the TRAC route and the Route Assignment page will display.

FIELD	DESCRIPTION
Name	This is the name of the Route Assignment object. Using an LPR to send data When using an LPR to send data to AnyQueue, the Route Assignment Name field must match the name used for the printer.
Selection Criteria	Wildcard characters ? and * can be used in any of the five selection criteria to provide matching based upon a mask. For instance, an * in any of the five selection criteria indicates that anything is to be considered a match. *ANYQ used in the dest criteria would indicate that any name ending in the sequence ANYQ is to be considered a match. ACT* used in the jobname would indicate that any jobname starting with ACT is to be considered a match. Question marks(?) can be used to consider any single character to be a match.
Length limits on the selection criteria	There are established length limits on each of the selection criteria used by AnyQueue. These lengths include the use of wildcards (* and ?). <ul style="list-style-type: none">• Class is limited to 1 character.• Jobname, dest, writer, and form are limited to 8 characters.
Job Name	This is an 8 position field. AnyQueue will match this against the print files Job Name. If an asterisk is specified, any value in the print file is a match.
Class	This is a 1 position field. AnyQueue will match this against the print files Class. If an asterisk is specified, any value in the print file is a match.
Destination	This is an 8 position field. AnyQueue will match this against the print files Dest. If an asterisk is specified, any value in the print file is a match.
Extended	If this field is checked, then the Destination field will match against the print files Extended Dest.
Form	This is an 8 position field. AnyQueue will match this against the print files Form. If an asterisk is specified, any value in the print file is a match.

FIELD	DESCRIPTION
Writer	This is an 8 position field. AnyQueue will match this against the print files Writer. If an asterisk is specified, any value in the print file is a match.
Group when Variable	This allows you to group multiple inbound datasets from the same job together. By specifying a variable name in the first field, like +writer for instance, and a value like WRITER01 in the second field, while the consecutive datasets match all of the specified selection criteria, and the "Group when Variable" specification, then the datasets will be combined into one. Any break in the selection criteria, the Grouping information, a new job, or a break in the link, will terminate the group. Also note that Line and Page limits are not in effect for Grouped Datasets since there is no way to determine the total counts during the initial selection process.

Any TRAC routes previously defined will appear under the **TRAC Route** heading. Select the **New** option to create a new TRAC route. A hyperlink (UnNamed) will be added.



New	Select New to create a TRAC Route.
Delete	Select the box next to the route to be deleted then select Delete .
Clone	Select the box next to the route you want to make a copy of then select Clone.

Select the hyperlink for the TRAC route to display the **WebTRAC Job** page.

TRAC Route - Basic tab

FIELDS	DESCRIPTION
Route	Use the hyperlink (Route) to display a list of all previously defined route objects. The selected route determines where a copy of the data will be delivered to.
Number of Copies	Specifies the number of times the job will be sent to its final destination. If 0 is specified, then the value received from VPS will be used.
Retention Period	Specifies the number of days to keep the job in WebTRAC before deleting it.
WebTRAC Job Name	The value entered in this field is the name that will be given to the created WebTRAC job.
Destination Override	The value entered in this field will override the Destination value in the selected route. If nothing is entered, the value from the specified route will be used.
File Type	<p>If the data you are receiving is Binary (not Line Data), then you can specify what type of file it is. This field equates to a file extension, like "PDF" for instance. A maximum of three characters will be used.</p> <p>A couple of the ways Binary data can be input into AnyQueue is via the AnyQueue Create Utility or the LPR command.</p>
Owner:	<p>Text Match If checked, then the Owner specified will not be resolved until run time. This allows you to specify variable names. If it is NOT checked, then you will either leave it blank, or specify a valid User Name. Also, if an Owner is specified, and no Notify Group is specified, then the Owner will automatically become the Notify Group.</p> <p>User Specify the Initial Owner of the WebTRAC Job. If nothing is specified, then AnyQueue is the Owner.</p>
Folder:	<p>Text Match If checked, then the folder specified will not be resolved until run time. This allows you to specify variable names. If the folder specified does not exist, AnyQueue will create the folder and store the job in the newly created folder.</p>

TRAC Route - Job Actions tab

FIELDS	DESCRIPTION
JOB ACTIONS tab	
Initial Action	<p>Send Select this box to have the job put into a pending status. A WebTRAC processor will pick up the job and attempt to deliver it to the AnyQueue route defined.</p> <p>Retain Select this box if the job, after it has been successfully delivered, should be retained for the number of days specified in the Retention Period field. If this box is not checked and the job is delivered to the AnyQueue route successfully, the job will be removed from WebTRAC immediately.</p> <p>Pause Select this box to have the job put into a Paused status. As long as the Job has also been put into a Send status, then the Job will not be deleted automatically even if it passes it's expiration date.</p>
Error Action	<p>Retry If a job can not be delivered to the AnyQueue route it will be put into an error status. If this box is checked, the job will stay in that status until the Error Retry value from the General page has expired. At that time, the job will be put into a pending status and retried. Also, if checked, the Error Action - Retain will be assumed.</p> <p>Retain If this box is checked and a job has an error, the job will be retained. If this box is not checked, the job will be deleted if there is an error.</p>

TRAC Route - Rights tab

FIELDS	DESCRIPTION
Clone	Specifies the user or group that can Clone this job.
Update	Specifies the user or group that can Delete or Update this job.
Reprint	Specifies the user or group that can Reprint this job.
List	Specifies the user or group that can list the job.
View	Specifies the user or group that can View the data if it is line data.
Text Match	If checked, then the Owner specified will not be resolved until run time. This allows you to specify variable names. If it is NOT checked, then you will either leave it blank, or specify a valid User Name. Also, if an Owner is specified, and no Notify Group is specified, then the Owner will automatically become the Notify Group.
User	Select the hyperlink for <u>User</u> to display the User List page. Select a user from the list to be the owner of the job.
Group	Select the hyperlink for <u>Group</u> to display the Group List page. Select a group from the list to be the owner of the job.

TRAC Route - Mail Notification tab

FIELDS	DESCRIPTION
MAIL NOTIFICATION:	
Notify	Text Match If checked, then the Owner specified will not be resolved until run time. This allows you to specify Variable names. If it is NOT checked, then you will either leave it blank, or specify a valid User Name. Also, if an Owner is specified, and no Notify Group is specified, then the Owner will automatically become the Notify Group. User Specifies the user that will receive any Event messages selected. Group Specifies the group that will receive any Event messages selected.
Events	Arrival: Sent when the Job is put in to WebTRAC. Print: Sent when the Job is printed or reprinted. Delete: Sent when a job expires or is manually deleted. Error: Sent one time if a job encounters an error during delivery. Note: If an Initial Action of Send is not specified, you will never get an Error Notification.

Note: For the **Clone, Update, Reprint, List, and View** fields, a valid WebTRAC location must be specified on the General page to browse for users or groups.

Security Note: If no user or groups are specified on the WebTRAC route properties (clone, update, reprint, list, and view) then only users with global rights will have access to the WebTRAC functions for that job.

LRS/Queue Client

LRS/Queue is a general-purpose client that enables users on multiple platforms to exploit the features of the DRS/OutputManager range of products. The LRS/Queue client is available for most execution platforms and provides a simple command line interface to the following functions:

- Output submission.
- Queue Query (currently not available in AnyQueue.)
- Print Query (currently not available in AnyQueue.)
- Print cancellation (currently not available in AnyQueue.)

The LRS/Queue client has been designed to provide a common interface to both the LRS host and LAN based output management solutions although in this document we will only describe the command in relation to the AnyQueue product.

Using the LRS/Queue client it is possible to submit a print request to AnyQueue and preset any of the variables it can use during processing.

Controlling Report Translation & Formatting

The LRS/Queue client enables users to control the data translation and formatting of print requests submitted to AnyQueue. By default all print files will be translated from ASCII to EBCDIC. If the input file contains text with formfeed characters and you wish to preserve the page breaks, specifying `/CC=A` will cause LRS/Queue to generate ASA carriage control characters. The ASCII to EBCDIC translation is performed using an internal translation table that can be modified using the `/tr_AA:EE` keyword (where AA = ASCII hex value, EE = EBCDIC hex value). For details of the default translation table refer to [page 4.160](#).

For input datasets which contain printer formatted or binary data (PCL, Postscript etc.) the `/BINARY=Y` keyword can be used to bypass all translation and formatting.

LRSQ Command Examples

The example below will submit a text file called 'test.txt' and will assign the output a class of 'A' and a destination of 'PRINTER1'. In this example, an AnyQueue queue name has not been explicitly specified via the **/Queue** keyword and AnyQueue will attempt to identify the Route Assignment using the normal selection criteria.

LRSQ /Server=1.2.3.4 /Port=1515 /File=test.txt /class=A /Dest=printer1

The example below will submit a text file called 'test.txt' and will select the AnyQueue Route Assignment named 'PRINTER1' if the host definition in AnyQueue that matches the Server and Port has 'Honor PRQ' checked.

LRSQ /Server=1.2.3.4 /Port:1515 /File=test.txt /Queue=PRINTER1 /DRSMerge=Y

The example below will submit a file called 'pcl.dat' which contains ASCII PCL data. The **/Binary** keyword indicates that this file should be transferred to AnyQueue without translation and the **/Class** keyword is used to set that variable.

LRSQ /Server=someanyq /Port:5000 /file:pcl.dat /Queue=PRINTER2 /class=T /Binary=Y

AnyQueue Host Definition

The LRSQ command can be used with any AnyQueue TCPIP host definition.

LRS/Queue Installation

The LRS/Queue client is available for most execution platforms and is distributed on CD or can be downloaded from the LRS Web site (<http://www.lrs.com/eom>).

The installation process for each supported platform is slightly different so please refer to the README file supplied with each version for details of the installation process. The installation procedure will extract the LRS/Queue executables to a user specified directory.

LRSQ Keywords

All LRSQ command keywords must begin with a '/' character and are delimited with an '=' or ':' character which is used to separate the keyword from the assigned value. Any value that contains embedded spaces must be enclosed in double quotes.

General syntax:

**LRSQ /S:host /P:port {operational keywords}{Variables}
{Query or Cancel request}**

Required Keywords

/Server	/S	Specifies the IP-address or host name of the machine executing AnyQueue
/Port	/P	Specify the TCP/IP port number which is being used by AnyQueue for connection requests.

Operational Keywords

/?	None	Display help information.
/AFPDS	None	Not used by AnyQueue.
/AltServer	/AS	Alternate IP address or host name of a machine executing AnyQueue. If LRSQueue cannot connect to AnyQueue that is listening on the IP address or host name specified by the /Server keyword, it will try to connect to this alternate IP address or host name.
/AltPort	/AP	Specify an alternate TCP/IP port number which is being used by AnyQueue for connection requests. If LRSQueue cannot connect to AnyQueue that is listening on the port number specified by the /Port keyword, it will try to connect to this alternate port number.
/Binary	/Bin	Specifies that the input file contains binary data which should not be translated. Valid Values: Y/N Default: N
/Compress	/cmp	Specifies whether the data should be compressed for transmission across the network. Valid Values: Y/N Default: Y
/DRSMerge	/DMRG	Not used by AnyQueue.
/Encrypt	/enc	Indicates whether the print data should be encrypted for transmission to the destination. (DRS V1 R3.4 fix level 90 with DRS Secure, VPSX V1 R1.0 fix level 10, or AnyQueue 1.2.50 with AnyQueue Secure.) Valid Values: Y/N Default: N
/File	None	Specifies the input print file.
/Logfile	/Log	Specifies the name of a file that should receive all messages from the LRSQ execution. Default: None.
/ParmFile	/pfl	Specifies the name of a text file that contains additional LRSQ commands. When coding LRSQ keywords in a parameter file the keyword syntax is exactly the same but only one keyword can be specified per line. Default: None. LRSQueue will look for a default parmfile called LRSQDFLT in the directory that LRSQueue is executing from. If it is found then any keywords in the default parmfile will be processed first but they can be overridden by supplying the same keyword on the command line. The name and location of the default parmfile can be overridden by specifying an environmental variable of LRSQDFLT=<full path to parmfile> .

/Queue	/Que	Specifies the name of the AnyQueue Route Assignment definition that should be used to process this request. If this keyword is not specified AnyQueue will attempt to match a Route Assignment normally.
/Removelff	/rlff	If the input file has ASA carriage control or LRSQueue is creating ASA carriage control from ANSI carriage control (/CC=C) and the last byte of the data is an ASA form feed then by setting /Removelff=Y this last form feed will not be sent. Valid value: Y/N Default: N
/TabSize	None	If file being processed is Text this is the number of spaces to insert when a TAB character is encountered. If this is set to 0 then the TAB character is passed on to the destination. When used in conjunction with /TabStop=Y this number indicates the number of spaces between each tab stop. Valid Values: 0-255 Default: 0
/TabStop	None	If set to 'Y', and the file being processed is Text, LRSQueue will calculate the number of spaces to add when a TAB character is encountered to get to the next tab stop. The location of the tab stops is determined by the /TabSize keyword. Valid Values: N/Y Default: N
/Translate	/tr	Specifies whether the input file should be translated from ASCII to EBCDIC.
/tr_AA:EE	None	This keyword allows you to change the default translate table for a specific character value. AA Specifies the hex value of the input character. EE Specifies the hex value of the output character. Example: /tr_41:C1 - will translate X'41' to X'C1'
/Type	None	Specifies the LRSQ request type. Not required by AnyQueue. Default: Q

Query & Cancel Requests

/Query	None	Not currently supported by AnyQueue.
/Cancel	/Can	Not currently supported by AnyQueue.

Basic SYSOUT Attributes

/CC	None	Specifies whether the output dataset has ASA, Machine or No carriage control. If 'A' is specified, ASCII line data will be converted to ASA carriage control. Valid Values: A, M, or N Default: N
/Class	/c	A one-byte variable that AnyQueue can use in the Route Assignment selection process. Valid Values: Alphanumeric character. Default: None.
/Copies	/cpy	Copy count. Valid Values: 1 to 255 Default: 1
/DDName	/ddn	An eight-byte variable.
/Dest	/d	An eight-byte variable that AnyQueue can use in the Route Assignment selection process. Valid Values: Any Default: None.
/DSName	/dsname	A 44-byte variable. Valid Values: Any Default: None.
/FCB	None	An eight-byte variable.
/Form	/f	An eight-byte variable that AnyQueue can use in the Route Assignment selection process. Valid Values: Any Default: None.
/Hold	/hld	Specifies whether or not the dataset should be in 'HOLD' status. Valid Values: Y/N.
/Jobname	/j	An eight-byte variable that AnyQueue can use in the Route Assignment selection process. Valid Values: Any Default: None.
/Outref	/orf	Not used by AnyQueue.
/UCS	None	A four-byte variable.
/Writer	/w	An eight-byte variable that AnyQueue can use in the Route Assignment selection process. Valid Values: Any Default: None.

Extended SYSOUT Attributes

/Address1-4	/ad1-4	Four sixty-byte variables.
/Building	/bld	A sixty-byte variable.
/Burst	/bst	Not used by AnyQueue.
/Chars1-4	/ca1-4	Four four-byte variables.
/Ckptline	/ckl	Not used by AnyQueue.
/Ckptpage	/ckp	Not used by AnyQueue.
/Chptsec	/cks	Not used by AnyQueue.
/CmodTrc	/cmtr	A four-byte variable.
/colormap		Not used by AnyQueue.
/CompactTbl	/ctb	An eight-byte variable.
/ComSetup	/csu	Not used by AnyQueue.
/Control	/Cntl	Not used by AnyQueue.
/Copyg1-8	/cg1-8	Not used by AnyQueue.
/CopyMod	/cpm	A four-byte variable.
/Dataack	/dck	Not used by AnyQueue.
/Dept	None	A sixty-byte variable.
/DpageLbl	/dpl	Not used by AnyQueue.
/Duplex	/dpx	Not used by AnyQueue.
/Flash	/fla	A four-byte variable.
/Flashcnt	/flhc	Not used by AnyQueue.
/Formdef	/fmd	A six-byte variable.
/Formlen	/fln	Not used by AnyQueue.
/Groupid	/gid	An eight-byte variable.
/Index	/idx	Not used by AnyQueue.
/Intray	/itr	Not used by AnyQueue.
/Linect	/lct	Not used by AnyQueue.
/Lindex	/lidx	Not used by AnyQueue.
/Longdest	/ld	Not used by AnyQueue.
/Mailbcc	/mbcc	Specifies email addresses that will receive blind copies of this document. Valid value: Maximum of 32 email addresses with a maximum length of 60 characters separated by a semi-colon. Default: None.
/Mailcc	/mcc	Specifies email addresses that will receive copies of this document. Valid value: Maximum of 32 email addresses with a maximum length of 60 characters separated by a semi-colon. Default: None

/Mailcharset	/mcset	Specifies the character set that should be used by email clients when displaying text in the body of an email. Valid value: Maximum 40 characters. Default: None.
/Mailfile	/mfile	Name of file being sent. Valid value: Maximum 60 characters. Default: None.
/Mailfrom	/mfrom	Address of sender. Valid value: Maximum 60 characters. Default: None.
/Mailreply	/mrply	Specifies the email address to send reply to. Valid value: Maximum 60 characters. Default: None. (Default reply-to will be taken from VPSX printer definition.)
/Mailto	/mto	Specifies the email addresses to send to. Valid value: 1-32 email addresses separated by a semi-colon. Default: None.
/Name	None	A sixty-byte variable.
/Notify1-4	/nt1-4	Not used by AnyQueue.
/OffsetXB	/oxb	Not used by AnyQueue.
/OffsetXF	/oxf	Not used by AnyQueue.
/OffsetYB	/oyb	Not used by AnyQueue.
/OffsetYF	/oyf	Not used by AnyQueue.
/Outbin	/obn	Not used by AnyQueue.
/Outdisp	/odp	Not used by AnyQueue.
/Outdispab	/odpa	Not used by AnyQueue.
/Overlayb	/ovb	Not used by AnyQueue.
/Overlayf	/ovf	Not used by AnyQueue.
/Ovfl	None	Not used by AnyQueue.
/Owner	None	Set Owner field when sending to DRS. DRS R3.4 fix 076 is needed to process this keyword and set the originating owner of the SYSOUT dataset.
/Pagedef	/pgd	A six-byte variable.
/Pimsg	/pim	Not used by AnyQueue.
/PIMsgcnt	/pimc	Not used by AnyQueue.
/Prmode	/prm	An eight-byte variable.
/PrtError	/pte	Not used by AnyQueue.
/PrtOptns	/pto	Not used by AnyQueue.
/PrtQueue	/ptq	Not used by AnyQueue.
/Prty	None	Not used by AnyQueue.
/Retainf	/rtf	Not used by AnyQueue.

/Retryl	/rtl	Not used by AnyQueue.
/Retryt	/rtt	Not used by AnyQueue.
/Room	None	A sixty-byte variable.
/Sysarea	/sya	Not used by AnyQueue.
/Threshld	/thld	Not used by AnyQueue.
/Title	/ttl	A sixty-byte variable.
/Trc	None	Not used by AnyQueue.
/Udata1-16	/ud1-16	Sixteen sixty-byte variables.
/Ulib1-8	/ul1-8	Not used by AnyQueue.

DASD Attributes

/AvgRecSize	/ars	Not used by AnyQueue.
/AvgRecUnit	/aru	Not used by AnyQueue.
/Blksize	/bsz	Not used by AnyQueue.
/DataClass	/dcl	Not used by AnyQueue.
/DSN	None	Not used by AnyQueue.
/DsnType	/dtp	Not used by AnyQueue.
/ExpDate	/edt	Not used by AnyQueue.
/Lrecl	/lrc	Not used by AnyQueue.
/Member	/mbr	Not used by AnyQueue.
/Mgmtclass	/mcl	Not used by AnyQueue.
/Recfm	/rfm	Not used by AnyQueue.
/RelUnused	/rus	Not used by AnyQueue.
/RetPeriod	/rpd	Not used by AnyQueue.
/SecDisp	/sdsp	Not used by AnyQueue.
/SpaceDbk	/sdb	Not used by AnyQueue.
/SpacePrim	/spr	Not used by AnyQueue.
/SpaceSec	/sse	Not used by AnyQueue.
/SpaceType	/stp	Not used by AnyQueue.
/Storclass	/scl	Not used by AnyQueue.
/UnitCount	/uct	Not used by AnyQueue.
/Unitname	/unm	Not used by AnyQueue.
/VolCount	/vct	Not used by AnyQueue.
/VolName	/vnm	Not used by AnyQueue.

SmartTag Attributes

/StOutRef	/sor	Not used by AnyQueue.
/StPrinter	/spn	Not used by AnyQueue.
/StUser	/sur	Not used by AnyQueue.

HFS File Attributes

/Path	None	Not used by AnyQueue.
/FileData	/FDAT	Not used by AnyQueue.
/HFSType	/HTYP	Not used by AnyQueue.
/HFSNDisp	/HND	Not used by AnyQueue.
/HFSADisp	/HAD	Not used by AnyQueue.
/ReadUser /WriteUser /ExecUser	/RUSR /WUSR /EUSR	Not used by AnyQueue.
/ReadGroup /WriteGroup /ExecGroup	/RGRP /WGRP /EGRP	Not used by AnyQueue.
/ReadOther /WriteOther /ExecOther	/ROTH /WOTH /EOTH	Not used by AnyQueue.
/OAppend	/OAPP	Not used by AnyQueue.
/OCreat	/OCRE	Not used by AnyQueue.
/OEXCL	/OEXC	Not used by AnyQueue.
/ONoatty	/ONOC	Not used by AnyQueue.
/OSync	/OSYN	Not used by AnyQueue.
/Otrunc	/OTRU	Not used by AnyQueue.
/ONonBlock	/ONON	Not used by AnyQueue.

Translation Table

The table below is the default ASCII to EBCDIC translation table used by the LRSQ command. This table can be modified using the `/tr AA:EE` keyword (where AA = ASCII hex value, EE = EBCDIC hex value).

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	00	01	02	03	37	2D	2E	2F	16	05	25	0B	0C	0D	0E	0F
1	10	11	12	13	B6	B5	32	26	18	19	3F	27	1C	1D	1E	1F
2	40	5A	7F	7B	5B	6C	50	7D	4D	5D	5C	4E	6B	60	4B	61
3	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9	7A	5E	4C	7E	6E	6F
4	7C	C1	C2	C3	C4	C5	C6	C7	C8	C9	D1	D2	D3	D4	D5	D6
5	D7	D8	D9	E2	E3	E4	E5	E6	E7	E8	E9	BA	E0	BB	B0	6D
6	79	81	82	83	84	85	86	87	88	89	91	92	93	94	95	96
7	97	98	99	A2	A3	A4	A5	A6	A7	A8	A9	C0	4F	D0	A1	07
8	68	DC	51	42	43	44	47	48	52	53	54	57	56	58	63	67
9	71	9C	9E	CB	CC	CD	DB	DD	DF	EC	FC	4A	B1	B2	3E	B4
A	45	55	CE	DE	49	69	9A	9B	AB	9F	5F	B8	B7	AA	8A	8B
B	3C	3D	62	6A	64	65	66	20	21	22	70	23	72	73	74	BE
C	76	77	78	80	24	15	8C	8D	8E	FF	06	17	28	29	9D	2A
D	2B	2C	09	0A	AC	AD	AE	AF	1B	30	31	FA	1A	33	34	35
E	36	59	08	38	BC	39	A0	BF	CA	3A	FE	3B	04	CF	DA	14
F	EE	8F	46	75	FD	EB	E1	ED	90	EF	B3	FB	B9	EA	BD	41

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+ANYQUEUE Return Codes Available from a Backend

Dec	Description
0	Route processing successful.
1	No matching Route Assignment found.
2	Unable to open destination specified in route.
3	Unable to open destination specified in Error Route.
4	Error receiving data from Host.
5	Received line exceeded Max Data.
6	Line Received from Host was invalid.
7	Error decompressing buffer received from Host.
8	Error writing to route destination.
9	Error creating TRAC job.
10	Error closing Route Destination.
11	Error decrypting buffer received from Host.

Directory Services OS Errors -- NWDSERR.H

-001 to -255 are Operating System errors returned through Directory Services.

Hex.	Dec.	Constant Description
0xFFFFF	-001	DSERR_INSUFFICIENT_SPACE
0xFFFF89	-119	DSERR_BUFFER_TOO_SMALL The data to be passed back is too large for the buffer you have declared.
0xFFFF88	-120	DSERR_VOLUME_FLAG_NOT_SET
0xFFFF87	-121	DSERR_NO_ITEMS_FOUND For example, you made a bindery request for items not found.
0xFFFF86	-122	DSERR_CONN_ALREADY_TEMPORARY Trying to convert a temporary connection into a temporary connection.
0xFFFF85	-123	DSERR_CONN_ALREADY_LOGGED_IN
0xFFFF84	-124	DSERR_CONN_NOT_AUTHENTICATED Connection for call must be authenticated - and is not.
0xFFFF83	-125	DSERR_CONN_NOT_LOGGED_IN Trying to logout of a connection you are not logged into.
0xFFFF82	-126	DSERR_NCP_BOUNDARY_CHECK_FAILED NCP subfunction size does not match the actual size of data sent.
0xFFFF81	-127	DSERR_LOCK_WAITING Time-out occurred before file was locked.
0xFFFF80	-128	DSERR_LOCK_FAIL Attempt to open or create a file that is already open.
0xFFFF7F	-129	DSERR_OUT_OF_HANDLES No more file handles available; the network file handle table is full.
0xFFFF7E	-130	DSERR_NO_OPEN_PRIVILEGE Attempt to open a file without the open privilege.
0xFFFF7D	-131	DSERR_HARD_IO_ERROR Hard disk input/output error on a NetWare volume; a bad sector has been encountered and could be fatal.
0xFFFF7C	-132	DSERR_NO_CREATE_PRIVILEGE Attempt to create a file without the create privilege.
0xFFFF7B	-133	DSERR_NO_CREATE_DELETE_PRIV Attempt to create an already existing file without the create/delete privileges.

Hex.	Dec.	Constant Description
0xFFFF7A	-134	DSERR_R_O_CREATE_FILE Attempt to create a file with the same name as an already existing file with read-only status.
0xFFFF79	-135	DSERR_CREATE_FILE_INVALID_NAME A file name contains invalid characters.
0xFFFF78	-136	DSERR_INVALID_FILE_HANDLE Attempt to close or perform I/O on a file with an invalid file handle (i.e. trying to read from a file that has been closed).
0xFFFF77	-137	DSERR_NO_SEARCH_PRIVILEGE Attempt to search a directory without search privileges in that directory.
0xFFFF76	-138	DSERR_NO_DELETE_PRIVILEGE Attempt to delete a file without file deletion privileges in that file's directory.
0xFFFF75	-139	DSERR_NO_RENAME_PRIVILEGE Attempt to rename a file without renaming privileges in that file's directory.
0xFFFF74	-140	DSERR_NO_SET_PRIVILEGE Attempt to modify a file without attribute modification privileges in that file's directory.
0xFFFF73	-141	DSERR_SOME_FILES_IN_USE Attempt to delete, rename, or set file attributes using an ambiguous filename while some of the files specified by the filename are in use by another workstation.
0xFFFF72	-142	DSERR_ALL_FILES_IN_USE Attempt to delete, rename, or set file attributes using a filename when the file or files specified by the filename are in use by another workstation.
0xFFFF71	-143	DSERR_SOME_READ_ONLY Attempt to open some files that are read-only.
0xFFFF70	-144	DSERR_ALL_READ_ONLY Attempt to delete, rename, or set file attributes using a filename when all of the files specified have read_only status.
0xFFFF6F	-145	DSERR_SOME_NAMES_EXIST Attempt to rename files using an ambiguous filename, when one or more files matching the new filename specification already exist.
0xFFFF6E	-146	DSERR_ALL_NAMES_EXIST Attempt to rename a file using a filename, when all of the files matching the new filename specification already exist.
0xFFFF6D	-147	DSERR_NO_READ_PRIVILEGE Attempt to read to a file without read privileges to that file.

Hex.	Dec.	Constant Description
0xFFFF6C	-148	DSERR_NO_WRITE_PRIVILEGE Attempt to write to a file without write privileges to that file, or if the specified file has read-only status.
0xFFFF6B	-149	DSERR_FILE_DETACHED Attempt to read or write to a detached file.
0xFFFF6A	-150	DSERR_NO_ALLOC_SPACE DSERR_TARGET_NOT_A_SUBDIR Attempt to write to file server which does not currently have enough free dynamic memory to process this request.
0xFFFF69	-151	DSERR_NO_SPOOL_SPACE The network operating system has determined that the network disk doesn't have enough space left for spool files.
0xFFFF68	-152	DSERR_INVALID_VOLUME The network operating system has tried to access a volume but cannot find the volume in the system definition files.
0xFFFF67	-153	DSERR_DIRECTORY_FULL Attempt to write to a volume without available directory space.
0xFFFF66	-154	DSERR_RENAME_ACROSS_VOLUME Attempt to rename across volumes; attempt to rename a file and move the renamed file from its current volume into another volume. The rename command may move the file between directories on the same volume; however, using rename to move a file between volumes is not allowed.
0xFFFF65	-155	DSERR_BAD_DIR_HANDLE Attempt to use an invalid directory handle. This occurs if the network has been brought down and brought back up without rebooting the workstation.
0xFFFF64	-156	DSERR_INVALID_PATH DSERR_NO_SUCH_EXTENSION No more trustees are listed in the directory.
0xFFFF63	-157	DSERR_NO_DIR_HANDLES No more directory handles available; the directory handle table is full. Each user may have up to 255 directory handles.
0xFFFF62	-158	DSERR_BAD_FILE_NAME Attempt to create a file using invalid characters within the name of the file.
0xFFFF61	-159	DSERR_DIRECTORY_ACTIVE Attempt to delete a directory that is being used by another workstation.
0xFFFF60	-160	DSERR_DIRECTORY_NOT_EMPTY Attempt to delete a directory that contains files or other directories.

Hex.	Dec.	Constant Description
0xFFFF5F	-161	DSERR_DIRECTORY_IO_ERROR A non-recoverable I/O error has occurred on the disk in the directory area. This error has occurred in both copies of the directory and is fatal.
0xFFFF5E	-162	DSERR_IO_LOCKED Attempt to read a file where data is physically locked.
0xFFFF5D	-163	DSERR_TRANSACTION_RESTARTED
0xFFFF5C	-164	DSERR_RENAME_DIR_INVALID
0xFFFF5B	-165	DSERR_INVALID_OPENCREATE_MODE
0xFFFF5A	-166	DSERR_ALREADY_IN_USE
0xFFFF59	-167	DSERR_INVALID_RESOURCE_TAG
0xFFFF58	-168	DSERR_ACCESS_DENIED
0xFFFF42	-190	DSERR_INVALID_DATA_STREAM
0xFFFF41	-191	DSERR_INVALID_NAME_SPACE
0xFFFF40	-192	DSERR_NO_ACCOUNTING_PRIVILEGES
0xFFFF3F	-193	DSERR_NO_ACCOUNT_BALANCE Attempt to log in by a bindery object without an accounting balance, and accounting is enabled.
0xFFFF3E	-194	DSERR_CREDIT_LIMIT_EXCEEDED Attempt to log in to account with no credit available.
0xFFFF3D	-195	DSERR_TOO_MANY_HOLDS
0xFFFF3C	-196	DSERR_ACCOUNTING_DISABLED
0xFFFF3B	-197	DSERR_LOGIN_LOCKOUT Attempt to log in after the system had locked the account because of intruder detection.
0xFFFF3A	-198	DSERR_NO_CONSOLE_RIGHTS Attempt to use console privileges without operator privileges.
0xFFFF30	-208	DSERR_Q_IO_FAILURE
0xFFFF2F	-209	DSERR_NO_QUEUE
0xFFFF2E	-210	DSERR_NO_Q_SERVER
0xFFFF2D	-211	DSERR_NO_Q_RIGHTS
0xFFFF2C	-212	DSERR_Q_FULL
0xFFFF2B	-213	DSERR_NO_Q_JOB

Hex.	Dec.	Constant Description
0xFFFF2A	-214	DSERR_NO_Q_JOB_RIGHTS DSERR_UNENCRYPTED_NOT_ALLOWED
0xFFFF29	-215	DSERR_Q_IN_SERVICE DSERR_DUPLICATE_PASSWORD Attempt to change password to a previously used password when the unique requirement is specified for the account.
0xFFFF28	-216	DSERR_Q_NOT_ACTIVE DSERR_PASSWORD_TOO_SHORT Attempt to change password to a password with less characters than the required minimum specified for the account.
0xFFFF27	-217	DSERR_Q_STN_NOT_SERVER DSERR_MAXIMUM_LOGINS_EXCEEDED Attempt to log in using an account which has limits on the number of concurrent connections and that number has been reached.
0xFFFF26	-218	DSERR_Q_HALTED DSERR_BAD_LOGIN_TIME Attempt to log in during an unauthorized time of day specified for the account.
0xFFFF25	-219	DSERR_Q_MAX_SERVERS DSERR_NODE_ADDRESS_VIOLATION Attempt to log in from an unauthorized station using an account with limits to a specific network and/or station.
0xFFFF24	-220	DSERR_LOG_ACCOUNT_EXPIRED Attempt to log in using an account which has expired or has been disabled by the Supervisor.
0xFFFF22	-222	DSERR_BAD_PASSWORD Attempt to log in using an account password which has expired and all grace logins have also expired.
0xFFFF21	-223	DSERR_PASSWORD_EXPIRED Attempt to log in using an expired account password but the login was allowed because the account had a grace login.
0xFFFF20	-224	DSERR_NO_LOGIN_CONN_AVAILABLE
0xFFFF18	-232	DSERR_WRITE_TO_GROUP_PROPERTY Attempt to write a data segment to a group property using the call to write a property value.
0xFFFF17	-233	DSERR_MEMBER_ALREADY_EXISTS Attempt to redundantly add an object to a group property.
0xFFFF16	-234	DSERR_NO_SUCH_MEMBER Attempt to use an object which is not a member of the defined group property.

Hex.	Dec.	Constant Description
0xFFFF14	-236	DSERR_NO_SUCH_VALUE_SET Attempt to use a non-existing segment. Note that segments must be written sequentially when a property is first created, but may be read and written in any order after they already exist.
0xFFFF13	-237	DSERR_PROPERTY_ALREADY_EXISTS
0xFFFF12	-238	DSERR_OBJECT_ALREADY_EXISTS
0xFFFF11	-239	DSERR_ILLEGAL_NAME Request made with an object or property name containing illegal characters. Illegal characters in names are control characters, the comma, colon, semicolon, slash, backslash, question mark, asterisk, and tilde.
0xFFFF10	-240	DSERR-ILLEGAL-WILDCARD Attempt to use a wildcard character or wild object type in a call where wildcards are not allowed.
0xFFFF0F	-241	DSERR_BINDERY_SECURITY Attempt to assign a security level of a bindery object or property to be higher than the user's security level. This would make the object or property inaccessible to the user.
0xFFFF0E	-242	DSERR_NO_OBJECT_READ_RIGHTS Attempt to access object information or scan the object's properties by a station without the necessary security to access this information.
0xFFFF0D	-243	DSERR_NO_OBJECT_RENAME_RIGHTS Attempt to rename an object without the necessary security. Only the Supervisor can rename objects. Note that if the station does not have the proper security to see that the object exists, then NCP_NO_SUCH_OBJECT is returned.
0xFFFF0C	-244	DSERR_NO_OBJECT_DELETE_RIGHTS Attempt to delete an object by a station without the necessary security to delete the object. Only the Supervisor can delete objects. Note that if the station does not even have the proper security to see that the object exists, then NCP_NO_SUCH_OBJECT is returned.
0xFFFF0B	-245	DSERR_NO_OBJECT_CREATE_RIGHTS Attempt to create an object by a station without the necessary security to create or change an object. Only Supervisors are allowed to create objects.
0xFFFF0A	-246	DSERR_NO_PROPERTY_DELETE_RIGHTS Attempt to delete a property by a station without the necessary security privilege to delete a property from the give object. Note that if the station does not have the proper security to see that the property exists, then NCP_NO_SUCH_PROPERTY is returned.
0xFFFF09	-247	DSERR_NO_PROPERTY_CREATE_RIGHTS Attempt to create a property by a station without the necessary security to create or change a property for the object.

Hex.	Dec.	Constant Description
0xFFFF08	-248	DSERR_NO_PROPERTY_WRITE_RIGHTS
0xFFFF07	-249	DSERR_NO_PROPERTY_READ_RIGHTS Attempt to read by a station without the necessary read security to access the property data.
0xFFFF06	-250	DSERR_TEMP_REMAP Attempt to use an unknown path.
0xFFFF05	-251	DSERR_UNKNOWN_REQUEST Attempt to use an invalid parameter (drive number, path, or flag value) during a set drive path call. DSERR_NO_SUCH_PROPERTY Attempt to use a property which doesn't exist for the specified object.
0xFFFF04	-252	DSERR_MESSAGE_QUEUE_FULL DSERR_TARGET_ALREADY_HAS_MSG DSERR_NO_SUCH_OBJECT Attempt to use an object which doesn't exist, or the calling station doesn't have the proper security to access the object. Note that the object name and type must both match for the object to be found.
0xFFFF03	-253	DSERR_BAD_STATION_NUMBER Attempt to use a bad (undefined, unavailable, etc.) station number.
0xFFFF02	-254	DSERR_BINDERY_LOCKED Attempt to use a bindery which is temporarily locked by the Supervisor. DSERR_DIR_LOCKED DSERR_SPOOL_DELETE DSERR_TRUSTEE_NOT_FOUND
0xFFFF01	-255	DSERR_HARD_FAILURE DSERR_FILE_NAME DSERR_FILE_EXISTS DSERR_CLOSE_FCB DSERR_IO_BOUND Attempt to write beyond the end of file or disk. DSERR_NO_SPOOL_FILE DSERR_BAD_SPOOL_PRINTER Attempt to use a bad (undefined, unavailable, etc.) printer. DSERR_BAD_PARAMETER DSERR_NO_FILES_FOUND No files were found that matched the search specification. DSERR_NO_TRUSTEE_CHANGE_PRIV DSERR_TARGET_NOT_LOGGED_IN DSERR_TARGET_NOT_ACCEPTING_MSGS DSERR_MUST_FORCE_DOWN

Directory Services Client Library -- NWDSERR.H

-301 to -399 are returned by the Directory Services client library.

Hex.	Dec.	Constant Description
0xFFFFFED3	-301	ERR_NOT_ENOUGH_MEMORY Client workstation does not have memory to allocate.
0xFFFFFED2	-302	ERR_BAD_KEY Trying to pass a bad key parameter for a context call. See NWSDC.H for the correct parameter.
0xFFFFFED1	-303	ERR_BAD_CONTEXT Trying to pass a bad <i>context</i> parameter to a Directory Services Call. Call NWSDCreateContext first and use its return value as the <i>context</i> parameter.
0xFFFFFED0	-304	ERR_BUFFER_FULL Ran out of room trying to add data to an input buffer.
0xFFFFECEF	-305	ERR_LIST_EMPTY Passed an empty list (a null pointer) to NWDSPutAttrVal for one of the following syntax types: SYN_CI_LIST SYN_OCTET_LIST
0xFFFFECE	-306	ERR_BAD_SYNTAX Tried to pass a bad syntax ID.
0xFFFFECD	-307	ERR_BUFFER_EMPTY Tried to get data from an empty buffer.
0xFFFFECC	-308	ERR_BAD_VERB Initialized the buffer with a verb not associated with the API call.
0xFFFFECB	-309	ERR_EXPECTED_IDENTIFIER The name being parsed is not typed.
0xFFFFECA	-310	ERR_EXPECTED_EQUALS An equal sign is expected in the name.
0xFFFFEC9	-311	ERR_ATTR_TYPE_EXPECTED The name being parsed is a multi-AVA and must be typed (All AVAs must be either typed or not typed).
0xFFFFEC8	-312	ERR_ATTR_TYPE_NOT_EXPECTED The name being parsed is a multi-AVA and must <i>not</i> be typed (All AVAs must be either typed or not typed).
0xFFFFEC7	-313	ERR_FILTER_THREE_EMPTY Trying to delete an empty filter.
0xFFFFEC6	-314	ERR_INVALID_OBJECT_NAME (1) Trying to pass a NULL string for object name to the API call or (2) Trying to pass a name containing both leading and trailing dots.

Hex.	Dec.	Constant Description
0xFFFFFEC5	-315	ERR_EXPECTED_RDN_DELIMITER An RDN delimiter (.) was expected and not found during the name parse.
0xFFFFFEC4	-316	ERR_TOO_MANY_TOKENS Too many trailing delimiter dots in name; only three context levels and four trailing dots in name are permitted.
0xFFFFFEC3	-317	ERR_INCONSISTENT_MULTIAVA AVA type passed in is wrong.
0xFFFFFEC2	-318	ERR_COUNTRY_NAME_TOO_LONG Country name identifiers are only allowed one character.
0xFFFFFEC1	-319	ERR_SYSTEM_ERROR Internal error.
0xFFFFFEC0	-320	ERR_CANT_ADD_ROOT Trying to restore object at root.
0xFFFFEFBF	-321	ERR_UNABLE_TO_ATTACH An API call that take a server name could not connect to the server of the specified name.
0xFFFFEFBE	-322	ERR_INVALID_HANDLE Invalid iteration handle.0xFFFFEFBD
0xFFFFEFBD	-323	ERR_BUFFER_ZERO_LENGTH Tried to call NWDSAllocBuf with a zero-length size.
0xFFFFEFBC	-324	ERR_INVALID_REPLICA_TYPE Attempt to pass in a replica type that was not a MASTER, SECONDARY, or READONLY.
0xFFFFEFBB	-325	ERR_INVALID_ATTR_SYNTAX Attempt to pass in an invalid attribute syntax ID.
0xFFFFEFB8	-328	ERR_CONTEXT_CREATION Failure to create a context - usually because Unicode tables were not loaded, if this is the first call.
0xFFFFEFB7	-329	ERR_INVALID_UNION_TAG The server returned an <i>infotype</i> parameter that did not agree with the <i>infotype</i> you passed in.
0xFFFFEFB6	-330	ERR_INVALID_SERVER_RESPONSE Returned from NWDSGetSyntaxID.
0xFFFFEFB5	-331	ERR_NULL_POINTER Real pointer expected.
0xFFFFEFB4	-332	ERR_INVALID_FILTER_SYNTAX
0xFFFFEFB3	-333	ERR_NO_CONNECTION Internal error - contact Novell Customer Support.

Hex.	Dec.	Constant Description
0xFFFFFEB2	-334	ERR_RDN_TOO_LONG The RDN exceeded 128 characters.
0xFFFFFEB1	-335	ERR_DUPLICATE_TYPE Multi-AVAs - AVAs cannot contain same type.
0xFFFFFEB0	-336	ERR_DATA_STORE_FAILURE
0xFFFFEAF	-337	ERR_NOT_LOGGED_IN
0xFFFFEAE	-338	ERR_INVALID_PASSWORD_CHARS
0xFFFFEAD	-339	ERR_FAILED_SERVER_AUTHENT
0xFFFFEAC	-340	ERR_TRANSPORT Transport failed.
0xFFFFEAB	-341	ERR_NO_SUCH_SYNTAX
0xFFFFEAA	-342	ERR_INVALID_DS_NAME (1) An empty string passed in for a name or (2) a NULL pointer.
0xFFFFEA9	-343	ERR_ATTR_NAME_TOO_LONG Attribute name exceeded 32 characters.
0xFFFFEA8	-344	ERR_INVALID_TDS Tagged Data Store is either uninitialized or corrupted. Usually, NWDSLogin was not first called.
0xFFFFEA7	-345	ERR_INVALID_DS_VERSION
0xFFFFEA6	-346	ERR_UNICODE_TRANSLATION A Unicode translation error returned from one of three calls: NWDSListPartitions, NWDSsyncPartition, and NWDSsyncSchema.
0xFFFFEA5	-347	ERR_SCHEMA_NAME_TOO_LONG Schema name exceeded 32 characters.
0xFFFFEA4	-348	ERR_UNICODE_FILE_NOT_FOUND Unicode file could not be found in the defined search algorithm defined in NWInitUnicodeTables (<i>NetWare Client Internationalization API for C</i> reference)
0xFFFFEA3	-349	ERR_UNICODE_ALREADY_LOADED (DOS-only) NWInitUnicodeTables attempted to call Unicode tables more than once.
0xFFFFEA0	-352	ERR_NO_WRITABLE_REPLICAS Returned by NWDSLogout: On logout, the server logs out of the monitor connection. Subsequently, the API call tries to find a writable replica of that monitor connection's partition, but can't.
0xFFFFE3F	-353	ERR_DN_TOO_LONG The name passed in exceeded 256 characters.
0xFFFFE3E	-354	ERR_RENAME_NOT_ALLOWED Attempt to move an object to the same place in the tree that it was in. See NWDSMoveObject.

Directory Services Agent in the Server -- NWDSERR.H

-601 to -699 are Directory Services Agent in the Server errors.

Hex.	Dec.	Constant Description
0xFFFFFDA7	-601	ERR_NO_SUCH_ENTRY Object passed in could not be found. check context relative to the passed-in name.
0xFFFFFDA6	-602	ERR_NO_SUCH_VALUE The requested attribute value could not be found.
0xFFFFFDA5	-603	ERR_NO_SUCH_ATTRIBUTE The requested attribute could not be found.
0xFFFFFDA4	-604	ERR_NO_SUCH_CLASS The class does not exist.
0xFFFFFDA3	-605	ERR_NO_SUCH_PARTITION The name of the passed-in partition could not be found.
0xFFFFDA2	-606	ERR_ENTRY_ALREADY_EXISTS Attempt to add object at the same level in the tree as a pre-existing object of the same name.
0xFFFFDA1	-607	ERR_NOT_EFFECTIVE_CLASS Attempt to create an object of a base class that is not an effective class.
0xFFFFDA0	-608	ERR_ILLEGAL_ATTRIBUTE Attempt to add an attribute that is illegal for that object class.
0xFFFFD9F	-609	ERR_MISSING_MANDATORY Attempt to add an object that is missing a mandatory attribute.
0xFFFFD93	-610	ERR_ILLEGAL_DS_NAME Server found a problem with a name passed in by the client.
0xFFFFD9D	-611	ERR_ILLEGAL_CONTAINMENT Attempt to add an object that violates the schema's containment roles for that type of object.
0xFFFFD9C	-612	ERR_CANT_HAVE_MULTIPLE_VALUES Attempt to add more than one value to a single-value attribute.
0xFFFFD9B	-613	ERR_SYNTAX-VIOLATION
0xFFFFD9A	-614	ERR_DUPLICATE_VALUE Attempt to add the same attribute-value combination to an object.
0xFFFFD99	-615	ERR_ATTRIBUTE-ALREADY-EXISTS Attempt to add an attribute that already exists.
0xFFFFD98	-616	ERR_MAXIMUM_ENTRIES_EXIST The server has reached the maximum entries in its data base.

Hex.	Dec.	Constant Description
0xFFFFFD97	-617	ERR_DATABASE_FORMAT
0xFFFFFD96	-618	ERR_INCONSISTENT_DATABASE The server has detected an inconsistent database - usually the number of entries in a container does not match the number stored in the containers entry.
0xFFFFFD95	-619	ERR_INVALID_COMPARISON Attempt to (1) compare two attributes that are not comparable or (2) use an invalid compare syntax.
0xFFFFFD94	-620	ERR_COMPARISON_FAILED
0xFFFFFD93	-621	ERR_TRANSACTIONS_DISABLED
0xFFFFFD92	-622	ERR_INVALID_TRANSPORT The type of transport passed in to the server is not supported by the server.
0xFFFFFD91	-623	ERR_SYNTAX_INVALID_IN_NAME
0xFFFFFD90	-624	ERR_REPLICA_ALREADY_EXISTS Name passed in for replica already exists.
0xFFFFFD8F	-625	ERR_TRANSPORT_FAILURE
0xFFFFFD8E	-626	ERR_ALL_REFERRALS_FAILED Server has no objects that match request and has attempted to contact <i>x</i> other servers to find the object. None of those servers respond.
0xFFFFFD8D	-627	ERR_CANT_REMOVE_NAMING_VALUE Attempt to delete the naming attribute. Rename the object, then delete the attribute.
0xFFFFFD8C	-628	ERR_OBJECT_CLASS_VIOLATION
0xFFFFFD8B	-629	ERR_ENTRY_IS_NOT_LEAF Attempt to delete an entry containing subordinates, which the API call cannot do. First delete the subordinates.
0xFFFFFD8A	-630	ERR_DIFFERENT_TREE
0xFFFFFD89	-631	ERR_ILLEGAL_REPLICA_TYPE
0xFFFFFD88	-632	ERR_SYSTEM_FAILURE
0xFFFFFD87	-633	ERR_INVALID_ENTRY_FOR_ROOT
0xFFFFFD86	-634	ERR_NO_REFERRALS Server has no objects that match request and has no referrals on which to search for the object.
0xFFFFFD85	-635	ERR_REMOTE_FAILURE Attempt to connect to other server failed.

Hex.	Dec.	Constant Description
0xFFFFFD7F	-641	ERR_INVALID_REQUEST Server did not understand request - for example, verb sent by client could be wrong.
0xFFFFFD7E	-642	ERR_INVALID_ITERATION Iteration handle passed in by client is wrong.
0xFFFFFD7D	-643	ERR_SCHEMA_IS_NONREMOVABLE Attempt to delete Novell base schema.
0xFFFFFD7C	-644	ERR_SCHEMA_IS_IN_USE Attempt to delete a schema entry that still contains an object using that schema entry. Delete that object or attribute, then delete the schema.
0xFFFFFD7B	-645	ERR_CLASS_ALREADY_EXISTS Attempt to add a class that already exists in the schema.
0xFFFFFD7A	-646	ERR_BAD_NAMING_ATTRIBUTES
0xFFFFFD79	-647	ERR_NOT_ROOT_PARTITION Attempted a function that is required on the root partition and (1) client did not pass in the root partition name or (2) client has attempted to do the function somewhere besides the root partition.
0xFFFFFD78	-648	ERR_INSUFFICIENT_STACK Server ran out of stack.
0xFFFFFD77	-649	ERR_INSUFFICIENT_BUFFER Server ran out of memory.
0xFFFFFD76	-650	ERR_AMBIGUOUS_CONTAINMENT Attempt to create a schema definition for a class that contained an ambiguous containment rule.
0xFFFFFD75	-651	ERR_AMBIGUOUS_NAMING Attempt to create a schema definition for a class that contained an ambiguous containment name.
0xFFFFFD74	-652	ERR_DUPLICATE_MANDATORY Attempt to create a schema definition for a class that contained a duplicate mandatory name.
0xFFFFFD73	-653	ERR_DUPLICATE_OPTIONAL Attempt to create a schema definition for a class that contained a duplicate optional name.
0xFFFFFD71	-655	ERR_MULTIPLE_REPLICAS
0xFFFFFD70	-656	ERR_CRUCIAL_REPLICA
0xFFFFFD6F	-657	ERR_SCHEMA_SYNC_IN_PROGRESS Function could not be completed because schema sync was in progress.

Hex.	Dec.	Constant Description
0xFFFFFD6E	-658	ERR_SKULK_IN_PROGRESS Function could not be completed because skulk was in progress.
0xFFFFFD6D	-659	ERR_TIME_NOT_SYNCHRONIZED Servers are not synchronized.
0xFFFFFD6C	-660	ERR_RECORD_IN_USE
0xFFFFFD6B	-661	ERR_DS_VOLUME_NOT_MOUNTED
0xFFFFFD6A	-662	ERR_DS_VOLUME_IO_FAILURE
0xFFFFFD69	-663	ERR_DS_LOCKED DS Database is locked; analogous to bindery being locked.
0xFFFFFD68	-664	ERR_OLD_EPOCH
0xFFFFFD67	-665	ERR_NEW_EPOCH
0xFFFFFD65	-667	ERR_PARTITION_ROOT Attempted a function that cannot be done on the root partition.
0xFFFFFD64	-668	ERR_ENTRY_NOT_CONTAINER Attempted to do an illegal function on a leaf object.
0xFFFFFD63	-669	ERR_FAILED_AUTHENTICATION Passed in a bad password.
0xFFFFFD61	-671	ERR_NO_SUCH_PARENT
0xFFFFFD60	-672	ERR_NO_ACCESS Client has no rights to do the function that returned the error.
0xFFFFFD5F	-673	ERR_REPLICA_NOT_ON
0xFFFFFD5A	-678	ERR_DUPLICATE_ACL
0xFFFFFD59	-679	ERR_PARTITION_ALREADY_EXISTS
0xFFFFFD58	-680	ERR_NOT_SUBREF Attempt to use a reference that is not a subordinate reference.
0xFFFFFD57	-681	ERR_ALIAS_OF_AN_ALIAS Attempt to alias an alias.
0xFFFFFD56	-682	ERR_AUDITING_FAILED
0xFFFFFD55	-683	ERR_INVALID_API_VERSION Library passes an invalid API version; for example, client may be using an old library.
0xFFFFFD54	-684	ERR_SECURE_NCP_VIOLATION
0xFFFFFD45	-699	ERR_FATAL

Shell/Requester Errors -- NWERROR.H

0 to 127 Shell/Requester errors

Hex.	Dec.	Constant Description
0x8800	0	SHELL_ERROR VLM_ERROR ALREADY_ATTACHED Attach attempted to server with valid, existing connection.
0x8801	1	INVALID_CONNECTION Request attempted with invalid or non-attached connection handle.
0x8802	2	DRIVE_IN_USE OS/2 only (NOT USED)
0x8803	3	CANT_ADD_CDS Map drive attempted but unable to add new current directory structure.
0x8804	4	BAD_DRIVE_BASE Map drive attempted with invalid path specification.
0x8805	5	NET_READ_ERROR Attempt to receive from the selected transport failed. NET_RECV_ERROR Attempt to receive from the selected transport failed.
0x8806	6	UNKNOWN_NET_ERROR Network send attempted with a non-specific network error.
0x8807	7	SERVER_INVALID_SLOT Server request attempted with invalid server connection slot. BAD_SERVER_SLOT Server request attempted with invalid server connection slot.
0x8808	8	NO_SERVER_SLOTS Attach attempted to server with no connection slots available.
0x8809	9	NET_WRITE_ERROR Attempt to send on the selected transport failed. NET_SEND_ERROR Attempt to send on the selected transport failed.
0x880A	10	SERVER_NO_ROUTE Attempted to find route to server where no route exists.
0x880B	11	BAD_LOCAL_TARGET OS/2 only.
0x880C	12	TOO_MANY_REQ_FRAGS Attempted request with too many request fragments specified.
0x880D	13	CONNECT_LIST_OVERFLOW Too many connections to fit in the list size specified.

Hex.	Dec.	Constant Description
0x880E	14	BUFFER_OVERFLOW Attempt to receive more data than the reply buffer had room for.
0x880F	15	NO_CONN_TO_SERVER Attempt to get connection for a server not connected. NO_CONNECTION_TO_SERVER Attempt to get connection for a server not connected
0x8810	16	NO_ROUTER_FOUND OS/2 only.
0x8811	17	BAD_FUNC_ERROR Attempted function call to non-existent or illegal function. INVALID_SHELL_CALL Attempted function call to non-existent or illegal function.
0x8830	48	NOT_SAME_CONNECTION Internal server request attempted across different server connections.
0x8831	49	PRIMARY_CONNECTION_NOT_SET Attempt to retrieve default connection with no primary connection set. NO_PRIMARY_SET Attempt to retrieve default connection with no primary connection set.
0x8832	50	NO_CAPTURE_SET Capture information requested on port with no capture in progress. NO_CAPTURE_IN_PROGRESS Capture information requested on port with no capture in progress.
0x8833	51	BAD_BUFFER_LENGTH <i>len</i> that caller requested on a GetDNC or SetDNC was too large. INVALID_BUFFER_LENGTH <i>len</i> that caller requested on a GetDNC or SetDNC was too large.
0x8834	52	NO_USER_NAME
0x8835	53	NO_NETWARE_PRINT_SPOOLER Capture requested without local print spooler installed.
0x8836	54	INVALID_PARAMETER Attempted function with invalid function parameter specified.
0x8837	55	CONFIG_FILE_OPEN_FAILED OS/2 only.
0x8838	56	NO_CONFIG_FILE OS/2 only.
0x8839	57	CONFIG_FILE_READ_FAILED OS/2 only.
0x883A	58	CONFIG_LINE_TOO_LONG OS/2 only.

Hex.	Dec.	Constant Description
0x883B	59	CONFIG_LINES_IGNORED OS/2 only.
0x883C	60	NOT_MY_RESOURCE Attempted request made with a parameter using foreign resource.
0x883D	61	DAEMON_INSTALLED OS/2 only.
0x883E	62	SPOOLER_INSTALLED Attempted load of print spooler with print spooler already installed.
0x883F	63	CONN_TABLE_FULL Tried to alloc a connection handle with no more local connection table entries. CONNECTION_TABLE_FULL Tried to alloc a connection handle with no more local connection table entries.
0x8840	64	CONFIG_SECTION_NOT_FOUND OS/2 only.
0x8841	65	BAD_TRAN_TYPE Attempted function on a connection with an invalid transport selected. INVALID_TRANSPORT_TYPE Attempted function on a connection with an invalid transport selected.
0x8842	66	TDS_TAG_IN_USE OS/2 only.
0x8843	67	TDS_OUT_OF_MEMORY OS/2 only.
0x8844	68	TDS_INVALID_TAG Attempted TDS function with invalid tag.
0x8845	69	TDS_WRITE_TRUNCATED Attempted TDS write with buffer that exceeded buffer.
0x8846	70	NO_DIRECTORY_SERVICE_CONNECTION SERVICE_BUSY Attempted request to a busy, partially asynchronous function.
0x8847	71	NO_SERVER_ERROR Attempted connect failed to find any servers responding.
0x8848	72	BAD_VLM_ERROR Attempted function call to non-existent or non-loaded overlay.
0x8849	73	NETWORK_DRIVE_IN_USE Attempted map to network drive that was already mapped.
0x884A	74	LOCAL_DRIVE_IN_USE Attempted map to local drive that was in use.

Hex.	Dec.	Constant Description
0x884B	75	NO_DRIVES_AVAILABLE Attempted map to next available drive when none available.
0x884C	76	DEVICE_NOT_REDIRECTED The device is not redirected.
0x884D	77	NO_MORE_SFT_ENTRIES Maximum number of files was reached.
0x884E	78	UNLOAD_ERROR Attempted unload failed.
0x884F	79	IN_USE_ERROR Attempted re-use of already in use connection entry.
0x8850	80	TOO_MANY_REP_FRAGS Attempted request with too many reply fragments specified.
0x8851	81	TABLE_FULL Attempted to add a name into the name table after it was full.
0x8852	82	SOCKET_NOT_OPEN Listen was posted on unopened socket.
0x8853	83	MEM_MGR_ERROR Attempted enhanced memory operation failed.
0x8854	84	SFT3_ERROR An SFT3 switch occurred mid-transfer.
0x8855	85	PREFERRED_NOT_FOUND Preferred directory server not established, but another directory server was returned.
0x8856	86	DEVICE_NOT_RECOGNIZED Determine if the device is not used by VLM; pass to next redirector, if any.
0x8857	87	BAD_NET_TYPE The network type (Bindery or Directory Services) does not match the server version.
0x8858	88	ERROR_OPENING_FILE Generic open failure error, invalid path, access denied, etc.
0x8859	89	NO_PREFERRED_SPECIFIED No preferred name specified.
0x885A	90	ERROR_OPENING_SOCKET Error opening a socket.
0x88FF	127	SHELL_FAILURE Either an unknown error, or the shell is not present. VLM_FAILURE Either an unknown error, or the VLM is not present.

Server Errors -- NWERROR.H

001 to 255 are Server errors

Hex.	Dec.	Constant Description
0x8901	001	ERR_INSUFFICIENT_SPACE
0x8977	119	ERR_BUFFER_TOO_SMALL
0x8978	120	ERR_VOLUME_FLAG_NOT_SET The service requested is not available on the selected volume.
0x8979	121	ERR_NO_ITEMS_FOUND
0x897A	122	ERR_CONN_ALREADY_TEMP
0x897B	123	ERR_CONN_ALREADY_LOGGED_IN
0x897C	124	ERR_CONN_NOT_AUTHENTICATED
0x897D	125	ERR_CONN_LOT_LOGGED_IN
0x897E	126	NCP_BOUNDARY_CHECK_FAILED
0x897E	127	ERR_LOCK_WAITING
0x8980	128	ERR_LOCK_FAIL FILE_IN_USE_ERROR Attempt to open or create a file that is already open.
0x8981	129	NO_MORE_FILE_HANDLES No more file handles available; the network file handle table is full.
0x8982	130	NO_OPEN_PRIVILEGES Attempt to open a file without the open privilege.
0x8983	131	IO_ERROR_NETWORK_DISK Hard disk input/output error on a NetWare volume; a bad sector has been encountered and could be fatal.
0x8984	132	NO_CREATE_PRIVILEGES Attempt to create a file without the create privilege.
0x8985	133	NO_CREATE_DELETE_PRIVILEGES Attempt to create an already existing file without the create/delete privileges.
0x8986	134	CREATE_FILE_EXISTS_READ_ONLY Attempt to create a file with the same name as an already existing file with read-only status.
0x8987	135	WILD_CARDS_IN_CREATE_FILE_NAME Attempt to create a file using an ambiguous filename.

Hex.	Dec.	Constant Description
0x8988	136	INVALID_FILE_HANDLE Attempt to close or perform I/O on a file with an invalid file handle (i.e., trying to read from a file that has been closed).
0x8989	137	NO_SEARCH_PRIVILEGES Attempt to search a directory without search privileges in that directory.
0x898A	138	NO_DELETE_PRIVILEGES Attempt to delete a file without file deletion privileges in that file's directory.
0x898B	139	NO_RENAME_PRIVILEGES Attempt to rename a file without renaming privileges in that file's directory.
0x898C	140	NO_MODIFY_PRIVILEGES Attempt to modify a file without attribute modification privileges in that file's directory.
0x898D	141	SOME_FILES_AFFECTED_IN_USE Attempt to delete, rename, or set file attributes using an ambiguous filename while some of the files specified by the filename are in use by another workstation.
0x898E	142	NO_FILES_AFFECTED_IN_USE Attempt to delete, rename, or set file attributes using an ambiguous filename while some of the files specified by the filename are in use by another workstation.
0x898F	143	SOME_FILES_AFFECTED_READ_ONLY Attempt to delete, rename, or set file attributes using a filename when some of the files specified have read-only status.
0x8990	144	NO_FILES_AFFECTED_READ_ONLY Attempt to delete, rename, or set file attributes using a filename when all of the files specified have read-only status.
0x8991	145	SOME_FILES_RENAMED_NAME_EXISTS Attempt to rename files using an ambiguous filename, when one or more files matching the new filename specification already exist.
0x8992	146	NO_FILES_RENAMED_NAME_EXISTS Attempt to rename a file using a filename, when all of the files matching the new filename specification already exist.
0x8993	147	NO_READ_PRIVILEGES Attempt to read a file without read privileges to that file.
0x8994	148	NO_WRITE_PRIVILEGES_OR_READONLY Attempt to write to a file without write privileges to that file, or if the specified file has read-only status.

Hex.	Dec.	Constant Description
0x8995	149	FILE_DETACHED Attempt to read or write to a detached file.
0x8996	150	SERVER_OUT_OF_MEMORY Attempt to write to file server which does not currently have enough free dynamic memory to process this request. ERR_TARGET_NOT_A_SUBDIRECTORY
0x8997	151	NO_DISK_SPACE_FOR_SPOOL_FILE The network operating system has determined that the network disk doesn't have enough space left for spool files.
0x8998	152	VOLUME_DOES_NOT_EXIST The network operating system has tried to access a volume but cannot find the volume in the system definition files.
0x8999	153	DIRECTORY_FULL
0x899A	154	RENAMING_ACROSS_VOLUMES Attempt to rename across volumes; attempt to rename a file and move the renamed file from its current volume into another volume. The rename command may move the file between directories on the same volume; however, using rename to move a file between volumes is not allowed.
0x899B	155	BAD_DIRECTORY_HANDLE Attempt to use an invalid directory handle. This occurs if the network has been brought down and brought back up without rebooting the workstation.
0x899C	156	INVALID_PATH NO_MORE_TRUSTEES No more trustees are listed in the directory.
0x899D	157	NO_MORE_DIRECTORY_HANDLES No more directory handles available; the directory handle table is full. Each user may have up to 255 directory handles.
0x899E	158	INVALID_FILENAME Attempt to create a file using invalid characters within the name of the file.
0x899F	159	DIRECTORY_ACTIVE Attempt to delete a directory that is being used by another workstation.
0x89A0	160	DIRECTORY_NOT_EMPTY
0x89A1	161	DIRECTORY_IO_ERROR A non-recoverable I/O error has occurred on the disk in the directory area. This error has occurred in both copies of the directory and is fatal.

Hex.	Dec.	Constant Description
0x89A2	162	READ_FILE_WITH_RECORD_LOCKED Attempt to read a file where data is physically locked.
0x89A3	163	ERR_TRANSACTION_RESTARTED
0x89A4	164	ERR_RENAME_DIR_INVALID
0x89A5	165	ERR_INVALID_OPENCREATE_MODE
0x89A6	166	ERR_ALREADY_IN_USE
0x89A7	167	ERR_INVALID_RESOURCE_TAG
0x89A8	168	ERR_ACCESS_DENIED
0x89BE	190	INVALID_DATA_STREAM
0x89BF	191	INVALID_NAME_SPACE
0x89C0	192	NO_ACCOUNTING_PRIVILEGES
0x89C1	193	LOGIN_DENIED_NO_ACCOUNT_BALANCE Attempt to log in by a bindery object without an accounting balance, and accounting is enabled.
0x89C2	194	LOGIN_DENIED_NO_CREDIT Attempt to log in to account with no credit available.
0x89C3	195	ERR_TOO_MANY_HOLDS
0x89C4	196	ACCOUNTING DISABLED
0x89C5	197	INTRUDER_DETECTION_LOCK Attempt to log in after the system had locked the account because of intruder detection.
0x89C6	198	NO_CONSOLE_OPERATOR Attempt to use console without operator privileges. NO_CONSOLE_PRIVILEGES
0x89C8	200	MISSING_EA_KEY
0x89C9	201	EA_NOT_FOUND
0x89CA	202	INVALID_EA_HANDLE_TYPE
0x89CB	203	EA_NO_KEY_NO_DATA
0x89CC	204	EA_NUMBER_MISMATCH
0x89CD	205	EXTENT_NUMBER_OUT_OF_RANGE
0x89CE	206	EA_BAD_DIR_NUM

Hex.	Dec.	Constant Description
0x89CF	207	INVALID_EA_HANDLE
0x89D0	208	ERR_Q_IO_FAILURE EA_POSITION_OUT_OF_RANGE
0x89D1	209	ERR_NO_QUEUE EA_ACCESS_DENIED
0x89D2	210	ERR_NO_Q_SERVER DATA_PAGE_ODD_SIZE
0x89D3	211	ERR_NO_Q_RIGHTS EA_VOLUME_NOT_MOUNTED
0x89D4	212	ERR_Q_FULL BAD_PAGE_BOUNDARY
0x89D5	213	ERR_NO_Q_JOB INSPECT_FAILURE
0x89D6	214	ERR_NO_Q_JOB_RIGHTS EA_ALREADY_CLAIMED
0x89D7	215	ERR_Q_IN_SERVICE PASSWORD_NOT_UNIQUE Attempt to change password to a previously used password when the unique requirement is specified for the account. ODD_BUFFER_SIZE
0x89D8	216	ERR_Q_NOT_ACTIVE PASSWORD_TOO_SHORT Attempt to change password to a password with fewer characters than the required minimum specified for the account. NO_SCORECARDS
0x89D9	217	ERR_Q_STN_NOT_SERVER LOGIN_DENIED_NO_CONNECTION Attempt to log in using an account which was limits on the number of concurrent connections and that number has been reached. ERR_MAXIMUM_LOGINS_EXCEEDED BAD_EDS_SIGNATURE
0x89DA	218	ERR_Q_HALTED UNAUTHORIZED_LOGIN_TIME EA_SPACE_LIMIT

Hex.	Dec.	Constant Description
0x89DB	219	UNAUTHORIZED_LOGIN_STATION Attempt to log in from an unauthorized station using an account with limits to a specific network and/or station.
		ERR_Q_MAX_SERVERS
		EA_KEY_CORRUPT
0x89DC	220	ACCOUNT_DISABLED Attempt to log in using an account which has expired or has been disabled by the Supervisor.
		EA_KEY_LIMIT
0x89DD	221	TALLY_CORRUPT
0x89DE	222	PASSWORD_HAS_EXPIRED_NO_GRACE Attempt to log in using an account password which has expired and all grace logins have also expired.
0x89DF	223	PASSWORD_HAS_EXPIRED Attempt to log in using an expired account password but the login was allowed because the account had a grace login.
0x89E7	231	E_NO_MORE_USERS
0x89E8	232	NOT_ITEM_PROPERTY Attempt to use an item not associated with this property group or an item which has been deleted from this group.
		WRITE_PROPERTY_TO_GROUP Attempt to write a data segment to a group property using the call to write a property value.
0x89E9	233	MEMBER_ALREADY_EXISTS Attempt to redundantly add an object to a group property.
0x89EA	234	NO_SUCH_MEMBER
0x89EB	235	NOT_GROUP_PROPERTY Attempt to use a non-group property.
0x89EC	236	NO_SUCH_SEGMENT Attempt to use a non-existing segment. Note that segments must be written sequentially when a property is first created, but may be read and written in any order after they already exist.
0x89ED	237	PROPERTY_ALREADY_EXISTS
0x89EE	238	OBJECT_ALREADY_EXISTS

Hex.	Dec.	Constant Description
0x89EF	239	INVALID_NAME Request made with an object or property name containing illegal characters. Illegal characters in names are control characters, the comma, colon, semicolon, slash, backslash, question mark, asterisk, and tilde.
0x89F0	240	WILD_CARD_NOT_ALLOWED Attempt to use a wildcard character or wild object type in a call where wildcards are not allowed. ERR_INVALID_SM_ID
0x89F1	241	INVALID_BINDERY_SECURITY Attempt to assign a security level of a bindery object or property to be higher than the user's security level. This would make the object or property inaccessible to the user.
0x89F2	242	NO_OBJECT_READ_PRIVILEGE Attempt to access object information or scan the object's properties by station without the necessary security to access this information. ERR_SM_ALREADY_REGISTERED
0x89F3	243	NO_OBJECT_RENAME_PRIVILEGE Attempt to rename an object without the necessary security. Only the Supervisor can rename objects. Note that if the station does not have the proper security to see that the object exists, then NCP_NO_SUCH_OBJECT is returned. ERR_SM_CLOSE_FAILED
0x89F4	244	NO_OBJECT_DELETE_PRIVILEGE Attempt to delete an object by a station without the necessary security to delete the object. Only the Supervisor can delete objects. Note that if the station does not even have the proper security to see that the object exists, then NCP_NO_SUCH_OBJECT is returned. ERR_SM_WRITE_NO_SPACE
0x89F5	245	NO_OBJECT_CREATE_PRIVILEGE Attempt to create an object by a station without the necessary security to create or change an object. Only Supervisors are allowed to create objects.
0x89F6	246	NO_PROPERTY_DELETE_PRIVILEGE Attempt to delete a property by a station without the necessary security privilege to delete a property from the give object. Note that if the station does not have the proper security to see that the property exists, then NCP_NO_SUCH_PROPERTY is returned. NOT_SAME_LOCAL_DRIVE ERR_SM_WRITE_IO_ERROR

Hex.	Dec.	Constant Description
0x89F7	247	<p>NO_PROPERTY_CREATE_PRIVILEGE Attempt to create a property by a station without the necessary security to create or change a property for the object.</p> <p>TARGET_DRIVE_NOT_LOCAL</p> <p>ERR_SM_OPEN_FAILED</p>
0x89F8	248	<p>NO_PROPERTY_WRITE_PRIVILEGE Attempt to write by a station without the necessary write security to change the property data.</p> <p>ALREADY_ATTACHED_TO_SERVER</p> <p>NOT_ATTACHED_TO_SERVER</p> <p>ERR_SM_DELETE_FAILED</p>
0x89F9	249	<p>NO_FREE_CONNECTION_SLOTS</p> <p>NO_PROPERTY_READ_PRIVILEGE Attempt to read by a station without the necessary read security to access the property data.</p>
0x89FA	250	<p>NO_MORE_SERVER_SLOTS</p> <p>TEMP_REMAP_ERROR Attempt to use an unknown path.</p>
0x89FB	251	<p>INVALID_PARAMETERS Attempt to use an invalid parameter (drive number, path, or flag value) during a set drive path call.</p> <p>NO_SUCH_PROPERTY</p>
0x89FC	252	<p>INTERNET_PACKET_REQT_CANCELED</p> <p>UNKNOWN_FILE_SERVER Attempt to attach to a server using an invalid server name.</p> <p>MESSAGE_QUEUE_FULL</p> <p>NO_SUCH_OBJECT Attempt to use an object which doesn't exist, or the calling station doesn't have the proper security to access the object. Note that the object name and type must both match for the object to be found.</p>

Hex.	Dec.	Constant Description
0x89FD	253	<p>LOCK_COLLISION</p> <p>BAD_STATION_NUMBER Attempt to use a bad (undefined, unavailable, etc.) station number.</p> <p>INVALID_PACKET_LENGTH The requesting packet did not have a 30 byte packet header as the first ragment, or its total length exceeded 576 characters.</p> <p>UNKNOWN_REQUEST</p>
0x89FE	254	<p>BINDERY_LOCKED Attempt to use a bindery which is temporarily locked by the Supervisor.</p> <p>TRUSTEE_NOT_FOUND</p> <p>DIRECTORY_LOCKED</p> <p>INVALID_SEMAPHORE_NAME_LENGTH Attempt to open a semaphore with an invalid semaphore name length. Semaphores use strings that are from 1 to 127 bytes long.</p> <p>PACKET_NOT_DELIVERABLE Currently unable to deliver packet for any of the following possible reasons: (1) The destination node is on another network, and no router could be found with a path to the destination network. or (2) the destination node address is on the local network, and hardware detects that the destination node address is nonexistent or inactive, or (3) the destination node is the same machine as the source node, and there is no pending listen request on the destination socket number, or the destination socket number is not open.</p> <p>SERVER_BINDERY_LOCKED</p> <p>SOCKET_TABLE_FULL Attempt to open a socket when the socket table already has 50 entries marked as open.</p> <p>SPOOL_DIRECTORY_ERROR</p> <p>SUPERVISOR_HAS_DISABLED_LOGIN Attempt to log in when the Supervisor has disabled logins from the console or the bindery was locked.</p> <p>TIMEOUT_FAILURE Failure caused by the timeout limit expiring before the request was fulfilled.</p>

Hex.	Dec.	Constant Description
0x89FF	255	<p>BAD_PRINTER_ERROR Attempt to use a bad (undefined, unavailable, etc.) printer.</p> <p>BAD_RECORD_OFFSET Attempt to use an invalid offset value during physical locking calls.</p> <p>CLOSE_FCB_ERROR Error closing file.</p> <p>FILE_EXTENSION_ERROR Attempt to use file with a bad (undefined, unavailable, etc.) extension.</p> <p>FILE_NAME_ERROR Attempt to use file with a bad (undefined, unavailable, etc.) name.</p> <p>HARDWARE_FAILURE</p> <p>INVALID_DRIVE_NUMBER</p> <p>DOS_INVALID_DRIVE Attempt to use an invalid (undefined, unavailable, etc.) drive.</p> <p>INVALID_INITIAL_SEMAPHORE_VALUE Attempt to open a semaphore with an invalid semaphore value. The semaphore value must be positive, and must be initialized to a value from 0 to 127.</p> <p>INVALID_SEMAPHORE_HANDLE Attempt to examine, wait, or signal a semaphore with an invalid semaphore handle. The semaphore handle is obtained through the open a semaphore call.</p> <p>IO_BOUND_ERROR Attempt to write beyond the end of file or disk.</p> <p>NO_FILES_FOUND_ERROR No files were found that matched the search specification.</p> <p>NO_RESPONSE_FROM_SERVER</p> <p>NO_SUCH_OBJECT_OR_BAD_PASSWORD Attempt to use an unfound object, or attempt to use a bad (undefined, unavailable, etc.) password. On a login call, this indicates the password was correct, but it has expired and all grace logins have been used up. On a change password call, it indicates that the old password given was correct, but the account is not allowed to change the password (typical of the GUEST account).</p>

Hex.	Dec.	Constant Description
		PATH_NOT_LOCATABLE Attempt to find an unknown path during a get full path call.
		QUEUE_FULL_ERROR Attempt to use a queue with 99 entries in it (99 is the maximum number of entries that can be placed in each print queue).
		REQUEST_NOT_OUTSTANDING
		SOCKET_ALREADY_OPEN Attempt to redundantly open a socket whose specified socket number is already open.
		LOCK_ERROR Attempt to use a locked file.

IPX, NCP, etc. -- NWDSERR.H

Errors from the file system, IPX, NCP, and other OS services (1-byte, mapped to -1 to -256 when returned as a Directory Services error).

Hex.	Dec.	Constant Description
0xFFFFFFFF	-1	ERR_OF_SOME_SORT Many OS errors are originally 0xFF.
0xFFFFFFFFB	-5	ERR_REQUEST_UNKNOWN Corresponds to OS error ERR_UNKNOWN_REQUEST which is 0xFB.
0xFFFFFFFF96	-150	ERR_INSUFFICIENT_MEMORY Corresponds to OS error ERR_NO_ALLOC_SPACES which is 0x96.

Print Server Communication Errors -- NWPSRV.H

Hex.	Dec.	Constant Description
0x0000	0	NWPSE_SUCCESSFUL
0x0040	64	NWPSE_NO_AVAILABLE_SPX_CONNECTI
0x0041	65	NWPSE_SPX_NOT_INITIALIZED
0x0042	66	NWPSE_NO_SUCH_PSERVER
0x0043	67	NWPSE_UNABLE_TO_GET_SERVER_ADDR
0x0044	68	NWPSE_UNABLE_TO_CONNECT_TO_SERV
0x0045	69	NWPSE_NO_AVAILABLE_IPX_SOCKETS
0x0046	70	NWPSE_ALREADY_ATTACH_TO_A_PRINT
0x0047	71	NWPSE_IPX_NOT_INITIALIZED

Print Server Errors -- NWPSRV.H

Hex.	Dec.	Constant Description
0x0101	257	NWPSE_TOO_MANY_NW_SERVERS The print server exceeded the maximum number of NetWare servers it is configured for. In NetWare v3.11, the maximum number of servers that the print server can be configured for is 8.
0x0102	258	NWPSE_UNKNOWN_NW_SERVER Either the NetWare server name does not exist, or the NetWare server the print server is attached to cannot see the other NetWare server.
0x0103	259	NWPSE_BINDERY_LOCKED A call made by the print server to the bindery found the bindery locked. See your network Supervisor.
0x0104	260	NWPSE_NW_SERVER_MAXED_OUT When the print server tried to log in to the NetWare server, it exceeded the maximum number of users that can log in at the same time. The number of users allowed depends on the NetWare version.
0x0105	261	NWPSE_NO_RESPONSE The NetWare server that the print server is attempting to log in to is not responding.
0x0106	262	NWPSE_ALREADY_ATTACHED The print server login to the NetWare server failed because the print server was already logged into it.
0x0107	263	NWPSE_CANT_ATTACH This is a generic return code for unknown errors that occur when the print server is trying to attach to the NetWare server.
0x0108	264	NWPSE_NO_ACCOUNT_BALANCE Although Accounting was activated, no account property was created for the print server. See your network Supervisor.
0x0109	265	NWPSE_NO_CREDIT_LEFT The NetWare server sends this message when the print server cannot log in because the account balance has been exceeded.
0x010A	266	NWPSE_INTRUDER_DETECTION_LOCK The print server locks up when the intruder detection lock is set and the user exceeds the number of login tries.
0x010B	267	NWPSE_TOO_MANY_CONNECTIONS The print server login to the NetWare server failed because it did not have a connection. This may happen if there are no available connections on the server. Check the number of connections and retry.
0x010C	268	NWPSE_ACCOUNT_DISABLED Although an account exists, it has been disabled. See your network Supervisor.

Hex.	Dec.	Constant Description
0x010D	269	NWPSE_UNAUTHORIZED_TIME The times during which the print server can log in to the NetWare server have been restricted.
0x010E	270	NWPSE_UNAUTHORIZED_STATION The locations from which the print server can log in to the NetWare server have been restricted.
0x010F	271	NWPSE_NO_MORE_GRACE The print server has reached the maximum number of grace logins allowed to change its password. See your network Supervisor.
0x0110	272	NWPSE_LOGIN_DISABLED The network Supervisor disabled all print servers from logging in to the NetWare server.
0x0111	273	NWPSE_ILLEGAL_ACCT_NAME The print server name is not a valid account name.
0x0112	274	NWPSE_PASSWORD_HAS_EXPIRED The print server's password needs to be changed.
0x0113	275	NWPSE_ACCESS_DENIED The print server is not able to log in to the specified NetWare server because either the print server name is invalid, or the password is invalid.
0x0114	276	NWPSE_CANT_LOGIN This is a generic return code for unknown errors that occur when the print server is trying to log in to the NetWare server.
0x0115	277	NWPSE_PRINTER_ALREADY_INSTALLED To be determined.
0x0116	278	NWPSE_CANT_OPEN_CONFIG_FILE To be determined.
0x0117	279	NWPSE_CANT_READ_CONFIG_FILE To be determined.
0x0118	280	NWPSE_UNKNOWN_PRINTER_TYPE The printer type you used is either not listed in the print server configuration files, or is defined elsewhere.
0x0200	512	NWPSE_NO_SUCH_QUEUE The queue that the print server is trying to attach to cannot be located. Verify the queue name.
0x0201	513	NWPSE_NOT_AUTHORIZED_FOR_QUEUE The print server is not authorized to service the queue it needs to attach to.
0x0202	514	NWPSE_QUEUE_HALTED The queue that the print server is trying to attach to was previously placed on hold.

Hex.	Dec.	Constant Description
0x0203	515	NWPSE_UNABLE_TO_ATTACH_TO_QUEUE This is a generic return code for unknown errors that occur when the print server is trying to attach to a queue.
0x0204	516	NWPSE_TOO_MANY_QUEUE_SERVERS The number of queue servers that can attach to a queue was exceeded.
0x0300	768	NWPSE_INVALID_REQUEST The request you made is unrecognizable.
0x0301	769	NWPSE_NOT_ENOUGH_MEMORY The print server could not allocate sufficient memory to complete your request.
0x0302	770	NWPSE_NO_SUCH_PRINTER The specified printer is unrecognizable.
0x0303	771	NWPSE_INVALID_PARAMETER The function call you made contains unrecognizable parameters.
0x0304	772	NWPSE_PRINTER_BUSY You must pause the printer before giving this command, or wait until the job completes.
0x0305	773	NWPSE_CANT_DETACH_PRIMARY_SERVE You can detach the print server from all NetWare servers, except the primary server.
0x0306	774	NWPSE_GOING_DOWN The print server is going down. All commands will be ignored except for Cancel Down.
0x0307	775	NWPSE_NOT_CONNECTED The command could not be completed because the printer is not connected.
0x0308	776	NWPSE_ALREADY_IN_USE The slot number you specified for the remote printer is already in use. You cannot attach the remote printer to the print server using this number.
0x0309	777	NWPSE_NO_JOB_ACTIVE There were no active jobs when the command was issued.
0x030A	778	NWPSE_NOT_ATTACHED_TO_SERVER The print server is not attached to the specified NetWare server.
0x030B	779	NWPSE_ALREADY_IN_LIST Either the queue you tried to attach to is already on the list, or the user you tried to add to the notify list is already on the list.
0x030C	780	NWPSE_DOWN The print server is down.

Hex.	Dec.	Constant Description
0x030D	781	NWPSE_NOT_IN_LIST Either the queue you tried to change is not on the list, or the <i>notify user</i> you tried to change is not on the list.
0x030E	782	NWPSE_NO_RIGHTS You have insufficient rights to give this command.
0x030F	783	NWPSE_CMD_NOT_SUPPORTED
0x0400	1024	NWPSE_UNABLE_TO_VERIFY_IDENTITY The print server cannot verify the user name used in the login to the print server.
0x0401	1025	NWPSE_NOT_REMOTE_PRINTER The command you sent applies only to remote printers.
0x0402	1026	NWPSE_UNAUTHORIZED_PRINTER

Other Print Server Errors -- NWPSRV.H

Hex.	Dec.	Constant Description
0x00007760	N/A	NWPSE_END_OF_LIST No other items are left in the GetFirst/GetNext list.
0x00007761		NWPSE_END_OF_ATTR_LIST The Verify call did not succeed.
0x00007762		NWPSE_END_OF_ATTR_LIST No other attributes are left in the object list.
0x00007763		NWPSE_WRONG_CLASS_LIST_ENTRY For Directory Services only. This error returns when the Verify call finds the common name, but the object base class does not match what you were verifying.
0x00007770		NWPSE_BAD_VERSION The version of the database you accessed was the wrong one. See your network Supervisor to correct the version.
0x00007771		NWPSE_END_SCAN You reached the end of the scan list. There are no more entries.
0x00007772		NWPSE_ERROR_EXPANDING_DB You cannot add any more information because there is no more disk space in the network drive. Free up some space or get more allocated.
0x00007773		NWPSE_ERROR_GETTING_DEFAULT The default was specified, but there is an error in the database.
0x00007774		NWPSE_ERROR_OPENING_DB Either the libraries cannot find the database, or you are not authorized to use the database. See the network Supervisor.
0x00007775		NWPSE_ERROR_READING_DB Either you are not authorized to use the database, or there is a possible database problem. See the network Supervisor.
0x00007777		NWPSE_ERROR_WRITING_DB Either you are out of disk space, or you are not authorized to write to the database. Free up some space or see the network Supervisor.
0x00007779		NWPSE_INTERNAL_ERROR There is a problem with the database or the application. Contact the network Supervisor or application vendor.
0x0000777A		NWPSE_JOB_NOT_FOUND You requested information on an item that was not in the database. The item may have been deleted already or was never part of the list.
0x0000777B		NWPSE_NO_DEFAULT_SPECIFIED The PrintCON default entry has not been defined. Either you or the network Supervisor must define it using <i>NWPSSetDefaultJob</i> .

Hex.	Dec.	Constant Description
0x0000777C		NWPSE_OUT_OF_MEMORY Your workstation is out of RAM. Increase RAM.
0x0000777D		NWPSE_ERROR_SEEKING_DB Seek failed inside the Database. See the network Supervisor.
0x0000777E		NWPSE_NO_ACCESS_RIGHTS_DB The database could not be opened because you have no rights. See the network Supervisor.
0x00007790		NWPSE_ERROR_OPENING_IMP The import/export file could not be opened.
0x00007791		NWPSE_ERROR_READING_IMP The import/export file could not be read.
0x00007792		NWPSE_ERROR_WRITING_IMP The import/export file could not be written.
0x00007793		NWPSE_NO_ACCESS_RIGHTS_IMP The import/export file could not be opened because you have no rights. See the network Supervisor.
0x000077A0		NWPSE_CONTEXT_CANNOT_BE_ROOT The context for the PrintDEF database cannot be at the root.
0x000077A1		NWPSE_CONTEXT_CONTAINS_NO_ORGS The context for the PrintDEF database was expected to have OU or O levels, but none were found.

APPC Primary Return Codes (Windows and OS/2)

Primary Code	Description
0000	OK
	Reason: The verb issued by the local TP was executed successfully. Action: No action needs to be taken.
0001	PARAMETER_CHECK
	Reason: The verb issued by the local TP contained a parameter with an invalid argument. Action: Correct the appropriate verb parameter.
0002	STATE_CHECK
	Reason: The local TP issued a verb, the conversation is in a state that is not valid for the issued verb. Action: Issue a verb that is valid for the current state, or wait for a valid state to re-issue the verb.
0003	ALLOCATION_ERROR
	Reason: The conversation could not be allocated by APPC. The conversation is now in RESET state. Action: The action you take at this point is determined by the secondary return_code you receive.
0005	DEALLOC_ABEND
	Reason: This error notification is returned when either the partner TP or partner LU issue an MC_DEALLOCATE verb. If returned from the partner TP, it is because the MC_DEALLOCATE verb was specified with the type ABEND. If returned from the partner LU, it is normally due to an ABEND condition in the partner TP. Action: Check the TP for errors.
0006	DEALLOC_ABEND_PROG
	Reason: This error notification is returned when either the partner TP or partner LU issue a DEALLOCATE verb and specify the type ABEND_PROG. If the conversation for the partner TP is in Receive or Pending Post state when the Deallocate occurs, any information sent by the local TP to the partner TP is ignored. This error notification is also returned when the partner TP or partner LU issues a DEALLOCATE and the local TP has issued a verb in Send, Receive or Pending Post state. Action: Check the TP for errors.

Primary Code	Description
0007	DEALLOC_ABEND_SVC
	<p>Reason: This error notification is returned when either the partner TP or partner LU issue a DEALLOCATE verb and specify the type ABEND_SVC. If the conversation for the partner TP is in Receive or Pending Post state when the Deallocate occurs, any information sent by the local TP to the partner TP is ignored. This error notification is also returned when the partner TP or partner LU issues a DEALLOCATE and the local TP has issued a verb in Send, Receive or Pending Post state.</p> <p>Action: Check the TP for errors.</p>
0008	DEALLOC_ABEND_TIMER
	<p>Reason: This error notification is returned when either the partner TP or partner LU issue a DEALLOCATE verb and specify the type ABEND_TIMER. If the conversation for the partner TP is in Receive or Pending Post state when the Deallocate occurs, any information sent by the local TP to the partner TP is ignored. This error notification is also returned when the partner TP or partner LU issues a DEALLOCATE and the local TP has issued a verb in Send, Receive or Pending Post state.</p> <p>Action: Check the TP for errors.</p>
0009	DEALLOC_NORMAL
	<p>Reason: A DEALLOCATE was issued by the partner TP with a type of FLUSH or SYNC_LEVEL, and with a synchronization level of NONE. This return code is returned to the local TP after it issues the next verb in Receive or Pending Post state.</p> <p>Action: No action needs to be taken.</p>
000C	PROG_ERROR_NO_TRUNC
	<p>Reason: The partner TP was in Send state and issued a SEND_ERROR of type PROG, but no logical record was truncated. No logical records are truncated when SEND_ERROR is issued before sending any logical records or after sending a complete logical record.</p> <p>Action: Correct the error reported by the partner TP.</p>
000D	PROG_ERROR_TRUNC
	<p>Reason: The partner TP was in Send state and issued a SEND_ERROR of type PROG, and a logical record was truncated. A logical record is truncated when SEND_ERROR is issued after the local TP starts to send a logical record but before the entire logical record is sent.</p> <p>Action: Correct the error reported by the partner TP and resend the truncated logical record.</p>

Primary Code	Description
000E	PROG_ERROR_PURGING
	<p>Reason: The partner TP was in Receive, Pending Post or Confirm state and issued a SEND_ERROR of type PROG. If the conversation for the partner TP is in Receive or Pending Post state when the Send Error occurs, any information sent by the local TP but not yet received by the partner TP is ignored (purged).</p> <p>Action: Correct the error reported by the partner TP. The local TP may also need to resend any purged data.</p>
000F	CONV_FAILURE_RETRY
	<p>Reason: A temporary failure has terminated the conversation.</p> <p>Action: Allocate the conversation again.</p>
0010	CONV_FAILURE_NO_RETRY
	<p>Reason: A failure of some sort has terminated the conversation.</p> <p>Action: No action can be taken by the TP. Normally operator intervention is required to determine the cause of the failure.</p>
0011	SVC_ERROR_NO_TRUNC
	<p>Reason: The partner TP was in Send state and issued a SEND_ERROR of type SVC, but no logical record was truncated. No logical records are truncated when SEND_ERROR is issued before sending any logical records or after sending a complete logical record.</p> <p>Action: Correct the error reported by the partner TP or partner LU.</p>
0012	SVC_ERROR_TRUNC
	<p>Reason: The partner TP or partner LU was in Send state and issued a SEND_ERROR of type SVC, and a logical record was truncated. A logical record is truncated when SEND_ERROR is issued after the local TP starts to send a logical record but before the entire logical record is sent.</p> <p>Action: Correct the error reported by the partner TP or partner LU and resend the truncated logical record.</p>
0013	SVC_ERROR_PURGING
	<p>Reason: The partner TP or partner LU was in Receive, Pending Post or Confirm state and issued a SEND_ERROR of type SVC. If the conversation for the partner TP or partner LU is in Receive or Pending Post state when the Send Error occurs, any information sent by the local TP but not yet received by the partner TP or partner LU is ignored (purged).</p> <p>Action: Correct the error reported by the partner TP or partner LU. The local TP may also need to resend any purged data.</p>

Primary Code	Description
0014	UNSUCCESSFUL
	<p>Reason: If the local TP issued [MC_]TEST_RTS, the REQUEST_TO_SEND has not been received. If the local TP issued [MC_]RECEIVE_IMMEDIATE, there is no data available to be received. If the local TP issued [MC_]ALLOCATE and return control is specified as IMMEDIATE, a contention winner session could not be allocated.</p> <p>Action: Take the action necessary for the verb issued.</p>
0018	CNOS_PARTNER_LU_REJECT
	<p>Reason: The remote LU rejected a CNOS request from the local LU, as indicated by the secondary return_code.</p> <p>Action: Take the action described in the secondary return_code.</p>
0019	CONVERSATION_TYPE_MIXED
	<p>Reason: The TP has created a mixed conversation by issuing both mapped and basic verbs on the same conversation.</p> <p>Action: Correct the TP so that verbs issued match the conversation type specified by the ALLOCATE or RECEIVE_ALLOCATE verbs.</p>
0021	CANCELED
	<p>Reason: The [MC_]RECEIVE_AND_POST Receive function has been canceled due to one of the following verbs being issued:</p> <ol style="list-style-type: none"> 1. DEALLOCATE with a Type of ABEND_PROG, ABEND_SVC or ABEND_TIMER 2. MC_DEALLOCATE with Type ABEND 3. [MC_]SEND_ERROR or 4. P_ENDED. <p>Action: No action can be taken.</p>
0032	CONFIG_FILE_ERROR
	<p>Reason: An error occurred when trying to update the auto-trace selections in the configuration file. Additional error information has been recorded in the Communications Manager error log.</p> <p>Action: Look at the Communications Manager error log for any errors that were logged at the same time. Follow the directions provided by those error logs.</p>

Primary Code	Description
F002	TP_BUSY
	<p>Reason: The verb could not be executed because another verb was being executed for the same transaction program on a different thread. Only one verb at a time can be executed from a given transaction program. This return_code can also occur if more than one thread of a transaction program issues verbs using the same tp_id.</p> <p>Action: No action can be taken. The TP will issue the verb again and it will be executed. Design the program so that the TP issues all verbs from a single thread or synchronize the issuance of verbs from different threads so that it does not have to rely on the TP_BUSY return_code.</p>
F003	COMMUNICATION_SUBSYSTEM_ABENDED
	<p>Reason: The verb could not be executed because APPC has abnormally ended. An abnormal end returns error types 0004 and FFFF.</p> <p>Action: Investigate the DosKillProcess and DosExit function calls in the TP. Do not issue these calls in one thread of a program that might simultaneously be calling APPC in another thread. Also, make sure that every RECEIVE_ALLOCATE and TP_STARTED verb is match with a TP_ENDED verb.</p>
F004	COMMUNICATION_SUBSYSTEM_NOT_LOADED
	<p>Reason: The verb could not be executed because the APPC engine is not loaded.</p> <p>Action: Load the APPC engine (e.g., DynaComm/Elite) before executing your TP.</p>
F008	INVALID_VERB_SEGMENT
	<p>Reason: The verb could not be processed by APPC because the verb is truncated at the end of the data segment containing the verb.</p> <p>Action: Check the 4-byte verb control block pointer that was passed to APPC; it may not be pointing to the beginning of the verb control block. Make sure that your program is using a read/write data segment large enough to contain the entire verb structure.</p>
F011	UNEXPECTED_DOS_ERROR
	<p>Reason: An unexpected OS/2 return_code has been encountered.</p> <p>Action: Take the action described in the secondary return_code.</p>
F014	INVALID_CONFIG_FILE
	<p>Reason: APPC encountered an error when reading the Communications Manager configuration file.</p> <p>Action: Verify the integrity of the current Communications Manager configuration file. If damaged or truncated, restore the file from a backup.</p>

Primary Code	Description
F015	STACK_TOO_SMALL
	<p>Reason: The verb cannot be executed because APPC found the stack size to be less than the minimum size. A minimum size of 3.5KB (3500 bytes) is required by APPC.</p> <p>Action: Increase the stack size specified in the local program's source code in the .DEF file used in linking. Reassemble, recompile or relink your program as required; then retry the program.</p>
F020	INVALID_KEY
	<p>Reason: The supplied key was incorrect.</p> <p>Action: Issue the verb again with a valid key (find the current master or service key).</p>
F021	X25_ERROR
	<p>Reason: X.25 encountered an error when the DISPLAY verb was used to find X.25 information.</p> <p>Action: Take the action described in the secondary return_code. Also, assure that sufficient memory is available in your machine, and that your CONFIG.SYS file has been set up correctly before retrying your program.</p>
FFFF	INVALID_VERB
	<p>Reason: The verb issued by the local TP was not recognized and did not execute. The local TP has either specified in incorrect verb operation code or called the wrong entry point.</p> <p>Action: Specify a valid verb operation code or entry point.</p>

APPC Secondary Return Codes (Windows and OS/2)

Secondary Code	Description
00000000	OK
	Reason: The verb issued by the local TP was executed successfully. Action: No action needs to be taken.
00000000	CNOS_ACCEPTED
	Reason: The session limits and responsibility that are specified are accepted by APPC. Action: No action needs to be taken.
00000001	BAD_TP_ID
	Reason: The specified tp_id parameter is not recognized by APPC. The wrong tp_id was supplied on the verb. Action: Issue the verb again with the proper tp_id.
00000002	BAD_CONV_ID
	Reason: The specified conv_id parameter is not recognized by APPC. Action: Issue the verb again with the proper conv_id.
00000003	BAD_LU_ALIAS
	Reason: The specified lu_alias is not recognized by APPC. Action: Look in the local Communications Manager configuration file or use the DISPLAY verb to find which LU profiles have been configured at the local machine. Issue the verb again, specifying one of the configured LUs. If the local transaction program requires an LU alias that has not yet been configured, it must be configured before this verb will be successful.
00000004	ALLOCATION_FAILURE_NO_RETRY
	Reason: This secondary return_code suggests that something is wrong at the local machine and that the TP should not attempt to allocate a conversation until the reason for this failure is located and corrected. Action: Do not attempt to retry the allocation request. Contact the appropriate systems personnel.
00000005	ALLOCATION_FAILURE_RETRY
	Reason: This secondary return_code suggests that something is wrong at the remote machine or with the connection between the two machines and that there was a problem activating a link or session. The TP should attempt the allocation request again. Action: It is suggested that you have your TP pause or wait for a key stroke before retrying the allocation request. This will help to prevent the network from being cluttered with attempted allocation requests.

Secondary Code	Description
00000006	INVALID_DATA_SEGMENT
	<p>Reason: The segment containing the data buffer is too small for the specified data length, or the segment is not a shared, unnamed segment. The data length may be too large, or the address of the data buffer may be wrong.</p> <p>Action: Make sure that the data segment is a shared, unnamed segment. Determine the size and starting address of the data segment. Make sure that the data length and data address parameters specified in the verb control block correspond to the actual size and location of the desired segment.</p>
00000007	CNOS_NEGOTIATED
	<p>Reason: The session limits and responsibility as negotiated by the remote LU have been accepted by APPC.</p> <p>Action: No action needs to be taken.</p>
00000011	BAD_CONV_TYPE
	<p>Reason: The specified conversation_type is not recognized by APPC.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter (value must be either BASIC_CONVERSATION or MAPPED CONVERSATION).</p>
00000012	BAD_SYNC_LEVEL
	<p>Reason: The specified sync_level is not recognized by APPC.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter (either NONE or CONFIRM).</p>
00000013	BAD_SECURITY
	<p>Reason: The specified security parameter is not recognized by APPC.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter (either NONE, SAME or PGM).</p>
00000014	BAD_RETURN_CONTROL
	<p>Reason: The specified return_control parameter is not recognized by APPC.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter (either WHEN_SESSION_ALLOCATED, IMMEDIATE or WHEN_SESSION_FREE).</p>

Secondary Code	Description
00000016	PIP_LEN_INCORRECT
	<p>Reason: The pip_data_length is longer than 32767 bytes.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a value less than or equal to 32767 bytes.</p>
00000017	NO_USE_OF_SNASVCMG
	<p>Reason: APPC does not accept SNASVCMG as the value for the mode_name parameter.</p> <p>Action: Look at the mode_name being used in the verb control block. SNASVCMG is not a valid value.</p>
00000018	UNKNOWN_PARTNER_MODE
	<p>Reason: The specified partner_lu_alias or mode_name is not recognized by APPC.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a partner_lu_alias and mode_name that have been configured. Also, check the spelling of both names in your program and configuration.</p>
00000031	CONFIRM_ON_SYNC_LEVEL_NONE
	<p>Reason: APPC does not allow a TP to issue an MC_CONFIRM verb if the synchronization level of this conversation is allocated as NONE.</p> <p>Action: Either change the MC_ALLOCATE verb to specify a sync_level other than NONE, or prevent the program from issuing the MC_CONFIRM verb.</p>
00000032	CONFIRM_BAD_STATE
	<p>Reason: The conversation is not in Send state.</p> <p>Action: The state information returned by APPC was not handled properly by your program. Fix your local program to be aware of its current state, using the information returned by APPC.</p>
00000033	CONFIRM_NOT_LL_BDY
	<p>Reason: The conversation is in Send state and the TP started, but did not finish, sending a logical record.</p> <p>Action: The TP should send the remainder of the logical record before issuing a CONFIRM verb.</p>
00000041	CONFIRMED_BAD_STATE
	<p>Reason: The conversation is not in the Confirm state.</p> <p>Action: Your TP has not properly handled the state information returned by APPC. Fix your program to be aware of its current state, using the information returned by APPC.</p>

Secondary Code	Description
0000051	DEALLOC_BAD_TYPE
	<p>Reason: The specified type parameter is not recognized by APPC.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>
0000052	DEALLOC_FLUSH_BAD_STATE
	<p>Reason: The TP specified type (SYNC_LEVEL) for a conversation that has a synchronization level of NONE and is not in Send state. Alternatively, the TP may have specified type (FLUSH) when the conversation was not in Send state. The conversation was not deallocated.</p> <p>Action: Your TP has not properly handled the state information returned by APPC. Fix your local program to be aware of its current state, using the information returned by APPC.</p>
0000053	DEALLOC_CONFIRM_BAD_STATE
	<p>Reason: The TP specified type (SYNC_LEVEL) for a conversation that has a synchronization level of NONE and is not in Send state. Alternatively, the TP may have specified type (CONFIRM) when the conversation was not in Send state. The conversation was not deallocated.</p> <p>Action: Your TP has not properly handled the state information returned by APPC. fix your local program to be aware of its current state, using the information returned by APPC.</p>
0000055	DEALLOC_NOT_LL_BDY
	<p>Reason: The conversation is in Send state and type was specified as SYNC_LEVEL or FLUSH. The TP started, but did not finish, sending a logical record.</p> <p>Action: The TP should send the remainder of the logical record before issuing a DEALLOCATE verb.</p>
0000057	DEALLOG_LOG_LL_WRONG
	<p>Reason: The LL field of the log data does not match the specified log_data_length.</p> <p>Action: Look at the verb control block and the data buffer being issued for this verb. Assure that the log_data_length parameter corresponds with the LL field at the beginning of the data buffer. Remember that the log_data_length is in byte-reversed format, and the LL field is not.</p>
0000061	FLUSH_NOT_SEND_STATE
	<p>Reason: The conversation is not in Send state.</p> <p>Action: Your TP has not properly handled the state information returned by APPC. Fix your local program to be aware of its current state, using the information returned by APPC.</p>

Secondary Code	Description
000000A1	P_TO_R_INVALID_TYPE
	<p>Reason: The specified type parameter is not recognized by APPC. The specified value must be either SYNC_LEVEL or FLUSH.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>
000000A2	P_TO_R_NOT_LL_BDY
	<p>Reason: The conversation is in Send state and the TP started, but did not finish, sending a logical record.</p> <p>Action: The TP should send the remainder of the logical record before issuing a PREPARE_TO_RECEIVE verb.</p>
000000A3	P_TO_R_NOT_SEND_STATE
	<p>Reason: The conversation is not in Send state.</p> <p>Action: Your TP has not properly handled the state information returned by APPC. Fix your local program to be aware of its current state, using the information returned by APPC.</p>
000000B1	RCV_AND_WAIT_BAD_STATE
	<p>Reason: The conversation is not in Receive or Send state.</p> <p>Action: Your TP has not properly handled the state information returned by APPC. Fix your local program to be aware of its current state, using the information returned by APPC.</p>
000000B2	RCV_AND_WAIT_NOT_LL_BDY
	<p>Reason: The conversation is in Send state and the TP started, but did not finish, sending a logical record.</p> <p>Action: The TP should send the remainder of the logical record before issuing a RECEIVE_AND_WAIT verb.</p>
000000B5	RCV_AND_WAIT_BAD_FILL
	<p>Reason: The TP specified an invalid value for the fill parameter. The specified value must be either BUFFER or LL.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>
000000B7	RCV_AND_WAIT_BAD_RETURN_STATUS_WITH_DATA
	<p>Reason: The specified return_status_with_data parameter is not recognized by APPC. The specified value must be either YES or NO.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>

Secondary Code	Description
000000C1	RCV_IMMD_BAD_STATE
	<p>Reason: The conversation is not in Receive state.</p> <p>Action: Your TP has not properly handled the state information returned by APPC. Fix your local program to be aware of its current state, using the information returned by APPC.</p>
000000C4	RCV_IMMD_BAD_FILL
	<p>Reason: The TP specified an invalid value for the fill parameter. The specified value must be either BUFFER or LL.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>
000000C7	RCV_IMMD_BAD_RETURN_STATUS_WITH_DATA
	<p>Reason: The specified return_status_with_data parameter is not recognized by APPC. The specified value must be either YES or NO.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>
000000D1	RCV_AND_POST_BAD_STATE
	<p>Reason: The conversation is not in Receive or Send state.</p> <p>Action: Your TP has not properly handled the state information returned by APPC. Fix your local program to be aware of its current state, using the information returned by APPC.</p>
000000D2	RCV_AND_POST_NOT_LL_BDY
	<p>Reason: The conversation is in Send state and the TP started, but did not finish, sending a logical record.</p> <p>Action: The TP should send the remainder of the logical record before issuing a RECEIVE_AND_POST verb.</p>
000000D5	RCV_AND_POST_BAD_FILL
	<p>Reason: The TP specified an invalid value for the fill parameter. The specified value must be either BUFFER or LL.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>
000000D7	RCV_AND_POST_BAD_RETURN_STATUS_WITH_DATA
	<p>Reason: The specified return_status_with_data parameter is not recognized by APPC. The specified value must be either YES or NO.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>

Secondary Code	Description
000000E1	R_T_S_BAD_STATE
	<p>Reason: The conversation is in the wrong state.</p> <p>Action: Your TP has not properly handled the state information returned by APPC. Fix your program to be aware of its current state, using the information returned by APPC.</p>
000000F1	BAD_LL
	<p>Reason: The data buffer contains an invalid logical record length (LL) value of 0000h, 0001h, 8000h or 800 lh.</p> <p>Action: Look at the data buffer used for this verb. Assure that the LL fields in the data buffer contain valid values.</p>
000000F2	SEND_DATA_NOT_SEND_STATE
	<p>Reason: The conversation is not in Send state.</p> <p>Action: Your TP has not properly handled the state information returned by APPC. Fix your local program to be aware of its current state, using the information returned by APPC.</p>
000000F4	SEND_DATA_INVALID_TYPE
	<p>Reason: The specified type parameter is not recognized by APPC.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>
000001B4	DISPLAY_INFO_EXCEEDS_LEN
	<p>Reason: The information did not fit in the user-supplied buffer and Communications Manager stopped processing the DISPLAY verb. As much information as possible was returned. If a particular type of information cannot be returned into the display data buffer because it will not fit, no information of that type is returned, and its returned information address contains X'FFFFFFFF'.</p> <p>Action: Increase the segment containing the buffer.</p>
000001B5	DISPLAY_INVALID_CONSTANT
	<p>Reason: The verb issued by the local TP contained a length_of_initial_section parameter with an invalid argument.</p> <p>Action: Correct the appropriate verb parameter argument.</p>
00000102	SEND_ERROR_LOG_LL_WRONG
	<p>Reason: The LL field of the log data does not match the specified log_data_length.</p> <p>Action: Look at the verb control block and the data buffer being issued for this verb. Make sure that the log_data_length parameter corresponds with the LL field at the beginning of the data buffer. Remember that the log_data_length is in byte-reversed format, and the LL field is not.</p>

Secondary Code	Description
00000103	SEND_ERROR_BAD_TYPE
	<p>Reason: The specified type parameter is not recognized by APPC. The specified parameter must be either PROG or SVC.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>
00000105	BAD_ERROR_DIRECTION
	<p>Reason: The specified error_direction parameter is not recognized by APPC. The specified value must be either RECEIVE or SEND.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>
00000150	CNOS_IMPLICIT_PARALLEL
	<p>Reason: APPC does not permit a program to change the session limit for a mode other than the SNASVCMG mode for the implicit partner template when the template specifies parallel sessions. (The term template is used because many of the actual values are yet to be filled in.) Before the session activation request identifying the implicit partner arrives, CNOS negotiation is impossible. It is permissible to change session limits for implicit partners once they have been established.</p> <p>Action: Fix your local program so that it does not issue a CNOS verb for modes other than the SNASVCMG mode, when the partner LU is an implicit partner LU template. Implicit partner LU's are those configured with a partner LU name that starts with an asterisk(*).</p>
00000151	CAN'T_RAISE_LIMITS
	<p>Reason: APPC does not permit setting session limits to a non-zero value unless the limits are currently zero.</p> <p>Action: Use the DISPLAY verb to find the current session limits. If they are already the value desired by your local program, then no action is required. If they are not acceptable, then the session limits must first be lowered to zero, then raised to the desired non-zero value.</p>
00000153	ALL_MODE_MUST_RESET
	<p>Reason: APPC does not permit a non-zero session limit when the mode_name_select parameter indicates ALL.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it does not specify a value other than zero, or change the mode_name_select parameter to a value other than ALL.</p>

Secondary Code	Description
00000154	BAD_SNASVCMG_LIMITS
	<p>Reason: Your program specified invalid settings for the partner_LU_mode+session_limit, min_conwinners_source, or min_conwinners_target parameters when mode_name (SNASVCMG) was supplied. The three groups of valid settings are as follows:</p> <p>partner_LU_mode_session_limit(2) min_conwinners_source(1) min_conwinners_target(1) partner_LU_mode_session_limit(1) min_conwinners_source(0) min_conwinners_target(1) partner_LU_mode_session_limit(0) min_conwinners_source(0) min_conwinners_target(0)</p> <p>Action: Look at the verb control block being used for this verb. Fix your local program so that it specifies a valid combination of these three parameters whenever the SNASVCMG mode is specified.</p>
00000155	MIN_GT_TOTAL
	<p>Reason: The sum of min_conwinners_source and min_conwinners_target specifies a number greater than partner_LU_mode session limit.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that the sum of the min_conwinners_source plus the min_conwinners_target is less than or equal to the partner_LU_mode_session_limit.</p>
00000156	CNOS_MODE_CLOSED
	<p>Reason: The local LU cannot negotiate a non-zero session limit because the local maximum session limit at the remote LU is 0.</p> <p>Action: The local program cannot take any action until the remote LU raises its session limit above 0.</p>
00000156	MODE_CLOSED
	<p>Reason: The CNOS verb must specify a mode session limit of 0 because the local maximum negotiable session limit is currently 0 for the specified mode and set_negotiable(YES) was specified.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies 0 for the mode session limit.</p>

Secondary Code	Description
00000157	BAD_MODE_NAME
	<p>Reason: The remote LU does not recognize the specified mode name.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a mode_name that has been defined at the remote location.</p>
00000157	CNOS_MODE_NAME_REJECT
	<p>Reason: The remote LU does not recognize the specified mode name.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a mode_name that has been defined at the remote location.</p>
00000159	RESET_SNA_DRAINS
	<p>Reason: The SNASVCMG mode does not support the drain parameter values.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for the drain parameter whenever the mode_name specifies SNASVCMG.</p>
0000015B	BAD_PARTNER_LU_ALIAS
	<p>Reason: APPC did not recognize the supplied partner_lu alias as a configured partner for the supplied lu_alias.</p> <p>Action: Look at the local Communications Manager configuration file.</p>
0000015C	EXCEEDS_MAX_ALLOWED
	<p>Reason: The local maximum negotiable session limit is less than the session limit specified with the CNOS verb and set_negotiable (YES) was specified.</p> <p>Action: Use the DISPLAY verb to find the local maximum negotiable session limit. Fix your local program to specify a session limit less than that value.</p>
0000015D	CHANGE_SRC_DRAINS
	<p>Reason: APPC does not permit mode_name_select(ONE) and drain_source(YES) when drain_source(NO) is currently in effect for the specified mode.</p> <p>Action: No action needs to be taken.</p>
0000015E	LU_DETACHED
	<p>Reason: A command to stop Communications Manager as reset the definition of the local LU before the CNOS verb tried to specify that LU.</p> <p>Action: No action needs to be taken.</p>

Secondary Code	Description
0000015F	CNOS_COMMAND_RACE_REJECT
	<p>Reason: The local LU is currently processing a CNOS verb issued by the remote LU.</p> <p>Action: Retry the CNOS verb after a short delay.</p>
00000243	TOO_MANY_TPS
	<p>Reason: The maximum number of Tps are already running on the LU. This number is defined during configuration on the create/change APPC logical unit profile. Each incoming allocation request is counted as a TP, including those currently being rejected. If the TP_STARTED verb is tried again, the verb may be accepted.</p> <p>Action: Either raise the value for the Maximum number of TPs field in the configuration, or reduce the number of concurrent TPs.</p>
00000301	SSCP_PU_SESSION_NOT_ACTIVE
	<p>Reason: The NMVT was not sent because the SSCP-PU session was not active or because Communications Manager was not running.</p> <p>Action: Make sure that the SSCP-PU session is active or the Communications Manager is running.</p>
00000302	DATA_EXCEEDS_RU_SIZE
	<p>Reason: The data length exceeded the allowable RU size.</p> <p>Action: Increase the RU size or decrease the data length.</p>
00000303	INVALID_DATA_TYPE
	<p>Reason: The data type specified was not a valid type.</p> <p>Action: Specify a valid data type. Valid data types are: ALERT_SUBVECTORS, NMVT or USER_DEFINED.</p>
00000304	INVALID_NMVT_HEADER_ERROR
	<p>Reason: This error is returned under two conditions: The value specified in data_length was too short. The LL field in the NMVT header was incorrectly specified.</p> <p>Action: The data_length must be at least 12 bytes to allow for the NMVT header (8 bytes) plus a 2-byte LL (major vector length bytes) field plus the major vector key (2 bytes). The value specified for the LL plus the length of the NMVT header (8 bytes) must equal the value specified for data length.</p>

Secondary Code	Description
00000401	INVALID_DIRECTION
	<p>Reason: The specified direction parameter is not recognized by APPC. The specified value must be either ASCII_TO_EBCDIC or EBCDIC_TO_ASCII.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>
00000403	INVALID_FIRST_CHARACTER
	<p>Reason: The application specified character_set A, but the first character in the source string did not satisfy type A requirements.</p> <p>Action: There are three types of ASCII/EBCDIC conversion tables you can specify for use by the CONVERT verb: A, AE and G. Type A and Type AE tables are defined within Communications Manager. Type G table is user-defined; its file name is specified on the Communications Manager configuration menus. The type G table can be used to convert any character. Check to see that you have specified the correct conversion table for the characters you want to convert.</p>
00000405	TABLE_ERROR
	<p>Reason: The application specified character_set G, but the translation table filename was not specified in the workstation profile during configuration, or the file that contains the conversation table was in error.</p> <p>Action: Specify the correct filename in the workstation profile or make sure that the filename is correct.</p>
00000406	CONVERSION_ERROR
	<p>Reason: The application specified either character set A or character set AE, but Communications Manager encountered source characters not in the conversion table and converted them to X'00'.</p> <p>Action: This error cannot occur if the program specifies G (user-defined table) on the character_set parameter.</p>
00000506	UNDEFINED_TP_NAME
	<p>Reason: The APPC attach manager cannot find the specified tp_name among those configured.</p> <p>Action: Look at the verb control block being issued for this verb. Verify that the tp_name parameter specified on this RECEIVE_ALLOCATE verb has been configured in one of the remotely attachable TP profiles.</p>

Secondary Code	Description
0000508	ATTACH_MANAGER_INACTIVE
	<p>Reason: The APPC attach manager is not processing RECEIVE_ALLOCATE verbs. Either the attach manager was not configured as automatically activated or the attach manager stopped using Subsystem Management or the STOP_AM verb.</p> <p>Action: In order to accept RECEIVE_ALLOCATE verbs, the attach manager must be started. Use Subsystem Management to start the attach manager or issue the START_AM verb. In the SNA base profile, consider specifying Yes for automatically activated, so that the attach manager will be activated whenever APPC is started.</p>
0000509	ALLOCATE_NOT_PENDING
	<p>Reason: The timeout value for the RECEIVE_ALLOCATE verb was exceeded with no incoming allocation requests received.</p> <p>Action: Make sure that the remote program issuing the MC_ALLOCATE verb then issues a verb that will cause the allocation request to actually be sent by APPC.</p>
000050A	ATTACH_MANAGER_ALREADY_ACTIVE
	<p>Reason: The APPC attach manager is already started.</p> <p>Action: No action needs to be taken.</p>
000050D	LINK_DEACT_IN_PROGRESS
	<p>Reason: Deactivation of the specified link is already in progress as a result of a previous action or command.</p> <p>Action: No action needs to be taken.</p>
000050E	UNRECOGNIZED_DEACT_TYPE
	<p>Reason: The specified type parameter is not recognized by APPC.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>
000050F	INVALID_LINK_ID
	<p>Reason: The specified link identifier is not assigned to any link.</p> <p>Action: Use the DISPLAY verb to find the valid link Ids. Issue the verb again.</p>

Secondary Code	Description
0000510	INVALID_DLC
	<p>Reason: The specified parameter is not recognized by APPC. The wrong <i>dlc_namename</i> was supplied on the verb.</p> <p>Action: Issue the verb again with the proper <i>dlc_namename</i>. This is the ASCII name of the adapter that is used for this logical link. Only the following ASCII strings are allowed:</p> <p>‘ETHERAND’ ‘IBMPCNET’ ‘IBMTRNET’ ‘SDLC’ ‘TWINAX’ ‘X25DLC’</p>
0000512	INVALID_SESSION_ID
	<p>Reason: The specified session identifier is not assigned to any session on the specified LU-LU pair.</p> <p>Action: Use the DISPLAY verb to find the valid session Ids. Issue the verb again.</p>
0000517	DEACT_LINK_UNSUCCESSFUL
	<p>Reason: An error of type 001B was logged at the time APPC deactivated the logical link. This means that there was some inconsistency between APPC and the DLC at the time the DEACTIVATE_LOGICAL_LINK verb was issued.</p> <p>Action: Look at the Communications Manager error log for any DLC errors that were logged at the same time. Follow the directions provided by those error logs.</p>
0000525	INVALID_PROCESS
	<p>Reason: The process that issued a RECEIVE_ALLOCATE verb is a different process from the one started by the APPC attach manager. This secondary return_code is returned only when the TP operation for the associated TP has been configured as Queued - attach manager started or Queued - operator started. The definition of a queued program is that only a single instance of the program can be executing at a time. The attach manager uses the OS/2 process ID (PID) to ensure that only one instance is executing.</p> <p>Action: Make sure that the TP operation field has been configured so that it matches how the local program will be started.</p>

Secondary Code	Description
00000621	INVALID_MESSAGE_ACTION
	<p>Reason: The specified message_action parameter is not recognized by APPC. The specified value must be either INTERV or NO_INTERV.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>
00000630	INVALID_CHAR_NOT_FOUND
	<p>Reason: The character_not_found option was incorrectly specified.</p> <p>Action: Specify the correct character in the source code page that does not exist in the target code page.</p>
00000700	INVALID_FORWARD
	<p>Reason: The specified forward parameter is not recognized by APPC. The specified value must be either LOGS, SYSTEM_MESSAGES or USER_MESSAGES.</p> <p>Action: Look at the verb control block being issued for this verb. Fix your local program so that it specifies a valid value for this parameter.</p>
080F6051	SECURITY_NOT_VALID
	<p>Reason: The allocation request was rejected by the partner TP because the supplied user ID and/pr password is invalid.</p> <p>Action: Specify a valid user ID and/or password.</p>
084B6031	TRANS_PGM_NOT_AVAIL_RETRY
	<p>Reason: The allocation request was rejected by the partner TP because the specified TP cannot be started immediately.</p> <p>Action: The allocation request can be attempted again, but it is recommended that you pause execution or wait for a keystroke before retrying.</p>
084C0000	TRANS_PGM_NOT_AVAIL_NO_RETRY
	<p>Reason: The allocation request was rejected by the partner TP because the specified TP cannot be started.</p> <p>Action: Since the specified TP cannot be started, do not attempt to retry the allocation request. Consult the appropriate systems personnel.</p>
10086021	TP_NAME_NOT_RECOGNIZED
	<p>Reason: The allocation request was rejected by the partner TP because either the partner TP name specified by the local TP is unrecognized or invalid, or the partner LU name or mode name specified by the local TP is unrecognized or invalid.</p> <p>Action: Specify a valid partner TP name, LU name or mode name.</p>

Secondary Code	Description
10086031	PIP_NOT_ALLOWED
	<p>Reason: The allocation request was rejected by the partner LU because program initialization parameters (PIP data) was specified by the local TP, and the partner TP either does not support PIP data or has no PIP variables defined.</p> <p>Action: Since the partner TP does not support PIP data, you should not use PIP data when communicating with this particular partner TP.</p>
10086032	PIP_NOT_SPECIFIED_CORRECTLY
	<p>Reason: The allocation request was rejected by the partner LU because PIP data was specified, but either the partner TP has a different number of PIP variables defined or the local TP has specified that PIP data is not to be used.</p> <p>Action: Make sure that the [MC_]ALLOCATE verb specifies that PIP variables are to be used and that the number of PIP variables used agrees with the number specified by the partner TP.</p>
10086034	CONVERSATION_TYPE_MISMATCH
	<p>Reason: The allocation request was rejected by the partner LU because one of the two LUs involved does not support the conversation type that has been specified.</p> <p>Action: In order to correct this situation you need to change either the local TP or the attachable TP to agree on the conversation type as either Basic or Mapped.</p>
10086041	SYNC_LEVEL_NOT_SUPPORTED
	<p>Reason: The allocation request was rejected by the partner TP because the SYNC_LEVEL type specified by the local TP is unrecognized or invalid.</p> <p>Action: Specify a valid SYNC_LEVEL type.</p>

Microsoft Windows MAPI Return Codes

<u>Return Code</u>	<u>Definition</u>
0	SUCCESS
1	USER ABORT
2	FAILURE
3	LOGIN FAILURE
4	DISK FULL
5	INSUFFICIENT MEMORY
6	ACCESS DENIED
8	TOO MANY SESSIONS
9	TOO MANY FILES
10	TOO MANY RECIPIENTS
11	ATTACHMENT NOT FOUND
12	ATTACHMENT OPEN FAILURE
13	ATTACHMENT WRITE FAILURE
14	UNKNOWN RECIPIENT
15	BAD RECIPTYPE
16	NO MESSAGES
17	INVALID MESSAGE
18	TEXT TOO LARGE
19	INVALID SESSION
20	TYPE NOT SUPPORTED
21	AMBIGUOUS RECIPIENT
22	MESSAGE IN USE
23	NETWORK FAILURE
24	INVALID EDIT FIELDS
25	INVALID RECIPS
26	NOT SUPPORTED

Novell NetWare Return Codes

This is a list of return codes for Novell NetWare. If you need further information regarding a specific return code, consult the Novell NetWare documentation or contact LRS Technical Support.

Shell/Requester Errors

Hex	Dec	Constant
0x8800	0	SHELL_ERROR VLM_ERROR ALREADY_ATTACHED: Attempted to attach to a server with a valid, existing connection. NWE_ALREADY_ATTACHED: Attempted to attach to a server with a valid, existing connection.
0x8801	1	INVALID_CONNECTION: Request attempted with invalid or nonattached connection handle. NWE_CONN_INVALID: Request attempted with invalid or nonattached connection handle.
0x8802	2	DRIVE_IN_USE: OS/2 only. (NOT USED). NWE_DRIVE_IN_USE: OS/2 only. (NOT USED).
0x8803	3	CANT_ADD_CDS: Attempted to map a drive but was unable to add a new current directory structure. DRIVE_CANNOT_MAP NWE_DRIVE_CANNOT_MAP: Attempted to map a drive, but was unable to add new current directory structure.
0x8804	4	BAD_DRIVE_BASE: Attempted to map a drive using an invalid path specification. NWE_DRIVE_BAD_PATH: Attempted to map a drive using an invalid path specification.
0x8805	5	NET_READ_ERROR: Attempt to receive from the selected transport failed. NET_RECV_ERROR: Attempt to receive from the selected transport failed. NWE_NET_RECEIVE: Attempt to receive from the selected transport failed.
0x8806	6	UNKNOWN_NET_ERROR: Network send attempted with a nonspecific network error. NWE_NET_UNKNOWN: Network send attempted with a nonspecific network error.
0x8807	7	SERVER_INVALID_SLOT: Attempted a server request using an invalid server connection slot. BAD_SERVER_SLOT: Attempted a server request using an invalid server connection slot. NWE_SERVER_BAD_SLOT: Attempted a server request using an invalid server connection slot.
0x8808	8	NO_SERVER_SLOTS: Attempted to attach to a server with no connection slots available NWE_SERVER_NO_SLOTS: Attempted to attach to a server with no connection slots available

Shell/Requester Errors (continued)

Hex	Dec	Constant
0x8809	9	NET_WRITE_ERROR: Attempt to write on the selected transport failed. CONNECTION_IN_ERROR_STATE: Client-32 NET_SEND_ERROR: Attempt to send on the selected transport failed. NWE_NET_SEND: Attempt to send on the selected transport failed.
0x880A	10	SERVER_NO_ROUTE: Attempted to find a route to a server that does not exist. NWE_SERVER_NO_ROUTE: Attempted to find a route to a server that does not exist.
0x880B	11	BAD_LOCAL_TARGET: OS/2 only. NWE_BAD_LOCAL_TARGET: OS/2 only.
0x880C	12	TOO_MANY_REQ_FRAGS: Attempted a request with too many request fragments specified. NWE_REQ_TOO_MANY_REQ_FRAGS: Attempted a request with too many request fragments specified.
0x880D	13	CONNECT_LIST_OVERFLOW: Too many connections to fit in the list size specified. NWE_CONN_LIST_OVERFLOW: Too many connections to fit in the list size specified.
0x880E	14	BUFFER_OVERFLOW: Attempted to receive more data than the reply buffer had room for. NWE_BUFFER_OVERFLOW: Attempted to receive more data than the reply buffer had room for.
0x880F	15	NO_CONN_TO_SERVER: Attempted to get a connection for a server not connected. NO_CONNECTION_TO_SERVER: Attempted to get a connection for a server not connected. NWE_SERVER_NO_CONN: Attempted to get a connection for a server not connected.
0x8810	16	NO_ROUTER_FOUND: OS/2 only. NWE_NO_ROUTER_FOUND: OS/2 only.
0x8811	17	BAD_FUNC_ERROR: Attempted function call to non-existent or illegal function. INVALID_SHELL_CALL: Attempted function call to non-existent or illegal function. NWE_FUNCTION_INVALID: Attempted function call to non-existent or illegal function.
0x8812	18	SCAN_COMPLETE LIP_RESIZE_ERROR: Client-32 NWE_SCAN_COMPLETE
0x8813	19	UNSUPPORTED_NAME_FORMAT_TYPE NWE_UNSUPPORTED_NAME_FORMAT_TYP INVALID_DIR_HANDLE: Client-32

Shell/Requester Errors (continued)

Hex	Dec	Constant
0x8814	20	HANDLE_ALREADY_LICENSED NWE_HANDLE_ALREADY_LICENSED OUT_OF_CLIENT_MEMORY: Client-32
0x8815	21	HANDLE_ALREADY_UNLICENSED NWE_HANDLE_ALREADY_UNLICENSED PATH_NOT_OURS: Client-32
0x8816	22	INVALID_NCP_PACKET_LENGTH NWE_INVALID_NCP_PACKET_LENGTH PATH_IS_PRINT_DEVICE: Client-32
0x8817	23	SETTING_UP_TIMEOUT NWE_SETTING_UP_TIMEOUT PATH_IS_EXCLUDED_DEVICE: Client-32
0x8818	24	SETTING_SIGNALS NWE_SETTING_SIGNALS PATH_IS_INVALID: Client-32
0x8819	25	SERVER_CONNECTION_LOST NWE_SERVER_CONNECTION_LOST NOT_SAME_DEVICE: Client-32
0x881A	26	OUT_OF_HEAP_SPACE NWE_OUT_OF_HEAP_SPACE
0x881B	27	INVALID_SERVICE_REQUEST NWE_INVALID_SERVICE_REQUEST INVALID_SEARCH_HANDLE: Client-32
0x881C	28	INVALID_TASK_NUMBER NWE_INVALID_TASK_NUMBER INVALID_DEVICE_HANDLE: Client-32
0x881D	29	INVALID_MESSAGE_LENGTH NWE_INVALID_MESSAGE_LENGTH INVALID_SEM_HANDLE: Client-32
0x881E	30	EA_SCAN_DONE NWE_EA_SCAN_DONE INVALID_CFG_HANDLE: Client-32
0x881F	31	BAD_CONNECTION_NUMBER NWE_BAD_CONNECTION_NUMBER INVALID_MOD_HANDLE
0x8820	32	ASYN_FIRST_PASS NWE_MULT_TREES_NOT_SUPPORTED: Attempted to open a connection to a DS tree other than the default tree.
0x8821	33	INVALID_DEVICE_INDEX
0x8822	34	INVALID_CONN_HANDLE
0x8823	35	INVALID_QUEUE_ID
0x8824	36	INVALID_PDEVICE_HANDLE
0x8825	37	INVALID_JOB_HANDLE
0x8826	38	INVALID_ELEMENT_ID
0x8827	39	ALIAS_NOT_FOUND
0x8828	40	RESOURCE_SUSPENDED

Shell/Requester Errors (continued)

Hex	Dec	Constant
0x8829	41	INVALID_QUEUE_SPECIFIED
0x882A	42	DEVICE_ALREADY_OPEN
0x882B	43	JOB_ALREADY_OPEN
0x882C	44	QUEUE_NAME_ID_MISMATCH
0x882D	45	JOB_ALREADY_STARTED
0x882E	46	SPECT_DAA_TYPE_NOT_SUPPORTED
0x882F	47	NOT_SAME_CONNECTION
0x8830	48	NOT_SAME_CONNECTION: Attempted an Internal server request across different server connections. NWE_CONN_NOT_SAME: Attempted an Internal server request across different server connections.
0x8831	49	PRIMARY_CONNECTION_NOT_SET: Attempted to retrieve a default connection with no primary connection set. NO_PRIMARY_SET: Attempted to retrieve a default connection with no primary connection set. NWE_CONN_PRIMARY_NOT_SET: Attempted to retrieve a default connection with no primary connection set.
0x8832	50	NO_CAPTURE_SET: Requested capture information on a port with no capture set. NO_CAPTURE_IN_PROGRESS: Requested capture information on a port with no capture in progress. NWE_PRN_CAPTURE_NOT_IN_PROGRESS: Requested capture information on a port with no capture in progress. KEYWORD_NOT_FOUND: Client-32 PRINT_CAPTURE_NOT_IN_PROGRESS: Client-32
0x8833	51	BAD_BUFFER_LENGTH: len requested on a GetDNC or SetDNC was too large. INVALID_BUFFER_LENGTH: len requested on a GetDNC or SetDNC was too large. NWE_BUFFER_INVALID_LEN: len requested on a GetDNC or SetDNC was too large.
0x8834	52	NO_USER_NAME NWE_USER_NO_NAME
0x8835	53	NO_NETWARE_PRINT_SPOOLER: Capture requested without local print spooler installed. NWE_PRN_NO_LOCAL_SPOOLER: Capture requested without local print spooler installed.
0x8836	54	INVALID_PARAMETER: Attempted function call with an invalid function parameter specified. NWE_PARAM_INVALID: Attempted function call with an invalid function parameter specified.
0x8837	55	CONFIG_FILE_OPEN_FAILED: OS/2 only. NWE_CFG_OPEN_FAILED: OS/2 only.
0x8838	56	NO_CONFIG_FILE: OS/2 only. NWE_CFG_NO_FILE: OS/2 only.
0x8839	57	CONFIG_FILE_READ_FAILED: OS/2 only. NWE_CFG_READ_FAILED: OS/2 only.

Shell/Requester Errors (continued)

Hex	Dec	Constant
0x883A	58	CONFIG_LINE_TOO_LONG: OS/2 only. NWE_CFG_LINE_TOO_LONG: OS/2 only.
0x883B	59	CONFIG_LINES_IGNORED: OS/2 only. NWE_CFG_LINES_IGNORED: OS/2 only.
0x883C	60	NOT_MY_RESOURCE: Attempted a request using a foreign parameter. NWE_RESOURCE_NOT_OWNED: Attempted a request using a foreign parameter.
0x883D	61	DAEMON_INSTALLED: OS/2 only. NWE_DAEMON_INSTALLED: OS/2 only.
0x883E	62	SPOOLER_INSTALLED: Attempted to load a previously installed print spooler. NWE_PRN_SPOOLER_INSTALLED: Attempted to load a previously installed print spooler.
0x883F	63	CONN_TABLE_FULL: Tried to allocate a connection handle with no local connection table entries available. NWE_CONN_TABLE_FULL: Tried to allocate a connection handle with no local connection table entries available. CONNECTION_TABLE_FULL: Tried to allocate a connection handle with no local connection table entries available.
0x8840	64	CONFIG_SECTION_NOT_FOUND: OS/2 only. NWE_CFG_SECTION_NOT_FOUND: OS/2 only.
0x8841	65	BAD_TRAN_TYPE: Attempted a function call on a connection with an invalid transport selected. INVALID_TRANSPORT_TYPE: Attempted function on a connection with an invalid transport selected. NWE_TRAN_INVALID_TYPE: Attempted function on a connection with an invalid transport selected.
0x8842	66	TDS_TAG_IN_USE: OS/2 only. NWE_TDS_TAG_IN_USE: OS/2 only.
0x8843	67	TDS_OUT_OF_MEMORY: OS/2 only. NWE_TDS_OUT_OF_MEMORY: OS/2 only.
0x8844	68	TDS_INVALID_TAG: Attempted a TDS function call using an invalid tag. NWE_TDS_INVALID_TAG: Attempted a TDS function call using an invalid tag.
0x8845	69	TDS_WRITE_TRUNCATED: Attempted a TDS write with a buffer that exceeded the buffer. NWE_TDS_WRITE_TRUNCATED: Attempted a TDS write with a buffer that exceeded the buffer.
0x8846	70	NO_DIRECTORY_SERVICE_CONNECTION NWE_DS_NO_CONN SERVICE_BUSY: Attempted a request to a busy, partially asynchronous function. NWE_SERVICE_BUSY: Attempted a request to a busy, partially asynchronous function. NO_CONNECTION_TO_DS: Client-32

Shell/Requester Errors (continued)

Hex	Dec	Constant
0x8847	71	NO_SERVER_ERROR: Attempted connect failed; no servers responding. NWE_SERVER_NOT_FOUND: Attempted connect failed; no servers responding.
0x8848	72	BAD_VLM_ERROR: Attempted function call to non-existent or not-loaded overlay. NWE_VLM_INVALID: Attempted function call to non-existent or not-loaded overlay.
0x8849	73	NETWORK_DRIVE_IN_USE: Attempted a map to a network drive that was already mapped. NWE_DRIVE_ALREADY_MAPPED: Attempted a map to a network drive that was already mapped.
0x884A	74	LOCAL_DRIVE_IN_USE: Attempted a map to a local drive that was already in use. NWE_DRIVE_LOCAL_IN_USE: Attempted a map to a local drive that was already in use.
0x884B	75	NO_DRIVES_AVAILABLE: Attempted a map to the next available drive when none were available. NWE_DRIVE_NONE_AVAILABLE: Attempted a map to the next available drive when none were available.
0x884C	76	DEVICE_NOT_REDIRECTED: The device is not redirected. NWE_DEVICE_NOT_REDIRECTED: The device is not redirected.
0x884D	77	NO_MORE_SFT_ENTRIES: Maximum number of files was reached. NWE_FILE_MAX_REACHED: Maximum number of files was reached.
0x884E	78	UNLOAD_ERROR: Attempted unload failed. NWE_UNLOAD_FAILED: Attempted unload failed.
0x884F	79	IN_USE_ERROR: Attempted to re-use a connection entry that is already in use. NWE_CONN_IN_USE: Attempted to re-use a connection entry that is already in use.
0x8850	80	TOO_MANY_REP_FRAGS: Attempted request with too many reply fragments specified. NWE_REQ_TOO_MANY_REP_FRAGS: Attempted request with too many reply fragments specified.
0x8851	81	TABLE_FULL: Attempted to add a name to a full name table. NWE_NAME_TABLE_FULL: Attempted to add a name to a full name table.
0x8852	82	SOCKET_NOT_OPEN: Listen was posted on unopened socket. NWE_SOCKET_NOT_OPEN: Listen was posted on unopened socket.
0x8853	83	MEM_MGR_ERROR: Attempted enhanced memory operation failed. NWE_MEMORY_MGR_ERROR: Attempted enhanced memory operation failed.
0x8854	84	SFT3_ERROR: An SFT III* switch occurred mid-transfer. NWE_SFT3_ERROR: An SFTIII* switch occurred mid-transfer.

Shell/Requester Errors (continued)

Hex	Dec	Constant
0x8855	85	PREFERRED_NOT_FOUND: Connection with the preferred directory server was not established; another directory server was returned. NWE_DS_PREFERRED_NOT_FOUND: Connection with the preferred directory server was not established; another directory server was returned.
0x8856	86	DEVICE_NOT_RECOGNIZED: The device is not used by the NetWare requester; pass to another redirector, if any. NWE_DEVICE_NOT_RECOGNIZED: The device is not used by the NetWare requester; pass to another redirector, if any.
0x8857	87	BAD_NET_TYPE: The network type (Bindery or NDS) does not match the server version. NWE_NET_INVALID_TYPE: The network type (Bindery or NDS) does not match the server version.
0x8858	88	ERROR_OPENING_FILE: Generic open failure error; invalid path, access denied, etc.
0x8858	88	NWE_FILE_OPEN_FAILED: Generic open failure error; invalid path, access denied, etc.
0x8859	89	NO_PREFERRED_SPECIFIED: No preferred name specified. NWE_DS_PREFERRED_NOT_SPECIFIED: No preferred name specified.
0x885A	90	ERROR_OPENING_SOCKET: Error opening a socket. NWE_SOCKET_OPEN_FAILED: Error opening a socket. REQUESTER_FAILURE: Client-32
0x885B	91	RESOURCE_ACCESS_DENIED: Client-32
0x8861	97	SIGNATURE_LEVEL_CONFLICT NWE_SIGNATURE_LEVEL_CONFLICT: Unsupported security level.
0x8862	98	NO_LOCK_FOUND: OS/2---process lock on connection handle failed, process ID not recognized. NWE_NO_LOCK_FOUND: OS/2---process lock on connection handle failed, process ID not recognized.
0x8863	99	LOCK_TABLE_FULL: OS/2---process lock on connection handle failed, process lock table full. NWE_LOCK_TABLE_FULL: OS/2---process lock on connection handle failed, process lock table full.
0x8864	100	INVALID_MATCH_DATA NWE_INVALID_MATCH_DATA
0x8865	101	MATCH_FAILED NWE_MATCH_FAILED
0x8866	102	NO_MORE_ENTRIES NWE_NO_MORE_ENTRIES
0x8867	103	INSUFFICIENT_RESOURCES NWE_INSUFFICIENT_RESOURCES
0x8868	104	STRING_TRANSLATION NWE_STRING_TRANSLATION STRING_TRANSLATION_NEEDED: Client-32

Shell/Requester Errors (continued)

Hex	Dec	Constant
0x8869	105	ACCESS_VIOLATION NWE_ACCESS_VIOLATION: Specified connection handle belongs to another process.
0x886A	106	NOT_AUTHENTICATED NWE_NOT_AUTHENTICATED
0x886B	107	INVALID_LEVEL NWE_INVALID_LEVEL
0x886C	108	RESOURCE_LOCK_ERROR NWE_RESOURCE_LOCK
0x886D	109	INVALID_NAME_FORMAT NWE_INVALID_NAME_FORMAT
0x886E	110	OBJECT_EXISTS NWE_OBJECT_EXISTS
0x886F	111	OBJECT_NOT_FOUND NWE_OBJECT_NOT_FOUND
0x8870	112	UNSUPPORTED_TRAN_TYPE NWE_UNSUPPORTED_TRAN_TYPE
0x8871	113	INVALID_STRING_TYPE NWE_INVALID_STRING_TYPE
0x8872	114	INVALID_OWNER NWE_INVALID_OWNER
0x8873	115	UNSUPPORTED_AUTHENTICATOR NWE_UNSUPPORTED_AUTHENTICATOR
0x8874	116	IO_PENDING NWE_IO_PENDING
0x8875	117	INVALID_DRIVE_NUM NWE_INVALID_DRIVE_NUMBER
0x8880	128	SVC_ALREADY_REGISTERED: Client-32
0x8881	129	SVC_REGISTRY_FULL: Client-32
0x8882	130	SVC_NOT_REGISTERED: Client-32
0x8883	131	OUT_OF_RESOURCES: Client-32
0x8884	132	RESOLVE_SVC_FAILED: Client-32
0x8885	133	CONNECT_FAILED: Client-32
0x8886	134	PROTOCOL_NOT_BOUND: Client-32
0x8887	135	AUTHENTICATION_FAILED: Client-32
0x8888	136	INVALID_AUTHEN_HANDLE: Client-32
0x8889	137	AUTHEN_HANDLE_ALREADY_EXISTS: Client-32
0x8890	144	DIFF_OBJECT_ALREADY_AUTHEN: Client-32
0x8891	145	REQUEST_NOT_SERVICEABLE: Client-32
0x8892	146	AUTO_RECONNECT_SO_REBUILD: Client-32
0x8893	147	AUTO_RECONNECT_RETRY_REQUEST: Client-32
0x8894	148	ASYNC_REQUEST_IN_USE: Client-32
0x8895	149	ASYNC_REQUEST_CANCELED: Client-32
0x8896	150	SESS_SVC_ALREADY_REGISTERED: Client-32
0x8897	151	SESS_SVC_NOT_REGISTERED: Client-32
0x8899	153	PREVIOUSLY_AUTHENTICATED: Client-32

Shell/Requester Errors (continued)

Hex	Dec	Constant
0x889A	154	RESOLVE_SVC_PARTIAL: Client-32
0x889B	155	NO_DEFAULT_SPECIFIED: Client-32
0x889C	156	HOOK_REQUEST_NOT_HANDLED: Client-32
0x889D	157	HOOK_REQUEST_BUSY: Client-32 HOOK_REQUEST_QUEUED: Client-32
0x889E	158	AUTO_RECONNECT_SO_IGNORE: Client-32
0x889F	159	ASYNC_REQUEST_NOT_IN_USE: Client-32
0x88A0	160	AUTO_RECONNECT_FAILURE: Client-32
0x88A1	161	NET_ERROR_ABORT_APPLICATION: Client-32
0x88A2	162	NET_ERROR_SUSPEND_APPLICATION: Client-32
0x88A3	163	NET_ERROR_ABORTED_PROCESS_GROUP: Client-32
0x88A5	165	NET_ERROR_PASSWORD_HAS_EXPIRED: Client-32
0x88A6	166	NET_ERROR_NETWORK_INACTIVE: Client-32
0x88FF	255	SHELL_FAILURE: Either an unknown error, or the shell is not present. VLM_FAILURE: Either an unknown error, or the VLM is not present. NWE_REQUESTER_FAILURE

Server Errors

Hex	Dec	Constant
0x8901	001	ERR_INSUFFICIENT_SPACE 001 NWE_INSUFFICIENT_SPACE
0x8977	119	ERR_BUFFER_TOO_SMALL NWE_BUFFER_TOO_SMALL
0x8978	120	ERR_VOLUME_FLAG_NOT_SET: The service requested is not available on the selected volume. NWE_VOL_FLAG_NOT_SET: The service requested is not available on the selected volume.
0x8979	121	ERR_NO_ITEMS_FOUND NWE_NO_ITEMS_FOUND
0x897A	122	ERR_CONN_ALREADY_TEMP NWE_CONN_ALREADY_TEMP
0x897B	123	ERR_CONN_ALREADY_LOGGED_IN NWE_CONN_ALREADY_LOGGED_IN
0x897C	124	ERR_CONN_NOT_AUTHENTICATED NWE_CONN_NOT_AUTHENTICATED
0x897D	125	ERR_CONN_NOT_LOGGED_IN NWE_CONN_NOT_LOGGED_IN
0x897E	126	NCP_BOUNDARY_CHECK_FAILED NWE_NCP_BOUNDARY_CHECK_FAILED
0x897F	127	ERR_LOCK_WAITING NWE_LOCK_WAITING
0x8980	128	ERR_LOCK_FAIL NWE_LOCK_FAIL FILE_IN_USE_ERROR: Attempted to open or create an already open file. NWE_FILE_IN_USE: Attempted to open or create an already open file.
0x8981	129	NO_MORE_FILE_HANDLES: No more file handles available; the network file handle table is full. NWE_FILE_NO_HANDLES: No more file handles available; the network file handle table is full.
0x8982	130	NO_OPEN_PRIVILEGES: Attempted to open a file without the open privilege. NWE_FILE_NO_OPEN_PRIV: Attempted to open a file without the open privilege.
0x8983	131	IO_ERROR_NETWORK_DISK: Hard disk input/output error on a NetWare volume; a bad sector has been encountered and could be fatal. NWE_DISK_IO_ERROR: Hard disk input/output error on a NetWare volume; a bad sector has been encountered and could be fatal.
0x8984	132	NO_CREATE_PRIVILEGES: Attempted to create a file without the create privilege. NWE_FILE_NO_CREATE_PRIV: Attempted to create a file without the create privilege.

Server Errors (continued)

Hex	Dec	Constant
0x8985	133	NO_CREATE_DELETE_PRIVILEGES: Attempted to create an already existing file without create/delete privileges. NWE_FILE_NO_CREATE_DEL_PRIV: Attempted to create an already existing file without create/delete privileges.
0x8986	134	CREATE_FILE_EXISTS_READ_ONLY: Attempted to create a file with the same name as an already existing file with read-only status. NWE_FILE_EXISTS_READ_ONLY: Attempted to create a file with the same name as an already existing file with read-only status.
0x8987	135	WILD_CARDS_IN_CREATE_FILE_NAME: Attempted to create a file using an ambiguous filename. NWE_FILE_WILD_CARDS_IN_NAME: Attempted to create a file using an ambiguous filename.
0x8987	135	CREATE_FILENAME_ERROR
0x8988	136	INVALID_FILE_HANDLE: Attempted to close or perform an I/O on a file with an invalid file handle (i.e. trying to read from a file that has been closed). NWE_FILE_INVALID_HANDLE: Attempted to close or perform an I/O on a file with an invalid file handle (i.e. trying to read from a file that has been closed).
0x8989	137	NO_SEARCH_PRIVILEGES: Attempted to search a directory without search privileges in that directory. NWE_FILE_NO_SRCH_PRIV: Attempted to search a directory without search privileges in that directory.
0x898A	138	NO_DELETE_PRIVILEGES: Attempted to delete a file without file deletion privileges in that file's directory. NWE_FILE_NO_DEL_PRIV: Attempted to delete a file without file deletion privileges in that file's directory.
0x898B	139	NO_RENAME_PRIVILEGES: Attempted to rename a file without renaming privileges in that file's directory. NWE_FILE_NO_RENAME_PRIV: Attempted to rename a file without renaming privileges in that file's directory.
0x898C	140	NO_MODIFY_PRIVILEGES: Attempted to modify a file without attribute modification privileges in that file's directory. NWE_FILE_NO_MOD_PRIV: Attempted to modify a file without attribute modification privileges in that file's directory.
0x898D	141	SOME_FILES_AFFECTED_IN_USE: Attempted to delete, rename, or set file attributes using an ambiguous filename while some of the files specified by the filename are in use by another workstation. NWE_FILE_SOME_IN_USE: Attempted to delete, rename, or set file attributes using an ambiguous filename while some of the files specified by the filename are in use by another workstation.

Server Errors (continued)

Hex	Dec	Constant
0x898E	142	NO_FILES_AFFECTED_IN_USE: Attempted to delete, rename, or set file attributes using an ambiguous filename while some of the files specified by the filename are in use by another workstation. NWE_FILE_NONE_IN_USE: Attempted to delete, rename, or set file attributes using an ambiguous filename while some of the files specified by the filename are in use by another workstation.
0x898F	143	SOME_FILES_AFFECTED_READ_ONLY: Attempted to delete, rename, or set file attributes using a filename when some of the files specified have read-only status. NWE_FILE_SOME_READ_ONLY: Attempted to delete, rename, or set file attributes using a filename when some of the files specified have read-only status.
0x8990	144	NO_FILES_AFFECTED_READ_ONLY: Attempted to delete, rename, or set file attributes using a filename when all of the files specified have read-only status. NWE_FILE_NONE_READ_ONLY: Attempted to delete, rename, or set file attributes using a filename when all of the files specified have read-only status.
0x8991	145	SOME_FILES_RENAMED_NAME_EXISTS: Attempted to rename files using an ambiguous filename, when one or more files matching the new filename specification already exist. NWE_FILE_SOME_RENAMED_EXIST: Attempted to rename files using an ambiguous filename, when one or more files matching the new filename specification already exist.
0x8992	146	NO_FILES_RENAMED_NAME_EXISTS: Attempted to rename a file using a filename, when all of the files matching the new filename specification already exist. NWE_FILE_NONE_RENAMED_EXIST: Attempted to rename a file using a filename, when all of the files matching the new filename specification already exist.
0x8993	147	NO_READ_PRIVILEGES: Attempted to read a file without read privileges to that file. NWE_FILE_NO_READ_PRIV: Attempted to read a file without read privileges to that file.
0x8994	148	NO_WRITE_PRIVILEGES_OR_READONLY: Attempted to write to a file without write privileges to that file, or the specified file has read-only status. NWE_FILE_NO_WRITE_PRIV: Attempted to write to a file without write privileges to that file. NWE_FILE_READ_ONLY: the specified file has read-only status.
0x8995	149	FILE_DETACHED: Attempted to read or write to a detached file. NWE_FILE_DETACHED: Attempted to read or write to a detached file.

Server Errors (continued)

Hex	Dec	Constant
0x8996	150	SERVER_OUT_OF_MEMORY: Attempted to write to a file server that does not currently have enough free DRAM to process this request. NWE_SERVER_OUT_OF_MEMORY: Attempted to write to a file server that does not currently have enough free DRAM to process this request. ERR_TARGET_NOT_A_SUBDIRECTORY NWE_DIR_TARGET_INVALID
0x8997	151	NO_DISK_SPACE_FOR_SPOOL_FILE: The network operating system has determined that the network disk doesn't have enough space left for spool files. NWE_DISK_NO_SPOOL_SPACE: The network operating system has determined that the network disk doesn't have enough space left for spool files.
0x8998	152	VOLUME_DOES_NOT_EXIST: The network operating system has tried to access a volume but cannot find the volume in the system definition files. NWE_VOL_INVALID: The network operating system has tried to access a volume but cannot find the volume in the system definition files.
0x8999	153	DIRECTORY_FULL NWE_DIR_FULL
0x899A	154	RENAMING_ACROSS_VOLUMES: Attempted to rename a file and move the renamed file from its current volume into another volume. The rename command may move the file between directories on the same volume; however, using rename to move a file between volumes is not allowed. NWE_VOL_RENAMING_ACROSS: Attempted to rename a file and move the renamed file from its current volume into another volume. The rename command may move the file between directories on the same volume; however, using rename to move a file between volumes is not allowed.
0x899B	155	BAD_DIRECTORY_HANDLE: Attempted to use an invalid directory handle. This occurs if the network has been brought down and brought back up without rebooting the workstation. NWE_DIRHANDLE_INVALID: Attempted to use an invalid directory handle. This occurs if the network has been brought down and brought back up without rebooting the workstation.
0x899C	156	INVALID_PATH NWE_PATH_INVALID NO_MORE_TRUSTEES: No more trustees are listed in the directory. NWE_TRUSTEES_NO_MORE: No more trustees are listed in the directory.
0x899D	157	NO_MORE_DIRECTORY_HANDLES: No more directory handles available; the directory handle table is full. Each user may have up to 255 directory handles. NWE_DIRHANDLE_NO_MORE: No more directory handles available; the directory handle table is full. Each user may have up to 255 directory handles.

Server Errors (continued)

Hex	Dec	Constant
0x899E	158	INVALID_FILENAME: Attempted to create a file using invalid characters in the file name. NWE_FILE_NAME_INVALID: Attempted to create a file using invalid characters in the file name.
0x899F	159	DIRECTORY_ACTIVE: Attempted to delete a directory that is being used by another workstation. NWE_DIR_ACTIVE: Attempted to delete a directory that is being used by another workstation.
0x89A0	160	DIRECTORY_NOT_EMPTY NWE_DIR_NOT_EMPTY
0x89A1	161	DIRECTORY_IO_ERROR: A nonrecoverable I/O error has occurred on the disk in the directory area. This error has occurred in both copies of the directory and is fatal. NWE_DIR_IO_ERROR: A nonrecoverable I/O error has occurred on the disk in the directory area. This error has occurred in both copies of the directory and is fatal.
0x89A2	162	READ_FILE_WITH_RECORD_LOCKED: Attempted to read a file where data is physically locked. NWE_FILE_IO_LOCKED: Attempted to read a file where data is physically locked.
0x89A3	163	ERR_TRANSACTION_RESTARTED NWE_TTS_TRANSACTION_RESTARTED
0x89A4	164	ERR_RENAME_DIR_INVALID NWE_DIR_RENAME_INVALID
0x89A5	165	ERR_INVALID_OPENCREATE_MODE NWE_FILE_OPENCREAT_MODE_INVALID
0x89A6	166	ERR_ALREADY_IN_USE NWE_ALREADY_IN_USE
0x89A7	167	ERR_INVALID_RESOURCE_TAG NWE_RESOURCE_TAG_INVALID
0x89A8	168	ERR_ACCESS_DENIED NWE_ACCESS_DENIED
0x89BE	190	INVALID_DATA_STREAM NWE_DATA_STREAM_INVALID
0x89BF	191	INVALID_NAME_SPACE NWE_NAME_SPACE_INVALID
0x89C0	192	NO_ACCOUNTING_PRIVILEGES NWE_ACCTING_NO_PRIV
0x89C1	193	LOGIN_DENIED_NO_ACCOUNT_BALANCE: Attempted to log in by a bindery object without an accounting balance, and accounting is enabled. NWE_ACCTING_NO_BALANCE: Attempted to log in by a bindery object without an accounting balance, and accounting is enabled.
0x89C2	194	LOGIN_DENIED_NO_CREDIT: Attempted to log in to account with no credit available. NWE_ACCTING_NO_CREDIT: Attempted to log in to account with no credit available.

Server Errors (continued)

Hex	Dec	Constant
0x89C3	195	ERR_TOO_MANY_HOLDS NWE_ACCTING_TOO_MANY_HOLDS
0x89C4	196	ACCOUNTING_DISABLED NWE_ACCTING_DISABLED
0x89C5	197	INTRUDER_DETECTION_LOCK: Attempt to log in after the system had locked the account because of intruder detection. NWE_LOGIN_LOCKOUT: Attempt to log in after the system had locked the account because of intruder detection.
0x89C6	198	NO_CONSOLE_OPERATOR: Attempt to use console without operator privileges. NWE_CONSOLE_NO_PRIV: Attempt to use console without operator privileges. NO_CONSOLE_PRIVILEGES
0x89D0	208	ERR_Q_IO_FAILURE NWE_Q_IO_FAILURE
0x89D1	209	ERR_NO_QUEUE NWE_Q_NONE
0x89D2	210	ERR_NO_Q_SERVER NWE_Q_NO_SERVER
0x89D3	211	ERR_NO_Q_RIGHTS NWE_Q_NO_RIGHTS
0x89D4	212	ERR_Q_FULL NWE_Q_FULL
0x89D5	213	ERR_NO_Q_JOB NWE_Q_NO_JOB
0x89D6	214	ERR_NO_Q_JOB_RIGHTS NWE_Q_NO_JOB_RIGHTS NWE_PASSWORD_UNENCRYPTED
0x89D7	215	ERR_Q_IN_SERVICE NWE_Q_IN_SERVICE PASSWORD_NOT_UNIQUE: Attempt to change password to a previously used password when the unique requirement is specified for the account. NWE_PASSWORD_NOT_UNIQUE: Attempt to change password to a previously used password when the unique requirement is specified for the account.
0x89D8	216	ERR_Q_NOT_ACTIVE NWE_Q_NOT_ACTIVE PASSWORD_TOO_SHORT: Attempt to change password to a password with fewer characters than the required minimum specified for the account. NWE_PASSWORD_TOO_SHORT: Attempt to change password to a password with fewer characters than the required minimum specified for the account.

Server Errors (continued)

Hex	Dec	Constant
0x89D9	217	ERR_Q_STN_NOT_SERVER NWE_Q_STN_NOT_SERVER LOGIN_DENIED_NO_CONNECTION NWE_LOGIN_NO_CONN NWE_LOGIN_MAX_EXCEEDED ERR_MAXIMUM_LOGINS_EXCEEDED: Attempt to log in using an account which has limits on the number of concurrent connections and that number has been reached.
0x89DA	218	ERR_Q_HALTED NWE_Q_HALTED UNAUTHORIZED_LOGIN_TIME NWE_LOGIN_UNAUTHORIZED_TIME
0x89DB	219	UNAUTHORIZED_LOGIN_STATION: Attempt to log in from an unauthorized station using an account with limits to a specific network and/or station. NWE_LOGIN_UNAUTHORIZED_STATION: Attempt to log in from an unauthorized station using an account with limits to a specific network and/or station.
0x89DC	220	ERR_Q_MAX_SERVERS NWE_Q_MAX_SERVERS ACCOUNT_DISABLED: Attempt to log in using an account which has expired or has been disabled by the Supervisor. NWE_ACCT_DISABLED: Attempt to log in using an account which has expired or has been disabled by the Supervisor.
0x89DE	222	PASSWORD_HAS_EXPIRED_NO_GRACE: Attempt to log in using an account password which has expired and all grace logins have also expired. NWE_PASSWORD_INVALID: Attempt to log in using an account password which has expired and all grace logins have also expired.
0x89DF	223	PASSWORD_HAS_EXPIRED: Attempt to log in using an expired account password but the login was allowed because the account had a grace login. NWE_PASSWORD_EXPIRED: Attempt to log in using an expired account password but the login was allowed because the account had a grace login.
0x89E0	224	NWE_LOGIN_NO_CONN_AVAIL
0x89E7	231	E_NO_MORE_USERS NWE_E_NO_MORE_USERS

Server Errors (continued)

Hex	Dec	Constant
0x89E8	232	<p>NOT_ITEM_PROPERTY: Attempt to use an item not associated with this property group or an item which has been deleted from this group.</p> <p>NWE_BIND_NOT_ITEM_PROP: Attempt to use an item not associated with this property group or an item which has been deleted from this group.</p> <p>WRITE_PROPERTY_TO_GROUP: Attempt to write a data segment to a group property using the call to write a property value.</p> <p>NWE_BIND_WRITE_TO_GROUP_PROP: Attempt to write a data segment to a group property using the call to write a property value.</p>
0x89E9	233	<p>MEMBER_ALREADY_EXISTS: Attempt to redundantly add an object to a group property.</p> <p>NWE_BIND_MEMBER_ALREADY_EXISTS: Attempt to redundantly add an object to a group property.</p>
0x89EA	234	<p>NO_SUCH_MEMBER</p> <p>NWE_BIND_NO_SUCH_MEMBER</p>
0x89EB	235	<p>NOT_GROUP_PROPERTY: Attempt to use a non-group property.</p> <p>NWE_BIND_NOT_GROUP_PROP: Attempt to use a non-group property.</p>
0x89EC	236	<p>NO_SUCH_SEGMENT: Attempt to use a nonexistent segment. Note that segments must be written sequentially when a property is first created, but may be read and written in any order after they already exist.</p> <p>NWE_BIND_NO_SUCH_SEGMENT: Attempt to use a nonexistent segment. Note that segments must be written sequentially when a property is first created, but may be read and written in any order after they already exist.</p>
0x89ED	237	<p>PROPERTY_ALREADY_EXISTS</p> <p>NWE_BIND_PROP_ALREADY_EXISTS</p>
0x89EE	238	<p>OBJECT_ALREADY_EXISTS</p> <p>NWE_BIND_OBJ_ALREADY_EXISTS</p>
0x89EF	239	<p>INVALID_NAME: Request made with an object or property name containing illegal characters. Illegal characters in names are control characters, the comma, colon, semicolon, slash, backslash, question mark, asterisk, and tilde.</p> <p>NWE_BIND_NAME_INVALID: Request made with an object or property name containing illegal characters. Illegal characters in names are control characters, the comma, colon, semicolon, slash, backslash, question mark, asterisk, and tilde.</p>
0x89F0	240	<p>WILD_CARD_NOT_ALLOWED: Attempt to use a wildcard character or wild object type in a call where wildcards are not allowed.</p> <p>NWE_BIND_WILDCARD_INVALID: Attempt to use a wildcard character or wild object type in a call where wildcards are not allowed.</p>

Server Errors (continued)

Hex	Dec	Constant
0x89F1	241	<p>INVALID_BINDERY_SECURITY: Attempt to assign a security level of a bindery object or property to be higher than the user's security level. This would make the object or property inaccessible to the user.</p> <p>NWE_BIND_SECURITY_INVALID: Attempt to assign a security level of a bindery object or property to be higher than the user's security level. This would make the object or property inaccessible to the user.</p>
0x89F2	242	<p>NO_OBJECT_READ_PRIVILEGE: Attempt to access object information or scan the object's properties by a station without the necessary security to access this information.</p> <p>NWE_BIND_OBJ_NO_READ_PRIV: Attempt to access object information or scan the object's properties by a station without the necessary security to access this information.</p>
0x89F3	243	<p>NO_OBJECT_RENAME_PRIVILEGE: Attempt to rename an object without the necessary security. Only the Supervisor can rename objects. Note that if the station does not have the proper security to see that the object exists, then NCP_NO_SUCH_OBJECT is returned.</p> <p>NWE_BIND_OBJ_NO_RENAME_PRIV: Attempt to rename an object without the necessary security. Only the Supervisor can rename objects. Note that if the station does not have the proper security to see that the object exists, then NCP_NO_SUCH_OBJECT is returned.</p>
0x89F4	244	<p>NO_OBJECT_DELETE_PRIVILEGE: Attempt to delete an object by a station without the necessary security to delete the object. Only the Supervisor can delete objects. Note that if the station does not even have the proper security to see that the object exists, then NCP_NO_SUCH_OBJECT is returned.</p> <p>NWE_BIND_OBJ_NO_DELETE_PRIV: Attempt to delete an object by a station without the necessary security to delete the object. Only the Supervisor can delete objects. Note that if the station does not even have the proper security to see that the object exists, then NCP_NO_SUCH_OBJECT is returned.</p>
0x89F5	245	<p>NO_OBJECT_CREATE_PRIVILEGE: Attempt to create an object by a station without the necessary security to create or change an object. Only Supervisors are allowed to create objects.</p> <p>NWE_BIND_OBJ_NO_CREATE_PRIV: Attempt to create an object by a station without the necessary security to create or change an object. Only Supervisors are allowed to create objects.</p>
0x89F6	246	<p>NO_PROPERTY_DELETE_PRIVILEGE: Attempt to delete a property by a station without the necessary security privilege to delete a property from the give object. Note that if the station does not have the proper security to see that the property exists, then NCP_NO_SUCH_PROPERTY is returned.</p> <p>NWE_BIND_PROP_NO_DELETE_PRIV: Attempt to delete a property by a station without the necessary security privilege to delete a property from the give object. Note that if the station does not have the proper security to see that the property exists, then NCP_NO_SUCH_PROPERTY is returned.</p>

Server Errors (continued)

Hex	Dec	Constant
0x89F7	247	NO_PROPERTY_CREATE_PRIVILEGE: Attempt to create a property by a station without the necessary security to create or change a property for the object. NWE_BIND_PROP_NO_CREATE_PRIV: Attempt to create a property by a station without the necessary security to create or change a property for the object.
0x89F8	248	NO_PROPERTY_WRITE_PRIVILEGE: Attempt to write by a station without the necessary write security to change the property data. NWE_BIND_PROP_NO_WRITE_PRIV: Attempt to write by a station without the necessary write security to change the property data.
0x89F9	249	NO_FREE_CONNECTION_SLOTS NWE_NO_FREE_CONN_SLOTS NO_PROPERTY_READ_PRIVILEGE: Attempt to read by a station without the necessary read security to access the property data. NWE_BIND_PROP_NO_READ_PRIV: Attempt to read by a station without the necessary read security to access the property data.
0x89FA	250	NO_MORE_SERVER_SLOTS NWE_NO_MORE_SERVER_SLOTS TEMP_REMAP_ERROR: Attempt to use an unknown path. NWE_TEMP_REMAP_ERROR: Attempt to use an unknown path.
0x89FB	251	INVALID_PARAMETERS: Attempt to use an invalid parameter (drive number, path, or flag value) during a set drive path call. NWE_PARAMETERS_INVALID: Attempt to use an invalid parameter (drive number, path, or flag value) during a set drive path call. NO_SUCH_PROPERTY NWE_BIND_NO_SUCH_PROP ERR_NCP_NOT_SUPPORTED NWE_NCP_NOT_SUPPORTED
0x89FC	252	INTERNET_PACKET_REQT_CANCELED NWE_INET_PACKET_REQ_CANCELED UNKNOWN_FILE_SERVER: Attempt to attach to a server using an invalid server name. NWE_SERVER_UNKNOWN: Attempt to attach to a server using an invalid server name. MESSAGE_QUEUE_FULL NWE_MSG_Q_FULL NO_SUCH_OBJECT: Attempt to use an object which doesn't exist, or the calling station doesn't have the proper security to access the object. Note that the object name and type must both match for the object to be found. NWE_BIND_NO_SUCH_OBJ: Attempt to use an object which doesn't exist, or the calling station doesn't have the proper security to access the object. Note that the object name and type must both match for the object to be found.

Server Errors (continued)

Hex	Dec	Constant
0x89FD	253	LOCK_COLLISION NWE_LOCK_COLLISION BAD_STATION_NUMBER: Attempt to use a bad (undefined, unavailable, etc.) station number. NWE_CONN_NUM_INVALID: Attempt to use a bad (undefined, unavailable, etc.) station number. INVALID_PACKET_LENGTH: The requesting packet did not have a 30 byte packet header as the first fragment, or its total length exceeded 576 characters. NWE_PACKET_LEN_INVALID: The requesting packet did not have a 30 byte packet header as the first fragment, or its total length exceeded 576 characters. UNKNOWN_REQUEST NWE_UNKNOWN_REQ
0x89FE	254	BINDERY_LOCKED NWE_BIND_LOCKED TRUSTEE_NOT_FOUND NWE_TRUSTEE_NOT_FOUND DIRECTORY_LOCKED NWE_DIR_LOCKED INVALID_SEMAPHORE_NAME_LENGTH NWE_SEM_INVALID_NAME_LEN PACKET_NOT_DELIVERABLE NWE_PACKET_NOT_DELIVERABLE SERVER_BINDERY_LOCKED SOCKET_TABLE_FULL NWE_SOCKET_TABLE_FULL SPOOL_DIRECTORY_ERROR NWE_SPOOL_DIR_ERROR SUPERVISOR_HAS_DISABLED_LOGIN NWE_LOGIN_DISABLED_BY_SUPER TIMEOUT_FAILURE NWE_TIMEOUT_FAILURE

Server Errors (continued)

Hex	Dec	Constant
0x89FF	255	BAD_PRINTER_ERROR NWE_BAD_SPOOL_PRINTER BAD_RECORD_OFFSET NWE_BAD_RECORD_OFFSET CLOSE_FCB_ERROR NWE_FCB_CLOSE FILE_EXTENSION_ERROR NWE_FILE_EXT FILE_NAME_ERROR NWE_FILE_NAME HARDWARE_FAILURE NWE_HARD_FAILURE INVALID_DRIVE_NUMBER NWE_DRIVE_INVALID_NUM DOS_INVALID_DRIVE INVALID_INITIAL_SEMAPHORE_VALUE NWE_SEM_INVALID_INIT_VAL INVALID_SEMAPHORE_HANDLE NWE_SEM_INVALID_HANDLE IO_BOUND_ERROR NWE_IO_BOUND NO_FILES_FOUND_ERROR NWE_NO_FILES_FOUND_ERROR NO_RESPONSE_FROM_SERVER NWE_NO_RESPONSE_FROM_SERVER NO_SUCH_OBJECT_OR_BAD_PASSWORD NWE_NO_OBJ_OR_BAD_PASSWORD PATH_NOT_LOCATABLE NWE_PATH_NOT_LOCATABLE QUEUE_FULL_ERROR NWE_Q_FULL_ERROR REQUEST_NOT_OUTSTANDING NWE_REQ_NOT_OUTSTANDING SOCKET_ALREADY_OPEN NWE_SOCKET_ALREADY_OPEN LOCK_ERROR NWE_LOCK_ERROR FAILURE: Generic Failure NWE_FAILURE: Generic Failure

NT Return Codes

NT Service Errors

<u>Hex</u>	<u>Dec</u>	<u>Constant</u>
0x041b	1051	ERROR_DEPENDENT_SERVICES_RUNNING
0x041c	1052	ERROR_INVALID_SERVICE_CONTROL
0x041d	1053	ERROR_SERVICE_REQUEST_TIMEOUT
0x041e	1054	ERROR_SERVICE_NO_THREAD
0x041f	1055	ERROR_SERVICE_DATABASE_LOCKED
0x0420	1056	ERROR_SERVICE_ALREADY_RUNNING
0x0421	1057	ERROR_INVALID_SERVICE_ACCOUNT
0x0422	1058	ERROR_SERVICE_DISABLED
0x0423	1059	ERROR_CIRCULAR_DEPENDENCY
0x0424	1060	ERROR_SERVICE_DOES_NOT_EXIST
0x0425	1061	ERROR_SERVICE_CANNOT_ACCEPT_CTRL
0x0426	1062	ERROR_SERVICE_NOT_ACTIVE
0x0427	1063	ERROR_FAILED_SERVICE_CONTROLLER_CONNECT
0x0428	1064	ERROR_EXCEPTION_IN_SERVICE
0x0429	1065	ERROR_DATABASE_DOES_NOT_EXIST
0x042a	1066	ERROR_SERVICE_SPECIFIC_ERROR
0x042b	1067	ERROR_PROCESS_ABORTED
0x042c	1068	ERROR_SERVICE_DEPENDENCY_FAIL
0x042d	1069	ERROR_SERVICE_LOGON_FAILED
0x042e	1070	ERROR_SERVICE_START_HANG
0x042f	1071	ERROR_INVALID_SERVICE_LOCK
0x0430	1072	ERROR_SERVICE_MARKED_FOR_DELETE
0x0431	1073	ERROR_SERVICE_EXISTS
0x0432	1074	ERROR_ALREADY_RUNNING_LKG
0x0433	1075	ERROR_SERVICE_DEPENDENCY_DELETED
0x0434	1076	ERROR_BOOT_ALREADY_ACCEPTED
0x0435	1077	ERROR_SERVICE_NEVER_STARTED
0x0436	1078	ERROR_DUPLICATE_SERVICE_NAME

NT Security Errors

<u>Hex</u>	<u>Dec</u>	<u>Constant</u>
0x0514	1300	ERROR_NOT_ALL_ASSIGNED
0x0515	1301	ERROR_SOME_NOT_MAPPED
0x0516	1302	ERROR_NO_QUOTAS_FOR_ACCOUNT
0x0517	1303	ERROR_LOCAL_USER_SESSION_KEY
0x0518	1304	ERROR_NULL_LM_PASSWORD
0x0519	1305	ERROR_UNKNOWN_REVISION
0x051a	1306	ERROR_REVISION_MISMATCH
0x051b	1307	ERROR_INVALID_OWNER
0x051c	1308	ERROR_INVALID_PRIMARY_GROUP
0x051d	1309	ERROR_NO_IMPERSONATION_TOKEN
0x051e	1310	ERROR_CANT_DISABLE_MANDATORY
0x051f	1311	ERROR_NO_LOGON_SERVERS
0x0520	1312	ERROR_NO_SUCH_LOGON_SESSION
0x0521	1313	ERROR_NO_SUCH_PRIVILEGE
0x0522	1314	ERROR_PRIVILEGE_NOT_HELD
0x0523	1315	ERROR_INVALID_ACCOUNT_NAME
0x0524	1316	ERROR_USER_EXISTS
0x0525	1317	ERROR_NO_SUCH_USER
0x0526	1318	ERROR_GROUP_EXISTS
0x0527	1319	ERROR_NO_SUCH_GROUP
0x0528	1320	ERROR_MEMBER_IN_GROUP
0x0529	1321	ERROR_MEMBER_NOT_IN_GROUP
0x052a	1322	ERROR_LAST_ADMIN
0x052b	1323	ERROR_WRONG_PASSWORD
0x052c	1324	ERROR_ILL_FORMED_PASSWORD
0x052d	1325	ERROR_PASSWORD_RESTRICTION
0x052e	1326	ERROR_LOGON_FAILURE
0x052f	1327	ERROR_ACCOUNT_RESTRICTION
0x0530	1328	ERROR_INVALID_LOGON_HOURS
0x0531	1329	ERROR_INVALID_WORKSTATION
0x0532	1330	ERROR_PASSWORD_EXPIRED
0x0533	1331	ERROR_ACCOUNT_DISABLED
0x0534	1332	ERROR_NONE_MAPPED
0x0535	1333	ERROR_TOO_MANY_LUIDS_REQUESTED
0x0536	1334	ERROR_LUIDS_EXHAUSTED
0x0537	1335	ERROR_INVALID_SUB_AUTHORITY
0x0538	1336	ERROR_INVALID_ACL
0x0539	1337	ERROR_INVALID_SID
0x053a	1338	ERROR_INVALID_SECURITY_DESCR
0x053c	1340	ERROR_BAD_INHERITANCE_ACL
0x053d	1341	ERROR_SERVER_DISABLED
0x053e	1342	ERROR_SERVER_NOT_DISABLED
0x053f	1343	ERROR_INVALID_ID_AUTHORITY
0x0540	1344	ERROR_ALLOTTED_SPACE_EXCEEDED
0x0541	1345	ERROR_INVALID_GROUP_ATTRIBUTES
0x0542	1346	ERROR_BAD_IMPERSONATION_LEVEL

<u>Hex</u>	<u>Dec</u>	<u>Constant</u>
0x0543	1347	ERROR_CANT_OPEN_ANONYMOUS
0x0544	1348	ERROR_BAD_VALIDATION_CLASS
0x0545	1349	ERROR_BAD_TOKEN_TYPE
0x0546	1350	ERROR_NO_SECURITY_ON_OBJECT
0x0547	1351	ERROR_CANT_ACCESS_DOMAIN_INFO
0x0548	1352	ERROR_INVALID_SERVER_STATE
0x0549	1353	ERROR_INVALID_DOMAIN_STATE
0x054a	1354	ERROR_INVALID_DOMAIN_ROLE
0x054b	1355	ERROR_NO_SUCH_DOMAIN
0x054c	1356	ERROR_DOMAIN_EXISTS
0x054d	1357	ERROR_DOMAIN_LIMIT_EXCEEDED
0x054e	1358	ERROR_INTERNAL_DB_CORRUPTION
0x054f	1359	ERROR_INTERNAL_ERROR
0x0550	1360	ERROR_GENERIC_NOT_MAPPED
0x0551	1361	ERROR_BAD_DESCRIPTOR_FORMAT
0x0552	1362	ERROR_NOT_LOGON_PROCESS
0x0553	1363	ERROR_LOGON_SESSION_EXISTS
0x0554	1364	ERROR_NO_SUCH_PACKAGE
0x0555	1365	ERROR_BAD_LOGON_SESSION_STATE
0x0556	1366	ERROR_LOGON_SESSION_COLLISION
0x0557	1367	ERROR_INVALID_LOGON_TYPE
0x0558	1368	ERROR_CANNOT_IMPERSONATE
0x0559	1369	ERROR_RXACT_INVALID_STATE
0x055a	1370	ERROR_RXACT_COMMIT_FAILURE
0x055b	1371	ERROR_SPECIAL_ACCOUNT
0x055c	1372	ERROR_SPECIAL_GROUP
0x055d	1373	ERROR_SPECIAL_USER
0x055e	1374	ERROR_MEMBERS_PRIMARY_GROUP
0x055f	1375	ERROR_TOKEN_ALREADY_IN_USE
0x0560	1376	ERROR_NO_SUCH_ALIAS
0x0561	1377	ERROR_MEMBER_NOT_IN_ALIAS
0x0562	1378	ERROR_MEMBER_IN_ALIAS
0x0563	1379	ERROR_ALIAS_EXISTS
0x0564	1380	ERROR_LOGON_NOT_GRANTED
0x0565	1381	ERROR_TOO_MANY_SECRETS
0x0566	1382	ERROR_SECRET_TOO_LONG
0x0567	1383	ERROR_INTERNAL_DB_ERROR
0x0568	1384	ERROR_TOO_MANY_CONTEXT_IDS
0x0569	1385	ERROR_LOGON_TYPE_NOT_GRANTED
0x056a	1386	ERROR_NT_CROSS_ENCRYPTION_REQUIRED
0x056b	1387	ERROR_NO_SUCH_MEMBER
0x056c	1388	ERROR_INVALID_MEMBER
0x056d	1389	ERROR_TOO_MANY_SIDS
0x056e	1390	ERROR_LM_CROSS_ENCRYPTION_REQUIRED
0x056f	1391	ERROR_NO_INHERITANCE
0x0570	1392	ERROR_FILE_CORRUPT
0x0571	1393	ERROR_DISK_CORRUPT
0x0572	1394	ERROR_NO_USER_SESSION_KEY

FTP Return Codes

<u>Hex</u>	<u>Dec</u>	<u>Constant</u>
0x006E	110	Restart marker reply. In this case, the text is exact and not left to the particular implementation; it must read: MARK yyyy = mmmm Where yyyy is User-process data stream marker, and mmmm server's equivalent marker (note the spaces between markers and "=").
0x0078	120	Service ready in nnn minutes.
0x007D	125	Data connection already open; transfer starting.
0x0096	150	File status okay; about to open data connection.
0x00C8	200	Command okay.
0x00CA	202	Command not implemented, superfluous at this site.
0x00D3	211	System status, or system help reply.
0x00D4	212	Directory status.
0x00D5	213	File status.
0x00D6	214	Help message on how to use the server or the meaning of a particular non-standard command. This reply is useful only to the user.
0x00D7	215	NAME system type. Where NAME is an official system name from the list in the Assigned Numbers document.
0x00DC	220	Service ready for new user.
0x00DD	221	Service closing control connection. Logged out if appropriate.
0x00E1	225	Data connection open; no transfer in progress.
0x00E2	226	Closing data connection. Requested file action successful (for example, file transfer or file abort).
0x00E3	227	Entering Passive Mode (h1,h2,h3,h4,p1,p2).
0x00E6	230	User logged in, proceed.
0x00FA	250	Requested file action okay, completed.
0x0101	257	"PATHNAME" created.
0x014B	331	User name okay, need password.
0x014C	332	Need account for login.
0x015E	350	Requested file action pending further information.
0x01A5	421	Service not available, closing control connection. This may be a reply to any command if the service knows it must shut down.
0x01A9	425	Can't open data connection.
0x01AA	426	Connection closed; transfer aborted.

<u>Hex</u>	<u>Dec</u>	<u>Constant</u>
0x01C2	450	Requested file action not taken. File unavailable (e.g., file busy).
0x01C3	451	Requested action aborted: local error in processing.
0x01C4	452	Requested action not taken. Insufficient storage space in system.
0x01F4	500	Syntax error, command unrecognized. This may include errors such as command line too long.
0x01F5	501	Syntax error in parameters or arguments.
0x01F6	502	Command not implemented.
0x01F7	503	Bad sequence of commands.
0x01F8	504	Command not implemented for that parameter.
0x0212	530	Not logged in.
0x0214	532	Need account for storing files.
0x0226	550	Requested action not taken. File unavailable (e.g., file not found, no access).
0x0227	551	Requested action aborted: page type unknown.
0x0228	552	Requested file action aborted. Exceeded storage allocation (for current directory or dataset).
0x0229	553	Requested action not taken. File name not allowed.

Section 6 Diagnostics

Diagnostic Support for AnyQueue®

SYMPTOM	RESOLUTION
The AnyQueue log becomes full with SNA Server Events 94 and 592 because the 'Receive Allocate has timed out'.	Apply SNA Server 2.11 Service pack #1.
Engine unable to login rc=0x522 or 1314.	User ID does not hold correct rights on machine that engine is running on. Grant the following 2 rights: <ul style="list-style-type: none">• Act as part of the operating system• Logon as a service• Full Control of any Windows NT directory or print queue accessed by AnyQueue.
Starting AnyQueue Engine from Control Panel/Services applet receives Service Specific Error 1.	No /f parameter was specified in the startup parameters. Note: Need to enter two backslash's for every one backslash needed. (/f=C:\\LRS\\ANYQ\\ANYQ.CFG)
Starting AnyQueue Engine from Control Panel/Services applet receives Service Specific Error 9.	Unable to find .CFG file. Note: Need to enter two backslash's for every one backslash needed. (/f=C:\\LRS\\ANYQ\\ANYQ.CFG)

Diagnostic Tool for NT Error Messages

NTERROR.EXE is a program which will take a Windows NT return code and display the text that is associated with the error.

NOTE: This is only if the return code is a Windows NT code.

NTERROR.EXE is placed in the same directory as NANYQ.EXE when the product is installed.

Syntax: NTERROR <error number>

Example	Result
NTERROR 1326 <enter> (decimal input)	NT Return Code 1326 Logon failure: unknown user name or bad password.
NTERROR 0x569 <enter> (hex input)	NT Return Code 1385 Logon failure: the user has not been granted the requested logon type at this computer.

Windows NT additional information:

TCPIP Timeout

NT delays based on the TcpTimedWaitDelay field. Which, if not set, defaults to 240 seconds, or 4 minutes. You can set it as low as 30 seconds. To do that, do the following:

- 1) Run Registry Editor (Regedt32.exe).
- 2) Go to the following key in the registry:
HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\tcpip\Parameters
- 3) On the **Edit** menu, click **Add Value** and use the following entry:
Value Name: TcpTimedWaitDelay (new in 3.51 SP5 and 4.0)
Data Type: REG_DWORD (time in seconds)
Value: 30-300 (decimal)

VPS Messages

VPS371E is one of the most common host error messages reported by VPS when routing datasets to AnyQueue. The following lists the text and possible parameters for VPS371E.

VPS371E prtr-id APPCCMD FAILED CONT=aaaaaaaa QUAL=bbbbbbbb
 RCPRI=cccc RCSEC=dddd RC=rc F2=F2 R15=r15 R0=r0 snse

aaaaaaaa: CONTROL=value from VTAM APPCCMD macro.
 bbbbbbbb: QUALIFY=value from VTAM APPCCMD macro.
 cccc: Primary return code from RPL extension.
 dddd: Secondary return code from RPL extension.

Message Meaning: A VTAM APPCCMD macro failed for a VPS printer with COMMTYPE=(APPC,xxxx).
System Action: VPS will put this printer in EDRAINED status.
Required Action: Contact VPS technical support personnel.

Possible values for the error message variables:

CONT=	QUAL=	Function
ALLOC	ALLOCD	Start a conversation
CHECK	N/A	Check RPL after macro completion
DEALLOC	CONFIRM	End a conversation
OPRCNTL	ACTSESS	Accept session with APPC device
OPRCNTL	CNOS	Set session limits
OPRCNTL	DACTSESS	Reject session with APPC device
OPRCNTL	DISPLAY	Display session limits
REJECT	N/A	Termination conversation and session
SEND	CONFIRM	Request confirmation
SEND	DATA	Send data
SEND	DATACON	Send data and request confirmation

Primary and Secondary return codes for the APPCCMD macros are described in the VTAM Programming for LU6.2 manual. The most common codes received by VPS when operating with AnyQueue are:

<u>RCPRI</u>	<u>RCSEC</u>	<u>Description/Possible Reasons/Action</u>
0004	0000	ALLOCATION ERROR; NO RETRY Path error; check physical connections. Device not defined or not active. Device not ready; start AnyQueue.
0004	0001	ALLOCATION ERROR; RETRY IS ALLOWED Device not ready; start AnyQueue.
0010	0004	PARTNER LU STARTING SESSION AnyQueue has issued CNOS.

<u>RCPRI</u>	<u>RCSEC</u>	<u>Description/Possible Reasons/Action</u>
0020	0000	CNOS FAILURE, RETRY IS ALLOWED Device not ready; start AnyQueue.
0002C	0000	INVALID LU NAME LUNAME incorrect or not active.
002C	0001	INVALID MODE Mode name not equal to ALOGMODE. Mode name unknown or misspelled. Mode name not in logon mode table.
002C	0002	INVALID CONVERSATION Conversation has terminated abnormally.
002C	0003	INVALID LL Invalid record length (logic error).
002C	0014	INVALID BIND PARAMETERS Mode name does not specify LU6 session parameters.
0002C	001E	CID INVALID ACTSESS specified unknown session ID. DACTSESS specified unknown session ID.
0048	0000	RESOURCE FAILURE, NO RETRY AnyQueue was terminated; restart AnyQueue.
0054	0000	UNRECOGNIZED MODE NAME Mode name not equal to ALOGMODE. Mode name not in logon mode table.
0064	0000	ACTIVATION FAILURE APPC remote device not available. AnyQueue APPC software not active; start AnyQueue. AnyQueue using invalid mode name. AnyQueue mode name not equal to ALOGMODE.
0088	0000	CANCELED BY REJECT/ABNORMAL DEALLOC AnyQueue terminated abnormally; restart AnyQueue.
0090	0000	APPLICATION NOT APPC CAPABLE APPL definition does not allow APPCCMD; check VPS APPL.

Appendix A

SNA Server v2.11

Microsoft's SNA Server is one of the possible communications packages that AnyQueue[®] can use if communicating via APPC to VPS[®].

Overview

SNA Server is a communications package which provides a wide array of communications services ranging from terminal emulation to APPC command verbs. AnyQueue uses SNA Server to provide the link to VPS using APPC command verbs. (Other services may be configured and installed as well, but this manual will deal only with setting up communications through APPC command verbs. For information on setting up other services, consult the SNA Server Installation Guide.)

SNA Server Configuration

For AnyQueue to use APPC communication a "Link Service" that supports the network adapter installed in the PC and APPC must be install/configured in SNA Server. In the SNA Server setup program when the Link Service Installation dialog appears select the type of connection that you will be using (e.g. DLC 802.2 Link Service - for Token ring, Ethernet, or FDDI connections).

After SNA Server setup has installed all the needed files then run SNA Server Admin. to configure the connection properties and the LUs.

Connection Properties

The SNA Server Admin dialog should be displayed.

- Double-click on the connection that will be used for AnyQueue. (In [Figure A-1](#) **TOKEN1** will be used). If there are no connections to select from, you must add a new connection based on the type of connection you will be using (e.g. 802.2 - Token ring, Ethernet, or FDDI connections).

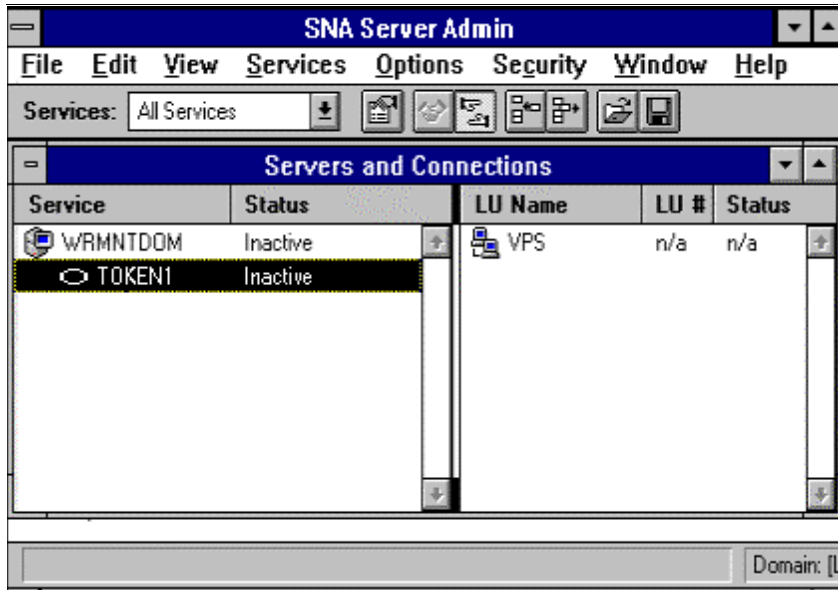


Figure A-1: SNA Server v2.11 Admin dialog

The **Connection Properties** dialog will display.

- Set **Remote End** to **Host System**.
- Select the **Setup** button to configure the connection.

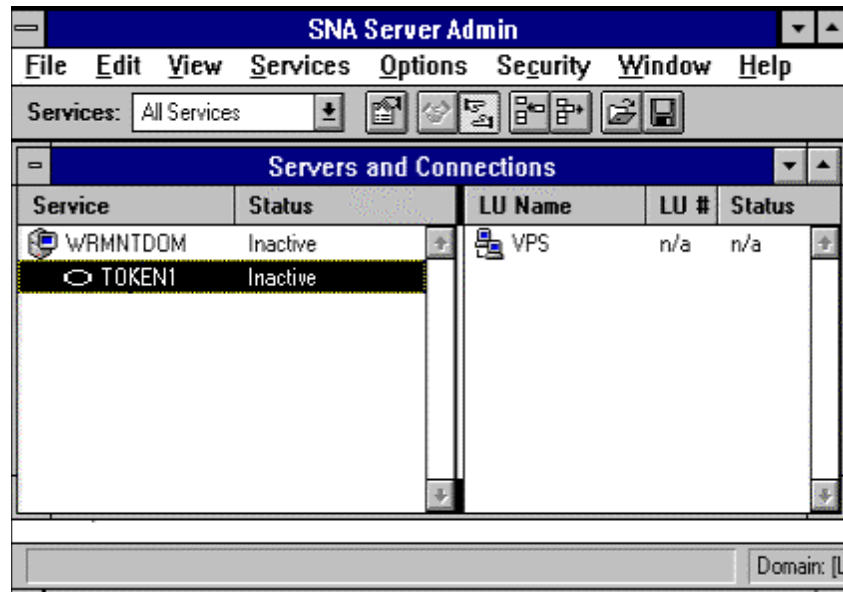


Figure A-2: SNA Server v2.11 Connection Properties

The **Link Setup** dialog will display.

- Select the **Advanced**>> button to display all the fields.
- Set the **Remote Network Address** to the address of the 3174 or similar device that AnyQueue will be connecting through.
- Set the **Local Node ID** to the hex network ID for the PU that you will be using. (IDBLK parameter on host VTAM definition).
- Set the **Remote SAP Address** to 4.
- Set the **Receive ACK Threshold(frames)** to 1.
- Set the **Unacknowledged Send Limit(frames)** to 2.
- Select the **OK** button to continue.

802.2 Setup

Remote Network Address: 400001374500

Local Node Name
Local Node ID: 061 00381

Remote Node Name
Network Name:
Control Point Name:
Remote Node ID:

XID Type
 Format 0
 Format 3

Remote SAP Address: 04 Retry Limit: 10
Max BTU Length: 1929 XID Retries: 3
Response (t1) Timeout: Default
Receive Ack (t2) Timeout: Default
Inactivity (tj) Timeout: Default
Receive ACK Threshold (frames): 1
Unacknowledged Send Limit (frames): 2

OK
Cancel
Retry Timers...
Advanced >>
Help

Figure A-3: SNA Server v2.11 802.2 Setup

Remote APPC LU (Partner LU)

Follow the procedure below to define the **partner LU** that AnyQueue will be communicating with.

The **SNA Server Admin** dialog should be displayed.

- Select the connection name in the Servers and Connection screen (TOKEN1 in our sample screens).
- Select **Assign LUs**.
- Select **APPC (Remote)**.
- Select **OK**.

The **APPC Remote LU Properties** dialog will display.

- Set the **LU Alias**. For less confusion it is recommended that this value be the same as the partner **LU Name** on this dialog.
- Set the **Network Name** to the name of your SNA network.
- This must match the parameter NETID specified on the host in SYS1.VTAMLST(ATCSTRXX). (XX can be anything.)
- Set the **LU Name** to the actual name of the **partner LU** that AnyQueue will be communicating with. This must match the APPLID defined in VTAM for VPS (see [Figure 3-3 on page 3.3](#)).
- Set the **Uninterpreted LU Name** to the same value as **LU Name**.
- Make sure **Supports Parallel Sessions** and **Enable Automatic Partnering** are **NOT** checked.
- Add a comment if desired.

The screenshot shows the 'APPC Remote LU Properties' dialog box. The title bar is blue with white text. The main area is light gray. On the left, there is a small icon of a computer. The fields are as follows: 'LU Alias' with 'VPS', 'Network Name' with 'USLRS101', 'LU Name' with 'VPS', and 'Uninterpreted LU Name' with 'VPS'. Below these is a 'Comment' field which is empty. There are two checkboxes: 'Supports Parallel Sessions' and 'Enable Automatic Partnering', both of which are unchecked. At the bottom, there is a dropdown menu for 'Implicit Incoming Mode' with 'LRSAPPC' selected. On the right side, there are five buttons: 'OK', 'Cancel', 'Partners...', 'Security...', and 'Help'.

Figure A-4: SNA Server v2.11 APPC Remote LU Properties

- Select the **Partners** button.
- The **LU 6.2 Partner LUs** dialog will display.
- Select the **Modes** button to define a Mode.
- The **APPC Mode Properties** dialog will display.
- Set the **Mode Name** to the same name listed for **DLOGMODE** in the VTAM LU definition. (See [Figure 3-2 on page 3.2](#) for a sample LU definition and a sample Mode Table.)
- Set **Parallel Session Limit** to **1**.
- Set **Minimum Contention Winner Limit** to **0**.
- Set **Partner Min Contention Winner Limit** to **0**.
- Set **Automatic Activation Limit** to **0**.
- **Enable Automatic Partnering** should **NOT** be checked.
- Set **Pacing Send Count** to **8**.
- Set **Pacing Receive Count** to **8**.
- Set **Max Send RU Size** to **2048**.
- Set **Max Receive RU Size** to **2048**.

You may modify the RU size to improve performance based upon your individual network configuration.

See the sample dialog below.

Figure A-5: SNA Server v2.11 APPC Mode Properties

- Select **Close** and reply **Yes** when asked to confirm the update.
- Select **Close** on the **LU 6.2 Partner LUs** dialog.
- Select **OK** on the **APPC Remote LU Properties** dialog.

APPC LU Definition

The **SNA Server Admin** dialog should be displayed.

- Select the **server** name in the **Servers and Connection** dialog.
- Select **Assign LUs** from the **Services** pull down menu.
- Select **APPC (Local)**.
- Select **OK**.
- The **APPC LU Properties** dialog will display.
- Set the **LU 6.2 Type** to **Dependent**.
- Set the **LU Alias**. For less confusion, it is recommended that you use the same name as the **LU Name** specified on this dialog.
- Set the **Network Name** to the name of your SNA network. In our example the **Network Name** is **USLRS101**.
- This must match the parameter NETID specified on the host in SYS1.VTAM(ATCSTRXX). (XX can be anything).
- Set the **LU Name**. This must match the name on the LU defined in VTAM for AnyQueue. In [Figure 3-1 on page 3.1](#) the LU Name is **L591002**. This value will also match the LUNAME keyword in the VPS printer definition for AnyQueue (see [Figure 3-4 on page 3.4](#)).
- Set the **LU Number**. This must match the **LOCADDR** value in the LU definition that was defined in SYS1.VTAMLST for AnyQueue. In [Figure 3-1 on page 3.1](#) the LOCADDR is 3 so the value for LU Number should also be 3.
- **Enable Automatic Partnering** should **NOT** be selected.

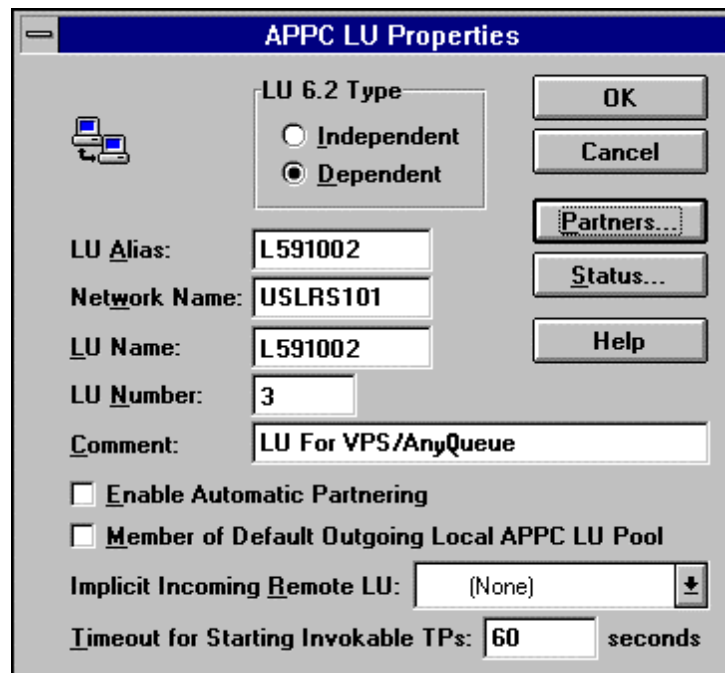


Figure A-6: SNA Server v2.11 APPC LU Properties

- Select the **Partners** button.
- Select the **Add** button.
- Select the **Partner LU** from the drop down list.
(The Partner LU you defined previously should be in the list).
- Select the **Mode** from the drop down list.
(The Mode you defined previously should be in the list).
- Select the **OK** button.

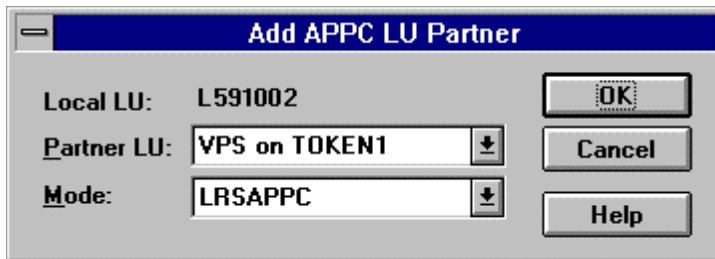


Figure A-7: SNA Server v2.11 Add APPC LU Partner

The **LU 6.2 Partner LUs** dialog will display.

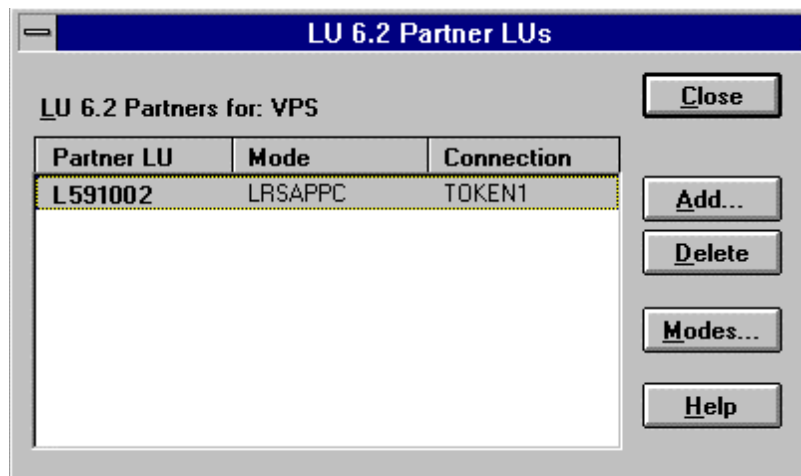


Figure A-8: SNA Server v2.11 LU 6.2 Partner LUs

- Select the **Close** button.
- Select the **OK** button.
- Select **Save Configuration** from the **File** option on the **SNA Server Admin** dialog.
- Continue to the next page to complete the configuration.

Transaction Program Definitions

In SNA Server Admin, there are no screens to configure the Transaction Program needed for AnyQueue so you **must** following the procedure below to complete the configuration.

When AnyQueue was installed, a program called TPCONFIG.EXE was copied to the AnyQueue directory.

1. Execute **TPCONFIG.EXE**.

The screen illustrated below will display. (Any Transaction Programs previously defined will be displayed in the dialog.)

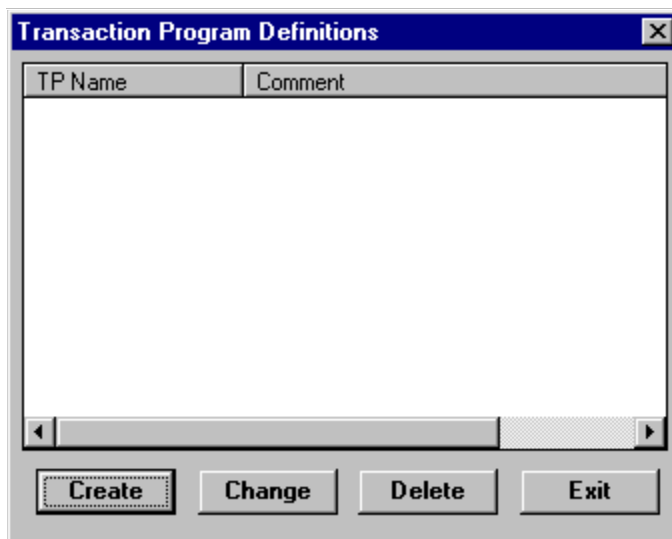


Figure A-9: SNA Server v2.11 Transaction Program Definitions

2. Select the **Create** button and the **TP Configuration** dialog will display.
3. Complete the **TP Configuration - Create** dialog with the following information:
 - Set **TP Name** to the LU Name. In [Figure 3-1 on page 3.1](#) the LU Name is **L591002**. This value will also match the LUNAME keyword in the VPS printer definition for AnyQueue (see [Figure 3-4 on page 3.4](#)).
 - **LU Alias (optional)** should be left blank.
 - Set **Program Location** to the fully-qualified path name for the AnyQueue Engine. (example: C:\LRS\ANYQ\NANYQ.EXE)
 - Enter an optional comment for the Transaction Program, if desired.
 - Set **Service Type** to Queued, Operator started.
 - Set **Timeout - Finite** to 1 sec.

The completed **TP Configuration** dialog should appear similar to the example below.

TP Configuration - Create

TP Name: L591002

LU Alias (optional):

Program Location: C:\LRS\ANYQ\NANYQ

Comment (optional):

Service Type

- Queued, Auto started
- Queued, Operator started
- Non-Queued, Auto started

Timeout

- Finite: 1 sec
- Infinite

Conversation Security

Accept already verified passwords

Conversation Security User Accounts

Add

Edit

Delete

Ok Cancel

Figure A-10: SNA Server v2.11 TP Configuration - Create

4. Select **OK** to save the Transaction Program definition.
The **Transaction Program Definitions** dialog will display showing the TPName.
5. Select **Exit** to finish Transaction Program definitions.

Appendix B

SNA Server v3.0

Microsoft's SNA Server v3.0 can be used for APPC communication to VPS[®]. It is highly recommended that you apply SNA Server Service Pack 1.

Overview

SNA Server is a communications package which provides a wide array of communication services ranging from terminal emulation to APPC command verbs. AnyQueue[®] uses SNA Server to provide the link to the host using APPC command verbs. (Other services may be configured and installed as well, but this appendix will deal only with setting up communications through APPC command verbs. For information on setting up other services, consult the SNA Server Installation Guide.)

SNA Server Configuration

For AnyQueue to use APPC communication a 'Link Service' that supports the network adapter installed in the PC and APPC must be installed/configured in SNA Server. In the SNA Server setup program when the Link Service Installation dialog appears select the type of connection you will be using (e.g. DLC 802.2 Link Service - for Token ring, Ethernet, or FDDI connections). A Token Ring connection will be used as the example in this manual.

After SNA Server setup has installed all the required files, run SNA Server Manager to configure the connection properties and the LUs.

Link Setup

From the **SNA Server Manager** screen, expand the **SNA Servers** folder.

- Move the mouse to the right side of the screen and click the right mouse button to bring up the pop-up menu.
- Select **Insert**.
- Select **Link Service...**

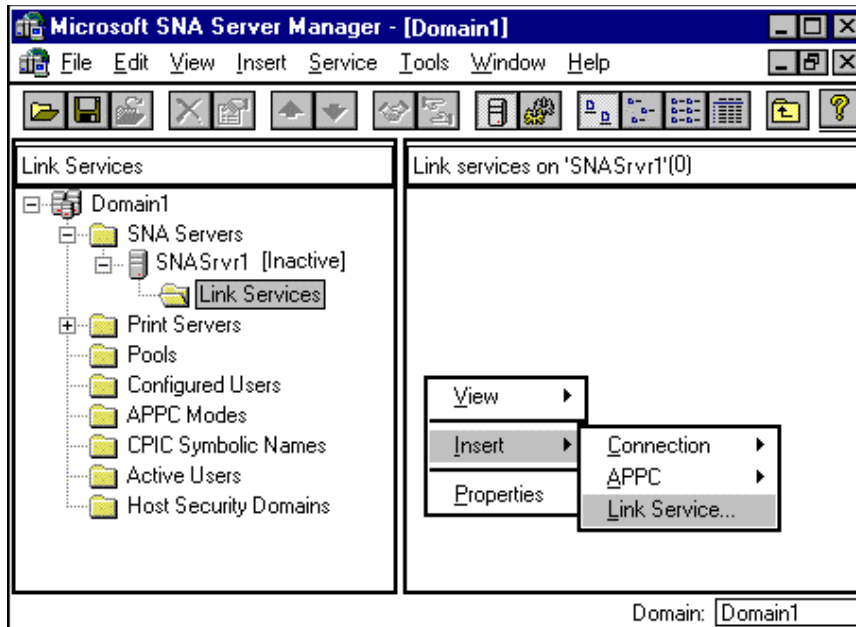


Figure B-1: Microsoft SNA Server Manager v3.0

The **Insert Link Service** dialog will display

- Select the applicable Link Service.

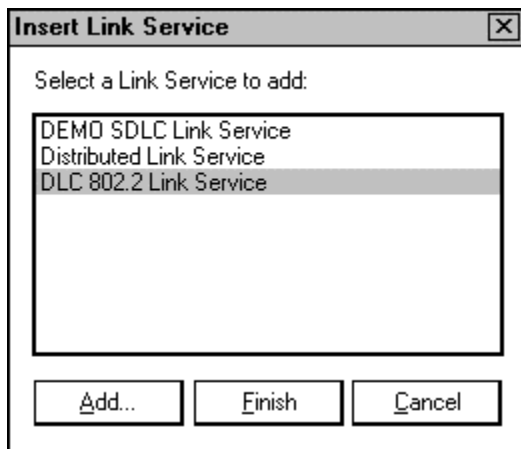


Figure B-2: SNA Server v3.0 Insert Link Service

-
- Select the **Add..** button at the bottom of the **Insert Link Service** dialog.
The **Title** and **Adapter** should reflect **your** installation. Do not attempt to alter your screen to look exactly like this example.
 - Select **OK** when you are finished.

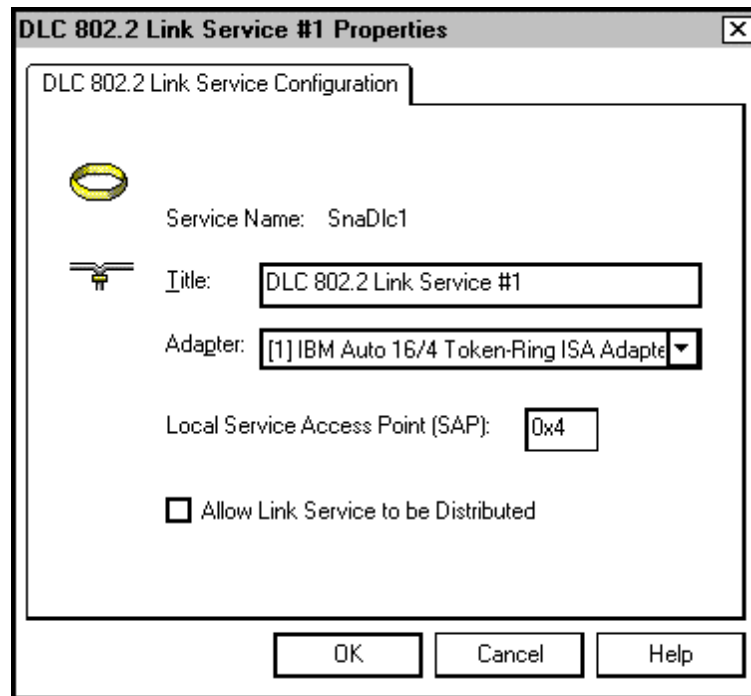


Figure B-3: SNA Server v3.0 Link Service Properties

Connection Properties

The **SNA Server Manager** main dialog will display again.

- Select the Server you are configuring on the left side of the screen under SNA Servers. (In the example below it is SNASrvr1 (Inactive).)
- Move your mouse to the right side of the screen and click the right mouse button to bring up the pop-up menu.
- Select **Insert**.
- Select **C**onnection.
- Select **802.2** (your connection could be different).

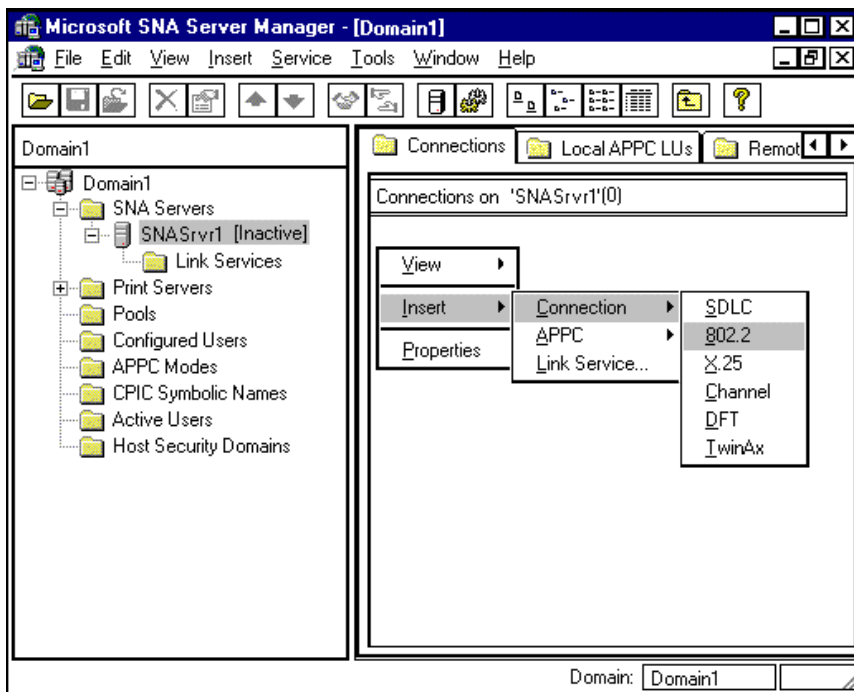


Figure B-4: Microsoft SNA Server Manager v3.0 - Connections

The **Connection Properties** dialog will display.

- In the **Name** field, enter a name for the connection. (The value entered here will be used again during this configuration.)
- In the **Link Service** field use the drop down box to select the type of link you are using.

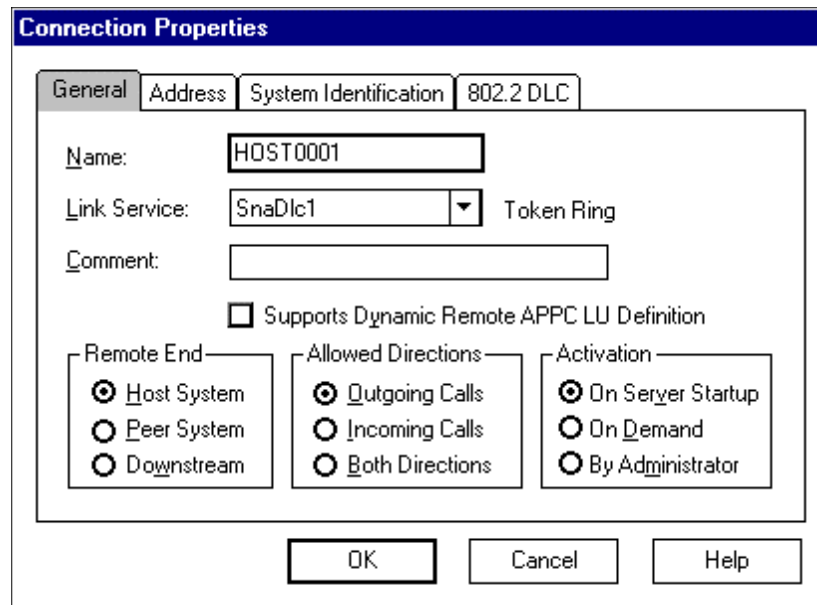


Figure B-5: SNA Server v3.0 Connection Prop. - General

-
- Select the **Address** tab on the **Connection Properties** dialog.
 - Enter the token ring address of your network in the **Remote Network Address:** field.

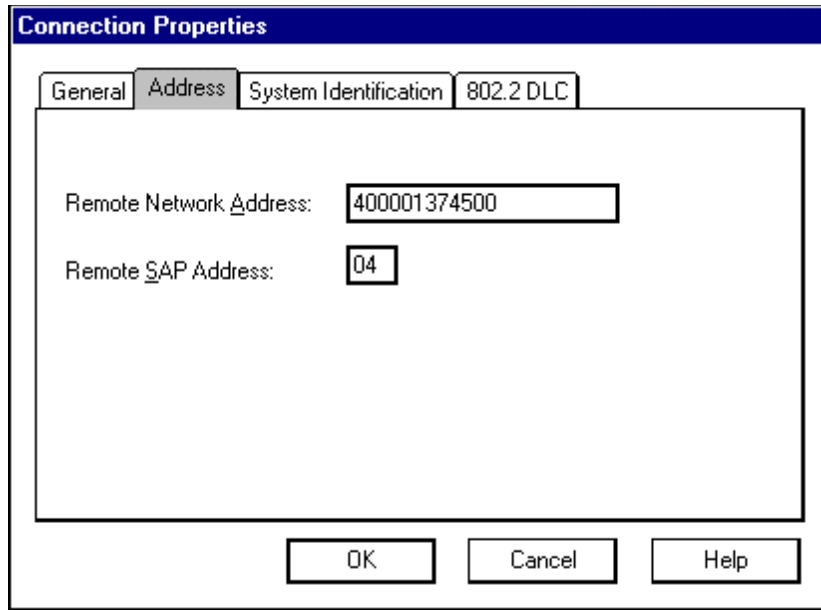


Figure B-6: SNA Server v3.0 Connection Prop. - Address

- Select the **System Identification** tab on the **Connection Properties** dialog.
- Set the **Network Name** field to the name of your SNA network.
- This must match the parameter NETID specified on the host in SYS1.VTAMLST(ATCSTRXX). (XX can be anything.)
- The **Control Point Name** should be the name of your SNA Server.
- Set the **Local Node ID** to the hex network ID for the PU that you will be using. (This must match the IDBLK parameter on the VTAM definition.)

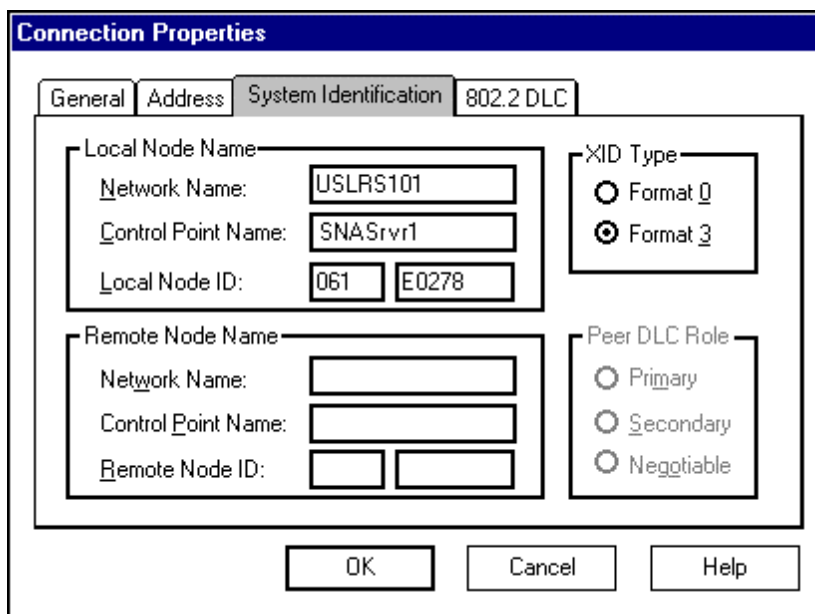


Figure B-7: SNA Server v3.0 Connection Prop. - System Identification

-
- Select the **802.2 DLC** tab on the **Connection Properties** dialog.

Most of the defaults should be correct, however we have found that in many sites a value of **1** for the **Receive ACK Threshold (frames)**, and a value of **2** for the **Unacknowledged Send Limit (frames)** improves performance.

- Select **OK** to continue.

The screenshot shows the 'Connection Properties' dialog box with the '802.2 DLC' tab selected. The dialog has four tabs: 'General', 'Address', 'System Identification', and '802.2 DLC'. The '802.2 DLC' tab is active and contains the following settings:

- Max BTU Length: 1929
- Receive ACK Threshold (frames): 1
- Unacknowledged Send Limit (frames): 2
- Retry Limit: 10
- XID Retries: 3
- 802.2 Timeouts:
 - Response (t1): Default
 - Receive Ack (t2): Default
 - Inactivity (tj): Default
- Connection Retry Limits:
 - Maximum Retries: No Limit
 - Delay After Failure: Default

At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Help'.

Figure B-8: SNA Server v3.0 Connection Prop. - 802.2 DLC

Local APPC LU Definition

- The **SNA Server Manager** main dialog will display again.
- Select the Server you are configuring on the left side of the screen under SNA Servers. (In the example below it is SNASrvr1 (Inactive).)
- Move your mouse to the right side of the screen and click the right mouse button to bring up the pop-up menu.
- Select **Insert**.
- Select **APPC**.
- Select **Local LU**.

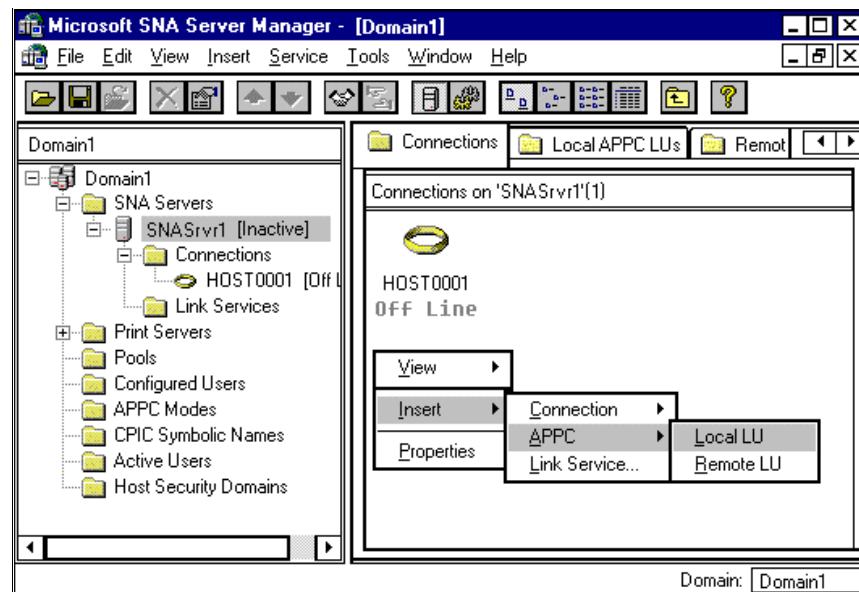


Figure B-9: SNA Server v3.0 Local LU

The **Local APPC LU Properties** dialog will display.

- Set the **LU Alias** to any name as long as it is unique. (For less confusion you could set the LU Alias name the same as the LU Name as shown in [Figure B-10](#).)
- Set the **Network Name** to the name of your SNA network.
- This must match the parameter NETID specified on the host in SYS1.VTAMLST(ATCSTRXX). (XX can be anything.)
- Set the **LU Name**. This must match the name on the LU defined in VTAM for AnyQueue. In [Figure 3-1 on page 3.1](#) the LU Name is **L591002**. This value will also match the LUNAME keyword in the VPS printer definition for AnyQueue (see [Figure 3-4 on page 3.4](#)).

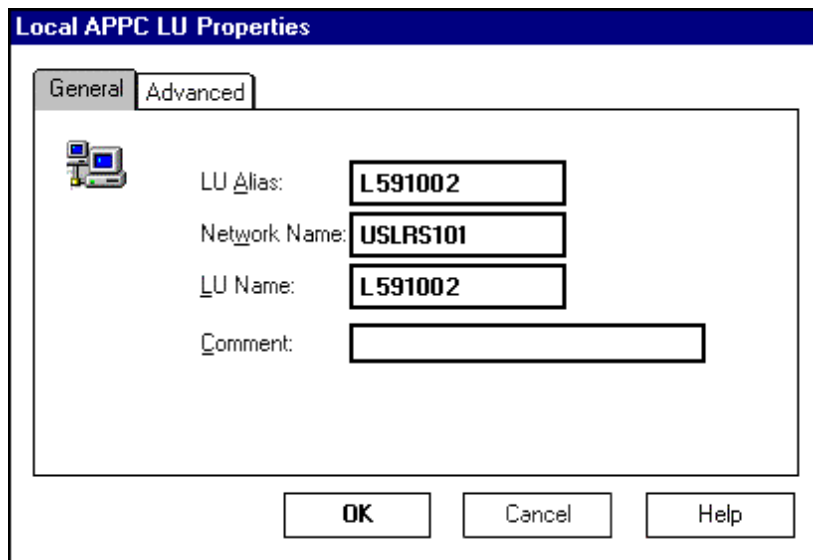


Figure B-10: SNA Server v3.0 Local APPC LU Prop. - General

- Select the **Advanced** tab on the **Local APPC LU Properties** dialog.
- Select **Dependent** for the LU 6.2 Type.
- The **LU Number** value should match the **LOCADDR** value for the VTAM LU. (See [Figure 3-1 on page 3.1.](#))
- Use the drop down box to select the Connection. (The name of your connection should appear in the drop down list. In [Figure B-5 on page B.5](#) the connection name is HOST0001.)
- Select **OK**.

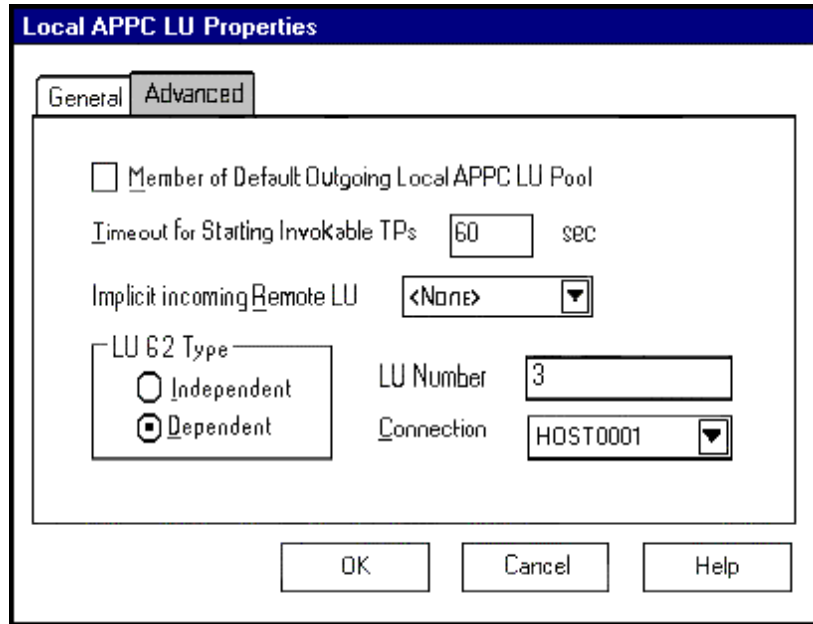


Figure B-11: SNA Server v3.0 Local APPC LU Prop. - Advanced

Mode Definition

The **SNA Server Manager** main dialog will display again.

- Select **APPC Modes** on the left side of the dialog.
- Move the mouse to the right side of the dialog and click the right mouse button to bring up the pop-up menu.
- Select **Insert**.
- Select **A**PPC.
- Select **M**ode definition.

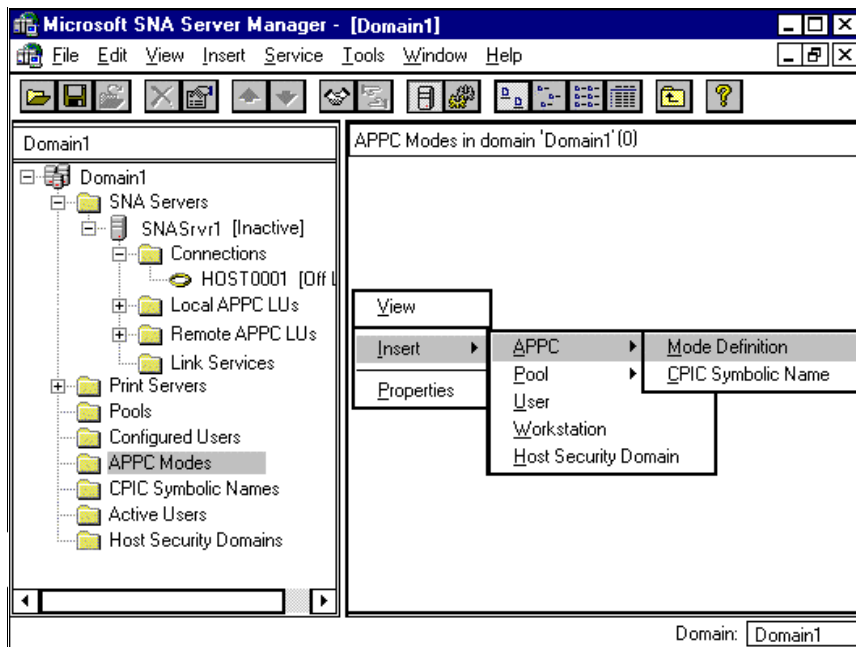


Figure B-12: SNA Server v3.0 Mode Definition

The **APPC Mode Properties** dialog will display.

- Set the **Mode Name** to the same name listed for **DLOGMODE** in the VTAM LU definition. (See [Figure 3-2 on page 3.2](#) for a sample LU definition and a sample Mode Table.)

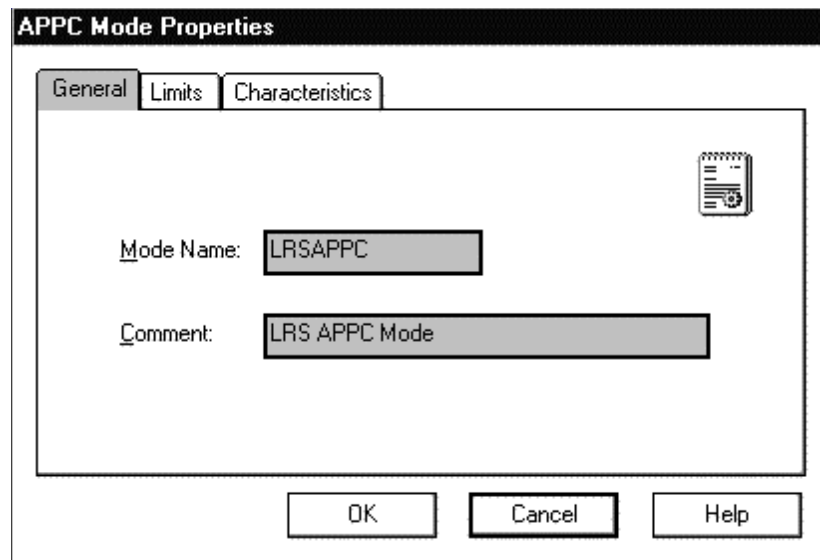


Figure B-13: SNA Server v3.0 APPC Mode Prop. - General

-
- Select the **Limits** tab on the **APPC Mode Properties** dialog.
 - Set the **Parallel Session Limit** to **1**.
 - Set the **Minimum Contention Winner Limit** to **0**.
 - Set the **Partner Min Contention Winner Limit** to **0**.
 - Set **Automatic Activation Limit** to **0**.

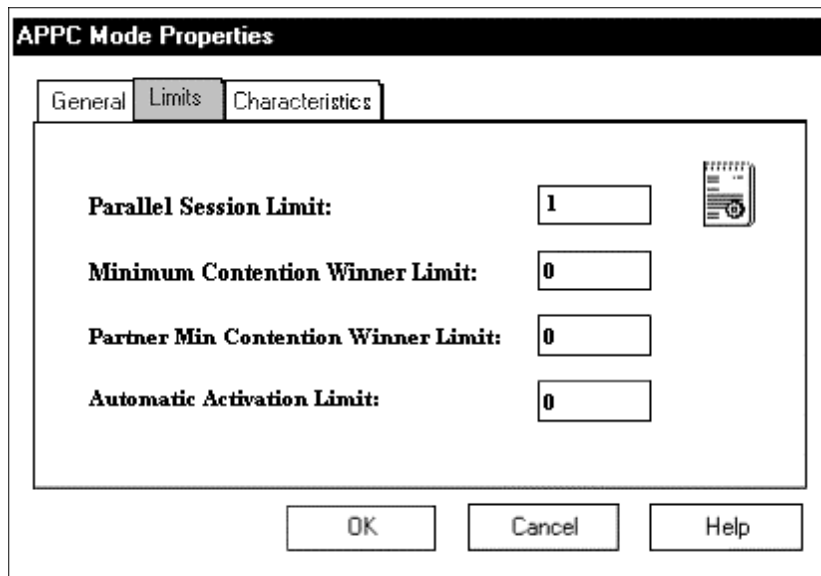


Figure B-14: SNA Server v3.0 APPC Mode Prop. - Limits

-
- Select the **Characteristics** tab on the **APPC Mode Properties** dialog.
 - Set the **Pacing Send Count** to **16**.
 - Set the **Pacing Receive Count** to **16**.
 - Set the **Max Send RU Size** to **2048**.
 - Set the **Max Receive RU Size** to **2048**.
- You may modify the RU size to improve performance based upon your individual network configurations.
- Select the **OK** button.

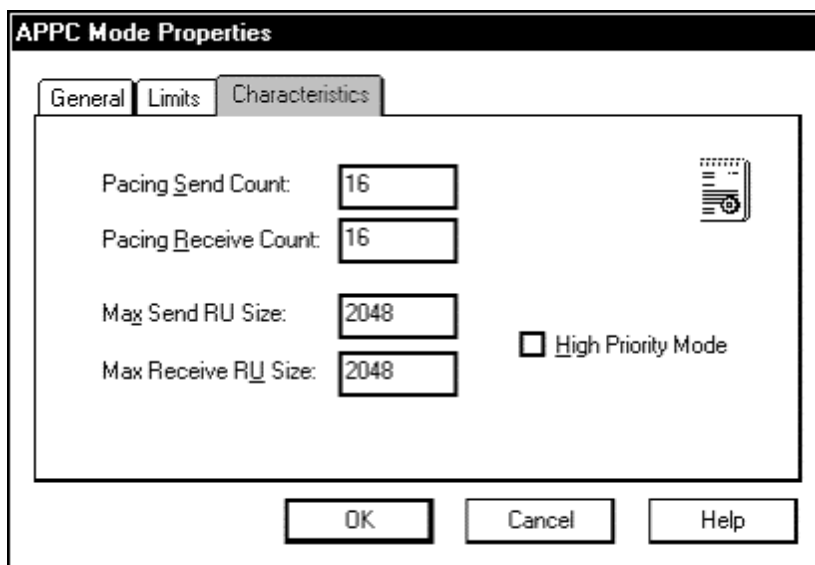


Figure B-15: SNA Server v3.0 APPC Mode Prop. – Characteristics

Remote LU Definition

- The **SNA Server Manager** main dialog will display again.
- Select the Server you are configuring on the left side of the screen under SNA Servers. (In this example it is SNASrvr1 (Inactive).)
- Move the mouse to the right side of the screen and click the right mouse button to bring up the pop-up menu.
- Select **Insert**.
- Select **A**PPC.
- Select **R**emote LU.

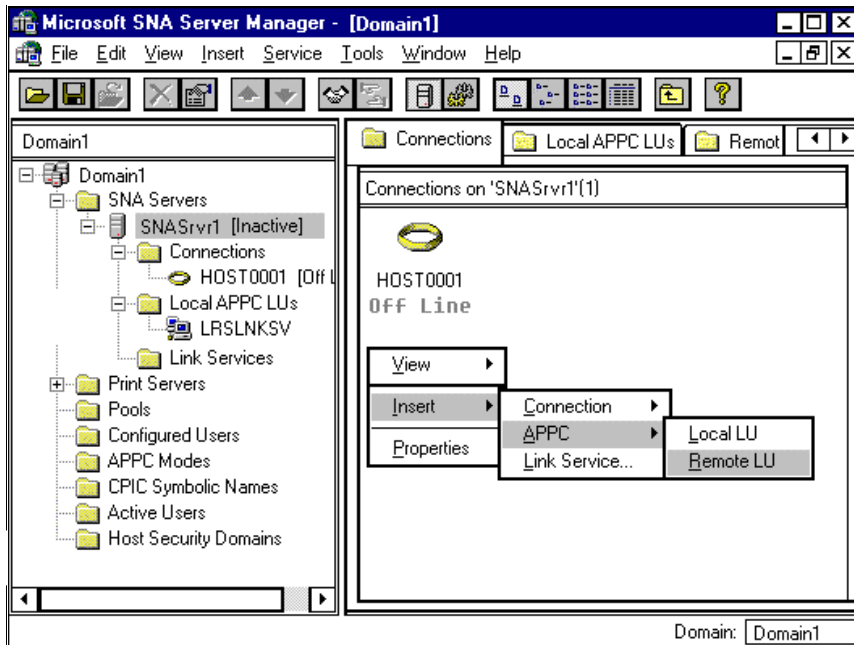
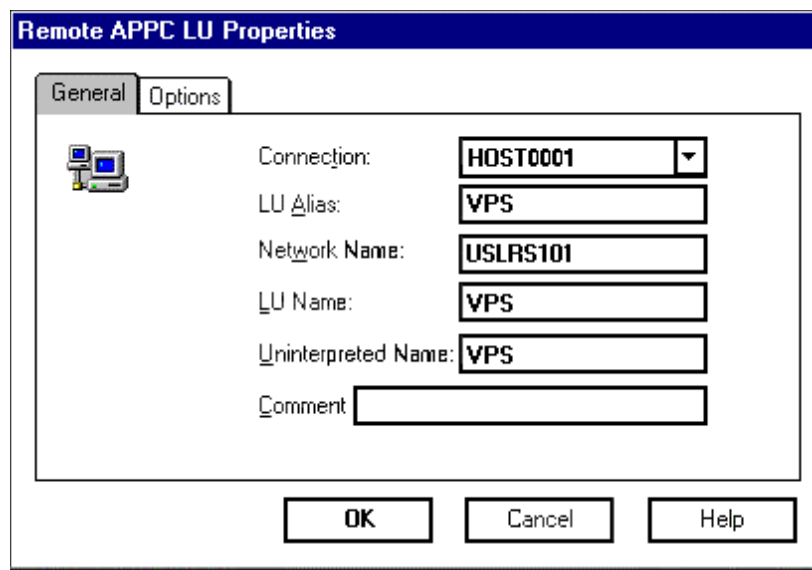


Figure B-16: SNA Server v3.0 Remote LU

The Remote APPC LU Properties dialog will display.

- Set the **Connection** to HOST0001 (or the value you supplied in [Figure B-5](#) on page [B.5](#)).
- Set the **LU Alias** to any name as long as it is unique.
- Set the **Network Name** to the name of your SNA network.
- This must match the parameter NETID specified on the host in SYS1.VTAMLST(ATCSTRXX). (XX can be anything.)
- Set the **LU Name** to the actual name of the **partner LU** that AnyQueue will be communicating with. (This must match the APPLID defined in VTAM for VPS as shown in [Figure 3-3](#) on page [3.3](#).)
- Set the **Uninterpreted Name** to the same value as the LU Name.



The screenshot shows a dialog box titled "Remote APPC LU Properties" with two tabs: "General" and "Options". The "General" tab is active. On the left side of the dialog, there is a small icon of a computer monitor and keyboard. The main area contains several labeled input fields:

- Connection:** A dropdown menu with "HOST0001" selected.
- LU Alias:** A text box containing "VPS".
- Network Name:** A text box containing "USLRS101".
- LU Name:** A text box containing "VPS".
- Uninterpreted Name:** A text box containing "VPS".
- Comment:** An empty text box.

At the bottom of the dialog, there are three buttons: "OK", "Cancel", and "Help".

Figure B-17: SNA Server v3.0 Remote APPC LU Prop. – General

-
- Select the **Options** tab on the **Remote APPC LU Properties** dialog.
 - Verify that **Supports Parallel Sessions** is not selected.
 - Select **OK** to continue.
 - **Save the configuration.**

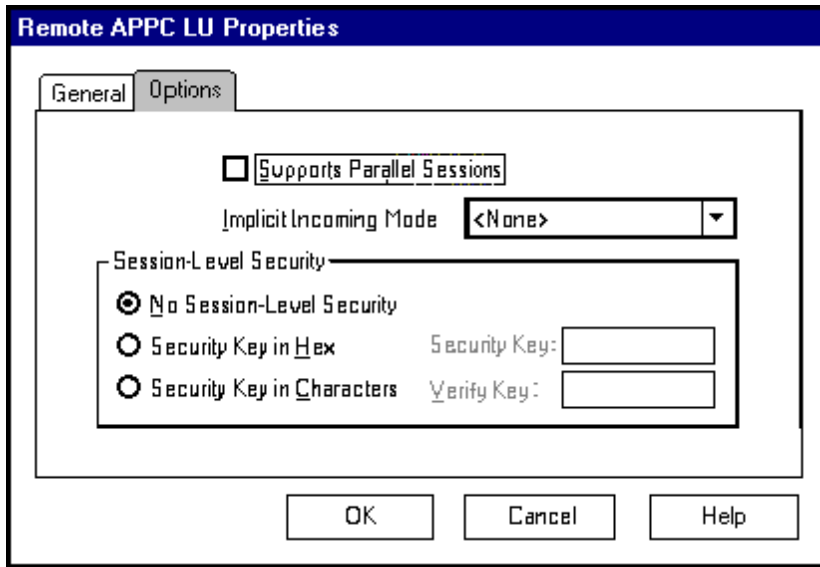


Figure B-18: SNA Server v3.0 Remote APPC LU Prop. - Options

Transaction Program Definitions

In the SNA Server Admin. there are no screens to configure the Transaction program needed for AnyQueue so you **must** following the procedure below to complete the configuration.

When AnyQueue was installed, a program called TPCONFIG.EXE was copied to the AnyQueue directory.

1. Execute **TPCONFIG.EXE**.

The screen illustrated below will display. Any Transaction Programs previously defined will be displayed in the dialog.

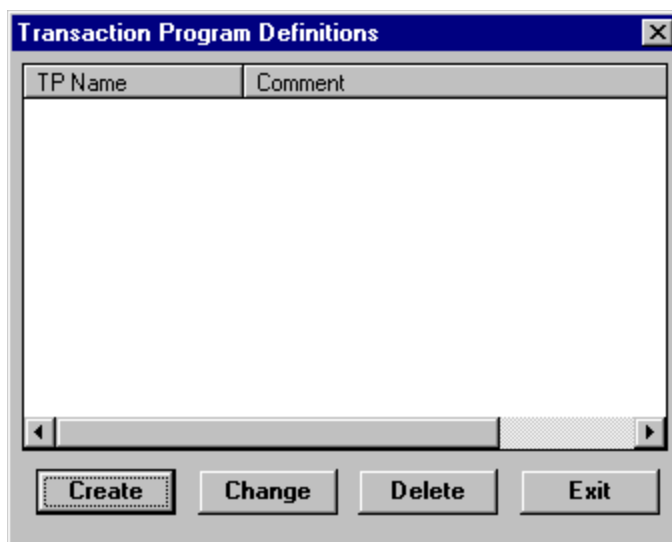


Figure B-19: SNA Server v3.0 Transaction Program Definitions

2. Select the **Create** button and the **TP Configuration** dialog will display.
3. Complete the **TP Configuration - Create** dialog with the following values.
 - Set **TP Name** to the LU Name. In [Figure 3-1 on page 3.1](#) the LU Name is L591002. This value will also match the LUNAME keyword in the VPS printer definition for AnyQueue (see [Figure 3-4 on page 3.4](#)).
 - **LU Alias (optional)** should be left blank.
 - Set **Program Location** to the fully-qualified path name for the AnyQueue Engine. (example: C:\LRS\ANYQ\NANYQ.EXE)
 - Enter an optional comment for the transaction program, if desired.
 - Set **Service Type** to **Queued, Operator started**.
 - Set **Timeout - Finite** to 1 sec.

The completed **TP Configuration** dialog should appear similar to the example below.

TP Configuration - Create

TP Name: L591002

LU Alias (optional):

Program Location: C:\LRS\ANYQ\NANYQ

Comment (optional):

Service Type

- Queued, Auto started
- Queued, Operator started
- Non-Queued, Auto started

Timeout

- Finite: 1 sec
- Infinite

Conversation Security

Accept already verified passwords

Conversation Security User Accounts

Add

Edit

Delete

Ok Cancel

Figure B-20: SNA Server v3.0 TP Configuration - Create

4. Select **OK** to save the transaction program definition.
The **Transaction Program Definitions** dialog will display showing the TPName.
5. Select **Exit** to finish transaction program definitions.

Appendix C

SNA Server v4.0

Microsoft's SNA Server v4.0 can be used for APPC communication to VPS®.

Overview

SNA Server is a communications package which provides a wide array of communication services ranging from terminal emulation to APPC command verbs. AnyQueue® uses SNA Server to provide the link to the host using APPC command verbs. (Other services may be configured and installed as well, but this appendix will deal only with setting up communications through APPC command verbs. For information on setting up other services, consult the SNA Server Installation Guide.)

SNA Server Configuration

For AnyQueue to use APPC communication a 'Link Service' that supports the network adapter installed in the PC and APPC must be installed/configured in SNA Server.

In the SNA Server setup program when the Link Service Installation dialog appears, select the type of connection you will be using (e.g. DLC 802.2 Link Service - for Token ring, Ethernet, or FDDI connections).

After SNA Server setup has installed all the required files, run SNA Server Manager to configure the connection properties and the LUs.

Link Setup

From the **SNA Server Manager** screen, expand the **SNA Servers** folder.

- Move the mouse to the right side of the screen and click the right mouse button to bring up the pop-up menu.
- Select **Insert**.
- Select **Link Service...**

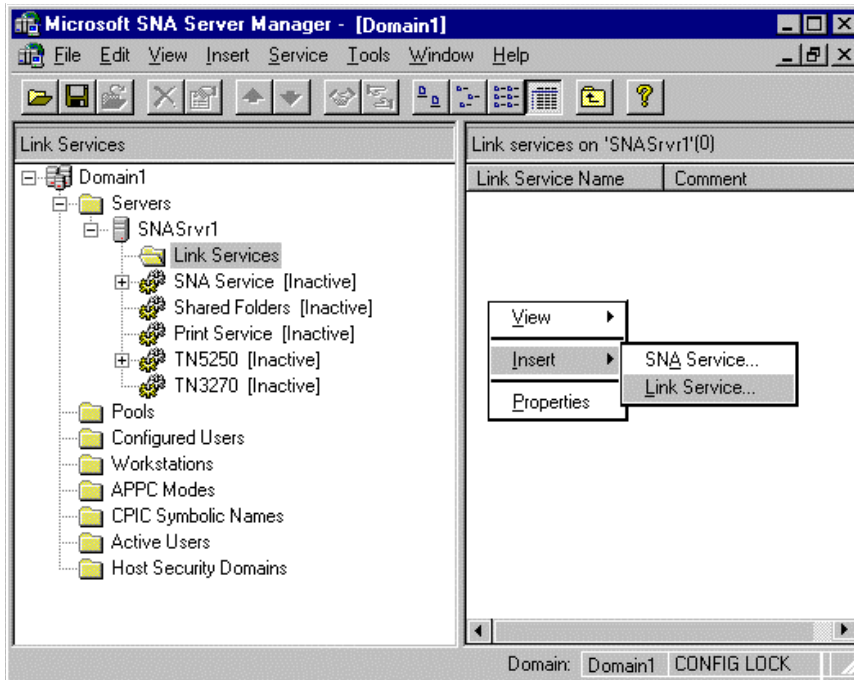


Figure C-1: Microsoft SNA Server v4.0 Manager

The **Insert Link Service** dialog will display.

- Select the applicable Link Service
- Select the **Add..** button.

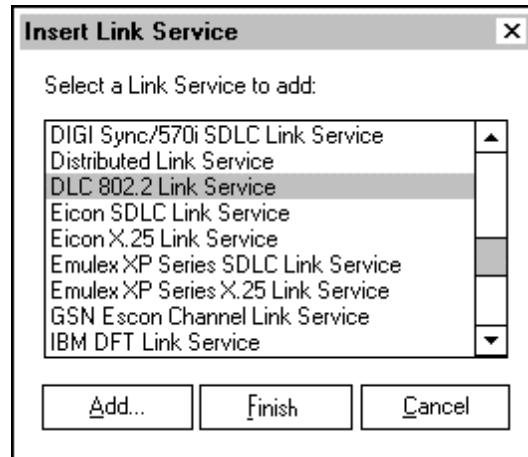


Figure C-2: SNA Server v4.0 Insert Link Service

The **Link Service Properties** dialog will display.

- The **Title** and **Adapter** fields should reflect your installation so the example below may not be exactly like your configuration.
- Select the **OK** button when you are finished defining your link properties.

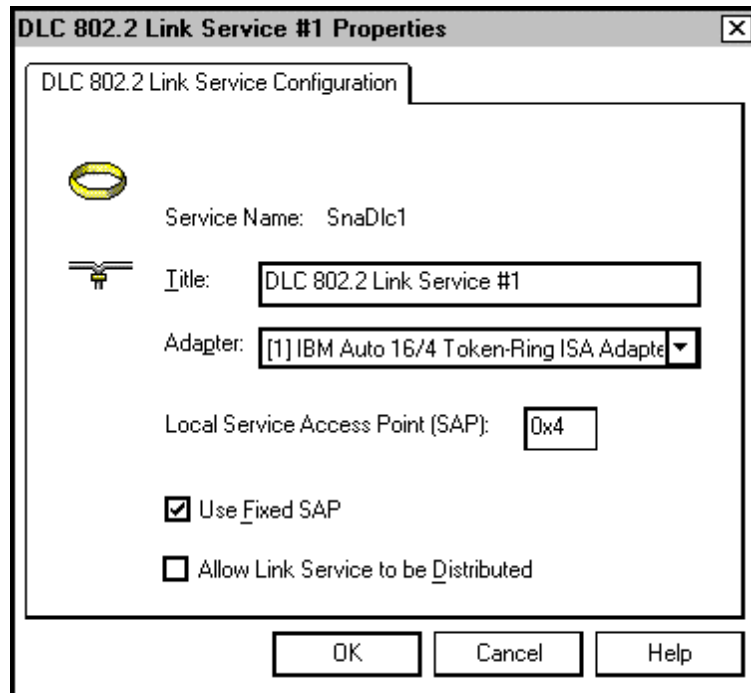


Figure C-3: SNA Server v4.0 Link Service Properties

The **Insert Link Service** dialog will display again.

- Select the **Finish** button.

Your system network bindings will be updated then the new Link Service will display on the right side of the dialog.

Connection Properties

The **SNA Server Manager** main dialog should be displayed.

- Expand **SNA Service** in the tree on the left side of the dialog.
- Move the mouse to the right side of the screen and click the right mouse button to bring up the pop-up menu.
- Select **Insert**.
- Select **C**onnection.
- Select **802.2** (your connection could be different).

The **Connection Properties** dialog will display.

- Enter a value in the **Name** field. (Figure C-4 below shows **HOST0001**. This name will be used when the Remote APPC LU Properties are defined later in this configuration.)
- Select the **Link Service** from the drop down box for the **Link Service** field.

The screenshot shows the 'Connection Properties' dialog box with the 'General' tab selected. The dialog has four tabs: 'General', 'Address', 'System Identification', and '802.2 DLC'. The 'Name' field contains 'HOST0001'. The 'Link Service' dropdown is set to 'SnaDlc1' with 'Token Ring' displayed to its right. There is an empty 'Comment' field. A checkbox for 'Supports Dynamic Remote APPC LU Definition' is checked. Below this are three groups of radio buttons: 'Remote End' with options 'Host System' (selected), 'Peer System', 'Downstream', and 'PU Passthrough'; 'Allowed Directions' with options 'Outgoing Calls' (selected), 'Incoming Calls', and 'Both Directions'; and 'Activation' with options 'On Server Startup' (selected), 'On Demand', and 'By Administrator'. At the bottom, there is a 'Passthrough via Connection' dropdown set to '<None>' and another unchecked checkbox for 'Supports Dynamic Remote APPC LU Definition'. The dialog ends with 'OK', 'Cancel', and 'Help' buttons.

Figure C-4: SNA Server v4.0 Connection Prop. - General

-
- Select the **Address** tab on the **Connection Properties** dialog.
 - Enter the token ring address of your network in the **Remote Network Address** field.

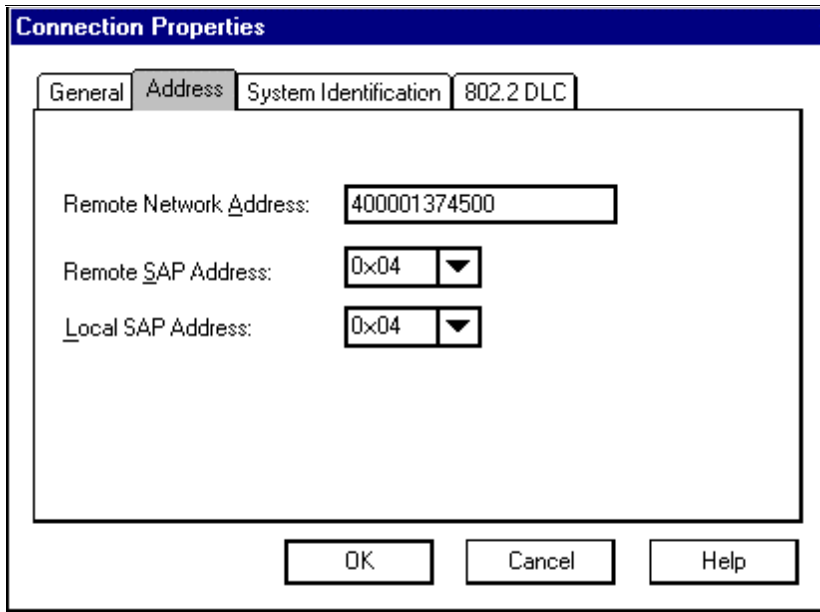


Figure C-5: SNA Server v4.0 Connection Prop. - Address

- Select the **System Identification** tab on the **Connection Properties** dialog.
- Set the **Network Name** field to the name of your SNA network.
This must match the parameter NETID specified on the host in SYS1.VTAMLST(ATCSTRXX). (XX can be anything.)
- The **Control Point Name** should be the name of your SNA Server.
- Set the **Local Node ID** to the hex network ID for the PU that you will be using. (This must match the IDBLK parameter on the VTAM definition.)

The screenshot shows the 'Connection Properties' dialog box with the 'System Identification' tab selected. The dialog has four tabs: 'General', 'Address', 'System Identification', and '802.2 DLC'. The 'System Identification' tab contains the following fields and options:

- Local Node Name:**
 - Network Name: USLRS101
 - Control Point Name: SNASrvr1
 - Local Node ID: 061 E0278
- Remote Node Name:**
 - Network Name: [Empty]
 - Control Point Name: [Empty]
 - Remote Node ID: [Empty] [Empty]
- XID Type:**
 - Format 0
 - Format 3
- Peer DLC Role:**
 - Primary
 - Secondary
 - Negotiable
- Compression Type:** None (dropdown menu)

At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Help'.

Figure C-6: SNA Server v4.0 Connection Prop. - System Identification

-
- Select the **802.2 DLC** tab on the dialog.
 - Most of the defaults should be correct, however we have found that in many sites a value of **1** for the **Receive ACK Threshold (frames)**, and a value of **2** for the **Unacknowledged Send Limit (frames)** improves performance.
 - Select **OK** to continue.

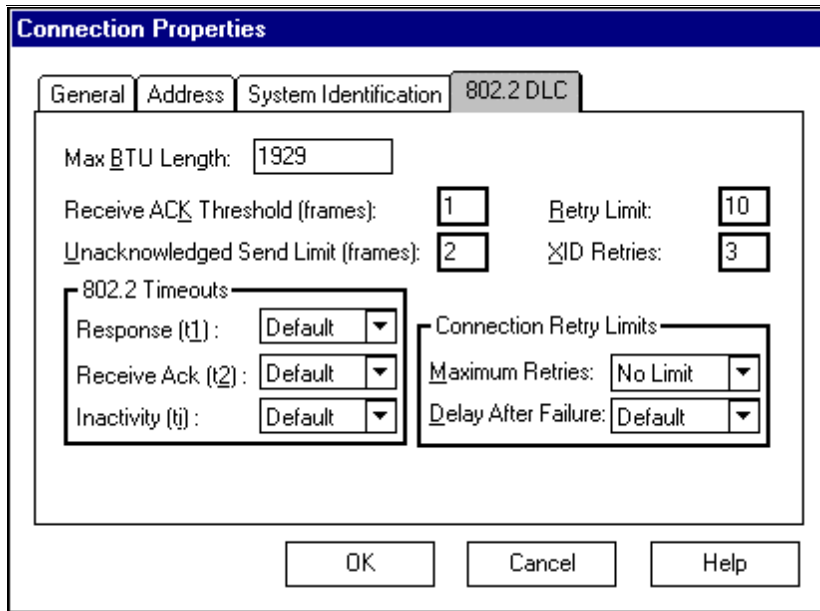


Figure C-7: SNA Server v4.0 Connection Prop. - 802.2 DLC

Local APPC LU Definition

The SNA Server Manager main dialog should be displayed.

- Under **SNA Service** select **Connections**.
- Move the mouse to the right side of the screen and click the right mouse button to bring up the pop-up menu.
- Select **Insert**.
- Select **APPC**.
- Select **Local LU**.

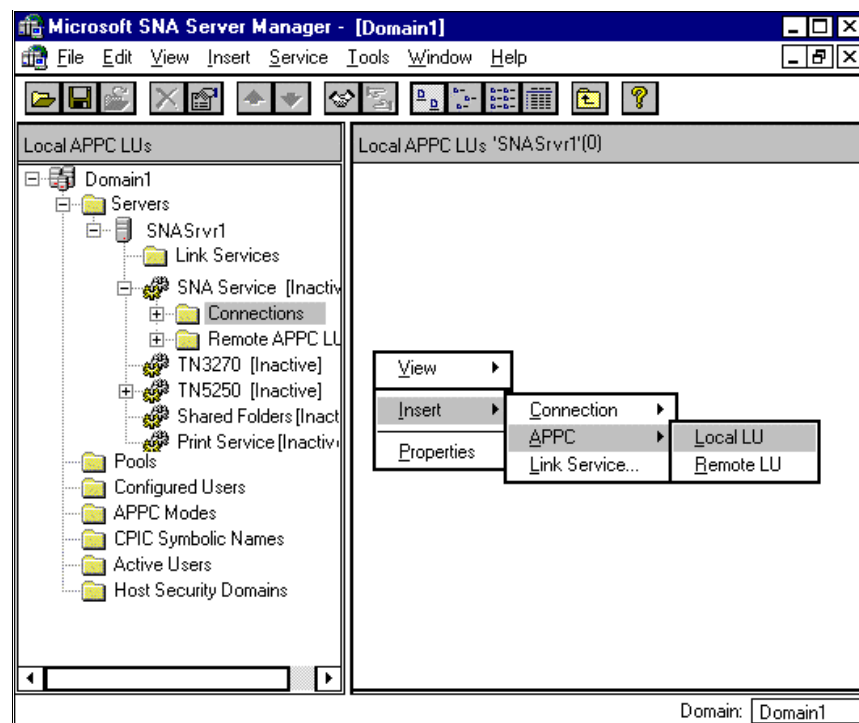


Figure C-8: SNA Server v4.0 Local LU

The **Local APPC LU Properties** dialog will display.

- Set the **LU Alias** to a unique name. (Recommendation: Use the name of the LU in VTAM – example L591002.)
- Set the **Network Name** to the name of your SNA network.
- **This must match the parameter NETID specified on the host in SYS1.VTAMLST(ATCSTRXX). (XX can be anything.)**
- Set the **LU Name**. This must match the name on the LU defined in VTAM for AnyQueue. In [Figure 3-1 on page 3.1](#) the LU Name is L591002. This value will also match the LUNAME keyword in the VPS printer definition for AnyQueue (see [Figure 3-4 on page 3.4](#)).

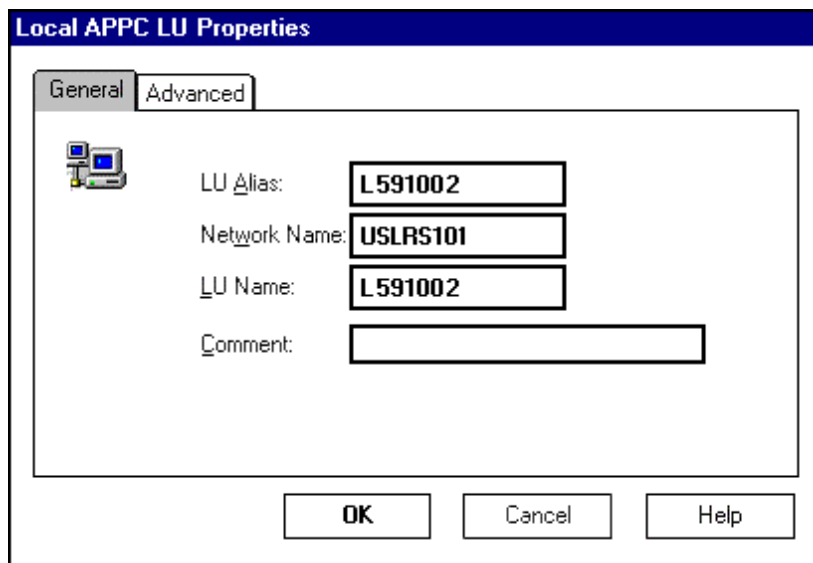


Figure C-9: SNA Server v4.0 Local APPC LU Prop. - General

- Select the **Advanced** tab on the **Local APPC LU Properties** dialog.
- Select **Dependent** for the LU 6.2 Type.
- The **LU Number** value should match the **LOCADDR** value for the VTAM LU. (See [Figure 3-1 on page 3.1.](#))
- Use the drop down box to select the **Connection**. (The name of your connection should appear in the drop down list. In [Figure C-4 on page C.5](#) the connection name is HOST0001.)
- Select **OK**.

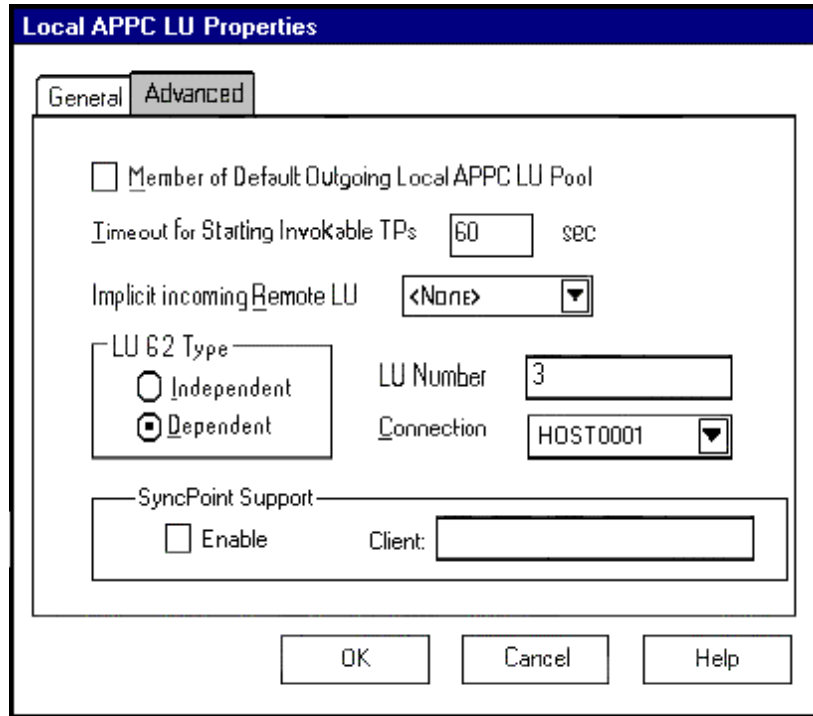


Figure C-10: SNA Server v4.0 Local APPC LU Prop. - Advanced

Mode Definition

The **SNA Server Manager** main dialog should be displayed.

- Select **APPC Modes** on the left side of the screen.
- Move the mouse to the right side of the screen and click the right mouse button to display the pop-up menu.
- Select **Insert**.
- Select **A**PPC.
- Select **M**ode Definition.

The **APPC Mode Properties** dialog will display.

- Set the **Mode Name** to the name listed in the DLOGMODE entry in SYS1.VTAMLST. (See [Figure 3-1](#) on page 3.1.)

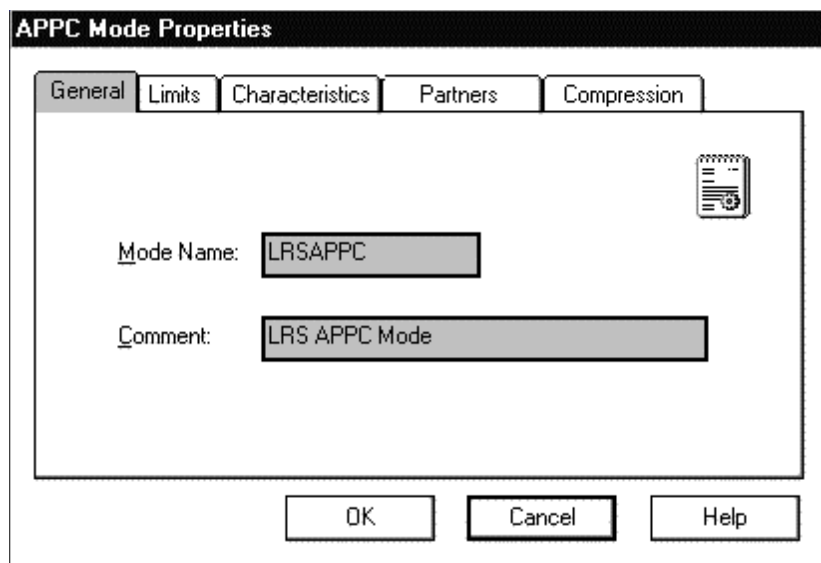


Figure C-11: SNA Server v4.0 Mode Entry

-
- Select the **Limits** tab on the APPC Mode Properties dialog.
 - Set the **Parallel Session Limit** to **1**.
 - Set the **Minimum Contention Winner Limit** to **0**.
 - Set the **Partner Min contention Winner Limit** to **0**.
 - Set **Automatic Activation Limit** to **0**.

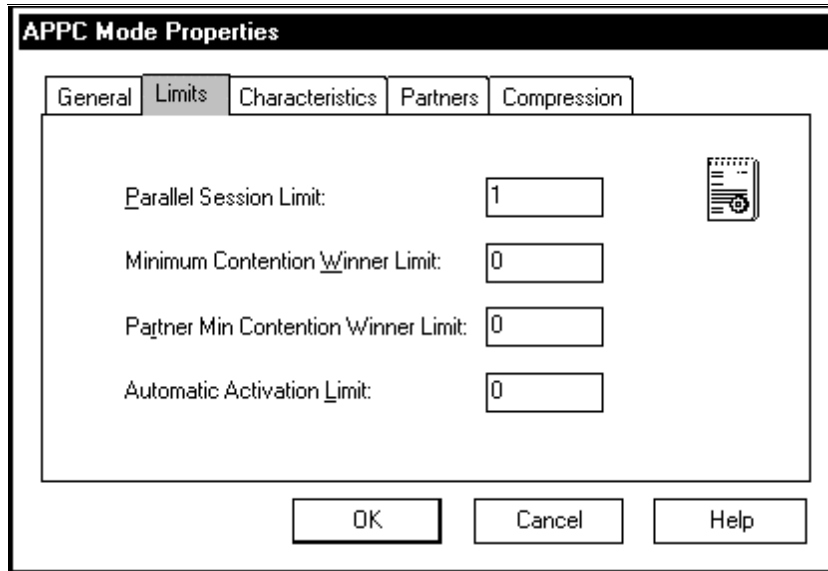


Figure C-12: SNA Server v4.0 APPC Mode Prop. - Limits

-
- Select the **Characteristics** tab on the **APPC Mode Properties** dialog.
 - Set the **Pacing Send Count** and **Pacing Receive Count** to **16**.
 - Set the **Max Send RU Size** and **Max Receive RU Size** to **2048**. You may modify the RU size to improve performance based upon your individual network configurations.

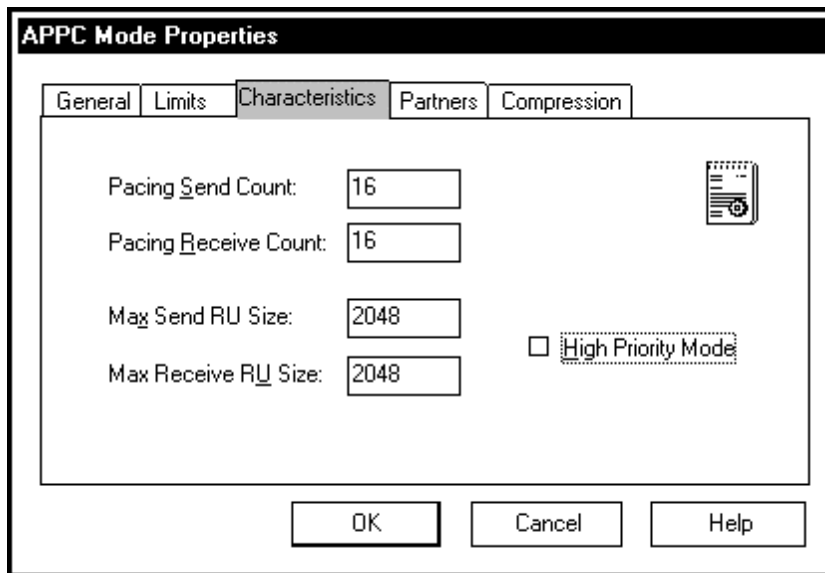


Figure C-13: SNA Server v4.0 APPC Mode Prop. - Characteristics

- Select the **OK** button.

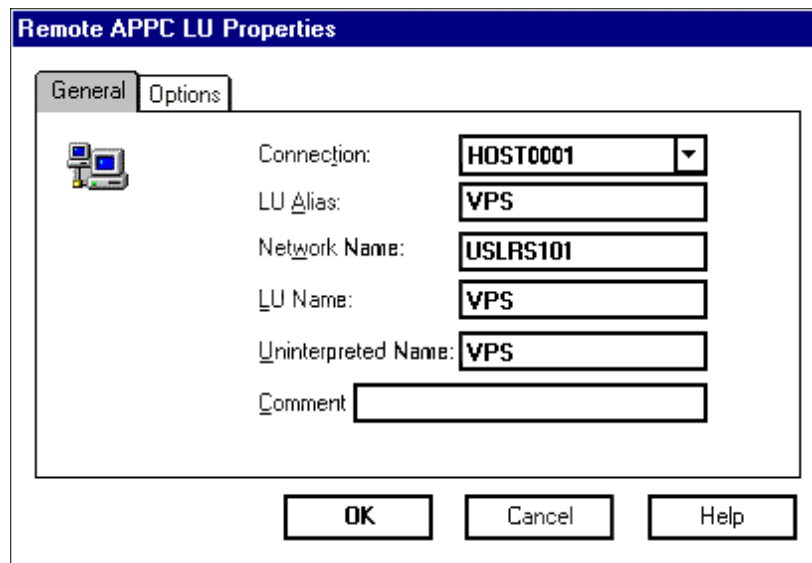
Remote APPC LU Definition

The **SNA Server Manager** main dialog should be displayed.

- Select **SNA Service**.
- Move the mouse to the right side of the screen and click the right mouse button to bring up the pop-up menu.
- Select **Insert**.
- Select **APPC**.
- Select **Remote LU**.

The **Remote APPC LU Properties** dialog will display.

- Use the drop down button next to the **Connection** field to display the name of the connection you defined previously.
- Set the **LU Alias** to a unique name. (Example: VPS)
- Set the **Network Name** to the name of your SNA network.
- **This must match the parameter NETID specified on the host in SYS1.VTAMLST(ATCSTRXX). (XX can be anything.)**
- Set the **LU Name** to the actual name of the partner LU that AnyQueue will be communicating with. This must match the APPLID defined in VTAM for the host as shown in [Figure 3-1](#) on page 3.1.
- Set the **Uninterpreted Name** to the same value as the **LU Name**.



The screenshot shows the 'Remote APPC LU Properties' dialog box with the 'General' tab selected. The dialog contains the following fields and values:

Field	Value
Connection:	HOST0001
LU Alias:	VPS
Network Name:	USLRS101
LU Name:	VPS
Uninterpreted Name:	VPS
Comment:	

At the bottom of the dialog are three buttons: OK, Cancel, and Help.

Figure C-14: SNA Server v4.0 Remote APPC LU Prop. - General

-
- Select the **Options** tab on the **Remote APPC LU Properties** dialog.
 - By default, the box for **Supports Parallel Sessions** will be selected. This box should be **unselected**.
 - Select **OK** to continue.
 - Select **File** from the menu on the **SNA Server Manager** dialog.
 - **Select Save to save the configuration.**

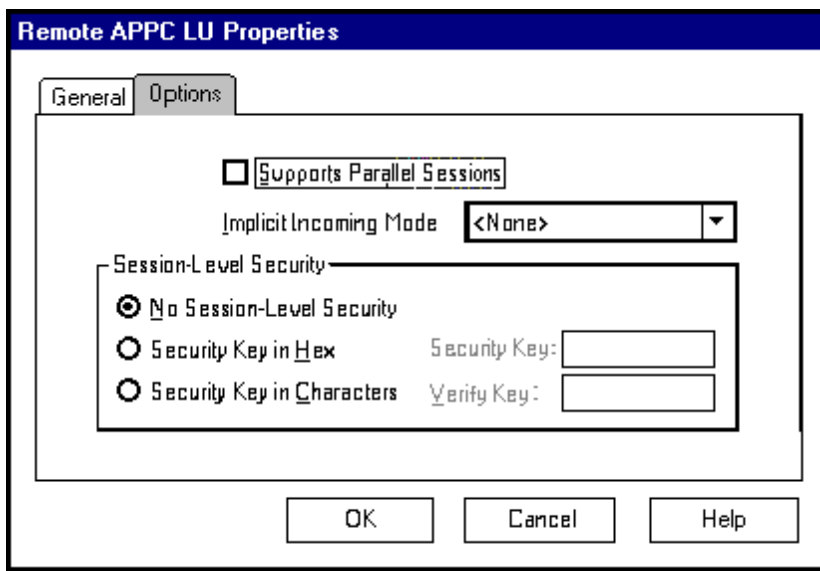


Figure C-15: SNA Server v4.0 Remote APPC LU Prop. - Options

Transaction Program Definitions

In the SNA Server Admin. there are no screens to configure the Transaction program needed for AnyQueue so you **must** following the procedure below to complete the configuration.

When AnyQueue was installed, a program called TPCONFIG.EXE was copied to the AnyQueue directory.

1. Execute **TPCONFIG.EXE**.

The screen illustrated below will display. Any Transaction Programs previously defined will be displayed in the dialog.

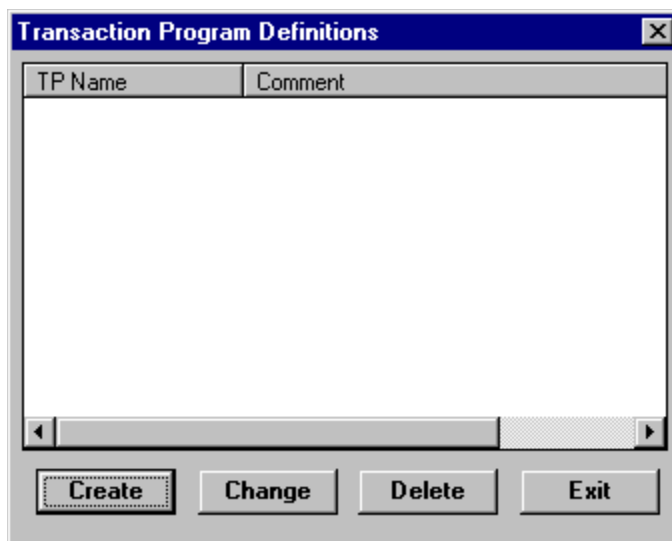


Figure C-16: SNA Server v4.0 Transaction Program Definitions

2. Select the **Create** button and the **TP Configuration** dialog will display.
3. Complete the **TP Configuration - Create** dialog with the following values.
 - Set **TP Name** to the **LU Name**. In [Figure 3-1](#) on page [3.1](#) the LU Name is L591002. This value will also match the LUNAME keyword in the VPS printer definition for AnyQueue (see [Figure 3-4](#) on page [3.4](#)).
 - **LU Alias (optional)** should be left blank.
 - Set **Program Location** to the fully-qualified path name for the AnyQueue Engine. (example: C:\LRS\ANYQ\NANYQ.EXE)
 - Enter an optional comment for the transaction program, if desired.
 - Set **Service Type** to **Queued, Operator started**.
 - Set **Timeout - Finite** to 1 sec.

The completed **TP Configuration** dialog should appear similar to the example below.

TP Configuration - Create

TP Name: L591002

LU Alias (optional):

Program Location: C:\LRS\ANYQ\NANYQ

Comment (optional):

Service Type

- Queued, Auto started
- Queued, Operator started
- Non-Queued, Auto started

Timeout

- Finite: 1 sec
- Infinite

Conversation Security

Accept already verified passwords

Conversation Security User Accounts

Add

Edit

Delete

Ok Cancel

Figure C-17: SNA Server v4.0 TP Configuration - Create

4. Select **OK** to save the transaction program definition.

The **Transaction Program Definitions** dialog will display showing the TPName.

5. Select **Exit** to finish transaction program definitions.

Appendix D

IBM Personal Communications

Configure Node

Do the following on the SNA Node Config dialog:

- Highlight *Configure Node* in the Configuration options box.
- Select the **New** button
- **Or**, if you already have a Node defined...
- Select the **View/Change/Add....** button.

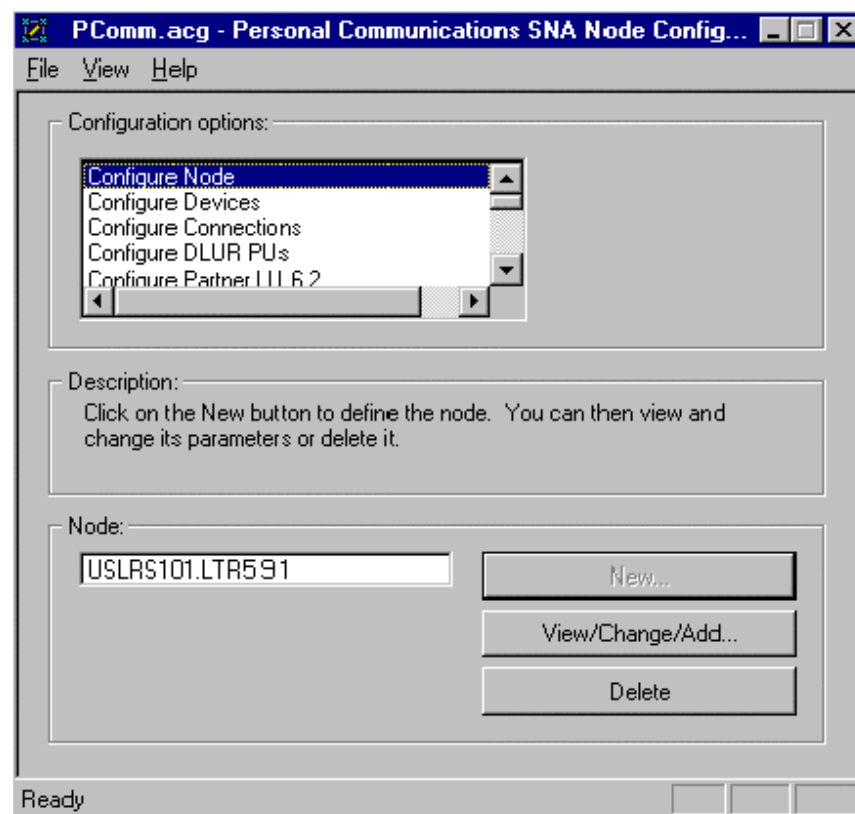


Figure D-1: SNA Node Config dialog

Define the Node – Basic tab

The **Define the Node** dialog will display. On the **Basic** tab, set the following parameters:

- Enter the VTAM Network name (example: USLRS101).
- Enter PU Name (example: LTR591).
- Enter the PU Name as CP Alias (example: LTR591).
- Enter the Block ID, if necessary (example: 061).
- Enter the Physical Unit ID, if necessary (example: 00381).
- Select the **Advanced** tab.

The screenshot shows the 'Define the Node' dialog box with the 'Basic' tab selected. The 'Control Point (CP)' section contains a 'Fully qualified CP name:' field with 'USLRS101' and 'LTR591' entered, and a 'CP alias:' field with 'LTR591' entered. The 'Local Node ID' section contains a 'Block ID:' field with '061' and a 'Physical Unit ID:' field with '00381' entered. The dialog has 'OK', 'Cancel', 'Apply', and 'Help' buttons at the bottom.

Figure D-2: Define the Node - Basic tab

Define the Node – Advanced tab

- Set the parameters in the **Advanced** tab as shown in the sample dialog below.

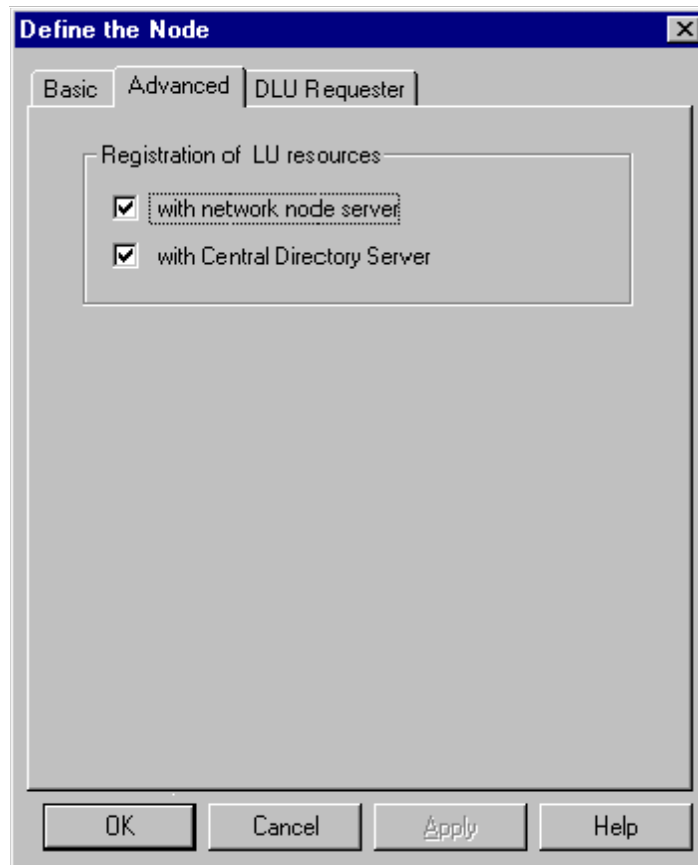


Figure D-3: Define the Node - Advanced tab

Define the Node – DLU Requester tab

- Use the defaults on the **DLU Requester** tab.
- Select the **OK** button and the **SNA Node Config** dialog will display.

Configure Devices

- Highlight *Configure Devices* in the Configuration options box.
- Select the **New** button
Or, if you already have a device defined...
- Select the **View/Change/Add....** button.

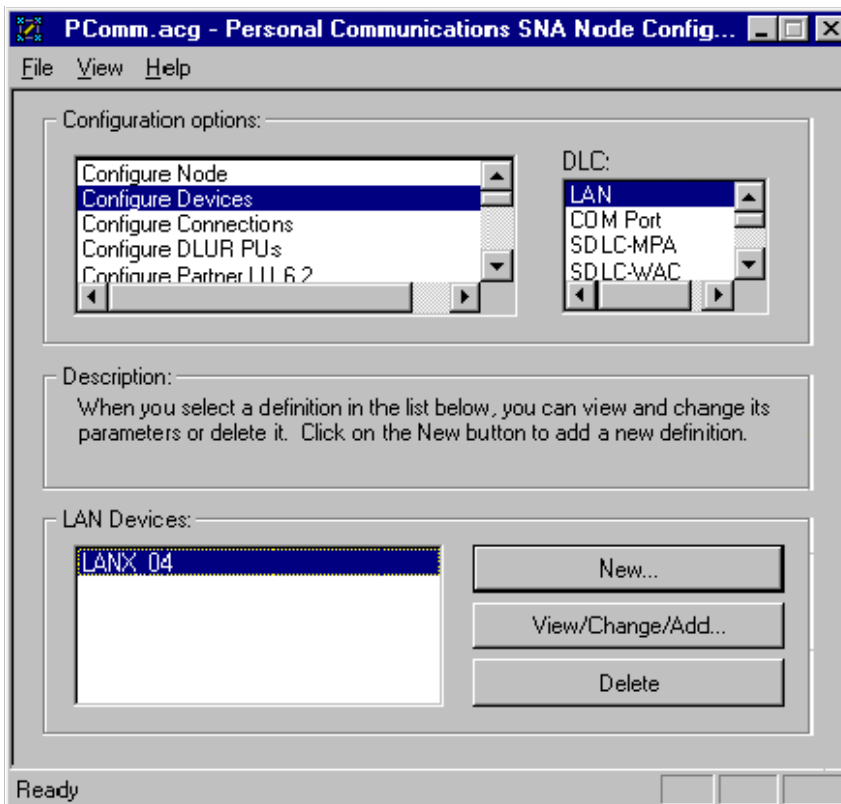


Figure D-4: Configure Devices

Define a LAN Device – Basic tab

In the example below a Token Ring Card will be defined.

- The box for **Use first available LAN adapter** is selected.
- The default **Local SAP** of 4 will be used.
- Select the **Activation** tab.

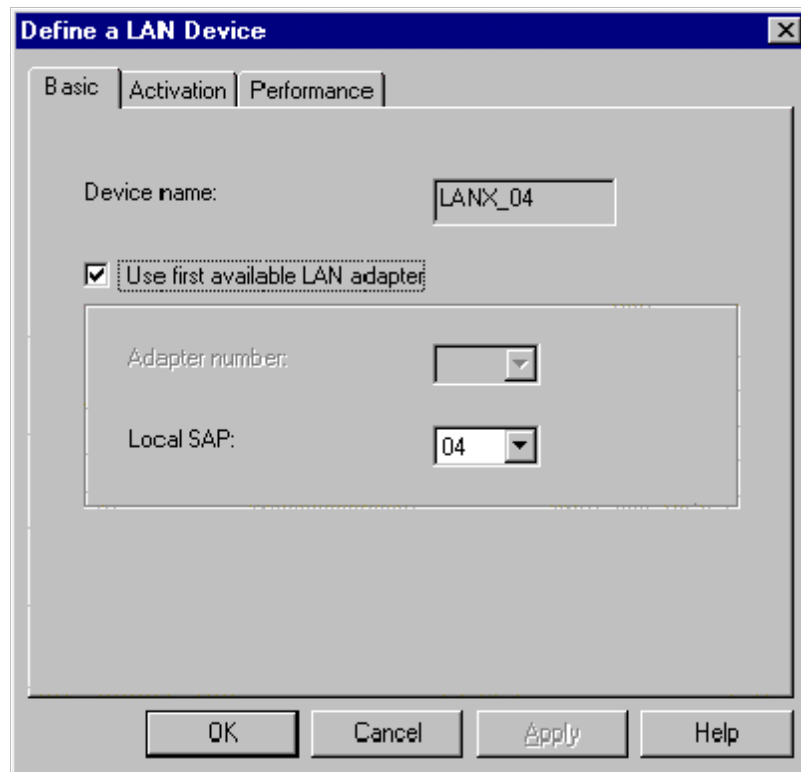


Figure D-5: Define a LAN Device – Basic tab

Define a LAN Device – Activation tab

The values in the sample dialog below will be used in our example.

- Select the **Performance** tab.

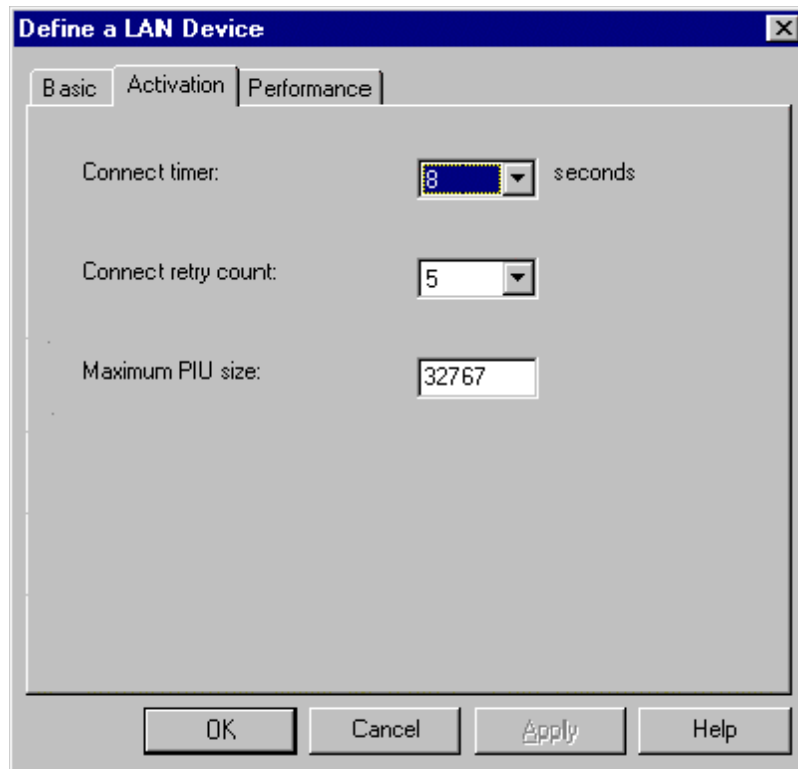
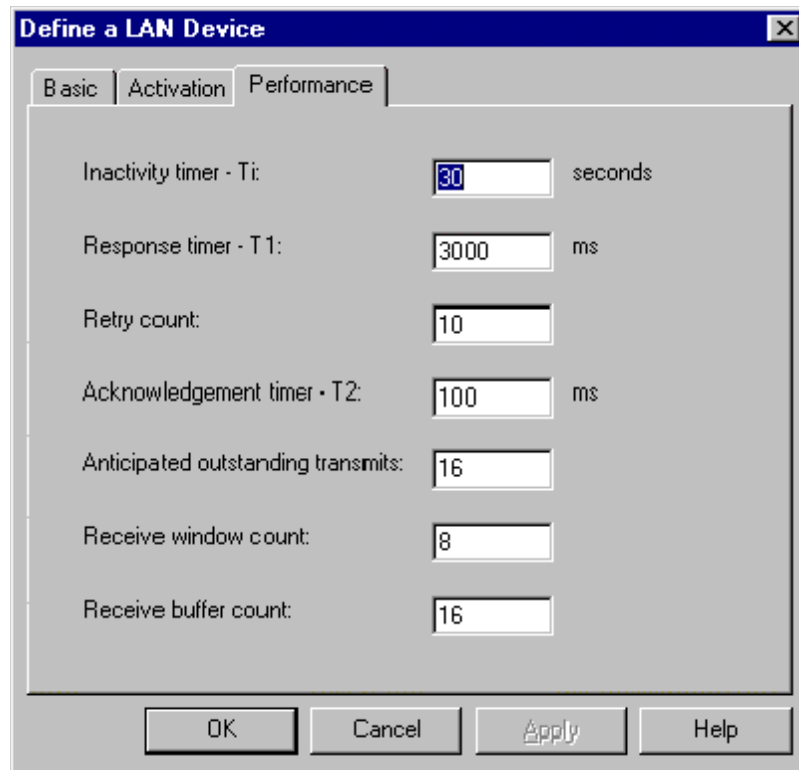


Figure D-6: Define a LAN Device – Activation tab

Define a LAN Device – Performance tab

The values in the sample dialog below will be used in our example.

- Select the **OK** button and the **SNA Node Config** dialog will display.



The screenshot shows a dialog box titled "Define a LAN Device" with three tabs: "Basic", "Activation", and "Performance". The "Performance" tab is selected. The dialog contains several configuration fields with text labels and input boxes:

Parameter	Value	Unit
Inactivity timer - T _i :	30	seconds
Response timer - T ₁ :	3000	ms
Retry count:	10	
Acknowledgement timer - T ₂ :	100	ms
Anticipated outstanding transmits:	16	
Receive window count:	8	
Receive buffer count:	16	

At the bottom of the dialog are four buttons: "OK", "Cancel", "Apply", and "Help".

Figure D-7: Define a LAN Device – Performance tab

Configure Connections

- Highlight *Configure Connections* in the Configuration options box.
- Select the **New** button
Or, if you already have a connection defined...
- Select the **View/Change/Add....** button.

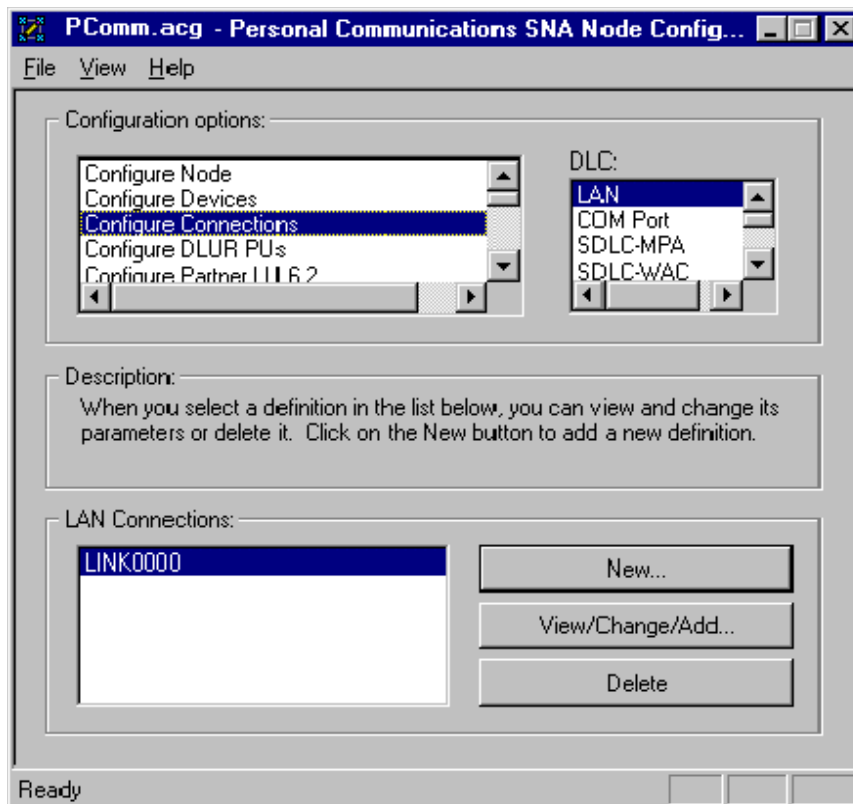


Figure D-8: Configure Connections

Define a LAN Connection – Basic tab

- Enter a generic name in the **Link station name** field.
- Select the device name in the **Device name** field. (In our example on page D.5, LANX_04 was used so that value must be selected here.)
- Enter the address of the 3745, 3174, etc. in the **Destination address** field.
- Our example uses 04 as the **Remote SAP**.
- **Token-Ring** is selected as the connection type.
- Select the **Advanced** tab.

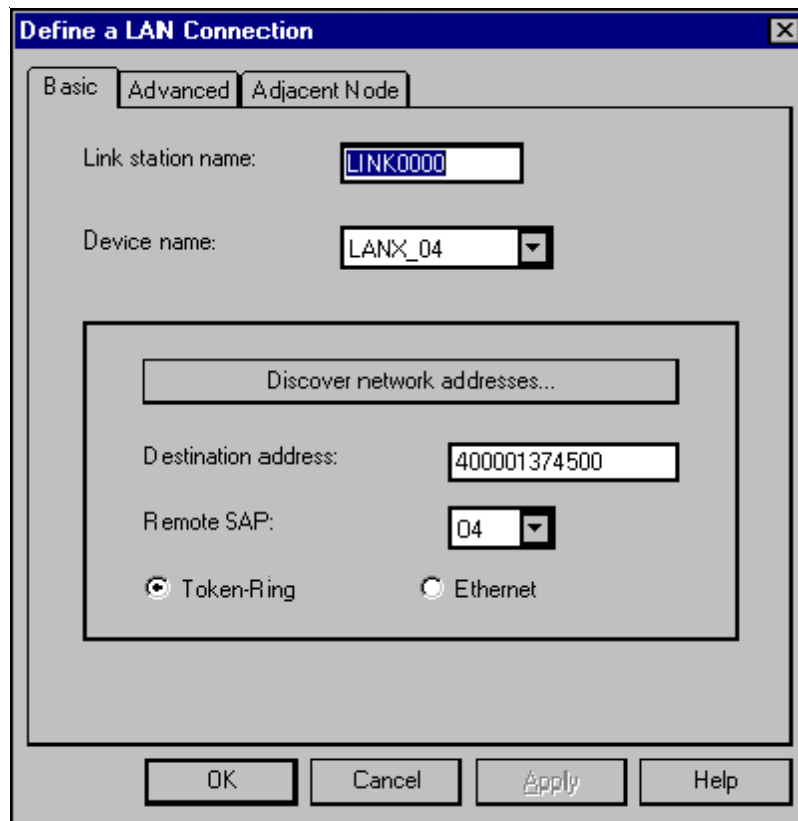


Figure D-9: Define a LAN Connection – Basic tab

Define a LAN Connection – Advanced tab

- Select the box for **Activate link at start**
- Enter the unique **PU name**.
- If applicable, enter the **Block ID** and **Physical Unit ID**.

The screenshot shows a dialog box titled "Define a LAN Connection" with three tabs: "Basic", "Advanced", and "Adjacent Node". The "Advanced" tab is selected. The dialog contains several options and input fields:

- Activate link at start
- HPR support
- APPN support
- Auto-activate support
- Link to preferred NN server
- Solicit SSCP sessions
- PU name:
- Maximum PIU size:
- Local Node ID:
 - Block ID:
 - Physical Unit ID:

At the bottom of the dialog are four buttons: "OK", "Cancel", "Apply", and "Help".

Figure D-10: Define a LAN Connection – Advanced tab

Define a LAN Connection – Adjacent Node tab

- The defaults on the **Adjacent Node** tab can be used.
- Select the **OK** button and the **SNA Node Config** dialog will display.

The image shows a dialog box titled "Define a LAN Connection" with a close button (X) in the top right corner. It has three tabs: "Basic", "Advanced", and "Adjacent Node", with "Adjacent Node" being the active tab. The dialog contains the following fields and controls:

- Adjacent CP name:** Two text input fields separated by a period.
- Adjacent CP type:** A dropdown menu showing "Host - XID3".
- TG number:** A dropdown menu showing "0".
- Adjacent node ID:** A dashed-line box containing:
 - Block ID:** A text input field with "000".
 - Physical Unit ID:** A text input field with "00000".

At the bottom of the dialog are four buttons: "OK", "Cancel", "Apply", and "Help".

Figure D-11: Define a LAN Connection – Adjacent Node tab

Configure Partner LU 6.2

- Highlight *Configure Partner LU 6.2* in the Configuration options box.
- Select the **New** button
Or, if you already have a partner LU defined...
- Select the **View/Change/Add....** button.

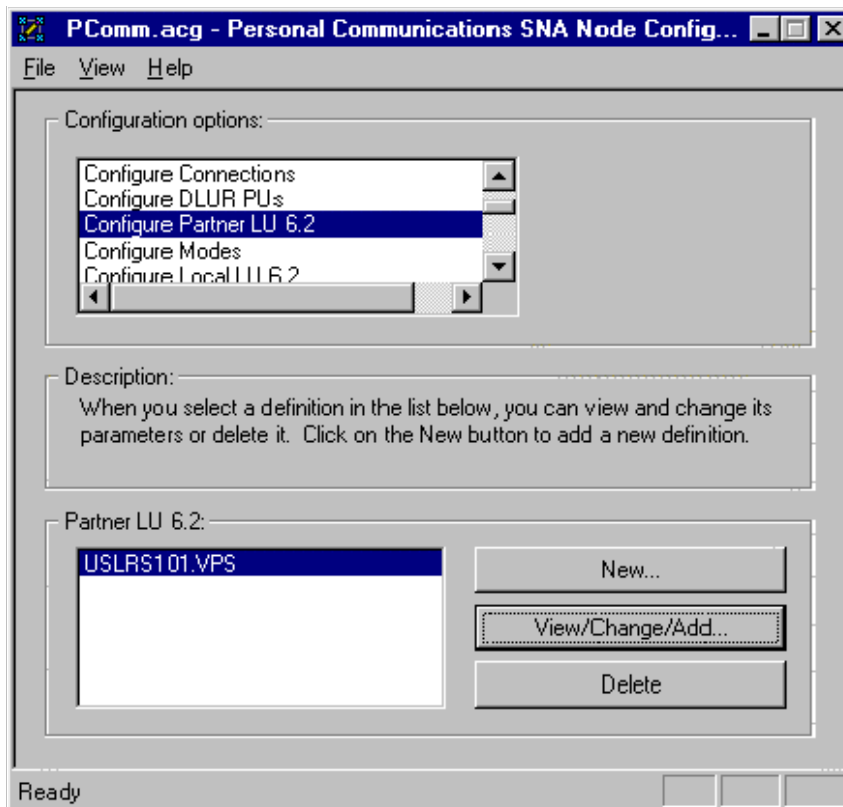


Figure D-12: Configure Partner LU 6.2

Define a Partner LU 6.2 – Basic tab

- In the example below the **Partner LU name** is USLRS101.VPS.

Where: **USLRS101** = The VTAM network name.

VPS = The APPL name for the VPS[®] system on the mainframe side as defined in VTAM. (See the sample APPL definition below.)

VPS	APPL	EAS=6,	LU6.2	APPL	X
		AUTH=(ACQ,VPACE),			X
		VPACING=63,			X
		APPC=YES,PARSESS=YES,			X
		DMINWNL=1,			X
		DMINWNR=0,			X
		DSESLIM=1			

- Define a **Partner LU alias**. For less confusion it is recommended that this should match the APPL name. In this example, it would be VPS.
- Select the **Advanced** tab.

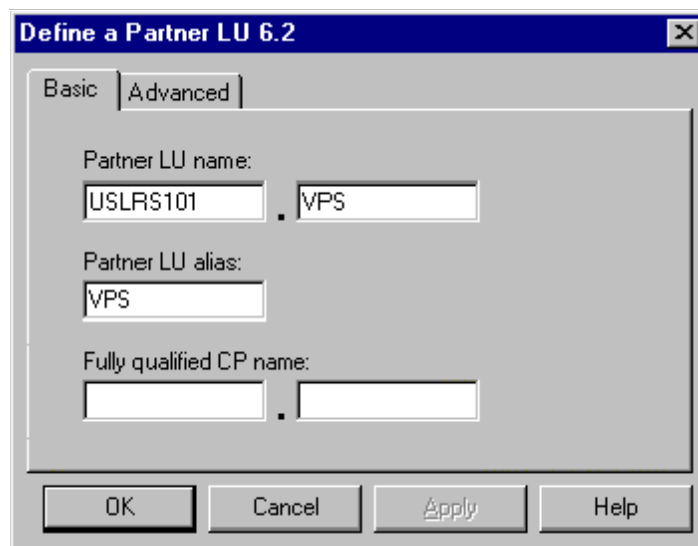


Figure D-13: Configure Partner LU 6.2 – Basic tab

Define a Partner LU 6.2 – Advanced tab

- Use the values and options indicated in the example dialog below.
- Select the **OK** button and the **SNA Node Config** dialog will display.

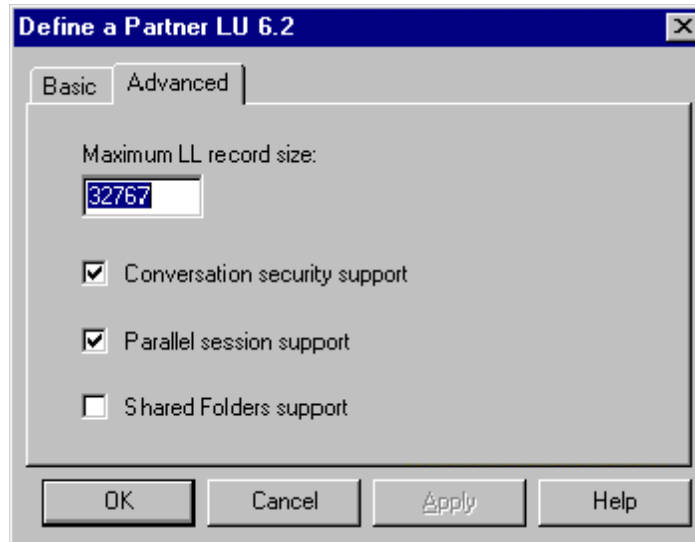


Figure D-14: Configure Partner LU 6.2 – Advanced tab

Configure Modes

- Highlight *Configure Modes* in the Configuration options box.
- Select the **New** button
Or, if you already have a mode defined...
- Select the **View/Change/Add....** button.

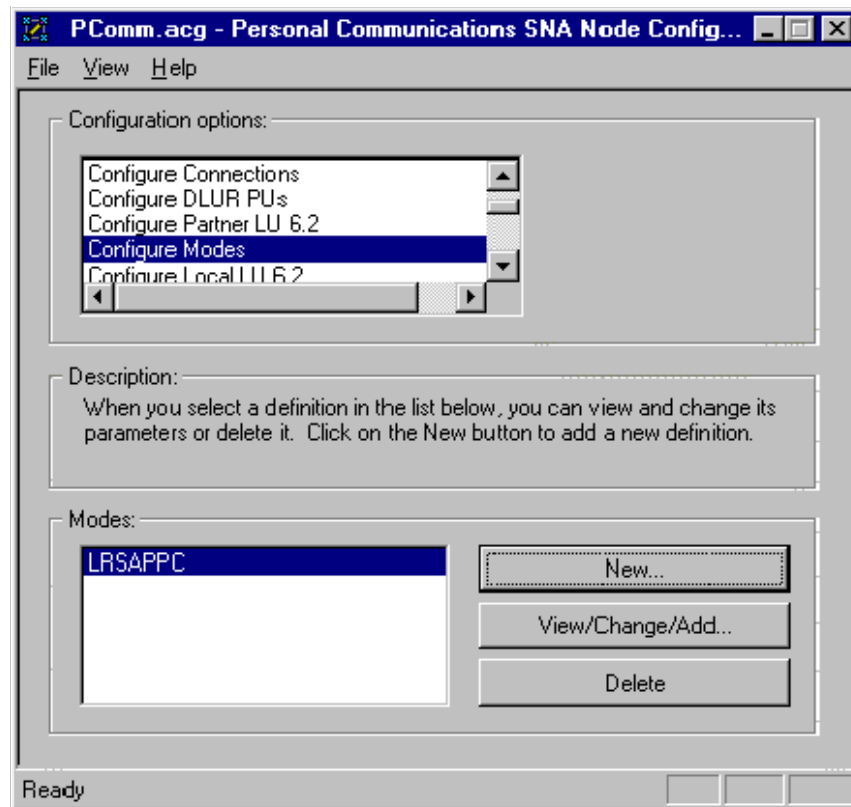


Figure D-15: Configure Modes

Define a Mode – Basic tab

- The **Mode name** must match the host defined mode name. (See the example mode definition below.)

```
LRSMODE  MODETAB
LRSAPPC  MODEENT LOGMODE=LRSAPPC,                                X
          TYPE=0,          NEGOTIABLE BIND                        X
          FMPROF=X'13',    REQUIRED FOR LU6.2                     X
          TSPROF=X'07',    REQUIRED FOR LU6.2                     X
          PRIPROT=X'B0',   REQUIRED FOR LU6.2                     X
          SECPROT=X'B0',   REQUIRED FOR LU6.2                     X
          COMPROT=X'D0B1', REQUIRED FOR LU6.2                     X
          RU SIZES=X'8787', 1024/1024                            X
          SSNDPAC=X'3F',    NON-ZERO FORCES USE OF VPACING=     X
          PSNDPAC=X'3F',    CAN BE OVERRIDDEN BY VPS/ANYQ       X
          SRCVPAC=X'3F',    CAN BE OVERRIDDEN BY VPS/ANYQ       X
          PSERVIC=X'06020000000000000000000000000000'
MODEEND
END
```

- Set the **PLU mode session limit** to **1**.
- Set **Minimum contention winner sessions** to **0**.
- Select the **Advanced** tab.

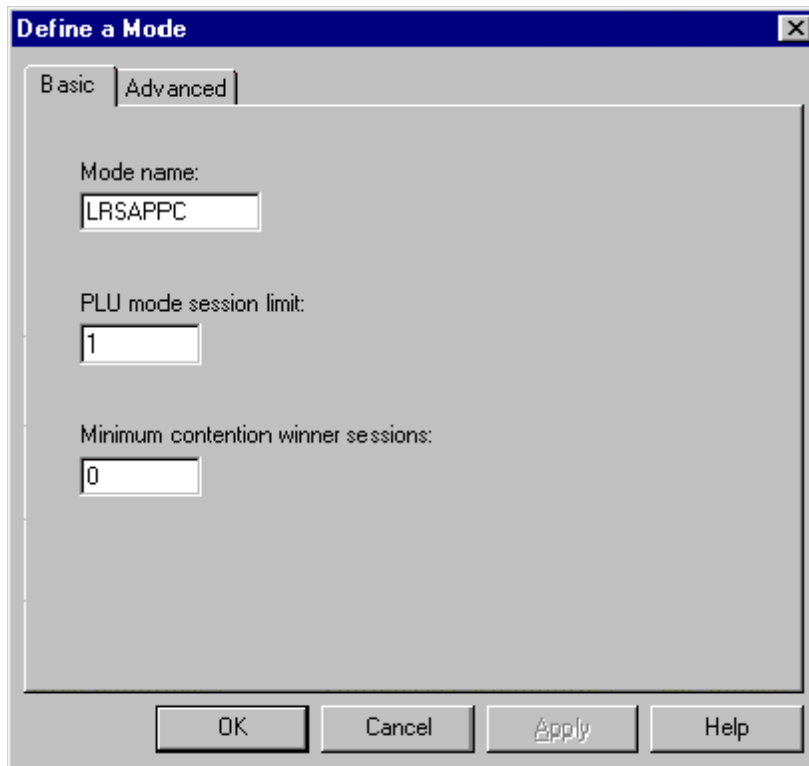


Figure D-16: Define a Mode – Basic tab

Define a Mode – Advanced tab

- Use the values and options indicated in the example dialog below.
- Select the **OK** button and the **SNA Node Config** dialog will display.

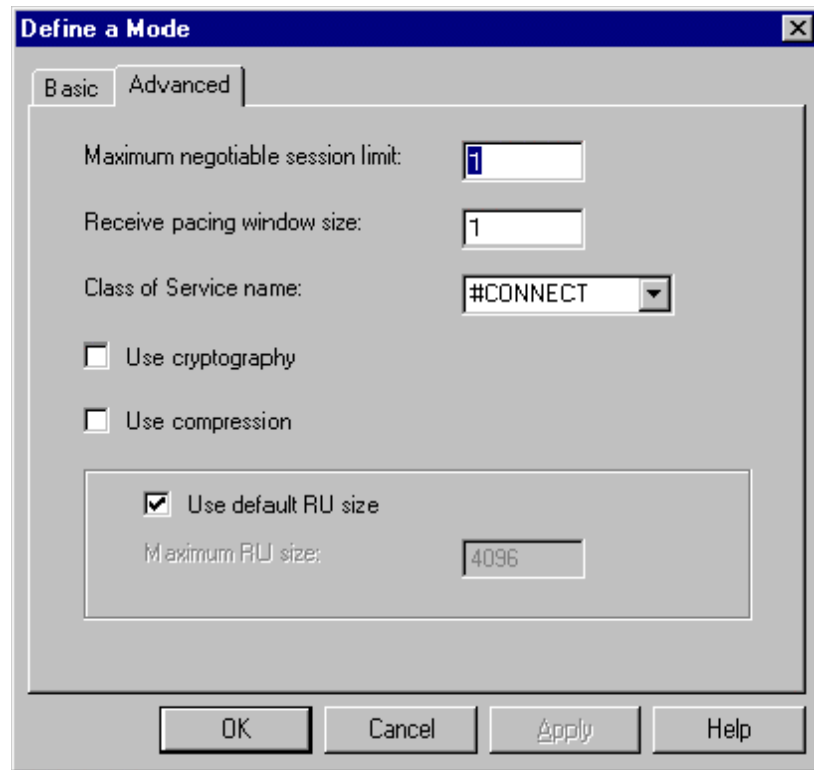


Figure D-17: Define a Mode – Advanced tab

Configure Local LU 6.2

- Highlight *Configure Local LU 6.2* in the Configuration options box.
- Select the **New** button
Or, if you already have a local LU defined...
- Select the **View/Change/Add....** button.

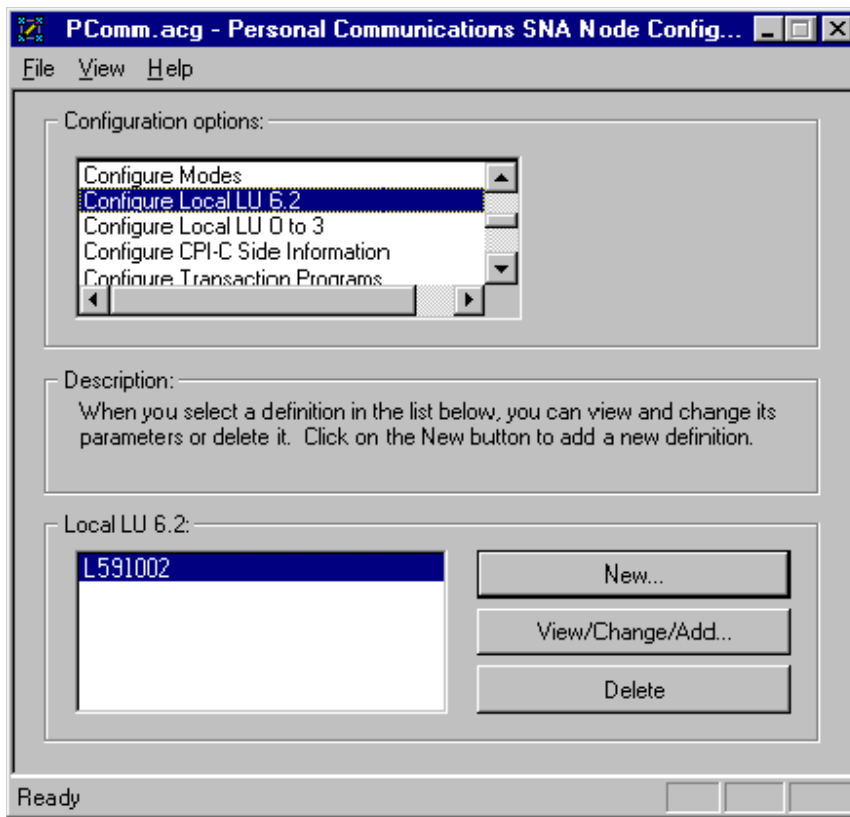


Figure D-18: Configure Local LU 6.2

Define a Local LU 6.2 – Basic tab

- Define the **Local LU name**. This must match the name of the VTAM LU defined on the host. (In the example LU definition below we are using L591002.)
- Select the box for **Dependent LU**.
- Define the **Local LU alias**. For less confusion it is recommended that this match the Local LU name. (In our example it would be L591002.)
- Define the **PU name**. This must match the name of the VTAM PU defined on the host. (In the example below, the PU name is LTR591.)
- Define the **NAU address**. This must match the LOCADDR value on the VTAM LU. (In the example below, it would be 03 since we are using the LU named L591002.)
- Select the **OK** button and the **SNA Node Config** dialog will display.

```
*-----*
          VBUILD TYPE=SWNET,MAXGRP=1,MAXNO=1
*-----*
* PU DEFINITION
*-----*
*
LTR591  PU      ADDR=01,
          SSCPFM=USSSCS,
          PUTYPE=2,
          VPACING=0,
          PACING=0,
          MODETAB=LRSMODE,
          DLOGMOD=D4A32784,
          IDBLK=061,
          IDNUM=00381,
          USSTAB=LRSUSSV
*-----*
* LU DEFINITIONS
*-----*
L591000 LU      LOCADDR=01
L591001 LU      LOCADDR=02
L591002 LU      LOCADDR=03,MODETAB=LRSMODE,DLOGMOD=LRSAPPC,
          SSCPFM=FSS,VPACING=2,PACING=2,USSTAB=ISTINCDT
*-----*
```

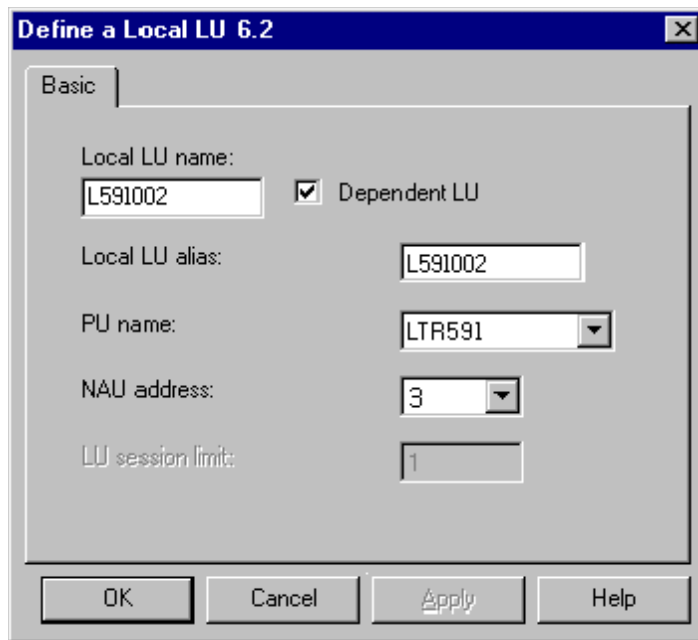


Figure D-19: Define a Local LU 6.2 – Basic tab

Configure Transaction Programs

- Highlight *Configure Transaction Programs* in the Configuration options box.
- Select the **New** button
Or, if you already have a transaction program defined...
- Select the **View/Change/Add....** button.

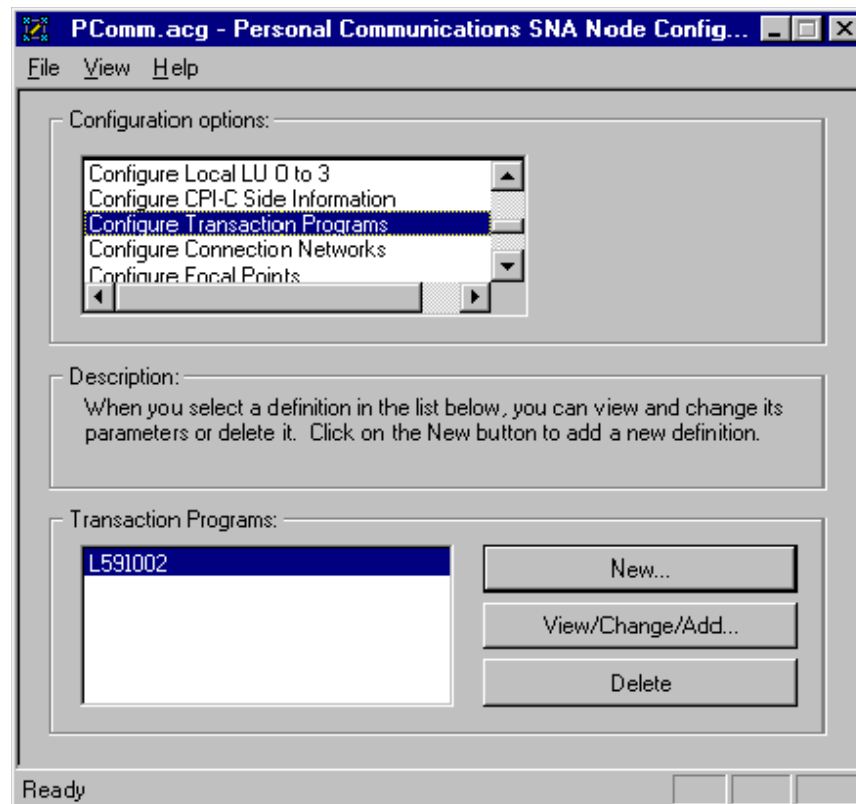
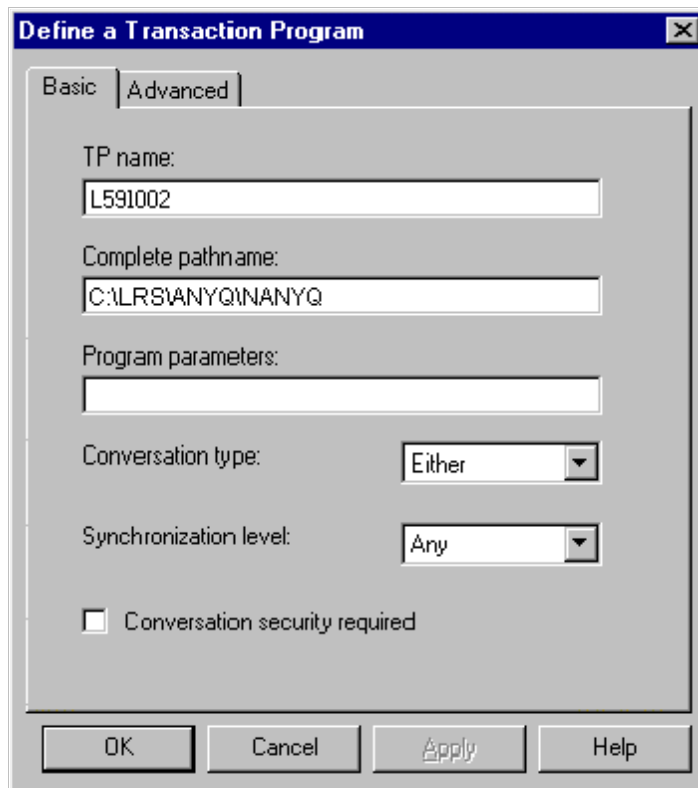


Figure D-20: Configure Transaction Programs

Define a Transaction Program – Basic tab

- The **TP name** must match the VTAM LU name.
- The **Complete pathname** will be the drive and path where AnyQueue[®] was installed.
- Set the other fields to match the example dialog below.
- Select the **Advanced** tab.



The screenshot shows a dialog box titled "Define a Transaction Program" with a close button (X) in the top right corner. The dialog has two tabs: "Basic" (selected) and "Advanced". The "Basic" tab contains the following fields and controls:

- TP name: L591002
- Complete pathname: C:\LRS\ANYQ\INANYQ
- Program parameters: (empty text box)
- Conversation type: Either (dropdown menu)
- Synchronization level: Any (dropdown menu)
- Conversation security required

At the bottom of the dialog are four buttons: OK, Cancel, Apply, and Help.

Figure D-21: Define a Transaction Program – Basic tab

Define a Transaction Program – Advanced tab

- Use the values and options indicated in the example dialog below.
- Select the **OK** button and the **SNA Node Config** dialog will display.

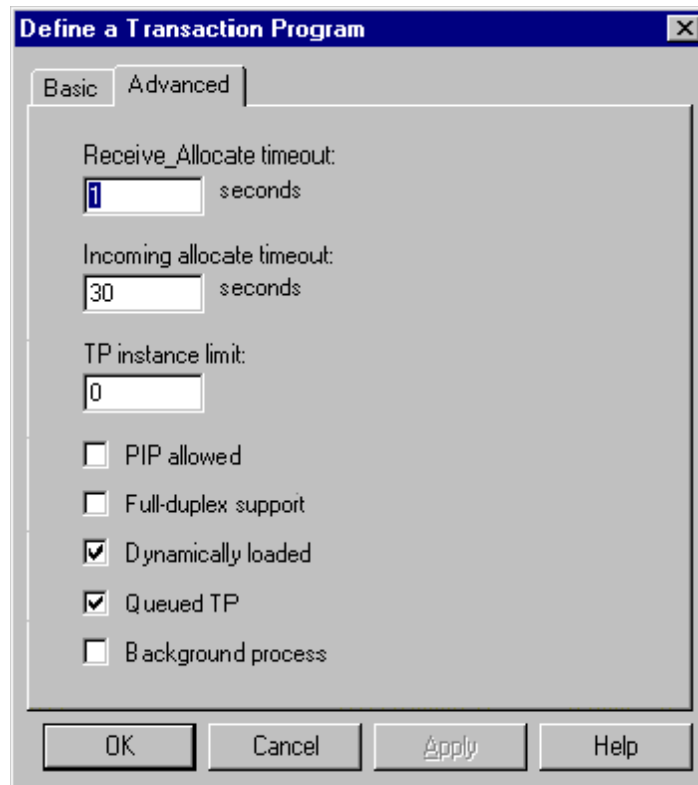


Figure D-22: Define a Transaction Program – Advanced tab

Saving the Configuration

- Select **File** from the menu option and save the configuration file. In this example, the configuration was saved as PCOMM.ACG.

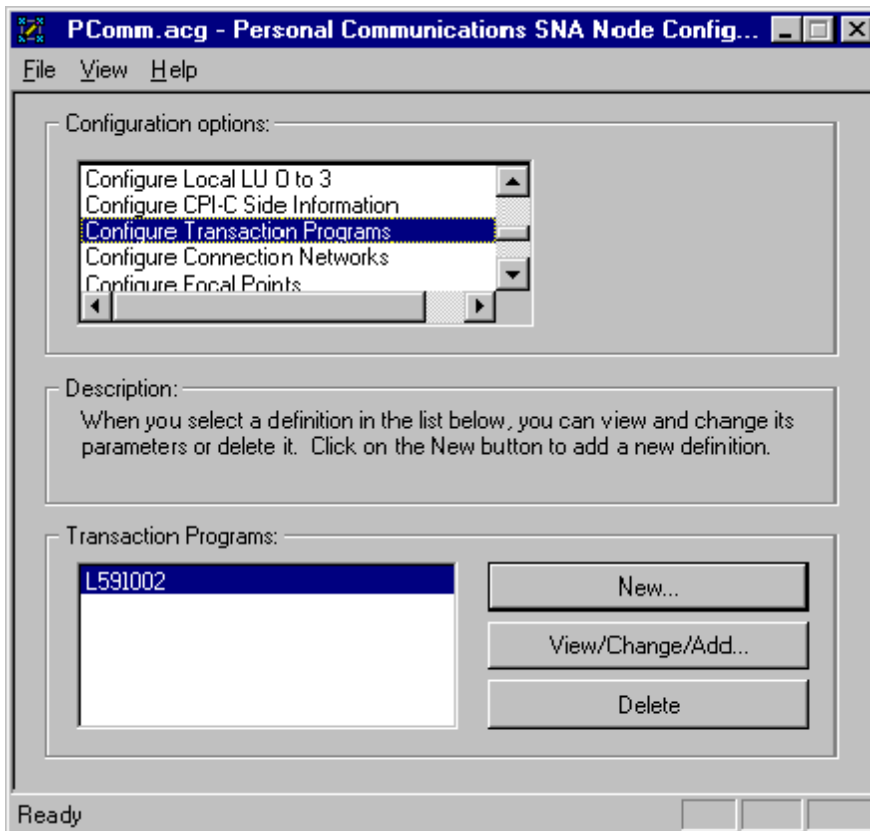



Figure D-23: Saving the Configuration

Activating the Configuration

- From the **Program** menu select **IBM Personal Communications**.
- Select **Administrative and PD Aids**.
- Double click on **SNA Node Operations**.
The **SNA Node Operations** dialog will display.
- Select **Operations**.
- Select the **Start Node...** option.
- In the **Open File....** dialog select the .acg file just created and then click on the **Open** button.

The dialog in [Figure D-24](#) will display.

(Note: The red icon  on the top left indicates the profile selected is running on the node and is started. Select the icon to stop the node.)

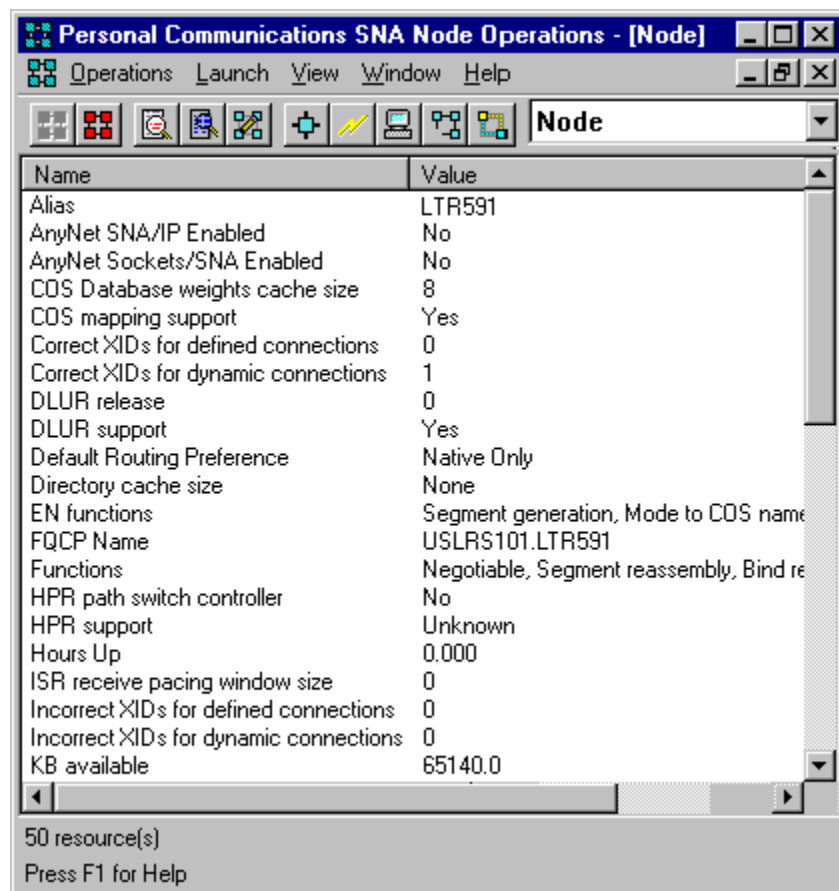


Figure D-24: SNA Node Operations (Node)



Appendix E

TCP/IP

AnyQueue[®] will support a TCP/IP link to VPS[®]. Most TCP/IP packages are similar and should function basically the same on the workstation.

Since each package is different, follow the steps below before attempting to connect VPS with AnyQueue.

1. Install VPS/TCPIP on the host.
2. Install the TCP/IP package on the PC that will also be running AnyQueue.
3. Supply the workstation host address to the TCP/IP software installed on the PC. This must match the **TCPHOST** keyword in the mainframe VPS printer definition.
4. **Ping** the mainframe. Most TCP/IP packages offer a ping utility. AnyQueue will not be able to make a connection to the host if you are not able to ping the host with the TCP/IP software.
5. When a ping to the host is successful, install AnyQueue.
6. The **PortID** field on the AnyQueue host configuration screen must match the **TCRPORT** keyword in the mainframe VPS printer definition.

After all of the above steps are complete, AnyQueue is ready to receive output from the host.



Appendix F

AnyQueue/OutputManager

AnyQueue/OutputManager is the generic name for a group of products that will provide output management solutions for external hosts and applications running on multiple platforms. The AnyQueue/OutputManager family of products will implement standard interfaces to external applications and will enable AnyQueue and the LRS Enterprise Output Management range of products to act as a central print server for all hosts and applications in an organization.

AnyQueue/OutputManager provides the following core functions that will be used to implement standard interfaces to OEM applications:

Report submission – LRS has developed a standard client that will enable reports to be submitted to AnyQueue from most environments. This client enables the submitter to have complete control over the attributes assigned to the report and will return a unique tracking token that can be used to monitor and control the output.

Output tracking – All output requests will be tracked from creation to final delivery and the status will be continually monitored.

Status feedback – AnyQueue/OutputManager will implement application specific interfaces to provide real-time status feedback of all output events.

Report cancellation – Remote applications and users can cancel previously submitted print requests.

The first product in the AnyQueue/OutputManager family is an interface to the SAP R/3 application suite.

AnyQueue/OutputManager for SAP R/3

AnyQueue/OutputManager for SAP R/3 is a SAP external output management solution for the SAP R/3 application suite. This product implements the SAP BC-XOM (eXternal Output Management) interface that enables AnyQueue to seamlessly integrate with the SAP R/3 environment and handle all printing and output delivery while providing full feedback and control to SAP R/3 users.

AnyQueue/OutputManager implements the following features of the BC-XOM standard:

- Report submission.
- Callback Interface for Output status notification.
- Operations Supplement (Queue Query, Output query, and report cancellation).
- Multilingual support.

AnyQueue/OutputManager for SAP R/3 has been designed to provide a single print server for the SAP R/3 environment supporting any number of SAP R/3 systems and servers. The product architecture enables SAP R/3 systems running on any platform to exploit the full power of the LRS Enterprise Output Management products without the requirement to install print management software on each server.

The only software requirement on the SAP R/3 servers is a single executable that is used to submit print requests to AnyQueue/OutputManager and to process query and cancel requests. All communication back to the SAP R/3 environment is achieved remotely using the SAP R/3 client API. This enables AnyQueue/OutputManager to directly update the status of each spool request in the SAP R/3 database.

Once a print request is submitted to AnyQueue/OutputManager, no further processing is required on the SAP R/3 server. AnyQueue will asynchronously update the status of all output requests in the SAP R/3 spool, and users can monitor the status of their print requests using the standard SAP R/3 output management interface (SP01). Users can also request pop-up status windows that will notify them when major events occur (output printed, error printing, output cancelled, etc.). These pop-up windows are independent of the application being used and will keep the users informed of the status of their print requests without having to access the output management interface.

Output submitted from the SAP R/3 environment can be monitored and delivered to the following destinations.

- TCP/IP printers and hosts via VPS/TCPIP.
- E-mail destinations.
- LAN Printers and files.
- JES system printers.
- DRS
- Other AnyQueue's

Installation Procedure

The steps required to install AnyQueue/OutputManager for SAP R/3 are:

1. Install AnyQueue.
2. Define SAP R/3 userid for remote communication. (See [“Define a SAP R/3 Userid”](#) on page F.4.)
3. Create SAP Logon Object.
4. Define AnyQueue Route and Route Assignments.
5. Install LRS/Queue client on SAP R/3 server. (See [“Installing the LRS/Queue Client”](#) on page F.6.)
6. Define AnyQueue/OutputManager to SAP R/3. (See [“Define AnyQueue/OutputManager to SAP R/3”](#) on page F.7.)
7. Define SAP R/3 output device. (See [“Define SAP R/3 Output Device”](#) on page F.18.)
8. Upload National Language message templates. (See [“Upload National Language Message Templates”](#) on page F.20.)

Create AnyQueue SAP Logon Object

AnyQueue will match the inbound SAP request with a Route Assignment. Since AnyQueue can create multiple jobs from a single inbound job, and SAP only understands a one-to-one relationship, only the first TRAC route defined in the Route Assignment will be tracked for SAP.

Installing the LRS/Queue Client

The LRS/Queue client is a general-purpose client that is used to communicate with AnyQueue to process report submission, output queries and cancel requests. This is the only software component that must be installed on the SAP R/3 servers that will be using the DRS/OutputManager interface.

The LRS/Queue client is available for most execution platforms and is distributed on CD or can be downloaded from the LRS WEB site <http://www.lrs.com/eom>.

As the installation process for each supported platform is slightly different, please refer to the README file supplied with each version for details of the installation process. The installation procedure will extract the LRS/Queue executables to a user-specified directory that must be accessible to all SAP R/3 spool servers using the AnyQueue/OutputManager interface. The LRSQ command must also be accessible to any server defined as a **Tasking Target** in the Logical OMS definition. Refer to the next section for details.

Define AnyQueue/OutputManager to SAP R/3

The AnyQueue/OutputManager for SAP R/3 interface is defined to SAP R/3 using the standard Spool Administration transaction (SPAD).

The SAP R/3 definitions for an external output managements system consist of:

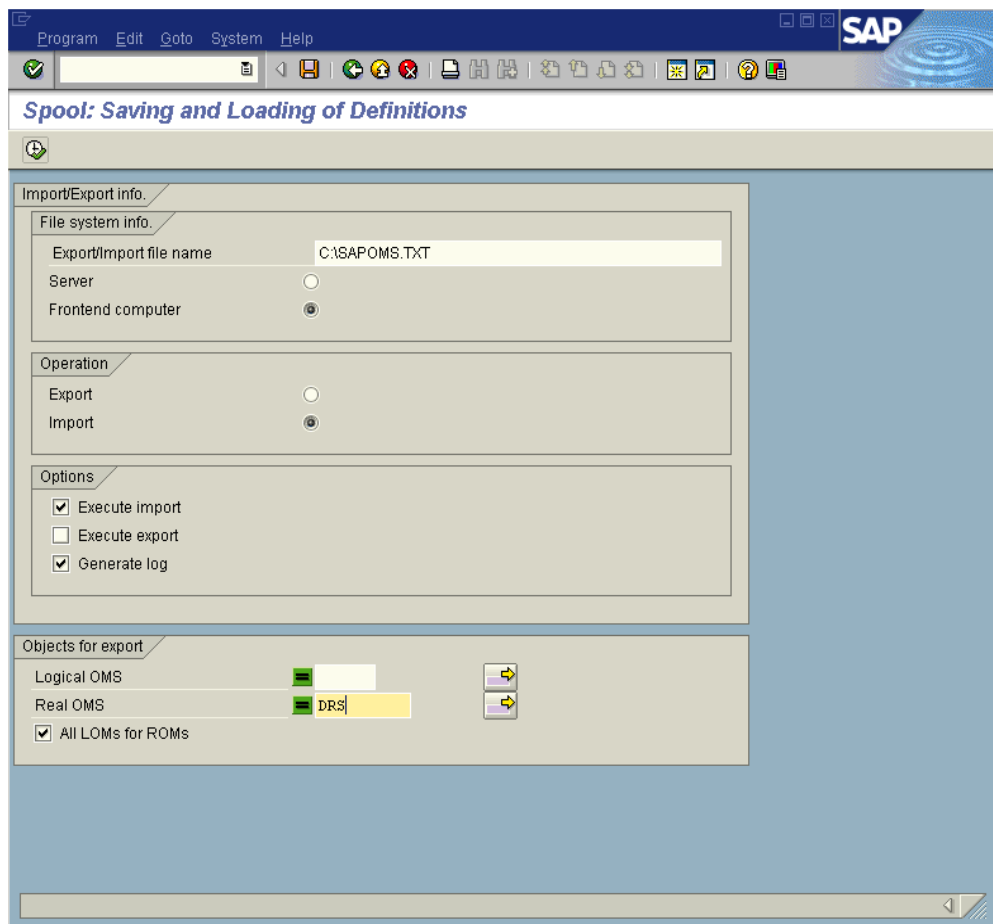
A single ROMS definition: This is a Real Output Management System definition and defines the basic characteristics of the external output management system. The definition details all the functions supported by the external output management system.

One or more LOMS definitions: The Logical Output Management System definitions are related to the ROMS definition but enable you to specify different sets of processing options for different groups of printers. For example, you may want to disable specific functions for a group of printers or use a different set of processing options when submitting the print requests for these devices.

To simplify the installation process, a sample set of OMS definitions is provided in the file named **SAPOMS.TXT**.

To import the sample definitions into SAP R/3:

1. Copy the SAPOMS.TXT file onto a PC running the SAP R/3 GUI.
2. Logon to SAP R/3 using an administrator userid.
3. Select:
 - > **Tools**
 - > **CCMS**
 - > **SPOOL**
 - > **SPOOL ADMINISTRATION (SPAD)**
4. On the command bar at the top of the window select:
 - > **UTILITIES**
 - > **FOR OUTPUT MANAGEMENT SYSTEMS**
 - > **IMPORT**
5. In the Import/Export utility transaction:
 - a. Enter the fully qualified name of the SAPOMS.TXT file you copied.
 - b. Select **Frontend Computer**.
 - c. Select **Import** in the Operation section.
 - d. Select **Execute Import** in the Options section.
 - e. Press **F8** to execute the import operation.



After importing the sample definitions, return to the **Spool Administration** initial screen and select **Full Administration** or press **F7**. Then select the **Output Management Systems** tab to access the Real (ROMS) and Logical (LOMS) output management definitions.

Real Output Management System Definition (ROMS)

The import process will have created a single ROMS definition called **AnyQ** that contains basic details of the functions supported by AnyQueue/OutputManager for SAP R/3.

The diagram below shows the ROMS definition.

Real OMS: DRS
Description: DRS/OutputManager for SAP/R3

OMS attributes

- Tasking**
 - Command line
 - RFC server
- Job status**
 - Query
 - Deletable
 - Polling
 - Callback
- Device status**
 - Queue query
 - Callback
- Output types**
 - Fax

OMS configuration
 Reconfiguration required

SAP configuration

- Initialization instance: []
- Initialization command: []
- Reconfiguration request: 300 sec

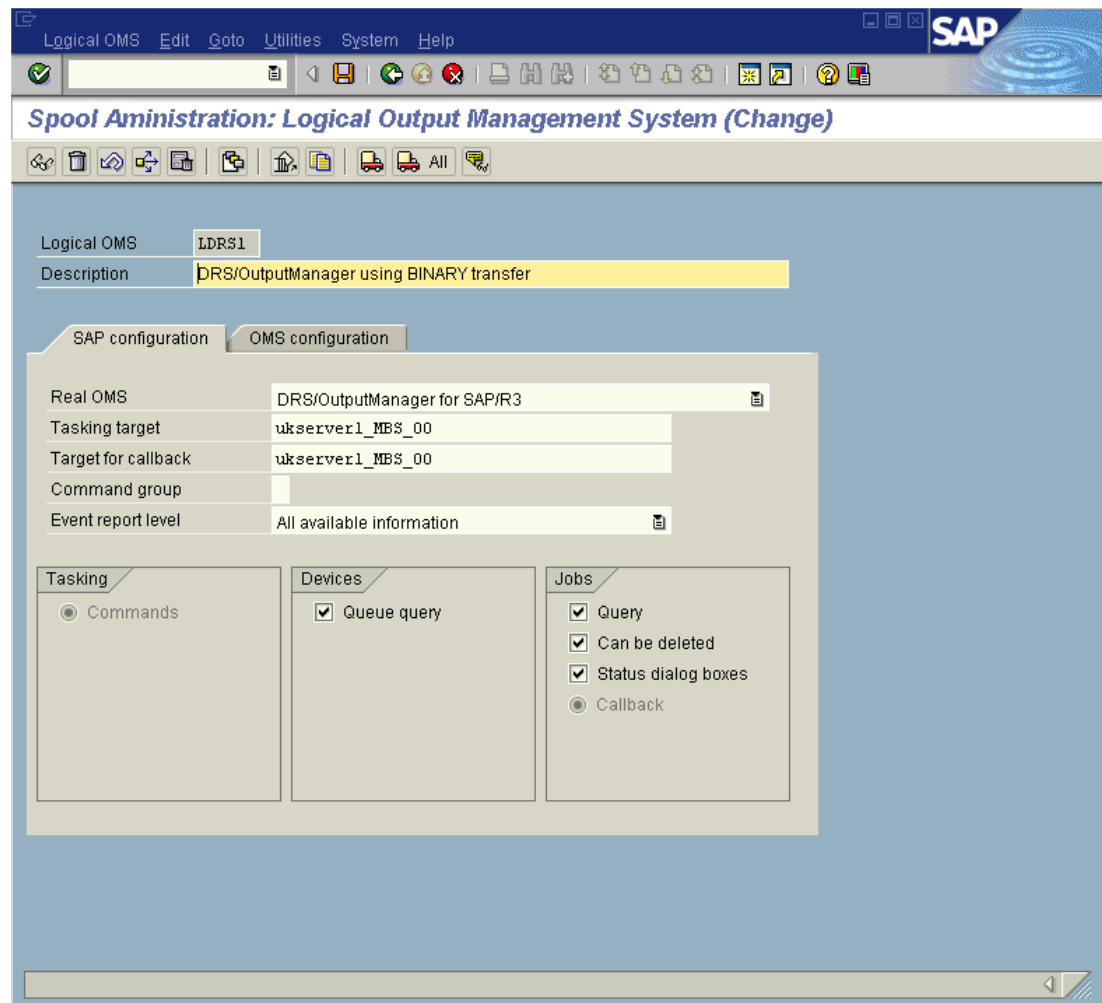
The **OMS Attributes** section should not be changed because this indicates the functions of the BC-XOM interface which AnyQueue/OutputManager supports. If you want to disable any of these functions (for example, Deletable), this should be done in the Logical OMS definition.

The **Reconfiguration Request** field specifies the interval AnyQueue/OutputManager should use to check if configuration options have been changed that require AnyQueue/OutputManager to reconfigure itself. Whenever AnyQueue/OutputManager executes a callback transaction to update the SAP R/3 spool status, it receives an indication whether reconfiguration is required. This interval applies when AnyQueue/OutputManager is idle (no callbacks being processed) and specifies the period that AnyQueue/OutputManager should send an empty callback request simply to check if reconfiguration is required.

Logical Output Management System Definition (LOMS)

The import process will create four Logical OMS definitions that contain examples of using different processing options when transferring print data to AnyQueue/OutputManager.

The Logical OMS definitions consist of general processing options and an associated set of command templates which are used to define the commands that are used to Submit, Query, and Cancel requests to the external output management system.



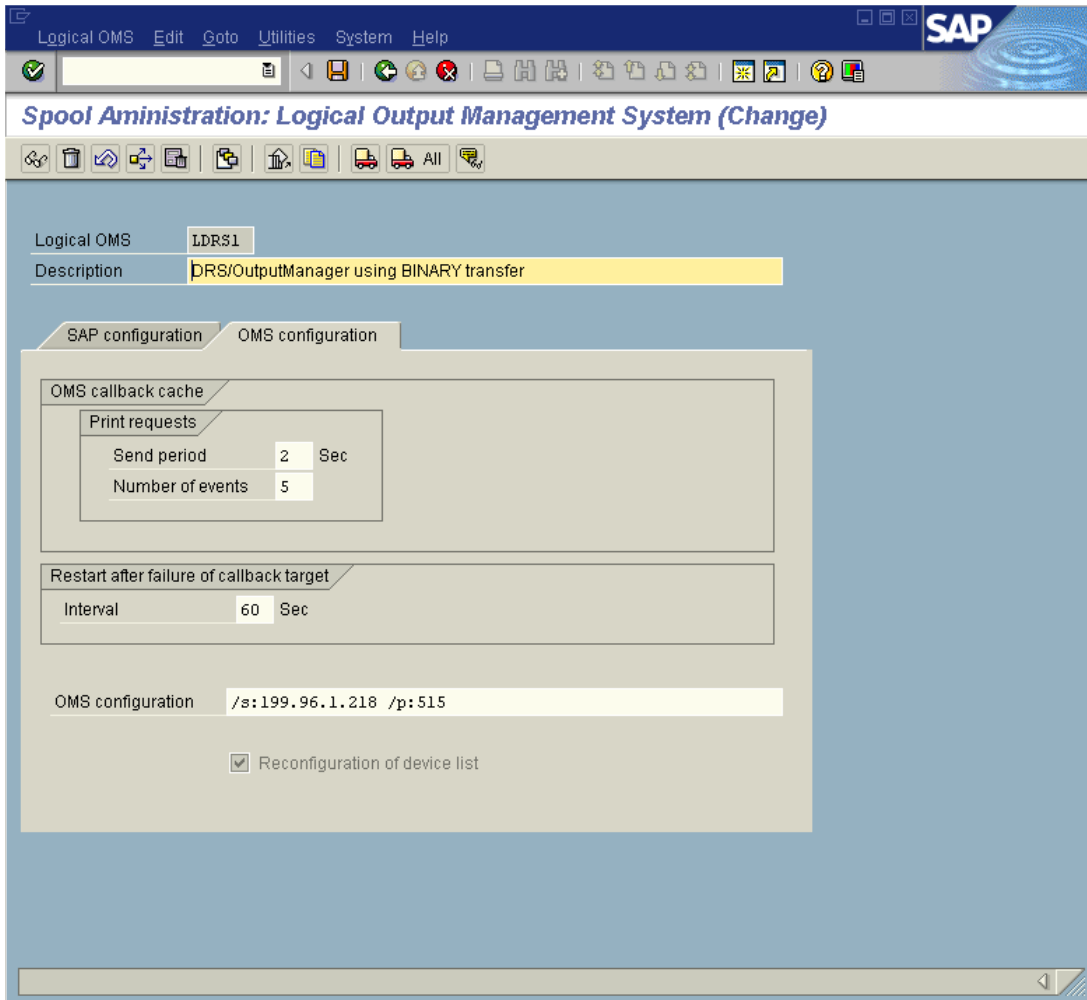
During the initial installation, the AnyQ Logical OMS definition should be used as the basis for a starting configuration after reviewing the following configuration options:

- Tasking Target
- Target for Callback
- OMS Configuration string

Field	Description
Real OMS	This field relates the Logical OMS definition to the associated Real OMS definition.
Tasking Target	<p>This field specifies the name of a SAP R/3 application server that will process the Query and Cancel commands issued by users. The Submit command will always be executed on the Spool server processing the print request.</p> <p>Note: The LRS/Queue client must be available on any server defined as a tasking target and all Spool servers using the Any-Queue/OutputManager interface.</p>
Target for callback	<p>This field identifies a SAP R/3 server that should be used as the target for Output event callback notifications. This field does not need to specify the same host as the tasking target because callback events can be directed to any SAP R/3 application server within the same system. For recoverability it is a good idea to define two Logical OMS definitions that specify different callback targets. If one callback target is unavailable, Any-Queue/OutputManager will attempt to route callback requests to another callback target for the same system.</p> <p>Note: The LRS/Queue client is not required on servers defined as callback targets unless they are also used as a spool server or tasking target for Query and Cancel requests.</p>
Command Group	This field is used to specify whether the command template definitions associated with this LOMS are specific to this host only (LOCAL). Normally SAP will select the command templates based on the execution platform (i.e AIX, HP-UX etc.)
Event Report Level	<p>This field specifies the level of detail that is required for output events for this Logical OMS. SAP R/3 supports 6 levels of events:</p> <p>Final Messages – This limits event notification to only completion events (i.e. printed, cancelled, etc.)</p> <p>Also Problems (Interaction Required) – Requests events defined above plus problems that require operator intervention.</p> <p>Also Warnings – Requests events defined above plus problems that don't require operator intervention.</p> <p>Also Status changes – Requests events defined above plus any event that changes the status of the output request.</p> <p>Also Information – Requests events defined above plus informational events.</p> <p>All Available Information – Requests all output events.</p> <p>Defining a lower report level will decrease the level of information available to SAP R/3 users but will reduce the number of callback transactions.</p>

Field	Description
Queue Query	Indicates whether the Queue Query option should be available for printers associated with this Logical OMS definition. The Queue Query enables users to query the external output queue for a specific printer and will display the status of all output requests (SAP and non-SAP) queued to this device.
Query	Indicates whether the output query option should be available for output requests associated with this Logical OMS. Normally, the output status displayed in the SAP R/3 spool will show the current status of all output requests. If a long callback delay has been specified, the status shown may be several seconds out of date. This option enables users to actively issue a query request to AnyQueue/OutputManager to retrieve the current status.
Can be deleted	Indicates whether users can delete output requests associated with this Logical OMS after submission to AnyQueue/OutputManager.
Status Dialog boxes	Indicates whether pop-up status messages should be issued to users for major output events (printed, cancelled, error, etc.). The status messages will appear in a pop-up window that is independent of the application the user is currently executing.

The figure below shows the Logical OMS OMS Configuration screen. **Note:** To display all configuration options shown, you may need to select the **Extended Config** icon or press **CTRL+F1**.

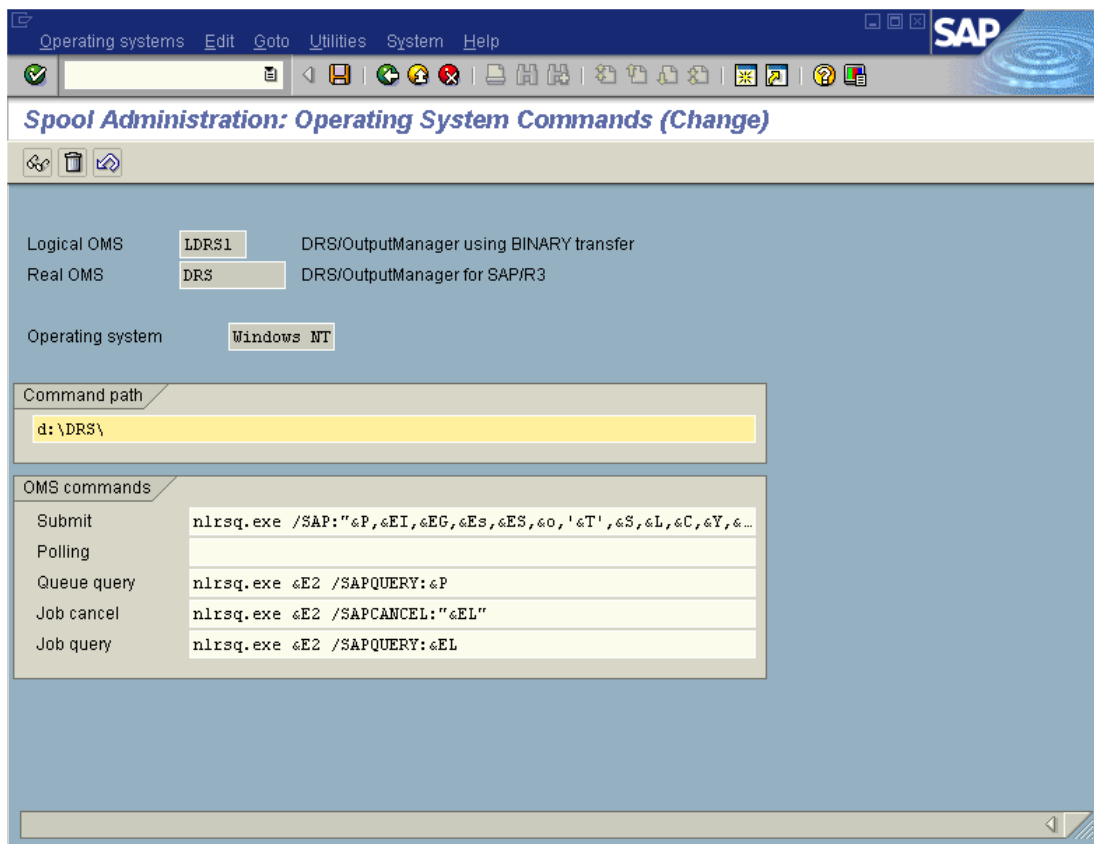


Field	Description
Send Period	This field defines a delay period that should be applied to output event callback requests. When an output event occurs, AnyQueue/OutputManager will delay the callback transaction by the delay specified in this field. Delaying the callback transaction enables AnyQueue/OutputManager to accumulate additional event notifications and deliver these events with a single callback transaction, reducing the overhead on the callback server. A value must be chosen which balances the requirement for prompt event notification with the overhead of processing callback transactions.
Number of events	This field defines the maximum number of notification events that can accumulate before automatically triggering a callback transaction. The maximum queue depth will override the delay specified in the Send Period field and will trigger an immediate callback transaction.
Interval	This field defines the retry interval for failed callback servers. This configuration option is not used by AnyQueue/OutputManager which will use the retry period specified via the SAPRETRY System Initialization keyword.
OMS Configuration	This field specifies configuration keywords that are common to all AnyQueue/OutputManager commands (Submit, Query, Cancel, etc.) This field is used to specify the AnyQueue/OutputManager server IP address or host name and the TCP/IP port number used by AnyQueue/OutputManager for connection requests (TCP PORT System Initialization parameter). Note: These keywords are substituted into the command templates using the &E2 variable

Logical OMS Command Templates

After reviewing the Logical OMS definitions, it is necessary to update the OMS command templates associated with this Logical OMS definition. The command templates define the AnyQueue/OutputManager commands that are used to submit reports to AnyQueue, query the output queue, cancel a previously submitted print, or query the status of a specific output request.

The command templates can be displayed by selecting the **Commands** icon in the logical OMS definition or by pressing **F6**. SAP R/3 will display a list of command definitions for each supported execution environment. You will need to review the command templates for all environments applicable to your installation. During the initial installation, the **Command Path** information should be the only configuration option that requires modification to specify the location of the LRS/Queue client executable.



Each command template consists of constant values and SAP R/3 system variables that are substituted when the command is issued to pass the required information to the command. All SAP R/3 system variables begin with a '&' character, and a complete list of available variables can be found in the following section.

Field	Description
Command Path	This field defines the fully qualified path to the directory that contains the LRS/Queue client executable.
Submit	This field defines the command template for the report submission command. This command accepts many keywords that enable you to control the host SYSOUT attributes assigned to output requests and also controls translation and formatting of the input file before submission to AnyQueue/OutputManager. For a complete description of the keywords available, please refer to “Controlling Attributes” on page F.21 .
Polling	This command is not used by AnyQueue/OutputManager which uses the callback interface for event notification.
Queue Query	This field defines the command template for the AnyQueue/OutputManager Queue Query command.
Job Cancel	This field defines the command template for the AnyQueue/OutputManager Cancel command.
Job Query	This field defines the command template for the AnyQueue/OutputManager Job Query command.

Define SAP R/3 Output Device

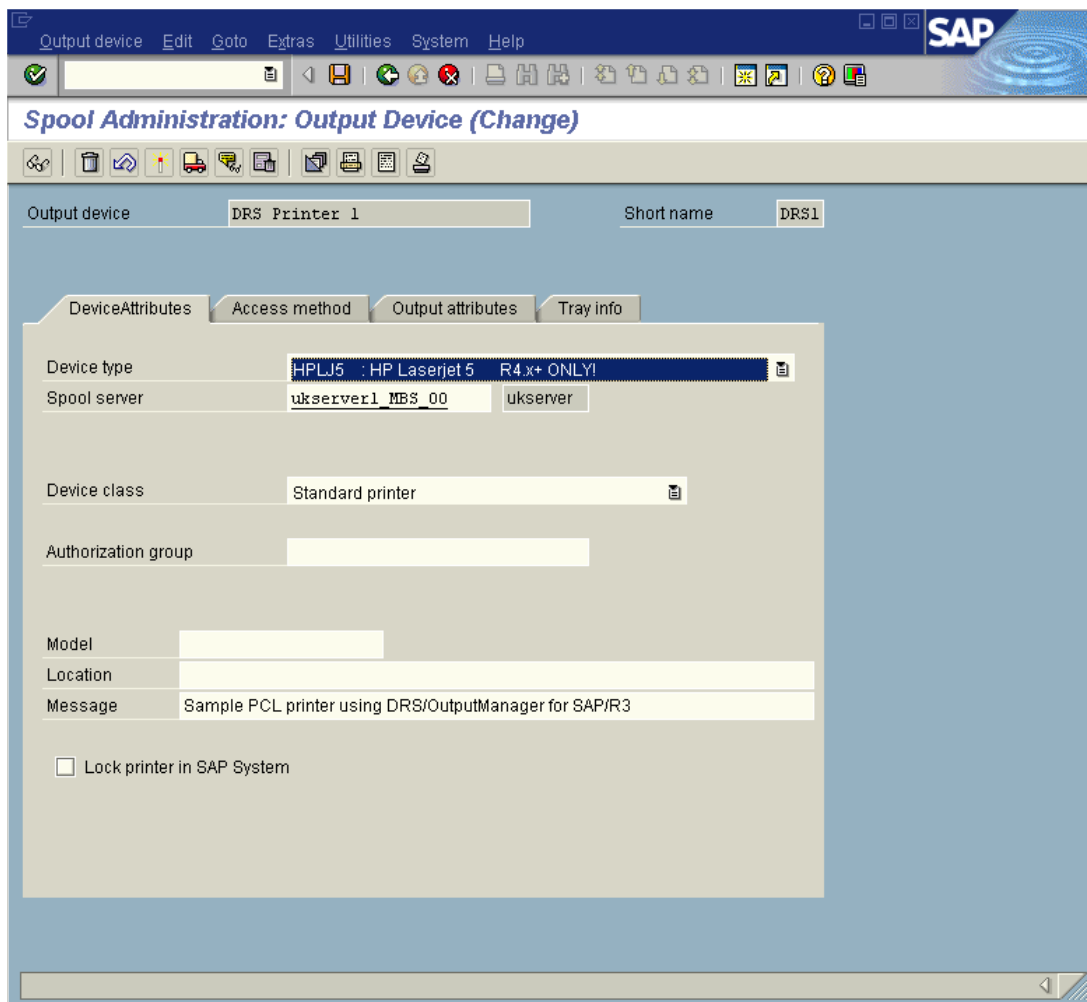
The final step in the installation of AnyQueue/OutputManager is to define an Output device. To do this:

- Return to the **Spool Administration** initial screen.
- Select the **Devices/ Servers** tab.
- Select **Output Devices**.

This will display a list of currently defined output devices.

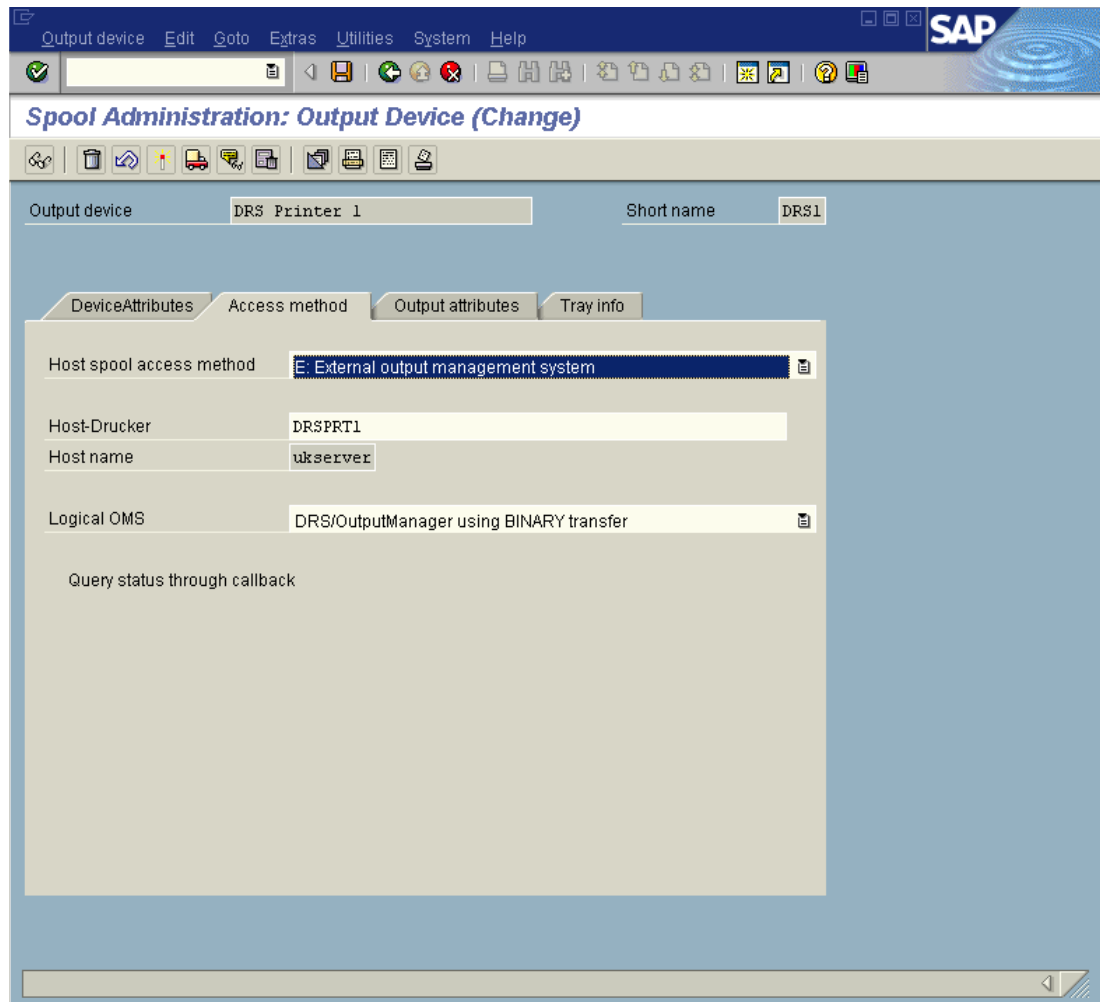
- Select the **Change** icon or press **F8** to enter update mode.
- Select the **Create** icon or press **Shift+F1** to create a new output device.

Below is an example output device definition which is suitable for HP PCL printer with printer name **AnyQ Printer 1**.



After specifying the printer name, select an appropriate **Device type** and specify the SAP R/3 spool server that should process print requests. Next select the **Access Method** tab.

The Output Device **Access Method** options define the connection between the SAP R/3 device and AnyQueue/OutputManager. The **Host spool access method** field must specify **E:External output management system**. The Logical OMS field relates this device to the AnyQueue/OutputManager Logical OMS definition that should be used for this device. Finally, the **Host-Drucker** field specifies the name of the AnyQueue printer definition that should receive this output.



After completing the above definitions, it is now possible to print to this new output device, and the output will be routed to the specified AnyQueue printer queue.

Upload National Language Message Templates

AnyQueue/OutputManager for SAP R/3 supports the National Language feature of the BC-XOM standard. This feature enables the SAP R/3 GUI interface to display all AnyQueue/OutputManager messages in the language selected by the user during logon.

All messages issued by AnyQueue/OutputManager have a unique message ID as well as the default message text in English. When SAP displays these messages, it will first check the SAP R/3 database to see if a language specific version of the message text is available. If a message template is found that matches the user's logon language, then the appropriate message template will be substituted in place of the default English text.

To enable this feature, it is necessary to upload the AnyQueue/OutputManager multi-lingual message templates into the SAP R/3 database. A sample program named **XSAPMSGL.EXE** is provided. This JCL will execute the message upload program that will remotely connect to a SAP R/3 server and upload the message templates into the SAP R/3 database.

Note: It is not necessary to execute this routine against all SAP R/3 servers that will be using the AnyQueue/OutputManager interface. The message templates are held in the SAP R/3 database and are available to all SAP R/3 servers connected to this database.

The National Language message templates are supplied in the file named **SAPMSGSTXT**. The supplied file contains message templates for German and Spanish, although additional templates can be created for any supported language and uploaded using the message upload routine.

Controlling Attributes

The AnyQueue/OutputManager interface has been design to provide a great deal of flexibility in assigning output attributes to reports submitted from the SAP R/3 environment. Reports are submitted from the SAP R/3 environment using the LRS/Queue client that supports an extensive number of keywords. These provide complete control of the attributes assigned to reports and the translation and formatting options.

The report submission options are defined in the SAP R/3 command templates that are associated with the Logical OMS definitions. These command templates specify the external commands which are used for report submission, Queue Query, Job Cancel and Job Query. Each command template consists of constant values and SAP R/3 system variables that are resolved when the command is issued to supply the required information to the command. The report submission command template can be customized to meet the installation requirements, and additional Logical OMS definitions can be created to specify different processing options for different groups of printers.

The AnyQueue/OutputManager submission command has some required keywords that must always be specified and should not be changed. Additional processing options can be appended to the end of the command string. Below is an example of the standard submission command template:

```
nlsrq /SAP:"....." &E2 /file:&F /Queue:&P {installation specific options}
```

Where:

- /SAP** Specifies request specific information that is required by AnyQueue/Output-Manager.
- &E2** Includes the keywords specified in the LOMS configuration string.
- /File** Specifies the name of the file that contains the SAP R/3 print data.
- /Queue** Specifies the name of the AnyQueue Route Assignment. The **&P** variable is taken from the SAP R/3 output device definition (Access method tab).

Any number of keywords can be appended to the end of the fixed command template to specify additional processing options. Each keyword can specify a fixed value or can use one of the SAP R/3 system variables to dynamically insert request specific information. If a system variable contains embedded spaces, then the variable must be enclosed in double quotes.

A complete list of SAP R/3 system variables can be found on the following page.

SAP R/3 Command Variables

The following table contains a list of all available SAP R/3 command variables that can be used in the Logical OMS command templates.

Attribute	Variable	Description
SAP Spool id	&EI	Internal SAP R/3 spool identifier.
Reply Message Group	&EG	The reply message group relates directly to the originating Logical OMS definition and is used to group callback events with specific configuration values ready for delivery via a callback transaction.
Destination	&P	This value specifies the Route Assignment name defined in AnyQueue that should receive this output. This value is taken from the SAP R/3 Output device definition (Host-Drucker field).
Document	&F	This value specifies the name of the file that contains the print data.
System ID	&Es	System identification of the submitting SAP R/3 system.
SAP callback server	&ES	Specifies the name of the SAP R/3 callback server that will receive event notifications for this output request.
Interval	&ET	Specifies the callback delay interval that will be applied to events for this output request.
Amount	&EA	Specifies the maximum number of notification events that can accumulate before triggering a callback transaction.
SAP Client	&M	Client number of user who owns the job.
SAP Client	&m	Client number of user who is printing.
SAP User	&O	SAP R/3 user who owns the output request.
SAP User	&o	SAP R/3 user who created the output request.
SAP User	&R	SAP R/3 user defined as recipient of the output request.
Department	&D	Department of user defined as recipient for the output request.
Job Name	&I	Job name (SAP Internal) without Database ID.
Job Name	&J	Job name (SAP Internal) including Database ID.
Title	&T	Report title.
SAP Printer	&S	SAP internal name for the printer.
Format	&L	SAP format name associated with the output request.
Copy count	&C	Number of copies.

Attribute	Variable	Description
Priority	&Y	SAP priority (1-99) (1 meaning high).
Title page	&U	Title page (X=Yes, N=No).
Fax number	&t	Valid telephone number for LOMS.
Fax Person	&EP	Name of fax recipient (future enhancement).
R3LOMS Flags	&E1	R/3 flags of LOMS.
LOMS config options	&E2	Logical OMS configuration options.
R3ROMS Flags	&E3	R/3 flags for ROMS.
ROMS config options	&E4	Real OMS configuration options.

Sample Logical OMS Definitions

The sample Logical OMS definitions supplied by LRS demonstrate how the submission command template can be altered to specify different processing options. LRS provides the following two Logical OMS definitions:

LANYQ1 – DRS/OutputManager using Binary transfer	
This logical OMS definition is suitable for output devices that will generate printer formatted or Binary data (PCL, Postscript, etc.).	
Additional Keywords:	
/BINARY=Y	This indicates that the print data should be transferred to AnyQueue without translation.
/CC=N	Specifies that the output SYSOUT dataset has no carriage control characters.
/DRSMERGE=Y	Indicates that the SYSOUT attributes should be taken from the DRS printer definition.
LANYQ2 – DRS/OutputManager using Text Transfer	
This logical OMS definition is suitable for output devices that will generate ASCII text data.	
Additional Keywords:	
/CC=C	Specifies that LRS/Queue should translate the data to standard line mode output with ASA carriage control.

For advice on controlling output attributes from SAP R/3, contact LRS technical support.

Appendix G

Route Definitions

This appendix shows sample Route Page definitions for every type of route AnyQueue can send files to.

Local File	G.2
Local Queue	G.4
Banyan Server File	G.6
Banyan Server Queue	G.8
Novell Bindery Server File	G.10
Novell Bindery Server Queue	G.12
Novell NDS Server File	G.14
Novell NDS Server Queue	G.16
Windows File	G.18
Windows Queue	G.21
Mapi Mail	G.22
Mapi Mail Attachment	G.24
LPR	G.26
SMTP	G.28
Variable Substitution with @Filepath	G.30
Variable Substitution to a Temp File	G.32
Variable Substitution to a Print Queue	G.34
PageCenter Plus as a Backend	G.36
AnyQueue/PageSorter® as a Backend	G.38

Local File

The route defined in [Figure G-1 on page G.3](#) will send the host file to a file on the **C** drive of the PC that is running AnyQueue.

- ① The route is named **ACCOUNTING**.
- ② Attach is **Local File**.
- ③ The **Route Assignment** specifies that the host selection criteria must match **WRITER=INVOICE** in order for the job to be sent to the **ACCOUNTING** route.
- ④ The Sequence Group **HP4SI** will be referenced to find the **START** and **PORTRAIT** sequence commands to add to the beginning of the job. The **END** sequence command from the **HP4SI** Sequence Group will be added to the end of the job.
- ⑤ AnyQueue will name the report **INVOICE.TXT** and place it on the **C** drive in the **INVOICES** folder.
- ⑥ If AnyQueue is unable to write the file to the **Destination** location specified in the **ACCOUNTING** route then the job will be sent to the route named **ErrorRoute**. If AnyQueue is unable to write the file to the **Destination** location specified in **ErrorRoute**, then the connection to the host will be terminated and the job will stay on the host.

Route

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Name: Accounting 1 **Attach:** Local File 2

Destination: C:\INVOICES\INVOICE.TXT 5

Backend: **Carriage Control:**

Translate: **Error Route:** ErrorRoute 6

User/Group:

Route

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Sequence Group: HP4SI 4 **Command Help:** Start 5

Start Sequence: Start Portrait **Add Start Command**

End Sequence: End **Add End Command**

Route Assignment

Name: Accounting

Job Name: *

Class: *

Dest: * Extended

Form: *

Writer: INVOICE 3

Route: Accounting

Error Route:

Group when Variable =

Figure G-1: Local File

Local Queue

The route defined in [Figure G-2 on page G.5](#) will send the host file to the port defined as LPT1 on the PC that is running AnyQueue.

- ① The route is named **MARKETING**.
- ② Attach is **Local Queue**.
- ③ The **Route Assignment** specifies that the host selection criteria must match **WRITER=MARKET** in order for the job to be sent to the **MARKETING** route.
- ④ The Sequence Group **HPIII** will be referenced to find the **START** and **LANDSCAPE** sequence commands to add to the beginning of the job. The **END** sequence command from the **HPIII** Sequence Group will be added to the end of the job.
- ⑤ AnyQueue will send the report to the port defined as **LPT1** on the PC that is running AnyQueue.
- ⑥ If AnyQueue is unable to write to **LPT1** then the job will be sent to the **Destination** location specified in the **ACCOUNTING** route. If AnyQueue is unable to write the file to the **Destination** location specified in the **ACCOUNTING** route, then the connection to the host will be terminated and the job will stay on the host.

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Name: Marketing 1 **Attach:** Local Queue 2

Destination: LPT1 5

Comment: AnyQueue Report: +JOBNAME +DATE(5:2)/+DATE(7:2)/+DATE(1:4) +TIME(1:2):4E

Backend: **Carriage Control:**

Translate: **Error Route:** Accounting 6

User/Group:

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Sequence Group: HP111 4 **Command Help:** Start

Start Sequence: Start Landscape **Add Start Command**

End Sequence: End **Add End Command**

Route Assignment

Name: Marketing

Job Name: *

Class: *

Dest: * Extended

Form: *

Writer: MARKET 3

Route: Marketing

Error Route:

Group when Variable =

Figure G-2: Local Queue

Banyan Server File

The route defined in [Figure G-3 on page G.7](#) will send the host file to a file on a Banyan file server.

- ① The route is named **PAYROLL**.
- ② Attach is **Banyan Server File**.
- ③ The **Route Assignment** specifies that the host selection criteria must match **WRITER=PAYROLL** in order for the job to be sent to the **PAYROLL** route.
- ④ The Sequence Group **HPIII** will be referenced to find the **START** and **PORTRAIT** sequence commands to add to the beginning of the job. The **END** sequence command from the **HPIII** Sequence Group will be added to the end of the job.
- ⑤ AnyQueue will name the file **PAY.DAT** and place it on the server named **BANSRVR1** in the **SYS** volume.
- ⑥ If AnyQueue is unable to write to **BANSRVR1\SYS** then the job will be sent to the **Destination** location specified in the route named **ErrorRoute**. If AnyQueue is unable to write the file to the **Destination** location specified in **ErrorRoute**, then the connection to the host will be terminated and the job will stay on the host.

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Name: 1 **Attach:** 2

Destination: 5

Backend: **Carriage Control:**

Translate: **Error Route:** 6

User/Group:

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Sequence Group: 4 **Command Help:**

Start Sequence: [Add Start Command](#)

End Sequence: [Add End Command](#)

Route Assignment

Name:

Job Name:

Class:

Dest: Extended

Form:

Writer: 3

Route:

Error Route:

Group when Variable =

Figure G-3: Banyan Server File

Banyan Server Queue

The route defined in [Figure G-4 on page G.9](#) will send the host file to a print queue on a Banyan file server.

- ① The route is named **MAILROOM**.
- ② Attach is **Banyan Server Queue**.
- ③ The **Route Assignment** specifies that the host selection criteria must match **WRITER=MAIL** in order for the job to be sent to the **MAILROOM** route.
- ④ The Sequence Group **HP4SI** will be referenced to find the **START** and **PORTRAIT** sequence commands to add to the beginning of the job. The **END** sequence command from the **HP4SI** Sequence Group will be added to the end of the job.
- ⑤ AnyQueue will place the file being received in the print queue named **QUEUE1** on the server named **BANSRV1**.
- ⑥ There is no error route defined in this route definition (see item 7 below).
- ⑦ Since there is no error route defined in the route definition, AnyQueue will attempt to send the file to the error route specified in the Route Assignments page (**ErrorRoute**). If this also fails then the connection to the host will be terminated and the job will stay on the host.

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Name: Mailroom 1
Attach: Banyan Server Queue 2

Destination: \\bansrvr1\queue1 5

Comment: AnyQueue Report: +JOBNAME +DATE(5:2)/+DATE(7:2)/+DATE(1:4) +TIME(

Form Override:

Backend:
Carriage Control:

Translate:
Error Route: 6

User/Group:

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Sequence Group: HP4SI 4
Command Help: Start

Start Sequence: Start Portrait [Add Start Command](#)

End Sequence: End [Add End Command](#)

Route Assignment

Name: Mailroom

Job Name: *

Class: *

Dest: * Extended

Form: *

Writer: Mail 3

Route: Mailroom 7

Error Route: ErrorRoute 7

Group when Variable =

Figure G-4: Banyan Server Queue

Novell Bindery Server File

The route defined in [Figure G-5 on page G.11](#) will send the host file to a file on a Novell file server that is running bindery emulation.

- ① The route is named **LEGAL**.
- ② Attach is **Novell Bindery Server File**.
- ③ The **Route Assignment** specifies that the host selection criteria must match **CLASS=L** and **FORM=LEGAL** in order for the job to be sent to the **LEGAL** route.
- ④ AnyQueue will place the file being received on the Novell Server named **NOVSRVR1** in the **SYS** volume and the file will be named **AFFIDAVT.TXT**.
- ⑤ There is no error route defined in this route definition (see item 6 below).
- ⑥ Since there is no error route defined in the route definition, AnyQueue will attempt to send the file to the error route specified in the Route Assignments page (**DIVISIONC**). If this also fails then the connection to the host will be terminated and the job will stay on the host.

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Name: Legal 1

Attach: Novell Bindery Server File 2

Destination: \\novosrvr1\sys\affidavt.txt 4

Backend:

Carriage Control:

Translate:

Error Route: 5

User/Group:

Route Assignment

Name: Legal

Job Name: *

Class: L 3

Dest: * Extended

Form: Legal 3

Writer: *

Route: Legal

Error Route: DivisionC 6

Group when Variable =

Figure G-5: Novell Bindery Server File

Novell Bindery Server Queue

The route defined in [Figure G-6 on page G.13](#) will send the host file to a print queue on a Novell file server that is running bindery emulation.

- ① The route is named **DIVISION C**.
- ② Attach is **Novell Bindery Server Queue**.
- ③ The **Route Assignment** specifies that the host selection criteria must match **CLASS=A** and **WRITER=DIVC** in order for the job to be sent to the **DIVISION C** route.
- ④ AnyQueue will place the file being received on the Novell Server named **SERVER** in the print queue named **PRINTER4**.
- ⑤ There is no error route defined in this route definition (see item 6 below).
- ⑥ Since there is no error route defined in the route definition, AnyQueue will attempt to send the file to the error route specified in the Route Assignments page (**MAILROOM**). If this also fails then the connection to the host will be terminated and the job will stay on the host.
- ⑦ The **Controls** tab on the Route specifies a page limit of 100. If the job being received is over 100 pages then the job will be rerouted to the route named **ErrorRoute**.

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Name: 1 **Attach:** 2

Destination: 4

Comment:

Form Override:

Backend: **Carriage Control:**

Translate: **Error Route:** 5

User/Group:

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Line Limit: **Page Limit:** 7

None None

Delay Delay

Delete Delete

Hold Hold

ReRoute **ReRoute**

Route Assignment

Name:

Job Name:

Class: 3

Dest: **Extended**

Form:

Writer: 3

Route:

Error Route: 6

Group when Variable =

Figure G-6: Novell Bindery Server Queue

Novell NDS Server File

The route defined in [Figure G-7 on page G.15](#) will send the host file to a file on a Novell file server that is running Novell Directory Services (NDS).

- ① The route is named **CONSULT**.
- ② Attach is **Novell NDS Server File**.
- ③ The **Route Assignment** specifies that the host selection criteria must match **CLASS=C** and **WRITER=CUSTOMER** in order for the job to be sent to the **CONSULT** route.
- ④ The Sequence Group **HP5** will be referenced to find the **START** and **PORTRAIT** sequence commands to add to the beginning of the job. The **END** sequence command from the **HP5** Sequence Group will be added to the end of the job.
- ⑤ AnyQueue will name the file being received **MONTHRPT.TXT** and place it on the **SYS** volume on the Novell server named **CONSULT**.
- ⑥ If AnyQueue is unable to write the file to **CONSULT\SYS** then the job will be sent to the **Destination** location specified in the route named **ErrorRoute**. If AnyQueue is unable to write the file to the **Destination** location specified in **ErrorRoute**, then the connection to the host will be terminated and the job will stay on the host.

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Name: 1 **Attach:** 2

Destination: 5

Backend: **Carriage Control:**

Translate: **Error Route:** 6

User/Group:

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Sequence Group: 4 **Command Help:**

Start Sequence: Add Start
Command

End Sequence: Add End
Command

Route Assignment

Name:

Job Name:

Class: 3

Dest: **Extended**

Form:

Writer: 3

Route:

Error Route:

Group when Variable =

Figure G-7: Novell NDS Server File

Novell NDS Server Queue

The route defined in [Figure G-8 on page G.17](#) will send the host file to a print queue on a Novell file server that is running Novell Directory Services (NDS).

- ① The route is named **FISCAL DEPARTMENT**.
- ② Attach is **Novell NDS Server Queue**.
- ③ The **Route Assignment** page specifies that the host selection criteria must match **WRITER=FISCAL** in order for the job to be sent to the **FISCAL DEPARTMENT** route.
- ④ The Sequence Group **HP4SI** will be referenced to find the **START** and **PORTRAIT** sequence commands to add to the beginning of the job. The **END** sequence command from the **HP4SI** Sequence Group will be added to the end of the job.
- ⑤ AnyQueue will place the file being received in the NDS print queue named **PRT**.
- ⑥ If AnyQueue is unable to write the file to the **PRT** print queue then the job will be sent to the **Destination** location specified in the route named **ADMIN**. If AnyQueue is unable to write the file to the **Destination** location specified in **ADMIN**, then the connection to the host will be terminated and the job will stay on the host.

The figure consists of three screenshots of the Novell NDS Server Queue configuration interface:

- Top Screenshot (Route - Basic tab):** Shows the 'Basic' configuration for a route named 'Fiscal Department' (1). It is attached to the 'Novell NDS Server Queue' (2). The destination is '\\tree\cn=prt.ou=acct.o=irs' (5). The comment is 'AnyQueue Report: +JOBNAME +DATE(5:2)/+DATE(7:2)/+DATE(1:4) +TIME(1:2)'. Other fields include 'Form Override', 'Backend', 'Carriage Control', 'Translate', 'Error Route' (set to 'Admin' (6)), and 'User/Group'.
- Middle Screenshot (Route - Sequences tab):** Shows the 'Sequences' configuration. The 'Sequence Group' is 'HP4SI' (4). 'Command Help' is set to 'Start'. The 'Start Sequence' is 'Start Portrait' and the 'End Sequence' is 'End'. There are links for 'Add Start Command' and 'Add End Command'.
- Bottom Screenshot (Route Assignment):** Shows the 'Route Assignment' configuration. The 'Name' is 'Fiscal'. 'Job Name', 'Class', 'Dest', and 'Form' are all set to '*'. The 'Writer' is 'Fiscal' (3). The 'Route' is 'Fiscal Department'. There is an 'Error Route' field and a 'Group when Variable' field with an equals sign.

Arrows indicate a flow from the 'Route' (Basic) window to the 'Route Assignment' window.

Figure G-8: Novell NDS Server Queue

Windows File

The route defined in [Figure G-9 on page G.19](#) will send the host file to a file on an NT server.

- ① The route is named **EDUCATION**.
- ② Attach is **NT/2000 Server File**.
- ③ The **Route Assignment** page specifies that the host selection criteria must match **WRITER=ROSTER** in order for the job to be sent to the **EDUCATION** route.
- ④ AnyQueue will place the file being received on the file server named **EDUCATE**, in the folder named **CLASS**, and the writer name on the job will be substituted as the file name. In this case, the writer name on the job is **ROSTER** so the file will be named **ROSTER.TXT**.
- ⑤ If AnyQueue is unable to write the file to **EDUCATE\CLASS** then the job will be sent to the **Destination** location specified in the route named **ErrorRoute**. If AnyQueue is unable to write the file to the **Destination** location specified in **ErrorRoute**, then the connection to the host will be terminated and the job will stay on the host.

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Name: 1 **Attach:** 2

Destination: 4

Backend: **Carriage Control:**

Translate: **Error Route:** 5

User/Group:

Route Assignment

Name:

Job Name:

Class:

Dest: **Extended**

Form:

Writer: 3

Route:

Error Route:

Group when Variable =

Figure G-9: NT/2000 Server File

Windows Queue

The route defined in [Figure G-10 on page G.21](#) will send the host file to a print queue on an NT server.

- ① The route is named **TIMEKEEPER**.
- ② Attach is **NT/2000 Server Queue**.
- ③ The **Route Assignment** page specifies that the host selection criteria must match **CLASS=T** and **WRITER=TIME** in order for the job to be sent to the **TIMEKEEPER** route.
- ④ The **Controls** page on the **Route** page specifies a line limit of **2000**. If the job being received is over 2000 lines then the job will put on **hold**.
- ⑤ The Sequence Group **HP4SI** will be referenced to find the **START** and **PORTRAIT** sequence commands to add to the beginning of the job. The **END** sequence command from the **HP4SI** Sequence Group will be added to the end of the job.
- ⑥ AnyQueue will place the file being received in the print queue named **PRINTER4** on the server named **NTSERVER**.
- ⑦ If AnyQueue is unable to write the file to the **PRINTER4** print queue then the job will be sent to the **Destination** location specified in the route named **ErrorRoute**. If AnyQueue is unable to write the file to the **Destination** location specified in **ErrorRoute**, then the connection to the host will be terminated and the job will stay on the host.

The figure displays three windows from the NT Server Queue configuration utility. The top window is the 'Route' configuration for 'TIMEKEEPER'. The middle window shows 'Controls' for the same route. The bottom window is the 'Route Assignment' dialog.

Route Configuration (Top Window):

- Name:** TIMEKEEPER (1)
- Attach:** NT/2000 Server Queue (2)
- Destination:** \\ntserver\printer4 (6)
- Comment:** AnyQueue Report: +JOBNAME +DATE(5:2)/+DATE(7:2)/+DATE(1:4) +TIM
- Backend:** [Empty]
- Carriage Control:** [Empty]
- Translate:** [Empty]
- Error Route:** ErrorRoute (7)
- User/Group:** [Empty]

Route Controls (Middle Window):

- Line Limit:** 2000 (4)
- Page Limit:** 0
- None:**
- Delete:**
- Hold:**
- ReRoute:** [Empty]
- None:**
- Delete:**
- Hold:**
- ReRoute:** [Empty]

Route Assignment (Bottom Window):

- Sequence Group:** HP4SI (5)
- Command Help:** Start
- Start Sequence:** Start Portrait **Add Start Command**
- End Sequence:** End **Add End Command**
- Name:** Timekeeper
- Job Name:** *
- Class:** T (3)
- Dest:** * Extended
- Form:** *
- Writer:** TIME (3)
- Route:** TIMEKEEPER
- Error Route:** [Empty]
- Group when Variable:** [Empty] = [Empty]

Figure G-10: NT Server Queue

Mapi Mail

The route defined in [Figure G-11 on page G.23](#) will send the host file to a Mapi e-mail address.

- ① The route is named **MANAGERS EMAIL**.
- ② Attach is **Mapi Mail**.
- ③ The **Route Assignment** page specifies that the host selection criteria must match **WRITER=STATUS** in order for the job to be sent to the **MANAGERS EMAIL** route.
- ④ AnyQueue will send the file being received to the e-mail destination named **COMPANY MANAGERS** and **Monthly Status Report** will appear on the subject line of the e-mail when it is received by the recipient(s).
- ⑤ Error routes are not fully supported for Mapi Mail routes.

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Name: MANAGERS EMAIL 1 **Attach:** Mapi Mail 2

Destination: COMPANY MANAGERS 4

Subject: Monthly Status Report

Backend: **Carriage Control:**

Translate: **Error Route:** 5

User/Group:

Route Assignment

Name: MANAGERS

Job Name: *

Class: *

Dest: * Extended

Form: *

Writer: STATUS 3

Route: MANAGERS EMAIL

Error Route:

Group when Variable =

Figure G-11: Mapi Mail

Mapi Mail Attachment

The route defined in [Figure G-12 on page G.25](#) will send the host file to a Mapi e-mail address and attach a file to the e-mail.

- ① The route is named **MEDICAL**.
- ② Attach is **Mapi Mail Attachment**.
- ③ The **Route Assignment** page specifies that the host selection criteria must match **CLASS=M** and **WRITER=MED** in order for the job to be sent to the **MEDICAL** route.
- ④ AnyQueue will send the file being received to the e-mail destination named **Marcus Welby**; the subject line of the e-mail will contain the host **jobname** of the file being received; and the file being received will be included in the e-mail as an attachment named **CHART.TXT**.
- ⑤ Error routes are not fully supported for Mapi Mail Attachment routes.

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Name: 1 **Attach:** 2

Destination: 4

Subject:

Attachment: 4

Backend: **Carriage Control:** 5

Translate: **Error Route:**

User/Group:

Route Assignment

Name:

Job Name:

Class: 3

Dest: **Extended**

Form:

Writer: 3

Route: 3

Error Route:

Group when Variable =

Figure G-12: Mapi Mail Attachment

LPR

The route defined in [Figure G-13 on page G.27](#) will send the host file to a TCP/IP printer.

- ① The route is named **DIVISION B**.
- ② Attach is **LPR**.
- ③ The **Route Assignment** page specifies that the host selection criteria must match **WRITER=DIVB** in order for the job to be sent to the **DIVISION B** route.
- ④ AnyQueue will send the file being received to the print queue named **PRT5** that has a TCP/IP address of **200.99.9.5** and port **515**.
- ⑤ Error routes are not fully supported for LPR routes.

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Route

Name: 1

Attach: 2

Destination: 4

Class:

Job Name:

Timeout:

Backend:

Carriage Control:

Translate:

Error Route: 5

User/Group:

Route Assignment

Name:

Job Name:

Class:

Dest: Extended

Form:

Writer: 3

Route:

Error Route:

Group when Variable =

Figure G-13: LPR

SMTP

The route defined in [Figure G-14 on page G.29](#) will send the host file to an SMTP mailbox.

- ① The route is named **SMTP**.
- ② Attach is **SMTP**.
- ③ The **Route Assignment** page specifies that the host selection criteria must match **WRITER=MAIL** in order for the job to be sent to the **SMTP** route.
- ④ AnyQueue will send the file being received to the mailbox named **jdoh@lrs.com**.

Route

Basic
Controls
Flags
Sequences
AnyQueue/Secure®

Name: 1 **Attach:** 2

Destination: 4

Subject:

Notify: Success Failure

Backend: **Carriage Control:**

Translate: **Error Route:**

User/Group:

Route Assignment

Name:

Job Name:

Class:

Dest: Extended

Form:

Writer: 3

Route:

Error Route:

Group when Variable =

Figure G-14: SMTP

Variable Substitution with @Filepath

The route defined in [Figure G-15 on page G.31](#) will add PCL commands to the host file based upon the host selection criteria on the job.

- ① The route is named **ADMIN**.
- ② Attach is **Novell Bindery Server Queue**.
- ③ The **Route Assignment** page specifies that the host selection criteria must match **CLASS=V** and **FORM=CHK** in order for the job to be sent to the **ADMIN** route.
- ④ The Sequence Group **HP5** will be referenced to find the **START** sequence command to add to the beginning of the job. The **END** sequence command from the **HP5** Sequence Group will be added to the end of the job.
- ⑤ The **Sequence** tab of the route specifies a **Start Sequence** of:
START @C:\PCL\+FORM\+WRITER
If the host writer is **DBOK** on the file being received, the following substitution would be performed:
START @C:\PCL\CHK\DBOK
The '@' sign tells AnyQueue to insert a file. A folder named **CHK** contains a file named **DBOK** and this file contains PCL commands that will be added to the beginning of the job before it is printed. Numerous files could be created that contain PCL commands and the appropriate file would be used based upon the host selection criteria on the job being received. This implementation eliminates the need for numerous route definitions for the same network queue because of different formatting required for the reports.
- ⑥ AnyQueue will place the file being received in the print queue named **PRINTER8** on the **NOVSVR2** server.
- ⑦ There is no error route defined in this route definition (see item 8 below).
- ⑧ Since there is no error route defined in the route definition, AnyQueue will attempt to send the file to the error route specified in the **Route Assignment** page (**ErrorRoute**). If this also fails then the connection to the host will be terminated and the job will stay on the host.

Route

Name: Admin (1) Attach: Novell Bindery Server Queue (2)

Destination: \\NDV\SVR2\PRINTER8 (6)

Comment: AnyQueue Report: +JOBNAME +DATE(5:2)/+DATE(7:2)/+DATE(1:4) +TIME

Form Override: _____

Backend: _____ Carriage Control: _____

Translate: _____ Error Route: (7)

User/Group: _____

Route

Sequence Group: HP5 (4) Command Help: Start

Start Sequence: Start @c:\pcl\+form\+writer (5) Add Start Command

End Sequence: End Add End Command

(5)

```

←E
←&11S←&1180U←&15H←&100←(8U←(s0P←(s12H
←(s10V←(s0S←(s0B←(s8T←&16D←&13E←&160F
←&11L←&a6L←&a90M←&s0C←&a0R←E|

```

Route Assignment

Name: ADMIN

Job Name: *

Class: V (3)

Dest: * Extended

Form: *

Writer: CHK (3)

Route: Admin

Error Route: ErrorRoute (8)

Group when Variable _____ = _____

Figure G-15: Variable Substitution with @Filepath

Variable Substitution to a Temp File

The route defined in [Figure G-16 on page G.33](#) will send the host files to an NT server and sequentially number the files as they are received.

- ① The route is named **DISTRIBUTION**.
- ② Attach is **NT Server File**.
- ③ The **Route Assignment** page specifies that the host selection criteria must match **JOBNAME=ADMINQ** and **WRITER=DIST** in order for the job to be sent to the **DISTRIBUTION** route.
- ④ AnyQueue will place the host file on the file server named **NTSRV**, in the folder named **DIST**.

The **Jobname** on the host file will be substituted as the folder name (in this case it would be **ADMINQ**). The folder **ADMINQ** must be created beforehand; **AnyQueue cannot create folders** - only files.

The **+TEMP** variable in the Destination field tells AnyQueue to number each file consecutively starting with **ANYQ0000.P**. (The default suffix is **.P** but you can specify a different suffix.)

In this example, the following substitution would be performed on the Destination field:

NTSRV\DIST\ADMINQ\ANYQ0000.P

- ⑤ If AnyQueue is unable to write the file to **NTSRV\DIST\ADMINQ** then the job will be sent to the **Destination** location specified in the route named **LAST CHANCE**. If AnyQueue is unable to write the file to the **Destination** location specified in **LAST CHANCE**, then the connection to the host will be terminated and the job will stay on the host.

Route

Basic
Controls
Flags
Sequences
AnyQueue/Secure™

Name: DISTRIBUTION (1) **Attach:** NT/2000 Server File (2)

Destination: \\ntsrv\dist\+jobname\+temp (4)

Backend: _____ **Carriage Control:** _____

Translate: _____ **Error Route:** Last Chance (5)

User/Group: _____

Route Assignment

Name: DISTRIBUTION

Job Name: ADMINQ (3)

Class: *

Dest: * Extended

Form: *

Writer: DIST (3)

Route: DISTRIBUTION

Error Route: _____

Group when Variable _____ = _____

Figure G-16: Variable Substitution to a +Temp File

Variable Substitution to a Print Queue

The route defined in [Figure G-17 on page G.35](#) will send host files to Novell Bindery Server Queues using variable substitution.

- ① The route is named **ALLQUEUES**.
- ② Attach is **Novell Bindery Server Queue**.
- ③ The **Route Assignment** page specifies that the host selection criteria must match **CLASS=Q** in order for the job to be sent to the **ALLQUEUES** route.
- ④ The **Sequence** tab of the route specifies a Start Sequence of:
@C:\FORMS\+FORM
If the **FORM** is **SLET** on the host file, the following substitution would be performed:
@C:\FORMS\SLET
The '@' sign tells AnyQueue to insert a file. A folder named **FORMS** contains a file named **SLET** and this file contains PCL commands that will be added to the beginning of the job before it is placed in the print queue. Numerous files could be created that contain PCL commands and the appropriate file would be used based upon the Form name on the host job. This implementation eliminates the need for numerous route definitions for the same network queue because of different formatting required for the reports.
- ⑤ The **Destination** field is also using variable substitution. In this case the **Writer** name on the host job will be substituted for **+WRITER**.
If the host **Writer** is **PRTQ1**, the following substitution would be performed in the **Destination** field:
ALPHA\PRTQ1
If the LAN print queue names are 8 characters or less (eight is the maximum allowed for the host **Writer**), then **one** AnyQueue route could send output to **any** print queue.
- ⑥ If AnyQueue is unable to write to **ALPHA\PRTQ1** then the job will be sent to the **Destination** location specified in the route named **LAST CHANCE**.

Route

Name: ALLQUEUES (1) Attach: Novell Bindery Server Queue (2)

Destination: \\ALPHA\WRITER (5)

Comment: AnyQueue Report: +JOBNAME +DATE(5:2)/+DATE(7:2)/+DATE(1:4) +TI

Form Override: _____

Backend: _____ Carriage Control: _____

Translate: _____ Error Route: _____

User/Group: _____

Route

Sequence Group: HP5 Command Help: Start

Start Sequence: @C:\FORMS\FORM (4) Add Start Command

End Sequence: _____ Add End Command

Route Assignment

Name: ALLQUEUES

Job Name: *

Class: Q (3)

Dest: * Extended

Form: *

Writer: *

Route: ALLQUEUES

Error Route: Last Chance (6)

Group when Variable _____ = _____

Address: FORMS

FORMS

This folder is Online.

slet File

```

<E
<&l0S<&l4H<&l0O<-(8U<-(s0P<-(s12H
<(s10V<-(s0S<-(s0B<-(s8T<&l6D<&l6E
<&l54F<&l1L<&a12L<&a84M<&s0C
<&a0R
<E

```

Figure G-17: Variable Substitution to a Print Queue

PageCenter Plus as a Backend

The route defined in [Figure G-18 on page G.37](#) shows how PageCenter Plus can be used as a Backend for AnyQueue. PageCenter Plus is an LRS product that provides users with the capability to access, store, and manage report information.

- ① The route is named **CRUSHER**.
- ② Attach is **Local File**.
- ③ The **Route Assignment** page specifies that the host selection criteria must match **WRITER=PAYROLL** in order for the job to be sent to the **CRUSHER** route.
- ④ The **Destination** field is using variable substitution. In this case the **Writer** name on the host job will be substituted for **+WRITER**.

The host **Writer** is **PAYROLL**, so the following substitution would be performed in the **Destination** field:

c:\pcplus\input\payroll.rpt

- ⑤ The **Backend** program is named **PCPCR32.EXE** which is the Crusher program for the LRS product PageCenter Plus. Once the file is placed in the **INPUT** folder, the Crusher program will automatically be executed.
- ⑥ There is no error route defined in the Route or the Route Assignments so if AnyQueue is unable to write to **c:\pcplus\input** the connection to the host will terminate and the job will stay on the host.

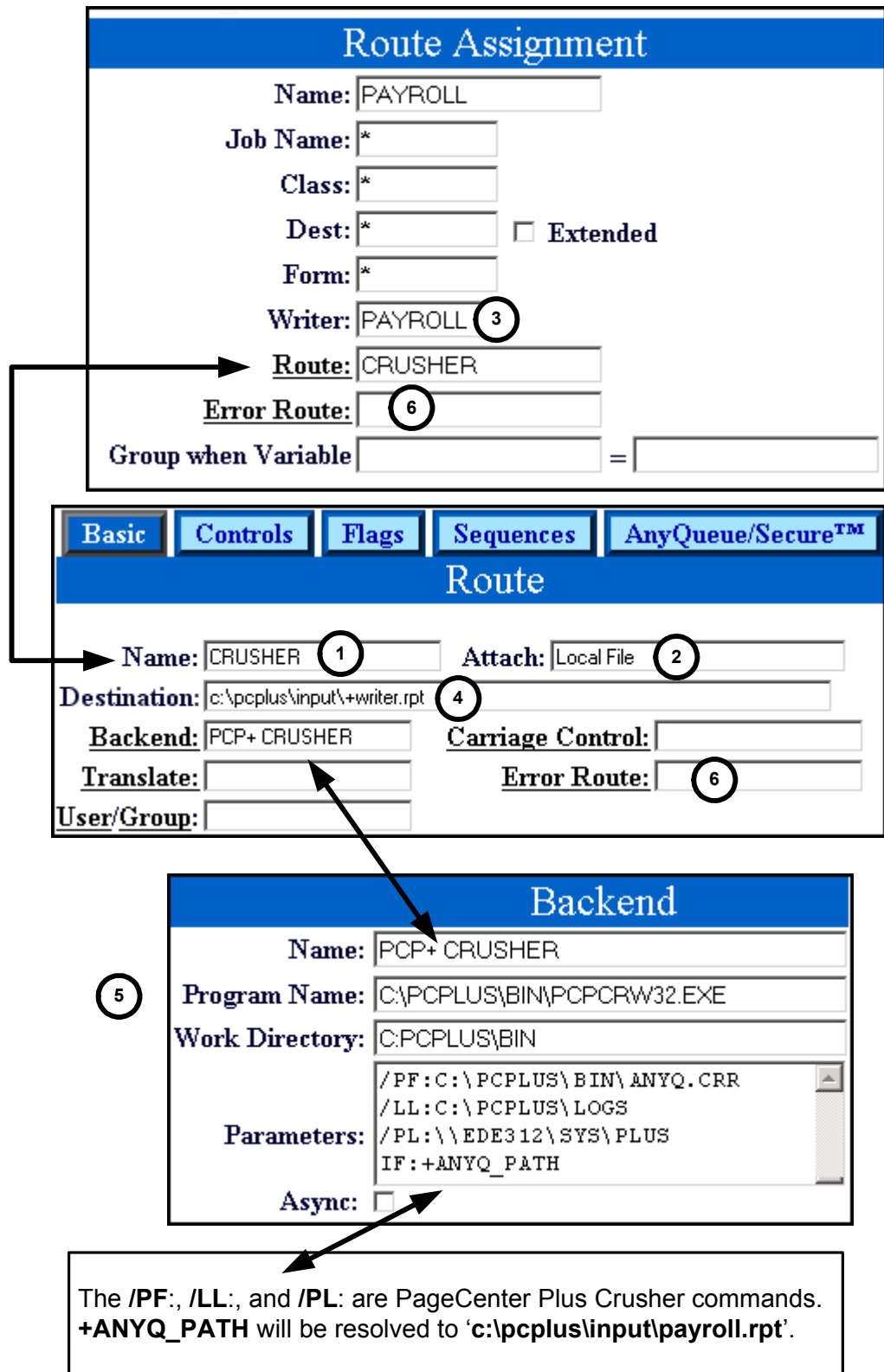


Figure G-18: PageCenter Plus as a Backend

AnyQueue/PageSorter® as a Backend

The route defined in [Figure G-19 on page G.39](#) shows how AnyQueue/PageSorter can be used as a Backend for AnyQueue®. AnyQueue/PageSorter is an LRS product that extracts reports from an ASCII input file to generate one or more output files.

- ① The route is named **CONSULTING FEES**.
- ② Attach is **Local File**.
- ③ The **Route Assignment** page specifies that the host selection criteria must match **WRITER=CONSULT** in order for the job to be sent to the **Consulting Fees** route.
- ④ The **Destination** field is using variable substitution. In this case the **Writer** name on the host job will be substituted for **+WRITER**.
The host **Writer** is **CONSULT** so the following substitution will be performed in the **Destination** field:
c:\lrs\pagesort\consult.txt
- ⑤ The **Backend** program is named **NPS.EXE** which is the program for AnyQueue/PageSorter. Once the file is placed in the **LRS\PAGESORT** folder, the NPS program will automatically be executed.
- ⑥ There is no error route defined in the Route or the Route Assignments so if AnyQueue is unable to write to **c:\lrs\pagesort** the connection to the host will terminate and the job will stay on the host.

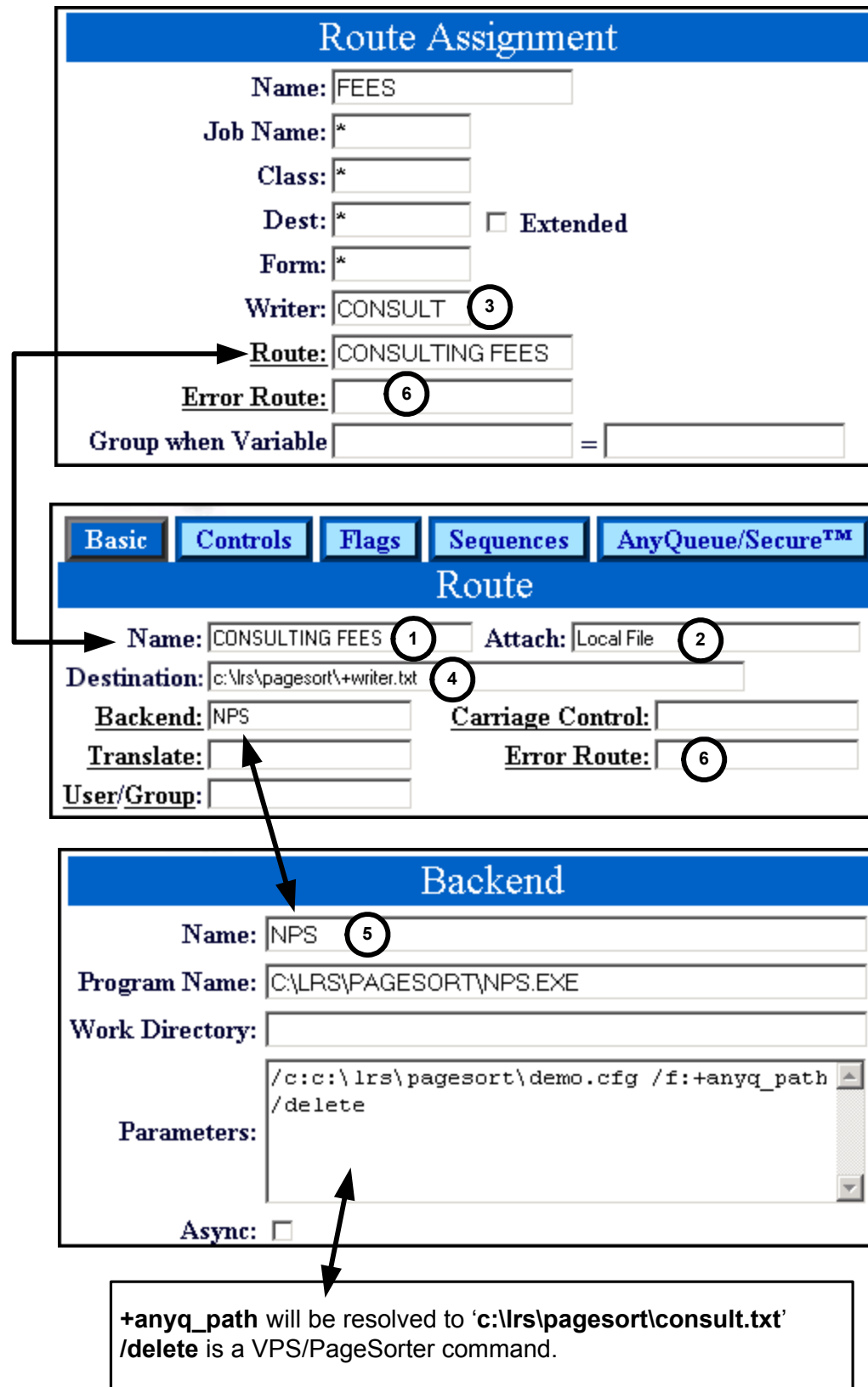


Figure G-19: AnyQueue\PageSorter as a Backend



Appendix H

AnyQueue® INF File

If a Route is defined with “Attach=Local File”, and the route flag “Create Info Files” is selected, an Information File will be created. The Information File will list the host information on the job such as Job Name, Class, Destination, Form, Writer, etc. It will also list the original .CFG file information such as Path, Type, FileExists, Printer, etc. Information files are useful to determine where the job was originally destined if the job has been routed to a DefaultRoute or ErrorRoute.

Sample AnyQueue Information file (*.INF)

```
*****
*
* Information File for AnyQueue
*
* Date and Time: 10/06/1999 15:19:59
*
* HOST INFORMATION:
* Job Name: *
* Job ID:
* Class: a
* Dest: mydest
* Form: myform
* Writer: mywrit
* Lines: 0
* Pages: 0
* Copies: 0
*
* ORIGINAL ROUTING INFORMATION:
* Route: FILE
* Path: f:\work\lrs\anyq\+TEMP
* Attach: Local File
* Printer:
*
*****
```

Figure H-1: Sample AnyQueue INF File



Appendix I

AnyQueue Text File Configuration Program

The AnyQueue Text File Configuration program provides a utility to AnyQueue system administrators for 1) generating a text based version on an existing AnyQueue binary configuration file and 2) building a binary AnyQueue configuration file from a text based command file. The AnyQueue application will continue to require the binary based version of the configuration file during system startup. In addition, the configuration file can still be modified via the WebTRAC interface; however, any changes made via the WebTRAC interface will only be made to the binary version of the configuration file. The AnyQueue Text File Configuration utility will need to be run again with the updated binary version of the file in order to generate a corresponding text based version of the file.

The syntax for the `xbaqcfg` executable, where `x` is:

- a** for AIX
- c** for Intel Linux
- h** for HP-UX
- l** for ZLinux
- n** for Windows
- s** for Solaris

is as follows:

Syntax: `_baqcfg /f:Filename.cfg /cf:CommandFile /bf:BackupFile /u:UserId /p:Password`
`[/generate] [/tracloc:WebTRACLocation] [/errcheck]`
`[/maxerr:MaxErrors] [/routenodeps] [/allowdups]`

Where:

/f	Filename.cfg	AnyQueue binary configuration file (required).
/cf	CommandFile	AnyQueue text command file (required).
/bf	BackupFile	AnyQueue backup file (required when replacing an existing binary configuration file). The backup file is formatted just as a backup created using the AnyQueue Management utility. Therefore, this file will be created with a .arq extension, and will need to be restored using the AnyQueue Management utility.
/u	UserID	AnyQueue Administrator User ID (required).
/p	Password	Password for the Administrator ID specified (required).
/generate	GenerateCommandFile	Tells the utility to generate a text based command file (/cf parameter) based on a supplied binary AnyQueue configuration file (/f parameter).

/tracloc	WebTRACDirectory	Fully qualified location of the WebTRAC directory. AnyQueue administrative authentication will be validated against the user files found in this directory. The WebTRAC location found in the binary version of the configuration file specified using the /f parameter will supersede any value specified for this parameter. This parameter is required if the WebTRAC location cannot be obtained from the binary version of the configuration file.
/errcheck	ErrorCheck	Check the command file (/cf parameter) for errors (no changes will be made to any of the specified filenames).
/maxerr	MaxErrors	Max number of errors logged before the utility stops processing. Default: 10
/routenodeps	RouteNoDependencies	Allow non-defined routes to be added as Error Routes and Limit ReRoutes on a route definition. Routes can reference other routes via the Error Route and/or Limit ReRoute keywords. In some instances, for example, a route that is defined later in a Command file may be referenced as an Error Route earlier in a command file. If the /routenodeps parameter is not specified, an error would occur at utility run time. In this example, the Error Route would need to be referenced by its InternalDatabaseKey keyword. The /routenodeps parameter (if used) must be specified when running the utility to generate the command file as well as when it is ran to create the binary configuration file.
/allowdups	AllowDuplicateNames	If this parameter is not specified, all names within a particular component type (Routes, Route Assignments, etc.) will need to be unique. As a general rule, unique names should always be specified when creating AnyQueue components.

General Utility Rules

Text based command files will always be processed from top to bottom. Therefore, as a general rule, components should be defined in the following sequential group order.

Group 1: General.

Group 2: Backends, Logons, Hosts, Carriage Controls, Translation Tables, Sequence Groups and Route Pools.

Group 3: Routes

Group 4: Route Assignments

In addition to the above primary components, four subcomponent types exist. Subcomponents **MUST** be defined immediately after the component with which they are associated. The four subcomponents are TRAC routes (a subcomponent of a Route Assignment), Sequence Commands (a subcomponent of a Sequence Group), Variables (a subcomponent of a route having an attach type of DRS File, DRS Queue or AnyQueue), and Control Data (a subcomponent of a route having an attach type of LPR).

All field settings within components and subcomponents are made based on the following syntax (which is strictly enforced):

KEYWORD = KEYVALUE

Keywords are case insensitive. A list of valid keywords for each component/subcomponent follows this section of the document.

Keywords and their values **MUST** be separated with a “ = ” delimiter.

The value assigned to the keyword is the remaining contents on a line after the “ = ” delimiter. You need only specify the keywords that you wish to have settings applied.

Some components have types associated with them (Logons, Hosts, Routes, Translation Tables, Route Assignments, and Route Pools). As a result, some keywords that are available within a component can only be specified if the component's current type matches the type required by the keyword. For example, the **Wait Delay** keyword associated with the Host component is only available if the Host's type has been set to **File**. We recommend specifying the component's type very early in the component definition since the command file is processed top to bottom.

The component/subcomponent keyword tables that follow identify the keyword's data type, low range and high range. For hexadecimal and alphanumeric data types, the low range is the minimum number of characters the keyword accepts, and the high range is the maximum number of characters accepted. For numeric data types, the low range is the minimum value accepted and the high range is the maximum value accepted. The low range and high range values are not applicable to keywords having a data type of Boolean as these fields will only accept a “Y” or “N”.

Hexadecimal keywords will only accept hexadecimal characters (0-9 and a-f).

Boolean keywords will only accept a Y or a N.

Alphanumeric keywords will accept any character other than a carriage control or line feed. **Carriage control/line feed characters signify the end of the keyword line, and should NEVER be specified as part of a keyword's actual value.** Alphanumeric keywords can be cleared by specifying the keyword with no value after the “ = ” delimiter (i.e., **KEYWORD =**).

Numeric keywords accept only numeric values (0-9).

As a general rule, passwords contained in a command file are NOT encrypted (i.e., they will be displayed in flat ASCII text).

A comment line can be included in the command file by placing an asterisk in column one on the line. If the asterisk is not placed in column one, the utility will attempt to process the line. Blank lines included in a command file are ignored.

This utility enforces the same set of validation rules as defined in the online WebTRAC configuration editing tool. No changes will be saved to a specified configuration file (/f parameter) unless the utility completes free of errors.

Under certain circumstances, an “***InternalDatabaseKey***” keyword will be associated with components defined in your command file. The value associated with this keyword is AnyQueue’s unique component identifier, and should **NEVER** be modified. The database key keyword is required by the utility when:

- 1) attempting to identify a component whose name is not unique.
- 2) referencing a component that has yet to be defined (primarily for Error Route and Limit ReRoute purposes).
- 3) jobs exist in the Job List (the jobs are tied back to pre-existing routes via the database key).

You will notice this database key keyword in the command file if the **/allowdups** or the **/routenodeps** flags are specified on the command line. The database key keyword will always be found on Route, Route Assignment, and Route Pool component definitions.

This utility will warn the user prior to overlaying any previously defined files. We STRONGLY recommend that you manually back up any previously defined configuration and/or command files prior to running this utility, and that a unique backup file name always be specified. Once a file is overwritten, its initial contents are LOST.

Backend

Backends can be referenced by a route and should therefore be included in the command file prior to any route definitions. A backend is created via the following syntax.

COMPONENT BACKEND

Backend Keywords	Type	Low Range	High Range
InternalDatabaseKey	Hexadecimal	16	16
Async	Boolean (Y/N)	0	0
FailJobOnBackendFailure	Boolean (Y/N)	0	0
Name	Alphanumeric	0	255
Parameters	Alphanumeric	0	2047
ProgramName	Alphanumeric	0	255
WorkDirectory	Alphanumeric	0	255

Sample command file definition:

```
COMPONENT BACKEND
  NAME                = PAGESORTER
  PROGRAMNAME         = C:\LRS\PAGESORT\nps.exe
  WORKDIRECTORY       = C:\LRS\PAGESORT
  PARMETERS           = /c:C:\LRS\PAGESORT\WEBAG49.CFG
  ASYNC               = N
  FAILJOBONBACKENDFAILURE = Y
```

Carriage Control

Carriage controls can be referenced by a route and should therefore be included in the command file prior to any route definitions. A carriage control is created via the following syntax.

COMPONENT CARRIAGECONTROL

Carriage Control Keyword's	Type	Low Range	High Range
InternalDatabaseKey	Hexadecimal	16	16
ANSIPProcessLeadFormFeed	Alphanumeric	0	128
ANSISkipToLine1OnNewPage	Alphanumeric	0	128
ANSISpace1Line	Alphanumeric	0	128
ANSISpace2Lines	Alphanumeric	0	128
ANSISpace3Lines	Alphanumeric	0	128
ANSISuppressSpace	Alphanumeric	0	128
LPDFormFeed	Alphanumeric	0	128
LPDInputLineDelimiter	Alphanumeric	0	128
LPDLeadingFormFeed	Alphanumeric	0	128
LPDOutputLineDelimiter	Alphanumeric	0	128
MachNoOperation	Alphanumeric	0	128
MachProcessLeadFormFeed	Alphanumeric	0	128
MachSkipToChannel1Immed	Alphanumeric	0	128
MachSpace1LineImmed	Alphanumeric	0	128
MachSpace2LinesImmed	Alphanumeric	0	128
MachSpace3LinesImmed	Alphanumeric	0	128
MachWriteAndSpace1Line	Alphanumeric	0	128
MachWriteAndSpace2Lines	Alphanumeric	0	128
MachWriteAndSpace3Lines	Alphanumeric	0	128
MachWriteSkipToChannel1	Alphanumeric	0	128
MachWriteWithoutSpacing	Alphanumeric	0	128
MaximumPageSize	Alphanumeric	0	128
MinimumPageSize	Alphanumeric	0	128
Name	Alphanumeric	0	255
StandardFormat	Alphanumeric	0	128

Sample command file definition:

```
COMPONENT CARRIAGECONTROL
  NAME = Remove Form Feed Carriage
  MACHNOOPERATION = \x0d
  MACHSPACELINEIMMED = \x0d\x0a
  .
  .
  .
  Other Carriage Control Keyword = Value assignments
  .
  .
  .
```

Control Data

Control data is a subcomponent of a route (having an Attach Type of LPR). The control data associated with a particular route must be defined in the command file immediately after the parent route's last "Keyword = Value" assignment. Control data is created via the following syntax.

SUBCOMPONENT CONTROLDATA

Route Control Data Keyword's	Type	Low Range	High Range
Parm	Alphanumeric	0	255
Value	Alphanumeric	0	255

Sample command file definition:

```
COMPONENT ROUTE
  NAME                               = LPR Route
  ***INTERNALDATABASEKEY1** = A83BACD41B0008DE
  .
  .
  .
  Other Route Keyword = Value assignments
  .
  .
  .

  SUBCOMPONENT CONTROLDATA
    PARM                               = Parm
    VALUE                              = Parm Value
```

In the above example, the Control Data item "Parm" would be associated with (found on) route "LPR Route".

General

The General section definitions for an AnyQueue configuration file are created via the following syntax. **Note:** The **CommandPassword** is not encrypted, and should be specified as you wish to have it set.

COMPONENT GENERAL

General Keyword's	Type	Low Range	High Range
AdminEMailId	Alphanumeric	0	255
AdminReportNotify	Boolean (Y/N)	0	0
AnyQueueEMailId	Alphanumeric	0	255
ArchiveLogFileDays	Numeric	0	99999
ArchiveLogFileOnStartup	Boolean (Y/N)	0	0
ChkPtRestartCleanupDays	Numeric	1	999
ClearPoolLoadCntsOnStrt	Boolean (Y/N)	0	0
CommandPassword	Alphanumeric	0	48
CommandPort	Numeric	0	99999
Cycle-Seconds	Numeric	1	3600
DefaultTimeout-Seconds	Numeric	15	300
DiskSpaceThrshld-Percent	Numeric	1	100
ErrorRetry-Minutes	Numeric	1	1440
GroupReverseIndexSearch	Boolean (Y/N)	0	0
JobProcessors	Numeric	1	250
JobRequestProcessors	Numeric	1	50
Location	Alphanumeric	0	255
LRSWebConnectPort	Numeric	0	99999
MaximumInvalidAttempts	Numeric	0	99
MaximumJobNumber	Numeric	100	99999999
MinimumPasswordLength	Numeric	0	20
NotifyURLPrefix	Alphanumeric	0	255
PasswordExpiration-Days	Numeric	0	99999
PurgeJobsInErrorOnExpire	Boolean (Y/N)	0	0
ReqAlphaAndNumPasswords	Boolean (Y/N)	0	0
SmtServer	Alphanumeric	0	255
TempFileNamePrefix	Alphanumeric	0	4

General Keyword's	Type	Low Range	High Range
TempLocation	Alphanumeric	0	255
TracMaintenanceTime-Hour	Numeric	0	23
TracMaintenanceTime-Mins	Numeric	0	59
UserTimeout-Mins	Numeric	0	1440

Sample command file definition:

```

COMPONENT GENERAL
  LOCATION = c:\lrs\anyq\trac
  DISKSPACETHRSHLD-PERCENT = 1
  JOBPROCESSORS = 8
  CYCLE-SECONDS = 30
  JOBREQUESTPROCESSORS = 6
  ERRORRETRY-MINUTES = 11
  USERTIMEOUT-MINS = 0
  .
  .
  Other General Keyword = Value assignments
  .
  .

```

Host

A Host is not referenced by any other component in the AnyQueue configuration file, so its definition can be located anywhere in the command file. Valid values for the HostType keyword are APPC, File, LPD and TCPIP. If the HostType keyword is **not** specified in your component definition, the Host will be created as TCPIP by default. A Host is created via the following syntax.

COMPONENT HOST

Keyword	Type	Low Range	High Range
InternalDatabaseKey	Hexadecimal	16	16
128BitKey	Hexadecimal	32	32
192BitKey	Hexadecimal	48	48
256BitKey	Hexadecimal	64	64
AssignClassTo	Alphanumeric	0	20
AssignJobnameTo	Alphanumeric	0	20
ErrorDelay-Cycle	Numeric	1	99999
HonorPRQ	Boolean (Y/N)	0	0
HostType	Alphanumeric	0	5
JobLocation	Alphanumeric	0	255
MaxData	Numeric	6400	32768
ModeName	Alphanumeric	0	8
Name	Alphanumeric	0	255
PortIdNumber	Numeric	0	99999
StartPaused	Boolean (Y/N)	0	0
TransactionName	Alphanumeric	0	8
WaitDelay-Seconds	Numeric	1	99999

Sample command file definition:

COMPONENT HOST	
NAME	= File Host
HOSTTYPE	= File
MAXDATA	= 32768
STARTPAUSED	= N
.	
.	
.	
Other Host Keyword	= Value assignments
.	
.	
.	

Logon

A Logon is not referenced by any other component in the AnyQueue configuration file, so its definition can be located anywhere in the command file. Valid values for the **LogonType** keyword are Bindery, Default, MAPI, NDS, SAP and Windows. If the LogonType keyword is **not** specified in your component definition, the Logon will be created as **Default** by default. **Note:** Passwords are not encrypted, and should be specified as you wish to have them set. A Logon is created via the following syntax:

COMPONENT LOGON

Logon Keyword's	Type	Low Range	High Range
InternalDatabaseKey	Hexadecimal	16	16
ClientNumber	Alphanumeric	0	3
Context	Alphanumeric	0	255
Domain	Alphanumeric	0	255
LogonType	Alphanumeric	0	7
Name	Alphanumeric	0	255
Password	Alphanumeric	0	255
Server	Alphanumeric	0	255
SystemNumber	Alphanumeric	0	2
Tree	Alphanumeric	0	255
UserName	Alphanumeric	0	255

Sample command file definition:

COMPONENT LOGON	
NAME	= NOVELL
LOGONTYPE	= NDS
USERNAME	= HRSPT
PASSWORD	= password
TREE	= HUMAN
CONTEXT	= admin

Route

Routes can be referenced by Route Assignments and should therefore be included in the command file prior to any Route Assignment definitions. Valid values for the **AttachType** keyword are AnyQueue, DRSFile, DRSQueue, Emtex, FTP, LocalFile, LocalQueue, LPR, MAPIMail, MAPIMailAttachment, NovellBinderyFile, NovellBinderyQueue, NovellINDSFile, NovellINDSQueue, SMTPMail, SMTPMailAttachment, TcpiPrinter, WindowsFile, and WindowsQueue. If the AttachType keyword is **not** specified in your component definition, the route will be created as **LocalFile** by default.

Valid values for the **LineLimit** and **PageLimit** keywords are Delay, Delete, Hold, None, and ReRoute.

Valid values for the **SecureType** keyword are None, LRS, HP, Lexmark, LRS Dynamic.

The **/routenodeps** flag will need to be specified on the command line when running the utility if the ErrorRoute, LineLimitReRouteName, or PageLimitReRouteName keywords reference a route that is defined further down in the command file. The flag will need to be specified when generating the command files as well as when creating the configuration file.

A route's Internal Database Key (or TRAC database index) is contained in Job Record files in the TRAC database directory. Therefore, when generating a command file from an existing AnyQueue configuration file, the route's internal database key will be displayed in the route's component definition. This value should **not** be modified!! If the value is changed, all ties back to the particular route in the TRAC database will be **LOST!!** A route is created via the following syntax.

COMPONENT ROUTE

Route Keyword's	Type	Low Range	High Range
***InternalDatabaseKey1**	Hexadecimal	16	16
***InternalDatabaseKey2**	Hexadecimal	16	16
***InternalDatabaseKey3**	Hexadecimal	16	16
***InternalDatabaseKey4**	Hexadecimal	16	16
***InternalDatabaseKey5**	Hexadecimal	16	16
***InternalDatabaseKey6**	Hexadecimal	16	16
***InternalDatabaseKey7**	Hexadecimal	16	16
***InternalDatabaseKey8**	Hexadecimal	16	16
***InternalDatabaseKey9**	Hexadecimal	16	16
AddBlockHeader	Boolean (Y/N)	0	0
AppendToFile	Boolean (Y/N)	0	0
AsciiLineDataToASA	Boolean (Y/N)	0	0
AssuredDelivery	Boolean (Y/N)	0	0
Attachment	Alphanumeric	0	255
AttachType	Alphanumeric	0	18
BackendName	Alphanumeric	0	255
BackupCopy	Boolean (Y/N)	0	0

Route Keyword's	Type	Low Range	High Range
BannerPage	Boolean (Y/N)	0	0
BCC	Alphanumeric	0	255
BypassPclEchoCommand	Boolean (Y/N)	0	0
CarriageControlName	Alphanumeric	0	255
CC	Alphanumeric	0	255
Class	Alphanumeric	0	31
Comment	Alphanumeric	0	255
ConfirmReceipt	Boolean (Y/N)	0	0
CreateANYQFile	Boolean (Y/N)	0	0
CreateInfoFiles	Boolean (Y/N)	0	0
Destination	Alphanumeric	0	255
DiscardDRSSeparators	Alphanumeric	0	0
DisconnectWaitTime	Numeric	0	255
DontSendFormFeedSequence	Boolean (Y/N)	0	0
EbdcicBasedServer	Boolean (Y/N)	0	0
EndSequence	Alphanumeric	0	255
ErrorRetryLimit	Numeric	0	99999
ErrorRouteName	Alphanumeric	0	255
FormOverride	Alphanumeric	0	255
Group	Alphanumeric	0	20
Header	Alphanumeric	0	4095
HonorFcbChannel1	Boolean (Y/N)	0	0
IgnoreCC	Boolean (Y/N)	0	0
IncludeSizeOfPrefix	Boolean (Y/N)	0	0
JifPrinterQueueNumber	Alphanumeric	0	255
JifSendBuffer	Boolean (Y/N)	0	0
JifSenderJobName	Alphanumeric	0	255
JifSenderQueueName	Alphanumeric	0	255
JifSenderTcpiHostName	Alphanumeric	0	255
JifSenderUserName	Alphanumeric	0	255
JobName	Alphanumeric	0	99
KeepCC	Boolean (Y/N)	0	0
LineLimit	Numeric	0	99999999

Route Keyword's	Type	Low Range	High Range
LineLimitAction	Alphanumeric	0	7
LineLimitDelayTime	Alphanumeric	0	7
LineLimitReRouteName	Alphanumeric	0	255
LogFTPServerResponses	Boolean (Y/N)	0	0
Name	Alphanumeric	0	255
NotifyFailure	Boolean (Y/N)	0	0
NotifySuccess	Boolean (Y/N)	0	0
PageLimit	Numeric	0	99999999
PageLimitAction	Alphanumeric	0	7
PageLimitDelayTime	Alphanumeric	0	7
PageLimitReRouteName	Alphanumeric	0	255
Password	Alphanumeric	0	255
PrefixLineLength	Boolean (Y/N)	0	0
RemoveFirstFormFeed	Boolean (Y/N)	0	0
RemoveSingleSpace	Boolean (Y/N)	0	0
RoutePoolName	Alphanumeric	0	255
SecureKey	Hexadecimal	32	64
SecureLength	Numeric	0	256
SecureType	Alphanumeric	0	11
SequenceGroupName	Alphanumeric	0	255
SerializeOutput	Boolean (Y/N)	0	0
SiteCommands	Alphanumeric	0	255
StandardFormat	Boolean (Y/N)	0	0
StartASAWithFormFeed	Boolean (Y/N)	0	0
StartSequence	Alphanumeric	0	255
Subject	Alphanumeric	0	255
SuppressFormFeed	Boolean (Y/N)	0	0
Timeout	Numeric	0	99999
Translate	Boolean (Y/N)	0	0
TranslateName	Alphanumeric	0	255
User	Alphanumeric	0	20
UserName	Alphanumeric	0	255
WebTRACPageRestart	Boolean (Y/N)	0	0

Sample command file definition:

```
COMPONENT ROUTE
  NAME = BH56 To WEBTRAC
  ***INTERNALDATABASEKEY1** = 042352E65A00040B
  ATTACHTYPE = LocalFile
  DESTINATION = C:\LRS\PSIN\+WRITER.+TEMP
  BACKENDNAME = AG49 TO WEBTRAC
  ERRORROUTENAME = ERROR
  APPENDTOFILE = N
  CREATEINFOFILES = N
  DISCARDDRSSEPARATORS = N
  .
  .
  .
  Other Route Keyword = Value assignments
  .
  .
  .
```

Route Assignment

Route Assignments reference routes and, as a general rule, should be defined as the last components contained in a command file. Valid values for the **RouteAssignmentType** keyword are **TRAC** and **Standard**. If the RouteAssignmentType keyword is **not** specified in your component definition, the Route Assignment will be created as **Standard** by default.

A Route Assignment's Internal Database Key (or TRAC database index) is contained in Job Record files in the TRAC database directory. Therefore, when generating a command file from an existing AnyQueue configuration file, the Route Assignment's internal database key will be displayed in the Route Assignment's component definition. This value should **not** be modified!! If the value is changed, all ties back to the particular Route Assignment in the TRAC database will be **LOST!!** A Route Assignment is created via the following syntax.

COMPONENT ROUTEASSIGNMENT

Route Assignment Keyword's	Type	Low Range	High Range
***InternalDatabaseKey1**	Hexadecimal	16	16
***InternalDatabaseKey2**	Hexadecimal	16	16
***InternalDatabaseKey3**	Hexadecimal	16	16
Class	Alphanumeric	0	1
Dest	Alphanumeric	0	8
ErrorRouteName	Alphanumeric	0	255
Extended	Boolean (Y/N)	0	0
Form	Alphanumeric	0	8
GroupWhen Value	Alphanumeric	0	60
GroupWhen Variable	Alphanumeric	0	60
JobName	Alphanumeric	0	8
Name	Alphanumeric	0	255
RouteAssignmentType	Alphanumeric	0	8
StandardRouteName	Alphanumeric	0	255
Writer	Alphanumeric	0	8

□

Sample command file definition:

```
COMPONENT ROUTEASSIGNMENT
  NAME = L027PJA1 - Check Writer
  ***INTERNALDATABASEKEY1** = 091E5E50DB004566
  ROUTEASSIGNMENTTYPE = TRAC
  JOBNAME = *
  CLASS = *
  DEST = *
  FORM = *
  WRITER = L543KJA1
  EXTENDED = N
```

Route Pool

Route Pools can be referenced by a route and should therefore be included in the command file prior to any route definitions. Valid values for the **PoolBy** keyword are JobLoad, LineCountLoad, and RouteSequence. If the **PoolBy** keyword is **not** specified in your component definition, the Route Pool will be pooled by **RouteSequence** by default.

A Route Pool's Internal Database Key (or TRAC database index) is contained in Job Records and Pool tracking files in the TRAC database directory. Therefore, when generating a command file from an existing AnyQueue configuration file, the Route Pool's internal database key will be displayed in the Route Pool's component definition. This value should **not** be modified!! If the value is changed, all ties back to the particular Route Pool in the TRAC database will be **LOST!!** A Route Pool is created via the following syntax.

COMPONENT ROUTEPOOL

Route Pool Keyword's	Type	Low Range	High Range
InternalDatabaseKey	Hexadecimal	16	16
DefaultLineCount	Numeric	0	999999
Name	Alphanumeric	0	255
PoolBy	Alphanumeric	0	13

Sample command file definition:

```
COMPONENT ROUTEPOOL
  NAME = HR Pool
  ***INTERNALDATABASEKEY*** = AA41768663000F25
  POOLBY = LineCountLoad
  DEFAULTLINECOUNT = 999999
```

Sequence Command

A Sequence Command is a subcomponent of a Sequence Group. The Sequence Commands associated with a particular Sequence Group need to be defined in the command file immediately after the parent Sequence Group's last **Keyword = Value** assignment. A Sequence Command is created via the following syntax.

SUBCOMPONENT SEQUENCECOMMAND

Sequence Command Keyword's	Type	Low Range	High Range
Name	Alphanumeric	0	255
Value	Alphanumeric	0	255

Sample command file definition:

<pre>COMPONENT SEQUENCEGROUP NAME = PCL Formatting SUBCOMPONENT SEQUENCECOMMAND NAME = Reset VALUE = {ESC}E</pre>

In the above example, the Sequence Command "Reset" would be associated with (found on) Sequence Group "PCL Formatting".

Sequence Group

Sequence Groups can be referenced by a route and should therefore be included in the command file prior to any route definitions. A Sequence Group is created via the following syntax.

COMPONENT SEQUENCEGROUP

Sequence Group Keyword	Type	Low Range	High Range
Name	Alphanumeric	0	255

Sample command file definition:

```
COMPONENT SEQUENCEGROUP  
  NAME                = HP LASER JET
```

TRAC Route

A TRAC Route is a subcomponent of a Route Assignment (of type TRAC). The TRAC routes associated with a particular Route Assignment need to be defined in the command file immediately after the parent Route Assignment. A TRAC Route is created via the following syntax.

SUBCOMPONENT TRACROUTE

TRAC Route Keyword's	Type	Low Range	High Range
InternalDatabaseKey	Hexadecimal	16	16
CloneGroup	Alphanumeric	0	20
CloneGroupTextMatch	Alphanumeric	0	255
CloneUser	Alphanumeric	0	20
CloneUserTextMatch	Alphanumeric	0	255
DestinationOverride	Alphanumeric	0	255
EnableRoutePool	Boolean (Y/N)	0	0
ErrorRetain	Boolean (Y/N)	0	0
ErrorRetry	Boolean (Y/N)	0	0
EventArrival	Boolean (Y/N)	0	0
EventDelete	Boolean (Y/N)	0	0
EventError	Boolean (Y/N)	0	0
EventPrint	Boolean (Y/N)	0	0
FileType	Alphanumeric	0	60
Folder	Alphanumeric	0	1080
FolderTextMatch	Alphanumeric	0	1080
InitialPause	Boolean (Y/N)	0	0
InitialRetain	Boolean (Y/N)	0	0
InitialSend	Boolean (Y/N)	0	0
ListGroup	Alphanumeric	0	20
ListGroupTextMatch	Alphanumeric	0	255
ListUser	Alphanumeric	0	20
ListUserTextMatch	Alphanumeric	0	255
NotifyGroup	Alphanumeric	0	20
NotifyGroupTextMatch	Alphanumeric	0	255
NotifyUser	Alphanumeric	0	20
NotifyUserTextMatch	Alphanumeric	0	255
NumberOfCopies	Numeric	0	99
OwnerUser	Alphanumeric	0	20
OwnerUserTextMatch	Alphanumeric	0	255

TRAC Route Keyword's	Type	Low Range	High Range
ReprintGroup	Alphanumeric	0	20
ReprintGroupTextMatch	Alphanumeric	0	255
ReprintUser	Alphanumeric	0	20
ReprintUserTextMatch	Alphanumeric	0	255
RetentionPeriod	Numeric	0	99999
Route	Alphanumeric	0	255
UpdateGroup	Alphanumeric	0	20
UpdateGroupTextMatch	Alphanumeric	0	255
UpdateUser	Alphanumeric	0	20
UpdateUserTextMatch	Alphanumeric	0	255
ViewGroup	Alphanumeric	0	20
ViewGroupTextMatch	Alphanumeric	0	255
ViewUser	Alphanumeric	0	20
ViewUserTextMatch	Alphanumeric	0	255
WebTracJobName	Alphanumeric	0	255

Sample command file definition:

```
COMPONENT ROUTEASSIGNMENT
  NAME = RA321
  ***INTERNALDATABASEKEY1** = 0698A5E4A70018F5
  .
  .
  .
  Other Route Assignment Keyword = Value assignments
  .
  .
  .

SUBCOMPONENT TRACROUTE
  ROUTE = LPR Route
  NUMBEROFCOPIES = 2
  RETENTIONPERIOD = 99
  WEBTRACJOBNAME = +WRITER
  DESTINATIONOVERRIDE = Destination override
  .
  .
  .
  Other TRAC Route Keyword = Value assignments
  .
  .
  .
```

In the above example, the TRAC Route “LPR Route” would be associated with (found on) Route Assignment “RA321”.

Translation Table

Translation Tables can be referenced by a route and should therefore be included in the command file prior to any route definitions. Valid values for the **TransTableType** keyword are **AsciiToEbcidic** and **EbcidicToAscii**. If the **TransTableType** keyword is **not** specified in your component definition, the Translation Table will be created as **EbcidicToAscii** by default. A Translation Table is created via the following syntax.

COMPONENT TRANSLATIONTABLE

Translation Table Keyword's	Type	Low Range	High Range
InternalDatabaseKey	Hexadecimal	16	16
Name	Alphanumeric	0	255
Row0	Hexadecimal	32	32
Row1	Hexadecimal	32	32
Row2	Hexadecimal	32	32
Row3	Hexadecimal	32	32
Row4	Hexadecimal	32	32
Row5	Hexadecimal	32	32
Row6	Hexadecimal	32	32
Row7	Hexadecimal	32	32
Row8	Hexadecimal	32	32
Row9	Hexadecimal	32	32
RowA	Hexadecimal	32	32
RowB	Hexadecimal	32	32
RowC	Hexadecimal	32	32
RowD	Hexadecimal	32	32
RowE	Hexadecimal	32	32
RowF	Hexadecimal	32	32
TransTableType	Alphanumeric	0	13

Sample command file definition:

```
COMPONENT TRANSLATIONTABLE
  NAME                = Ebcdic To Ascii Translation Table
  TRANSTABLETYPE      = EbcdicToAscii
  ROW0                 = 00010203EC09CA7FE2D2D30B0C0D0E0F
  ROW1                 = 10111213EFC508CB1819DCD81C1D1E1F
  ROW2                 = B7B8B9BBC40A171BCCDCFD0D1050607
  .
  .
  .
  Other Translation Table Keyword = Value assignments
  .
  .
  .
```

Route Variable

A Route Variable is a subcomponent of a route (having an AttachType of DRS File, DRS Queue, or AnyQueue). The variables associated with a particular route need to be defined in the command file immediately after the parent route's last **Keyword = Value** assignment. Refer to the "Variable Substitution Data (Out-Bound Data)" section of this manual for a list of acceptable variables ([page 4.132](#)). A Route Variable is created via the following syntax.

SUBCOMPONENT VARIABLE

Route Variable Keyword's	Type	Low Range	High Range
Value	Alphanumeric	0	255
Variable	Alphanumeric	0	255

Sample command file definition:

```
COMPONENT ROUTE
  NAME = Local File Route
  ***INTERNALDATABASEKEY1** = 05584DB73B0007FC
  .
  .
  .
  Other Route Keyword = Value assignments
  .
  .
  .

SUBCOMPONENT VARIABLE
  VARIABLE = +RECFM
  VALUE = u
```

In the above example, the Route Variable "+RECFM" would be associated with (found on) route "Local File Route".



Appendix J

AnyQueue User Import Program

The AnyQueue User Import program provides a utility to AnyQueue administrators for creating AnyQueue system users via a comma delimited import file. The utility will create new AnyQueue TRAC user files, or update existing user files (whenever the **/update** parameter is specified on the command line).

We **strongly** recommend that the utility be ran against production TRAC user files **only** when the AnyQueue application is **not** in use. If not, a user's settings could change while they are actually logged into AnyQueue.

The syntax for the **xbaqusr** executable, where **x** is:

- a** for AIX
- c** for Intel Linux
- h** for HP-UX
- l** for ZLinux
- n** for Windows
- s** for Solaris

is as follows:

Syntax: `_baqusr /f: ImportFile [/u:UserId] [/p:Password] [/userfileloc:UserFileLocation] [/update] [/ignoredups]`

Where:

/f	ImportFile	Comma delimited user import file.
/u	UserId	AnyQueue Administrator User ID (required if updating existing user files).
/p	Password	Password for the Administrator ID specified (required if updating existing user files).
/userfileloc	UserFileLocation	Fully qualified directory where the user files are located, or to be placed (defaults to the current directory).
/update	UpdateDupUserIds	Update any user records that may already exist in the user files.
/ignoredups	IgnoreDupUserIds	Do not update existing user records, and do not report a duplicate user record as an error.

General Utility Rules

Each user record defined in the comma delimited import file must be contained on a single line, and formatted as follows (where each column value is separated by a comma):

Column	User Record Attribute	Attribute Value Restriction
1	User ID	20 Alphanumeric Characters
2	Password	20 Alphanumeric Characters
3	User Name	40 Alphanumeric Characters
4	eMail ID	48 Alphanumeric Characters
5	View Right	1 Character - Y or N
6	List Right	1 Character - Y or N
7	Reprint Right	1 Character - Y or N
8	Clone Right	1 Character - Y or N
9	Update Right	1 Character - Y or N
10	Admin Maint Right	1 Character - Y or N
11	Connection Maint Right	1 Character - Y or N
12	Routes Right	1 Character - Y or N
13	View Engine Info Right	1 Character - Y or N
14	Control Engine Right	1 Character - Y or N
15	Maintain Engine Right	1 Character - Y or N
16	User/Group Maint Right	1 Character - Y or N
17	Account Locked Flag	1 Character - Y or N
18	Password Never Expires Flag	1 Character - Y or N
19	Remote Access Flag	1 Character - Y or N
20	Cannot Update Preferences Flag	1 Character - Y or N
21	Cannot Change Password Flag	1 Character - Y or N

The utility does not require that all fields be specified on a user line that is being inserted or updated. For example, if you only want to import User ID, Password, and User Name, you could have lines in the import file such as:

bills,billpasswd,Bill Smith

maryj,maryjpasswd,Mary Jones

tedj,tedjpasswd,Ted Johnson

This file would insert three users while only setting the User ID, Password and User Name fields in each record. All other attributes associated with these three users in the AnyQueue TRAC user files would not be set (or modified in the event that an update was being performed).

The following user record syntax is also allowed:

jills,jillpasswd,Jill Smith,,,y,y,,y

This row would insert Jill Smith and set the List Right, the Reprint Right, and the Update Right. All other fields not specified would not be set (or modified in the event that an update was being performed).

A comment line can be included in the import file by placing an asterisk in column one on the line. If the asterisk is not placed in column one, the utility will attempt to process the line. Blank lines included in a import file are ignored.

This utility does not buffer user file changes. The user records are inserted or modified in the actual TRAC user files as they are read in from the import file. For example, if an import file contained 20 user records of which 3 contained syntax errors, the utility would insert or modify the 17 records that were error free and report on the three records that contained errors.

The user passwords have no special processing (decryption) performed on them as the user records are read from the import file. Therefore, they should be specified in flat ASCII text as you wish to have them set.

This utility will make a backup copy of each TRAC user file (assuming they exist) prior to processing any data found in the import file. The backup copy of each file (aqusr.dat, aqusr00.idx, and aqusr01.idx) will have a unique numeric file extension. If the utility were ran three times on existing TRAC files, the aqusr.dat file, for example, would have three archived copies - aqusr.000, aqusr.001 and aqusr.002.



Appendix K

AnyQueue® Documentation

The most recent version of this manual can be downloaded from the LRS Web site (www.lrs.com).

As a licensed user of this product, you may print the PDF file on the *Enterprise Output Management Product Documentation* CD for use within your company as allowed by your license.



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