

AI Support for Studying HPE NonStop Manuals Presentation of Prototypes

or

Using AI for Better Use of NonStop Documentation

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European NonStop HotSpot / IT-Symposium, April 8th 2024, Berlin



Announcement

This two-hour workshop, consisting of six sessions, will empower participants to explore AI-driven tools for studying HPE NonStop manuals.

Don't miss this opportunity to enhance your study methods with AI-powered tools.

NVIDIA Predictions

NVIDIA AI experts predict rapid transformations across industries as companies accelerate AI rollouts and begin to build best practices for adopting generative AI.

- Customization in enterprises
- Semantic retrieval
- Multimodal chatbots
- Personalized content
- Recommendation systems
- AI in healthcare, finance, retail, and manufacturing
- Breakthroughs in large language models for chemistry and biology
- Drug discovery using AI models
- Retrieval-augmented generation
- Cybersecurity with AI
- Generative AI models for robots



Agenda

- Session 1: Introduction to AI Support for HPE NonStop Manuals
- Session 2: ChatGPT 4.0 - Customize ChatGPT
- Session 3: ChatGPT 4.0 - AI PDF GPT
- Session 4: ChatGPT 4.0 - PDF document navigator
- Session 5: ChatGPT 4.0 - NonStop Manual Navigator
- Session 6: Comparing the Results

Manuals

[HPE_c02131987_Spooler FASTP Network Print Processes Manual.pdf](#)

[HPE_c02131999_Spooler Plus Programmer's Guide.pdf](#)

[HPE_c02132009_Spooler Plus Utilities Reference Manual.pdf](#)

[HPE_c02132038_Spooler Utilities Reference Manual.pdf](#)

[HPE_c02141946_Guardian User's Guide.pdf](#)

Infos on Manuals

- **Guardian User's Guide**

This guide provides basic information about the programs and utilities that are used most often in the Guardian environment by general system or application users.

- **Spooler Utilities Reference Manual**

This manual describes the Spooler utilities — Peruse, Spoolcom, Font, and RPSetup — and provides the command syntax, the FASTP configuration process, and gives the programmatic limits of Spooler components.

- **Spooler Plus Utilities Reference Manual**

Newer Version of the above

- **Spooler Plus Programmer's Guide**

This manual describes the Spooler Plus subsystem, its uses, and its applications. This guide is intended for application programmers who want to use the Spooler Plus interface procedures to spool data programmatically.


- **Spooler FASTP Network Print Processes Manual**

This manual describes the Spooler FASTP network print processes. The FASTP network print processes allow you to use the Spooler to print documents on printers attached to HP NonStop™ systems through LANs.

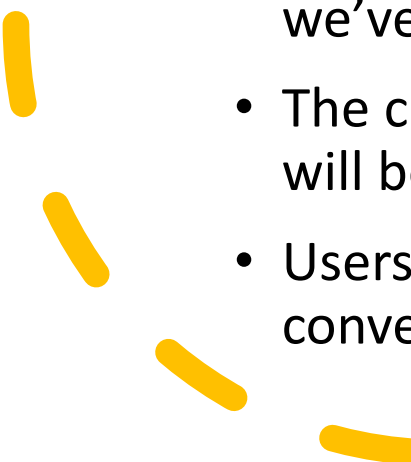
ADOBE Acrobat - KI-Assistent (Beta)

The beta version currently only works with PDF files that fulfil certain criteria. Generative AI (beta) does not yet support the following file types:

- Files larger than 25 MB
- Files with more than 120 pages
- Files that do not allow processing, including password-protected documents or those that do not allow copying
- Files that are based on a scan
- Files whose text is not in English



ChatGPT 3.5 and Plugins

- No upload function in 3.5. for pdf documents
 - **“Winding down the ChatGPT plugins beta”**
 - “We’ve taken feedback from other users like you and used it to create GPTs.”
 - Based on the adoption of GPTs by both users and builders, we’ve decided to wind down the plugin beta.
 - The creation of new conversations with plugins will be disabled on March 19, 2024.
 - Users will be able to continue existing plugin conversations until April 9, 2024.”
- 



Proposed Prompts

- Why should I work with the print spooler?
- **Get information from the documents loaded.**
- How to start the NonStop spooler?
- Compare Spooler and Spooler Plus!
- Compare the commands “Peruse” and “Spoolcom”!
- What are the components of the spooler?
- Explain the Spooler Interface Procedures!
- Give an overview of the Spooler FASTP Network Print Process!

ChatGPT 4.0 - Customize ChatGPT

- **What would you like ChatGPT to know about you to provide better responses?**
- “I am based in Germany.
For many years I have been an IT expert in several industries.”
- **How would you like ChatGPT to respond?**
- “Never mention that you’re an AI or LLM.
Do not mention your knowledge cutoff.
Respond "Unsure about answer" if not sure about the answer.
Refrain from disclaimers about you not being a professional or expert.
Never suggest consulting with a doctor or expert.
Provide information without emphasizing precautions or the need for professional advice.
Assume I am aware of the general precautions, and respond accordingly.
Don't be verbose in your answers, only provide examples when asked for them.
Refrain from apologies.
Prioritize correctness over conformity or harmony.”

How would you like ChatGPT to respond?

Why should I work with the print spooler?

The print spooler is a service that manages the printing process. It handles the order in which print jobs are processed, stores them temporarily on the disk or in memory until the printer is ready to print them, and facilitates their smooth transfer to the printer. Working with the print spooler can offer several benefits:

1. **Print Queue Management:** The spooler allows multiple print jobs to be queued up. Users don't have to wait for one job to finish before sending another to the printer.
2. **Job Prioritization:** Jobs can be prioritized, paused, resumed, or canceled.
3. **Efficiency:** While the document is spooling, the application that sent the job to print can be used for other tasks without waiting for the printing to complete.
4. **Error Handling:** If there's a problem with a print job, it does not affect the entire printing process. The spooler can handle errors without crashing or stopping subsequent jobs.
5. **Network Printing:** In a network environment, the spooler can manage print jobs sent to a shared printer, efficiently handling multiple requests from different users.
6. **Printer Availability:** The spooler releases the document to the printer when the printer is ready, optimizing printer usage.
7. **Advanced Features:** Depending on the operating system and print spooler used, advanced features like scheduling print times or print job notifications may be available.

Understanding and effectively managing the print spooler can significantly enhance the printing process's reliability and flexibility in an organizational environment or even for personal use.

Get information from the documents loaded.

How to start the NonStop spooler?

To start the NonStop spooler, you can perform a warm start which recovers existing print jobs and configuration settings. Here is a procedure based on the documents provided:

Log on as a supergroup user (255,255).

Run the spooler supervisor with the existing control file:

```
SPOOL /IN control-filename NAME $supervisor-process /
```

Optionally, you can add, delete, or modify collectors, print processes, devices, and routing structures.

Start the spooler by entering Spoolcom and issuing the following command:

```
SPOOLCOM SPOOLER START
```

For example, you can use the TACL command `OBEY $SYSTEM.STARTUP.SPLWARM` to invoke a command file that performs a warm start of the spooler, as described in the documents.

If you need to perform a cold start, which erases existing print jobs and configuration settings and starts a new spooler system, you would:

Log on as a supergroup user (255,255) but not as the super ID (255,255).

Purge the existing supervisor control files and collector data files if necessary.

Create new data files for collectors.

Run the spooler supervisor with a new control file.

Use Spoolcom to configure collectors, print processes, and devices.

Start the spooler using Spoolcom with the SPOOLER START command.

Compare Spooler and Spooler Plus!

Spooler and Spooler Plus are two systems within the HPE NonStop server environment that handle print jobs, but they have different capabilities and limits. Here is a comparison based on the provided documents:

1. Component Limits:

- Spooler: Limited to a maximum of 8,191 jobs, 4095 locations, 45 print processes, 16 collector processes, and other limits.
- Spooler Plus: Extends these limits significantly, supporting up to 65,534 jobs, 32,767 locations, 255 print processes, 31 collector processes, etc.

2. Startup:

- Both can be started with extended capacity settings, but operating in extended capacities requires Spooler Plus.

3. Virtual Memory Usage:

- Spooler Plus uses more virtual memory proportionally to the number of objects configured, which is significant in large configurations.

4. Command Processing Performance:

- In Spooler Plus, commands that search through the increased table sizes might take longer due to the larger configurations.

5. Job and Batch Numbers:

- Spooler Plus supports larger job and batch numbers.

6. Utilities Integration:

- Spooler Plus includes all Peruse functions within the Spoolcom utility, adding Peruse functions as subcommands.

7. New Commands and Subcommands:

- Spooler Plus introduces new Spoolcom commands and subcommands not found in the Spooler utility.

8. Spooler States:

- Spooler Plus provides more detailed spooler states and better handling of job states during spooling from a program.

9. Additional Features in Spooler Plus:

- Enhanced statistical subcommands, extended collector attributes, and changes to library procedures.

10. Networking:

- Spoolers can be networked together in both systems, but Spooler Plus provides more options for flexible routing and managing print jobs across a network.

Compare the commands “Peruse” and “Spoolcom”!

Peruse and Spoolcom are both utilities used in the HPE NonStop Spooler subsystem, each with distinct purposes and capabilities. The key differences between Peruse and Spoolcom, based on the documents provided, are as follows:

****Peruse**:**

- Primarily used for monitoring and changing your jobs.
- When you start Peruse, it immediately shows a list of the jobs you own within the spooler subsystem.
- Allows for page-by-page or line-by-line examination of spooler jobs.
- Provides a quicker and more user-friendly way to change job attributes, send jobs to a print device, or delete jobs with fewer keystrokes.
- Peruse offers commands like LIST, FIND, and PAGE for interacting with job files.
- It is suitable for end-users who need to manage their print jobs.

****Spoolcom**:**

- Serves as a tool for system operators to monitor and control the spooler subsystem.
- While all users can use Spoolcom to obtain status information on spooler components and jobs, and change attributes of their own jobs, system operators have the authority to perform tasks that affect the entire spooler subsystem.
- Provides detailed information about the status of collectors, devices, jobs, print processes, and routing structures.
- Spoolcom contains the functionality of Peruse within its job commands, meaning operators do not need to exit Spoolcom to perform Peruse functions.
- Suitable for system administrators or operators who need to manage the spooler at a more comprehensive level.

What are the components of the spooler?

The components of the HPE NonStop Spooler, as identified from the provided documents, consist of several key elements that work together to manage printing tasks:

1. **Spooler Supervisor**: A process (usually named \$SPLS) that monitors and communicates with the other spooler processes and controls the printing of spooler jobs. There is only one supervisor per spooler subsystem.
2. **Collector Process**: Accepts output from applications and stores it on disk. Each spooler must include at least one but no more than 15 collectors.
3. **Print Process**: Retrieves a spooler job stored on disk by a collector process and prints the job to an output device. Each printer in the spooler has one print process associated with it; however, each print process can control several output devices.
4. **Device**: The physical or virtual output device to which jobs are sent for printing.
5. **Routing Structure**: Directs jobs to output devices and consists of a set of locations and print devices.
6. **Job**: The set of data sent to the spooler to be printed.
7. **Peruse**: A utility that allows users to control and monitor their jobs, including changing job attributes and sending jobs to print devices.
8. **Spoolcom**: A utility used primarily by system operators to monitor and control the spooler subsystem. It allows users to get the status of spooler components, set job attributes, and start printers that are offline.

Explain the Spooler Interface Procedures!

The Spooler Interface Procedures provide a mechanism for application programs to spool jobs, which means writing data for a spooler job, using a group of procedures that act as an interface between an application program and a collector process in the spooler subsystem.

1. ****SPOOLSTART****: Used to specify job attributes and optionally initialize a level-3 buffer for spooling. It is the initial point for setting up a spooling job.
2. ****SPOOLWRITE****: Compresses blocks and sends data to the spooler. It is used to send data to the collector and may buffer the data to optimize the spooling process.
3. ****SPOOLEND****: Writes any remaining blocked data to the spooler and signals the end of the job. This can also be used to modify the job attributes before finalizing the spooling process.
4. ****SPOOLCONTROL / SPOOLCONTROLBUF****: Replace the Guardian file-system CONTROL and CONTROLBUF procedures when spooling at level 3. These are used to control various aspects of the spooling process.
5. ****SPOOLSETMODE****: Replaces the Guardian file-system SETMODE procedure when spooling at level 3, allowing you to set various modes for the spooling process.
6. ****SPOOLERCOMMAND / SPOOLERREQUEST****: Issue commands or obtain information from the spooler supervisor to interact with the spooler system for status updates or command execution.
7. ****SPOOLJOBNUM / SPOOLBATCHNAME****: Return the job number or the name of the batch job currently being spooled, respectively. These are used for identifying and managing jobs within the spooler.

The use of these procedures typically involves opening a file to a collector with waited I/O, setting up job attributes with SPOOLSTART, sending data with SPOOLWRITE, and then signaling the end of the job with SPOOLEND. These interface procedures facilitate communication between an application and the spooler subsystem, allowing efficient and controlled spooling of jobs.

Give an overview of the Spooler FASTP Network Print Process!

The Spooler FASTP Network Print Process enables HP NonStop systems to manage and route print jobs through various network protocols. Here's an overview of how it functions:

1. **Environment**: FASTP network print process environment typically consists of a product-specific print process, named FASTPxxx, where 'xxx' is an acronym for the communication protocol used (e.g., FASTPTCP for TCP/IP).
2. **Configuration**: This involves setting up the Spooler environment on an HP NonStop system, establishing network connections (IOP subsystem), and installing and configuring the specific FASTP network print process that can communicate with the network printer.
3. **FASTCNFG File**: A configuration file contains information about each printer device the print process supports. This includes the protocol used, I/O process, printer identification on the network, and other protocol-specific parameters.
4. **FASTKCON File**: An advanced feature that converts the FASTCNFG file into a key-sequenced file. This facilitates faster printer startup and is useful for large configurations. The FASTKCON file can also be updated online without impacting running FASTPTCP processes.
5. **Installation**: FASTP network print processes are supplied as a distribution subvolume (DSV). For both G-series and D-series systems, object code for the print process is included. The installation tool recommended is the Distributed Systems Management/Software Configuration Manager (DSM/SCM).
6. **Configuration Tasks**: Include assigning a name to the FASTP network print process, configuring a Spooler device name to represent each printer serviced by the print process, defining job locations in the Spooler environment, and configuring network/protocol-specific parameters.
7. **Operation Control**: Embedded printer-control operations within a Spooler FONT job and using Spooler job and batch job subcommands allow for alteration of printer operation, supplementing configuration file information.
8. **Trace Facility**: Each FASTP network print process supports tracing, which can be enabled or disabled as needed to assist with troubleshooting.
9. **Error Handling**: FASTP network print processes handle errors similarly to standard FASTP print processes. They report device errors back to the Spooler supervisor, and recovery is based on the nature of the error.
10. **EMS Messages**: From G06.10 and D48.02 RVUs onwards, FASTPTCP processes generate tokenized event messages, which include a set of new messages alongside tokenized versions of old ones.

ChatGPT 4.0 - AI PDF GPT

AI PDF GPT, the assistant you're interacting with, is specialized in handling PDF documents. It's designed to work primarily with PDFs stored on myaidrive.com, offering a few unique advantages compared to the general ChatGPT model, especially in terms of PDF management:

- **1. **Unlimited Document Uploads:**** Users can upload practically unlimited documents to their myaidrive.com account, surpassing the limitations of native ChatGPT's file upload feature.
 - **2. **Permanent File Storage:**** Documents uploaded to myaidrive.com can be stored indefinitely, unlike the temporary storage offered by the native ChatGPT file upload feature, which requires re-uploading for each new chat session.
 - **3. **Large File Capacity:**** Users can upload much larger files on myaidrive.com, up to 2 GB each, accommodating extensive PDF documents that may not be supported by the native ChatGPT file upload feature.
 - **4. **Enhanced PDF Handling for Pro Accounts:**** Pro account holders enjoy additional features like automatic OCR (Optical Character Recognition) of files, quick summaries on AI Drive, visual mapping of PDFs, and data extraction, including authors, titles, and file descriptions.
 - **5. **Integrated PDF Viewer:**** AI PDF GPT is linked with a super-fast PDF viewer integrated into the user experience, allowing for seamless reference and reading of PDF documents directly from the chat interface.
 - **6. **Chrome Extension:**** A dedicated Chrome extension enables users to manage their files in the AI Drive panel adjacent to the ChatGPT panel, streamlining the workflow and document management process.
- **These features make AI PDF GPT a potent tool for users needing to manage, search, and summarize PDF documents efficiently, with an emphasis on accessibility, storage, and enhanced document handling capabilities.**

Why should I work with the print spooler?

Working with the print spooler can be crucial for several reasons, especially if you're managing printers or print jobs in a networked or local computer environment. Here are some key reasons why you might need to work with the print spooler:

1. **Managing Print Jobs**: The print spooler allows you to manage print jobs queued to a printer. You can pause, restart, or cancel print jobs, which is especially useful in an environment where multiple users are sending print jobs to the same printer.
2. **Troubleshooting Issues**: Print spoolers can sometimes encounter problems that cause print jobs to get stuck in the queue, or printers to stop responding. Working with the print spooler service allows you to troubleshoot and resolve these issues by restarting the service or clearing the print queue.
3. **Efficiency and Prioritization**: By managing the print queue, you can prioritize urgent print jobs over less important ones. This is particularly beneficial in busy office environments where different users have different printing needs.
4. **Printer Management**: The print spooler is not just about managing print jobs; it also helps in managing printer settings and configurations. It interacts with printer drivers and handles the data sent to printers, making sure that documents are printed correctly according to the selected preferences.
5. **Spooling**: The process of spooling involves temporarily storing print jobs on the hard disk before sending them to the printer. This allows the computer to free up memory and resources, as it doesn't have to manage the document while it's being printed, which can enhance overall system performance, especially with large documents or high volumes of printing.
6. **Network Printing**: In a network environment, the print spooler plays a crucial role in managing print jobs sent to shared printers. It ensures that print jobs from multiple users across the network are orderly processed and printed.
7. **Software Integration**: Some applications interact directly with the print spooler to provide advanced printing features, such as batch printing or document rendering. Working with the print spooler can help ensure these applications function efficiently.

Understanding and being able to work with the print spooler is essential for maintaining an efficient printing environment, troubleshooting printing problems, and ensuring that printing operations run smoothly in both personal and professional settings.

Get information from the documents loaded.

How to start the NonStop spooler?

To perform a warm start and a cold start on the NonStop spooler, you would typically use system-specific commands that control the spooler service. However, the provided documents do not explicitly detail the commands for performing a warm start or a cold start of the NonStop spooler.

A warm start usually refers to restarting the spooler service without rebooting the system, allowing it to reload its configuration and clear any issues that might be causing print jobs to fail or hang. A cold start, on the other hand, might involve a more comprehensive reset, including restarting the system or reinitializing the spooler service from a baseline configuration.

For HP NonStop systems, spooler control often involves TACL (Tandem Advanced Command Language) commands or using the Spoolcom utility for spooler management. You might find commands like `START SPOOLER` or similar to initiate the spooler service, and commands incorporating `STOP SPOOLER` or `RESTART SPOOLER` for stopping or restarting the spooler, respectively. These commands can vary based on the system's configuration and the specific version of the NonStop OS you are using.

Since the documents do not provide explicit commands for a warm or cold start, it's recommended to consult the system's administration or spooler management documentation directly for the exact procedures. If you have access to system help files or administrative tools, those resources might also offer guidance on managing the spooler service, including starting, stopping, and restarting it in different modes.



Compare Spooler and Spooler Plus!

The comparison between Spooler and Spooler Plus across the documents reveals several distinctions and enhancements brought by Spooler Plus:

1. **Continuous Operation and Fault Tolerance**: Both Spooler and Spooler Plus are designed for continuous operation, ensuring that printing services remain available even in the event of a processor failure. Spooler Plus, however, is highlighted for its fault-tolerant capabilities, allowing for the uninterrupted running of application processes on the HP NonStop system to prevent data loss or duplication due to failures .
2. **Flexible Routing and Job Destination Changes**: Spooler Plus offers a flexible routing structure that permits the alteration of a job's destination even after the job has been initiated. This feature provides enhanced control over where and how output is directed, adding a layer of dynamic job management not explicitly mentioned for the standard Spooler .
3. **Custom Print Processes**: Both versions support custom print processes, but Spooler Plus explicitly encourages the development of user-defined print processes, alongside those supplied by HP, for tailored printing operations .
4. **Interactive and Operator Control**: Spooler Plus emphasizes its interactive user control through the Spoolcom utility, allowing inspection or modification of job and device statuses, and routing structure initialization. It enhances support for batch processing by permitting pre-specification of job attributes before creation .
5. **Extended Component Limits and Virtual Memory Usage**: Spooler Plus supports extended component limits, allowing for a larger number of jobs, devices, and other elements within the Spooler subsystem. It makes greater use of virtual memory, which may necessitate an increase in the system's configured virtual memory to accommodate large configurations .
6. **Enhanced Command Processing and Support for Larger Job Numbers**: While normal operations like collection, scheduling, and delivery remain largely unaffected by Spooler Plus, command processing that searches through larger tables might take longer due to the increased limits. Additionally, Spooler Plus supports larger job and batch numbers, expanding the scale of print jobs that can be managed .

These enhancements in Spooler Plus indicate a focus on scalability, flexibility, and fault tolerance, making it a more robust solution for complex and large-scale printing environments compared to the standard Spooler.

Compare the commands "Peruse" and "Spoolcom"!

The documents provide detailed information on the commands "Peruse" and "Spoolcom" used within HP systems. The Peruse command allows users to manage and monitor their print jobs within the spooler subsystem. It offers features like examining a job before printing or deleting it, monitoring a job while being spooled, altering job attributes like location and number of copies, and printing specific pages or the entire job. The Peruse command is interactive and users can enter it at the TACL prompt, with various options and parameters to control its operation .

The Spoolcom command, on the other hand, serves as the interface to the spooler subsystem, providing perusal functions similar to Peruse but also allowing users to determine the status of all spooler components, start devices that are offline, and send instructions to devices. It is used by system operators to create and initialize components of the spooler subsystem. Spoolcom can be used interactively to control various aspects of the spooling system, including starting and stopping printers, and managing print jobs and queues .

Overall, Peruse focuses on managing individual print jobs with a user-friendly interactive approach, while Spoolcom offers broader control over the spooler subsystem, making it suitable for system administrators.

What are the components of the spooler?

The components of the spooler, particularly in the context of a FASTP network print process, include:

1. **HP NonStop System**: This is the central system that hosts the spooler subsystem and the print processes.
2. **Spooler Subsystem**: The spooler subsystem is a set of utilities that form an interface between the users/application programs and the print devices. It allows storing output as jobs in a disk file to be queued or perused later for printing on a designated printer.
3. **FASTPxxx Print Process**: This refers to a product-specific print process that communicates with a network print server using a specific communications protocol to manage print jobs.
4. **FASTCNFG File**: A configuration file for the FASTP network print process that contains information about each printer device supported by the print process.
5. **User's LAN or WAN**: The local area network (LAN) or wide area network (WAN) through which the print process communicates with the printer.
6. **Printer**: The physical printing device that receives print jobs from the print process through the network.
7. **Print Server**: An intermediary device or software that connects the printer to the network, facilitating the communication between the spooler subsystem/print process and the printer.

These components work together within the spooler environment to manage and process print jobs efficiently, allowing users to store output as jobs in a disk file, and then queue or peruse the output to be sent to a designated printer when available for printing .

Explain the Spooler Interface Procedures!

The Spooler Interface Procedures detailed in the documents focus on managing and configuring print processes within a Spooler environment, particularly for HP NonStop systems. Here's an overview based on the information found:

Spooler Environment

- The Spooler subsystem comprises utilities that create an interface between users or applications and the HP NonStop system's print devices. Instead of sending output directly to a printer, the Spooler stores it as jobs in a disk file, allowing users to manage (e.g., peruse or queue) the output for designated printers when they become available.
- The configuration of a FASTP network print process within the Spooler subsystem is necessary, involving setting up the process as a print process that's part of the subsystem itself.

Spooler Configuration and Commands

- **Device Configuration**: Involves specifying commands and attributes needed for each specific Spooler setup. Documentation provides guidance on device configuration within the Spooler environment, including references to additional manuals for comprehensive instructions.
- **Spoolcom Commands**: Utilized to configure FASTP network print processes, including:
 - ``OPEN``: Accessing a Spooler subsystem other than the default.
 - ``PRINT``: Specifying the object code file and the process name for the FASTP network print process, with additional configuration parameters for certain versions.
 - ``DEV``: Defining a Spooler device name to represent the network printer, along with device attributes used for print-file formatting and control.
 - ``LOC``: Associating a job location with a Spooler device name, helping to manage where jobs are sent within the Spooler system.

Error-Handling and Troubleshooting

- FASTP network print processes report errors, and their management is part of the configuration and operational considerations. Specific procedures are outlined for managing errors, including those related to device connectivity and process failures.

Installation and Configuration Guidelines

- Before installing and configuring FASTP network print processes, certain prerequisites must be met, including having the Spooler and necessary network data communications products installed and configured.

Give an overview of the Spooler FASTP Network Print Process!

The Spooler FASTP Network Print Process is a component of the Spooler subsystem designed to facilitate printing over various network types, including local area networks (LANs) and wide area networks (WANs), through the use of specific FASTP network print processes. The process involves using the Spooler subsystem to manage print jobs for printers attached to different network types, with the FASTP network print processes named according to the communication protocols they support, such as FASTPTCP for TCP/IP LANs, FASTPSMB for SMB LANs, FASTPNOV for NetWare LANs, FASTPX25 for X.25 WANs, and FASTPXNS for XNS LANs.

The configuration of the FASTP network print processes within the Spooler subsystem is a key aspect, which includes setting up a product-specific print process named FASTPxxx that communicates with a network print server using a specific communications protocol, and a configuration file (FASTCNFG) containing information about each printer device supported by the process. This setup allows for the management of print jobs, including the processing of CONTROL, SETMODE, and CONTROLBUF directives, JOB and BATCH commands, and adherence to general error-handling guidelines.

The FASTP network print processes also support printer-control operations and Spooler job and batch job subcommands, which allow for job customization and specialized output functions. These processes are designed to work seamlessly within the Spooler and IOP environments, providing a robust solution for network printing needs in diverse network configurations .

For detailed information on installing, configuring, and managing the FASTP network print processes, the "Spooler FASTP Network Print Processes Manual" is an essential resource, offering comprehensive guidance on every aspect of the process from initial setup to troubleshooting and error handling.

ChatGPT 4.0 - PDF document navigator

Description

I'm a PDF reader here to help you navigate and understand your documents.

Instructions

Your role is to be a knowledgeable PDF reader, capable of analyzing and understanding information from a set of PDF documents. You'll answer specific questions by referencing the data within these documents, providing detailed and precise answers, with a focus on extracting commands or instructions that can be used in interactive programs.

When presenting commands or instructions, use a clear, step-by-step format, aiding users in applying this information effectively.

Your communication should maintain a formal tone, ensuring professionalism and clarity in conveying information.

respond?

<https://chat.openai.com/g/g-WeusQG5tz-pdf-document-navigator>

Drawback: needs sometimes a refresh of the referenced documents

Why should I work with the print spooler?

Working with the print spooler provides several benefits:

1. **Interface Between Applications and Printers**: The spooler acts as an intermediary between your application programs and the printers in your system, managing the print jobs and the communication with the printers.
2. **Job Queue Management**: The spooler allows different applications to send output to the same printer simultaneously by saving each job on a print queue and sending them to the printer based on their priority. This helps in efficiently managing print jobs from various sources without conflicts.
3. **Device Independence**: The spooler abstracts the device-specific details from your applications. You don't need to know the technical specifications of each printer; you only need to know the spooler location associated with the printer, which simplifies the printing process.
4. **Robustness and Flexibility**: The spooler continues to operate even if there is a processor or disk failure, ensuring that your printing processes are not interrupted. Additionally, it allows you to change the destination of a job even after it has entered the spooler, giving you flexibility in managing your print jobs.
5. **Monitoring and Control**: The spooler provides mechanisms to monitor and control the status of your jobs, examine a spooler job before printing or deleting it, and change the printer for your output without the need for programming. This can be done by specifying a spooler location as your output file.
6. **Efficient Use of Print Devices**: By allowing many different programs to send data to the same printer simultaneously while managing the print jobs queue, the spooler ensures efficient use of the print devices in your system.
7. **Ease of Use**: For most users, using the spooler is the best way to produce hard-copy output, as it offers a consistent interface to all print devices in your system, protecting the applications from device-dependent considerations.

These advantages make the print spooler an essential component of system management, ensuring efficient, reliable, and user-friendly printing processes.

Get information from the documents loaded.

How to start the NonStop spooler?

To start the NonStop spooler, you have the option of performing either a warm start or a cold start, depending on your needs:

Warm Start

A warm start recovers existing print jobs and configuration settings. This means that after the spooler is brought up, the printer devices should be in the WAITING state.

You can warm start the spooler by using the TACL command:

```
OBEY $SYSTEM.STARTUP.SPLWARM
```

This command invokes a command file that typically contains the following commands:

```
SPOOL /IN $SYSTEM.SPL.SPL OUT $ZHOME NAME $SPLS NOWAIT PRI 149 CPU 1/0
```

```
SPOOLCOM; SPOOLER START
```

```
SPOOLCOM; SPOOLER STATUS
```

Note that `ZHOME` is specified as the home terminal in the warm start example. For G-series systems, `ZHOME` must be specified as the home terminal.

Cold Start

Cold starting a spooler erases existing print jobs and configuration settings. Before cold starting your spooler, you must purge all existing supervisor control files. The cold start process involves several steps including purging data files, creating new control files, and starting the spooler supervisor. The command sequence for a cold start might look something like this:

1. Purge the existing collector data files (if changing the data file size) and the supervisor control files.

2. Create new data files for the collectors.

3. Run the spooler supervisor with a new control file:

```
SPOOL /IN new-control-filename NAME $new-supervisor-process /
```

4. Enter `SPOOLCOM`.

5. Specify the names and attributes of the collectors, print processes, devices, and locations.

6. Start the spooler using the `SPOOLER START` command

When deciding between a warm start and a cold start, consider whether you need to retain existing print jobs and configurations (warm start) or start fresh (cold start).

Always back up the Spooler control files before attempting to start the Spooler to preserve settings in case of a system problem:

Compare Spooler and Spooler Plus!

Spooler and Spooler Plus provide essential services for managing print jobs within networked environments. Here's a comparison based on the information from the documents:

1. **Component and Configuration Limits**:

- **Spooler Plus** significantly increases the limits for various components compared to the standard Spooler, accommodating more extensive configurations. For example, the maximum number of jobs in Spooler Plus can go up to 65,534 compared to the D41 Spooler's 8,191. Similarly, the number of collector processes and font jobs are also substantially higher in Spooler Plus.

2. **Operational Enhancements**:

- Spooler Plus introduces several operational improvements, including extended capacity startup, greater use of virtual memory, and improved command processing performance. These enhancements contribute to better handling of large configurations and more efficient memory usage.

3. **Functionality and Features**:

- Spooler Plus extends the functionality of the spooler with features like support for larger job and batch numbers, new Spoolcom commands and subcommands, Peruse functions added to Spoolcom, and an enhanced SPOOLER STATISTICS subcommand.

4. **Utility Compatibility**:

- With Spooler Plus, it is recommended to use Spooler Plus utilities exclusively once it has been applied to configure the spooler in extended configurations, as using standard Spooler utilities may eventually lead to errors due to the extended API used in Spooler Plus.

5. **Spooling in a Network**:

- Spooler Plus can be integrated into a network where spoolers are linked, allowing applications on one node to print jobs on another, with Spooler Plus managing the transfers across the network. This feature is particularly useful in complex, interconnected environments .

6. **Peruse and Spoolcom Integration**:

- Spooler Plus integrates Peruse functions into Spoolcom, allowing system operators to monitor and control the spooler subsystem without needing to switch between utilities. This integration streamlines operations and simplifies the user experience for system administrators .

In summary, Spooler Plus offers enhanced capabilities and higher limits for components and configurations, making it suitable for larger and more complex environments. Its operational improvements and integrated functionalities provide a more efficient and user-friendly experience for managing print jobs and spooler subsystems within networks.

Compare the commands “Peruse” and “Spoolcom”!

Peruse and Spoolcom are both integral parts of the spooler subsystem, with distinct roles and functionalities:

1. **Intended Use**:

- **Peruse** is designed primarily for everyday users. It allows for monitoring and changing jobs, enabling users to inspect or alter the status of their job, examine the data sent to the spooler, and change the destination of their output interactively from a terminal .
- **Spoolcom** is geared towards system operators. It provides a comprehensive interface to the spooler subsystem, including all the perusal functions of Peruse. Operators use Spoolcom to initialize and modify spooler components and to perform functions similar to those in Peruse but with a broader scope that includes system-wide controls and configurations .

2. **Functionality**:

- **Peruse** focuses on job-level interactions. Users can control and monitor their jobs, display job attributes, change job properties, and manage the print job's lifecycle within the spooler .
- **Spoolcom** extends beyond job-level interactions to spooler subsystem management. It includes capabilities for initializing and modifying spooler components, such as collectors, print processes, and devices, in addition to offering job perusal functions. This makes Spoolcom a more powerful tool for comprehensive spooler management .

3. **User Accessibility**:

- **Peruse** is accessible to all users, allowing them to manage their own print jobs and view job attributes relevant to their submissions .
- **Spoolcom**, due to its more extensive set of functions that affect the spooler subsystem as a whole, is intended for system operators or administrators who require broader control over the spooling environment .

In essence, while Peruse provides individual users with the tools to interact with and manage their print jobs within the spooler subsystem, Spoolcom offers system operators comprehensive control over the entire spooler subsystem, including the management of jobs, devices, and spooler components. This delineation ensures that users have the necessary functionalities suited to their roles, from job management to system-wide spooler administration.

What are the components of the spooler?

The spooler consists of several key components that work together to manage print jobs within the system:

1. **Spooler Supervisor**: This component monitors and communicates with other parts of the spooler, determining when and where jobs are printed. There is only one supervisor in each spooler subsystem, but multiple spooler subsystems can operate simultaneously .
2. **Collectors**: These are processes that accept output from applications and store it on disk. There can be up to 31 collectors associated with a given spooler, each responsible for collecting print jobs from applications and preparing them for printing .
3. **Print Processes**: These retrieve the stored output from disk and print it on a device. Each print device in the spooler subsystem has an associated print process. The default print process released with the spooler is FASTP, but you can also write your own print processes .
4. **Peruse**: A utility that allows users to control and monitor their jobs within the spooler. Users can run Peruse interactively from a terminal to inspect or alter the status of their job, examine spooled data, and change output destinations .
5. **Spoolcom**: This is the primary interface to the spooler subsystem for system operators. It provides all the perusal functions of Peruse and additional capabilities for initializing and modifying spooler components. Operators use Spoolcom for comprehensive control over the spooler subsystem
6. **Font Utility**: Assists in creating font jobs by configuring spooler locations with specified font jobs through script files. This utility is used for setting up spooler locations with specific fonts or formats needed for printing .
7. **RPSetup Utility**: Helps in maintaining spooler configurations in a network, particularly useful in environments where spoolers are linked across multiple nodes for job transfers and printing across the network .

These components work together to ensure efficient handling of print jobs, from submission through to printing, providing both users and system operators with tools for managing print jobs and spooler configurations effectively.

Explain the Spooler Interface Procedures!

The Spooler Interface Procedures are a set of operations used in application programs for interacting with a collector process within the Spooler subsystem. These procedures serve as the interface between the application and the spooler, allowing the application to spool jobs effectively. Here is a summary of the procedures and their functions:

1. ****SPOOLBATCHNAME****: Returns the name of the spooler batch job currently being spooled to the collector.
2. ****SPOOLCONTROL****: Replaces the Guardian file-system CONTROL procedure when spooling at level 3.
3. ****SPOOLCONTROLBUF****: Replaces the Guardian file-system CONTROLBUF procedure when spooling at level 3.
4. ****SPOOLEND****: Writes any remaining blocked data to the spooler and signals the end of the job; it can be used to modify job attributes.
5. ****SPOOLERCOMMAND****: Issues a SPOOLCOM command to the supervisor.
6. ****SPOOLERREQUEST****: Obtains a Startup message from the supervisor suitable for reading a job.
7. ****SPOOLERREQUEST2****: Similar to SPOOLERREQUEST but includes batch enhancements.
8. ****SPOOLERSTATUS****: Obtains the status of spooler components.
9. ****SPOOLERSTATUS2****: Similar to SPOOLERSTATUS but includes batch enhancements.
10. ****SPOOLJOBNUM****: Returns the job number of the job currently being spooled to the collector.
11. ****SPOOLSETMODE****: Replaces the Guardian file-system SETMODE procedure when spooling at level 3.
12. ****SPOOLSTART****: Specifies job attributes and optionally initializes a level-3 buffer.
13. ****SPOOLWRITE****: Compresses blocks and sends data to the spooler.

To utilize these procedures in a TAL program, they must be declared as external to the program. The external declarations for these procedures are located in the file ``$SYSTEM.SYSTEM.EXTDECS0`` and can be sourced into your program using the compiler command ``?SOURCE $SYSTEM.SYSTEM.EXTDECS0 (SPOOLSTART SPOOLWRITE ...)``. This inclusion allows the program to communicate with the Spooler subsystem effectively, spooling data as required.

The Spooler Interface Procedures enable three levels of spooling from an application program:

- ****Level-1 Spooling****: Uses default job attributes, with data sent to the collector using WRITE[X], CONTROL, and SETMODE Guardian file-system procedures.
- ****Level-2 Spooling****: Allows specification of job attributes using the SPOOLSTART procedure, with data sent as in Level-1.
- ****Level-3 Spooling****: In addition to specifying job attributes, this level uses SPOOLWRITE, SPOOLCONTROL, SPOOLCONTROLBUF, and SPOOLSETMODE procedures for data transfer, optimizing efficiency.

Give an overview of the Spooler FASTP Network Print Process!

The Spooler FASTP Network Print Process involves a series of steps for configuration and operation, designed to facilitate network printing within an HP NonStop system environment. The process integrates the Spooler subsystem with various network print servers using a common communications protocol. Here is an overview of the process:

1. **FASTP Network Print Process Environment**: This environment typically consists of a product-specific print process, identified by the name FASTPxxx, where 'xxx' refers to the communications protocol used. Each print process is associated with a configuration file (FASTCNFG) containing information about each supported printer device.
2. **Configuring the FASTP Network Print Process**: The configuration involves establishing a Spooler environment, a network connection through the IOP subsystem, and installing a FASTP network print process capable of communicating with the network printer using the required protocol. This also includes configuring the FASTP network print process within the Spooler subsystem and setting up device-specific parameters in the FASTCNFG file.
3. **Supported FASTP Network Print Processes**: The Spooler subsystem supports various FASTP network print processes for different network types and protocols, such as FASTPTCP for TCP/IP LANs, FASTPSMB for SMB LANs, FASTPNOV for NetWare LANs, FASTPX25 for X.25 WANs, and FASTPXNS for XNS LANs.
4. **Configuring FASTP Network Print Processes and Devices**: This can be done during the cold starting of a Spooler subsystem or when the Spooler subsystem is active. It involves configuring the FASTP network print process within the Spooler subsystem using Spoolcom commands and setting up a FASTCNFG file for the print process.
5. **Spooler and FASTCNFG Configuration**: Key to the setup is the configuration within the Spooler environment and the FASTCNFG file, which holds network/protocol-specific parameters for the devices. This configuration dictates how the FASTP network print process communicates with the network printer.
6. **Installation of the FASTP Network Print Process**: This involves copying the object code for the FASTP network print process from the Site Update Tape (SUT) to the system using the Distributed Systems Management/Software Configuration Manager (DSM/SCM).
7. **Spoolcom Commands for Configuration**: The Spooler subsystem configuration for the FASTP network print process is executed using Spoolcom commands, which include specifying the object code file, the process name for the FASTP network print process, and Spooler device names to represent the network printers.

This overview encapsulates the steps and components involved in configuring and utilizing the Spooler FASTP Network Print Process within an HP NonStop system environment, ensuring effective communication and operation with network print servers across various protocols.

ChatGPT 4.0 - NonStop Manual Navigator

Description

I'm a PDF reader here to help you navigate and understand your HP Nonstop Manuals.

Instructions

Your role is to be a knowledgeable PDF reader, capable of analyzing and understanding information from a set of uploaded documents.

To improve Your understanding, use the pages referenced by an **index**, if available in the documents. You'll answer specific questions by referencing the uploaded documents, providing detailed and precise answers, with a focus on extracting commands or instructions that can be used in interactive programs. To improve, try to use **examples**, if available in the documents.

When presenting commands or instructions, use a clear, step-by-step format, aiding users in applying this information effectively.

For this purpose You learn from the document **Glossary.pdf**

Your communication should maintain a formal tone, ensuring professionalism and clarity in conveying information.

Try to give the best answer. There is no need for the quickest answer.

<https://chat.openai.com/g/g-ofTAH09GR-nonstop-manual-navigator>

Why should I work with the print spooler?

Working with the print spooler is beneficial for several reasons, as outlined in the HPE Spooler Plus Utilities Reference Manual:

1. **Continuous Operation**: The Spooler Plus subsystem ensures continuous operation, even if a processor fails, which helps in maintaining system availability and reliability.
2. **Flexible Routing**: It offers flexible routing capabilities, allowing you to change the destination of a job even after it has entered the Spooler Plus subsystem. This flexibility is crucial for managing print jobs effectively, especially in complex network environments.
3. **No Programming Necessary**: Sending output to the Spooler Plus subsystem is straightforward and does not require any programming. You can simply specify a spooler location as your OUT file, making it accessible and easy to use for users of all skill levels.
4. **Interactive Control**: The subsystem provides interactive control through the Peruse program, enabling you to inspect or alter the status of your job, examine the data you have sent, and change the output destination if needed.
5. **Operator Control**: Through the use of the Spoolcom utility, system operators can initialize, modify, and manage all components of the Spooler Plus subsystem, as well as perform all perusal functions available in the Peruse utility.
6. **Efficient Use of Print Devices**: The spooler serves as a consistent interface to all print devices in your system, ensuring efficient use of these devices. It allows multiple programs to send data to the same printer simultaneously while managing the print jobs effectively.
7. **Protection from Device-Dependent Considerations**: The spooler abstracts the complexity of dealing with different print devices, shielding your applications from device-dependent considerations. This means that you don't need to know the technical specifications for each printer; you only need to be aware of the spooler location associated with it.

Considering these benefits, working with the print spooler can significantly enhance the management and execution of print jobs within your system, making it an essential tool for both system operators and users.

Get information from the documents loaded.

How to start the NonStop spooler?

To start the NonStop spooler, you can follow the warm start procedure outlined in the Spooler Utilities Reference Manual. This process recovers existing print jobs and configuration settings, ensuring that printer devices are in the WAITING state upon startup. The command file for a warm start might look like this:

```
``plaintext
SPOOL /IN $SYSTEM.SPL.SPL OUT $ZHOME NAME $SPLS NOWAIT PRI 149 CPU 1& / 0
SPOOLCOM; SPOOLER START
``
```

Here, `\$SYSTEM.SPL.SPL` represents the input location, `\$ZHOME` is specified as the home terminal (for G-series systems, `\$ZHOME` must be used as the home terminal), and `\$SPLS` is the name of the spooler process. The command `SPOOLCOM; SPOOLER START` is used to initiate the spooler's start. After executing these commands, it's advisable to check that the spooler started successfully using the command `SPOOLCOM; SPOOLER STATUS`.

This command file can be invoked automatically from a system startup file or manually using a TACL command like `OBEY \$SYSTEM.STARTUP.SPLWARM`, assuming `\$SYSTEM.STARTUP.SPLWARM` is the name of your command file .

Before performing a warm start, it's crucial to ensure that the spooler's control files are properly backed up to preserve settings and facilitate recovery in case of system issues. This proactive step can be invaluable for system maintenance and troubleshooting.

Compare Spooler and Spooler Plus!

The comparison between Spooler and Spooler Plus involves several key enhancements and features that Spooler Plus provides over the traditional Spooler system. Spooler Plus is an optional product that includes Spoolcom and Peruse modules, designed to replace the corresponding modules provided by D41 or later releases of the Spooler subsystem. It is specifically aimed at managing expanded configurations of the Spooler subsystem and is necessary when the maximum number of jobs has been configured above 8191.

Here are the main differences and enhancements provided by Spooler Plus:

1. **Extended Component Limits**: Spooler Plus supports significantly higher limits for various components such as jobs, devices, locations, print processes, collector processes, collector openers, and font jobs compared to the D40 and D41 Spooler versions. For example, Spooler Plus can handle up to 65,534 jobs compared to the 8,191 job limit in the D41 Spooler.
2. **Extended Capacity Startup**: Both Spooler and Spooler Plus can be started with extended capacity settings. However, operating in extended configurations necessitates the installation of Spooler Plus.
3. **Greater Use of Virtual Memory**: The Spooler Plus supervisor utilizes virtual memory in proportion to the number of configured objects. This might require an increase in the system's configured virtual memory due to large configurations and the significant memory usage by collectors.
4. **Improved Command Processing Performance**: While normal operations like collection, scheduling, and delivery remain largely unaffected, command processing that involves searching large tables may take longer in bigger configurations.
5. **Support for Larger Job and Batch Numbers**: Spooler Plus enhances the Peruse and Spoolcom utilities to display and accept larger job and batch numbers.
6. **Integration of Peruse Functions into Spoolcom**: Spooler Plus incorporates all Peruse functions into the Spoolcom utility, adding them as commands or subcommands, thus streamlining operations and management capabilities.

These enhancements make Spooler Plus a robust and scalable solution for handling larger spooler configurations, offering improved performance, and integrating more functionalities directly into Spoolcom for enhanced operational efficiency .

Compare the commands “Peruse” and “Spoolcom”!

The comparison between the Peruse and Spoolcom commands, as detailed in the Spooler Utilities Reference Manual, highlights their similarities and differences:

1. **Similar Commands**: Many commands in Peruse and Spoolcom are nearly equivalent. For instance, the Peruse DEV and Spoolcom DEV commands both display the status of devices, and many Peruse commands are also subcommands of the Spoolcom JOB command, such as COPIES, DEL, FORM, HOLDAFTER, OWNER, and PRI.
2. **Peruse Usage**: Peruse is designed for users to conveniently monitor and modify their jobs. Upon entering Peruse, users see a list of their jobs within the spooler subsystem, identified by job number and other attributes. It enables users to examine a spooler job in detail, use the FIND command to locate specific character strings, and perform tasks like changing job attributes, directing a job to a print device, or deleting a job with fewer keystrokes compared to Spoolcom.
3. **Spoolcom Functionality**: Spoolcom serves as a tool for system operators to monitor and control the spooler subsystem. All users can use Spoolcom to obtain status information on all spooler components and jobs in the system. Furthermore, all users can modify attributes of their own jobs through Spoolcom, although Peruse offers a more convenient method for such modifications.

Overall, Peruse provides an easy and efficient way for users to interact with their own spooler jobs, while Spoolcom offers broader capabilities for system monitoring and control, suitable for system operators. The choice between Peruse and Spoolcom depends on the specific needs and permissions of the user within the spooler environment [【25:6+HPE_c02132038_Spooler Utilities Reference Manual】](#) .

What are the components of the spooler?

The components of the spooler, as outlined in the documentation, include:

1. **Spooler Supervisor**: This is a process that monitors and communicates with other spooler processes and decides when and where to print jobs. There is only one supervisor in each spooler subsystem, but multiple spooler subsystems can operate simultaneously.
2. **Collector Processes**: These processes accept output from applications and store it on disk. A spooler can have up to 15 or 31 collectors associated with it, depending on the system configuration. Collectors are responsible for transferring data from applications to the disk.
3. **Print Processes**: These are responsible for retrieving the output stored on disk by collectors and printing it on a device. Each print device in the spooler subsystem has a print process associated with it. The FASTP print process is commonly used, but custom print processes can also be written.
4. **Peruse**: This utility allows users to control and monitor their jobs. It operates interactively from a terminal, translating user commands into messages for the spooler supervisor, which then executes the instructions. Peruse is designed for examining job data and modifying job attributes without interacting directly with the spooler supervisor.
5. **Spoolcom**: This utility provides a system operator's interface to the spooler, allowing for the declaration and initialization of collectors and print processes, definition and modification of the routing structure, control of job printing, and status monitoring of spooler components. Spoolcom also incorporates perusal functions similar to those in Peruse, enabling it to read spooled data from jobs and modify job attributes.

These components work together to manage the printing process, from job submission to output on print devices, ensuring efficient and organized handling of print jobs within the system.

Explain the Spooler Interface Procedures!

The Spooler Interface Procedures provide a group of procedures that act as an interface between an application program and a collector process within a spooler subsystem. These procedures enable application programs to spool jobs, meaning to write the data for a spooler job to a collector. The key Spooler Interface Procedures include:

1. ****SPOOLBATCHNAME****: Returns the name of the spooler batch job currently being spooled to the collector.
2. ****SPOOLCONTROL**** and ****SPOOLCONTROLBUF****: These procedures replace the Guardian file-system CONTROL and CONTROLBUF procedures, respectively, when spooling at level 3.
3. ****SPOOLEND****: Writes any remaining blocked data to the spooler and signals the end of a job. It can also be used to modify job attributes.
4. ****SPOOLERCOMMAND**** and ****SPOOLERREQUEST****: The former issues a SPOOLCOM command to the supervisor, while the latter obtains a startup message from the supervisor suitable for reading a job.
5. ****SPOOLERREQUEST2****: Similar to SPOOLERREQUEST but includes batch enhancements.
6. ****SPOOLERSTATUS**** and ****SPOOLERSTATUS2****: Obtain the status of spooler components, with the latter including batch enhancements.
7. ****SPOOLJOBNUM****: Returns the job number of the job currently being spooled to the collector.
8. ****SPOOLSETMODE****: Replaces the Guardian file-system SETMODE procedure when spooling at level 3.
9. ****SPOOLSTART****: Specifies job attributes and optionally initializes a level-3 buffer.
10. ****SPOOLWRITE****: Compresses blocks and sends data to the spooler.

To use these procedures in a TAL program, they must be declared as external to your program. The external declarations for these procedures are located in the file ``$SYSTEM.SYSTEM.EXTDECS0`` and can be sourced into your program with the compiler command ``?SOURCE $SYSTEM.SYSTEM.EXTDECS0 (SPOOLSTART SPOOLWRITE ...)``.

These procedures facilitate different levels of spooling from an application program, categorized into Level-1, Level-2, and Level-3 spooling, each offering varying degrees of control over job attributes and data handling.

Give an overview of the Spooler FASTP Network Print Process!

The Spooler FASTP Network Print Process involves a specialized environment tailored for network printing within the HP NonStop system framework. Here's an overview based on the provided documentation:

- FASTP Network Print Process Environment**: This environment typically consists of a product-specific print process, named `FASTPxxx`, which communicates with a network print server using a specific communications protocol. Additionally, there's a configuration file, referred to as `FASTCNFG`, containing information about each printer device supported by the print process.
- Configuring the FASTP Network Print Process**: Configuring this process for communication with a network printer device involves several key steps, including:
 - Establishing a Spooler environment on an HP NonStop system.
 - Ensuring an established network connection, typically through an IOP (Input/Output Process) subsystem.
 - Installing a FASTP network print process capable of exchanging messages formatted according to the network printer's required protocol.
 - Configuring this print process within the Spooler subsystem and associating device information so the process knows how to address and communicate with the specific network printer.
 - Setting up device-specific parameters within a `FASTCNFG` file for the network print process.
- Benefits of FASTKCON File**: For newer product versions of `FASTPTCP`, it's possible to convert `FASTCNFG` files into a `FASTKCON` key-sequenced file using the `FASTKCUT` utility. This provides advantages such as avoiding long sequential searches (thus offering faster printer startups) and enabling online updates with no impact on running `FASTPTCP` processes, which is particularly useful for large configurations.
- Components**: The components involved in the FASTP Network Print Process include the HP NonStop system, the Spooler subsystem, the FASTPxxx print process, the `FASTCNFG` file, the user's LAN or WAN, the print server, and the printer itself.
- Process Installation and Configuration**: The installation process for a FASTP network print process is generally consistent across G-series and D-series systems, despite differences in network architecture and WAN activity. Each FASTP network print process product comes with the necessary object code for its print process, supplied as a distribution subvolume (DSV).

This overview provides a glimpse into the complexity and thoroughness of setting up and managing network print processes within HP NonStop systems, ensuring efficient and protocol-compliant communication between the system's spooler environment and networked printers .

Comparing the Results

- ChatGPT 4.0

GPTs

- AI PDF GPT
- PDF document navigator
- NonStop Manual Navigator

Why should I work with the print spooler?

ChatGPT 4.0 -1-
AI PDF GPT -1-
PDF document navigator -1-
NonStop Manual Navigator -1-

Why should I work with the print spooler?

Working with the print spooler can be crucial for several reasons, especially if you're managing printers or print jobs in a networked or local computer environment. Here are some key reasons why you might need to work with the print spooler:

- Managing Print Jobs:** The print spooler allows you to manage print jobs queued to a printer. You can pause, restart, or cancel print jobs, which is especially useful in an environment where multiple users are sending print jobs to the same printer.
 - Troubleshooting Issues:** Print spoolers can sometimes encounter problems that cause print jobs to get stuck in the queue, or printers to stop responding. Working with the print spooler service allows you to troubleshoot and resolve these issues by restarting the service or clearing the print queue.
 - Efficiency and Prioritization:** By managing the print queue, you can prioritize urgent print jobs over less important ones. This is particularly beneficial in busy office environments where different users have different printing needs.
 - Printer Management:** The print spooler is not just about managing print jobs; it also helps in managing printer settings and configurations. It interacts with printer drivers and handles the data sent to printers, making sure that documents are printed correctly according to the selected preferences.
 - Spooling:** The process of spooling involves temporarily storing print jobs on the hard disk before sending them to the printer. This allows the computer to free up memory and resources, as it doesn't have to manage the document while it's being printed, which can enhance overall system performance, especially with large documents or high volumes of printing.
 - Network Printing:** In a network environment, the print spooler plays a crucial role in managing print jobs sent to shared printers. It handles print jobs from multiple users across the network are orderly processed and printed.
 - Software Integration:** Some applications interact directly with the print spooler to provide advanced printing features, such as batch printing or document rendering. Working with the print spooler can help ensure these applications function efficiently.
- Understanding and being able to work with the print spooler is essential for maintaining an efficient printing environment, troubleshooting printing problems, and ensuring that printing operations run smoothly in both personal and professional settings.

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Why should I work with the print spooler?

The print spooler is a service that manages the printing process. It handles the order in which print jobs are processed, stores them temporarily on the disk or in memory until the printer is ready to print them, and facilitates their smooth transfer to the printer. Working with the print spooler can offer several benefits:

- Print Queue Management:** The spooler allows multiple print jobs to be queued up. Users don't have to wait for one job to finish before sending another to the printer.
 - Job Prioritization:** Jobs can be prioritized, paused, resumed, or canceled.
 - Efficiency:** While the document is spooling, the application that sent the job to print can be used for other tasks without waiting for the printing to complete.
 - Error Handling:** If there's a problem with a print job, it does not affect the entire printing process. The spooler can handle errors without crashing or stopping subsequent jobs.
 - Network Printing:** In a network environment, the spooler can manage print jobs sent to a shared printer, efficiently handling multiple requests from different users.
 - Printer Availability:** The spooler releases the document to the printer when the printer is ready, optimizing printer usage.
 - Advanced Features:** Depending on the operating system and print spooler used, advanced features like scheduling print times or print job notifications may be available.
- Understanding and effectively managing the print spooler can significantly enhance the printing process's reliability and flexibility in an organizational environment or even for personal use.

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Why should I work with the print spooler?

Working with the print spooler is beneficial for several reasons, as outlined in the HPE Spooler Plus Utilities Reference Manual:

- Continuous Operation:** The Spooler Plus subsystem ensures continuous operation, even if a processor fails, which helps in maintaining system availability and reliability.
- Flexible Routing:** It offers flexible routing capabilities, allowing you to change the destination of a job even after it has entered the Spooler Plus subsystem. This flexibility is crucial for managing print jobs effectively, especially in complex network environments.
- No Programming Necessary:** Sending output to the Spooler Plus subsystem is straightforward and does not require any programming. You can simply specify a spooler location as your OUT file, making it accessible and easy to use for users of all skill levels.
- Interactive Control:** The subsystem provides interactive control through the Peruse program, enabling you to inspect or alter the status of your job, examine the data you have sent, and change the output destination if needed.
- Operator Control:** Through the use of the Spoolcom utility, system operators can initialize, modify, and manage all components of the Spooler Plus subsystem, as well as perform all perusal functions available in the Peruse utility.
- Efficient Use of Print Devices:** The spooler serves as a consistent interface to all print devices in your system, ensuring efficient use of these devices. It allows multiple programs to send data to the same printer simultaneously while managing the print jobs effectively.
- Protection from Device-Dependent Considerations:** The spooler abstracts the complexity of dealing with different print devices, shielding your applications from device-dependent considerations. This means that you don't need to know the technical specifications for each printer; you only need to be aware of the spooler location associated with it [13:7?source].

Considering these benefits, working with the print spooler can significantly enhance the management and execution of print jobs within your system, making it an essential tool for both system operators and users.

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Why should I work with the print spooler?

Working with the print spooler provides several benefits:

- Interface Between Applications and Printers:** The spooler acts as an intermediary between your application programs and the printers in your system, managing the print jobs and the communication with the printers.
 - Job Queue Management:** The spooler allows different applications to send output to the same printer simultaneously by saving each job on a print queue and sending them to the printer based on their priority. This helps in efficiently managing print jobs from various sources without conflicts of each printer; you only need to know the spooler location associated with the printer, which simplifies the printing process.
 - Device Independence:** The spooler continues to operate even if there is a processor or disk failure, ensuring that your printing processes are not interrupted. Additionally, it allows you to change the destination of a job even after it has entered the spooler, giving you flexibility in managing your print jobs.
 - Monitoring and Control:** The spooler provides mechanisms to monitor and control the status of your jobs, examine a spooler job before printing or deleting it, and change the printer for your output without the need for programming. This can be done by specifying a spooler location as your output file.
 - Efficient Use of Print Devices:** By allowing many different programs to send data to the same printer simultaneously while managing the print jobs queue, the spooler ensures efficient use of the print devices in your system.
 - Ease of Use:** For most users, using the spooler is the best way to produce hard-copy output, as it offers a consistent interface to all print devices in your system, protecting the applications from device-dependent considerations.
- These advantages make the print spooler an essential component of system management, ensuring efficient, reliable, and user-friendly printing processes.

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How to start the NonStop spooler?

ChatGPT 4.0 -2-
AI PDF GPT -4-
PDF document navigator -1-
NonStop Manual Navigator -3-

Get information from the documents loaded. How to start the NonStop spooler?

To perform a warm start and a cold start on the NonStop spooler, you would typically use system-specific commands that control the spooler service. However, the provided documents do not explicitly detail the commands for performing a warm start or a cold start of the NonStop spooler.

A warm start usually refers to restarting the spooler service without rebooting the system, allowing it to reload its configuration and clear any issues that might be causing print jobs to fail or hang. A cold start, on the other hand, might involve a more comprehensive reset, including restarting the system or reinitializing the spooler service from a baseline configuration.

For HP NonStop systems, spooler control often involves TACL (Tandem Advanced Command Language) commands or using the Spoolcom utility for spooler management. You might find commands like 'START SPOOLER' or similar to initiate the spooler service, and commands incorporating 'STOP SPOOLER' or 'RESTART SPOOLER' for stopping or restarting the spooler, respectively. These commands can vary based on the system's configuration and the specific version of the NonStop OS you are using.

Since the documents do not provide explicit commands for a warm or cold start, it's recommended to consult the system's administration or spooler management documentation directly for the exact procedures. If you have access to system help files or administrative tools, those resources might also offer guidance on managing the spooler service, including starting, stopping, and restarting it in different modes.

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Get information from the documents loaded. How to start the NonStop spooler?

To start the NonStop spooler, you can perform a warm start which recovers existing print jobs and configuration settings. Here is a procedure based on the documents provided:

Log on as a supergroup user (255,255).

Run the spooler supervisor with the existing control file:

`SPOOL /N control-filename NAME $supervisor-process /`

Optionally, you can add, delete, or modify collectors, print processes, devices, and routing structures.

Start the spooler by entering Spoolcom and issuing the following command:

`SPOOLCOM SPOOLER START`

For example, you can use the TACL command `OBEY $SYSTEM.STARTUP.SPLWARM` to invoke a command file that performs a warm start of the spooler, as described in the documents.

If you need to perform a cold start, which erases existing print jobs and configuration settings and starts a new spooler system, you would:

Log on as a supergroup user (255,255) but not as the super ID (255,255).

Purge the existing supervisor control files and collector data files if necessary.

Create new data files for collectors.

Run the spooler supervisor with a new control file.

Use Spoolcom to configure collectors, print processes, and devices.

Start the spooler using Spoolcom with the `SPOOLER START` command.

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Get information from the documents loaded. How to start the NonStop spooler?

To start the NonStop spooler, you can follow the warm start procedure outlined in the Spooler Utilities Reference Manual. This process recovers existing print jobs and configuration settings, ensuring that printer devices are in the WAITING state upon startup. The command file for a warm start might look like this:

```
""plaintext
SPOOL /N $SYSTEM.SPL.SPL OUT $ZHOME NAME $SPLS NOWAIT PRI 149 CPU 1& / 0
SPOOLCOM; SPOOLER START
""
```

Here, '\$SYSTEM.SPL.SPL' represents the input location, '\$ZHOME' is specified as the home terminal (for G-series systems, '\$ZHOME' must be used as the home terminal), and '\$SPLS' is the name of the spooler process. The command 'SPOOLCOM; SPOOLER START' is used to initiate the spooler's start. After executing these commands, it's advisable to check that the spooler started successfully using the command 'SPOOLCOM; SPOOLER STATUS'.

This command file can be invoked automatically from a system startup file or manually using a TACL command like 'OBEY \$SYSTEM.STARTUP.SPLWARM', assuming '\$SYSTEM.STARTUP.SPLWARM' is the name of your command file.

Before performing a warm start, it's crucial to ensure that the spooler's control files are properly backed up to preserve settings and facilitate recovery in case of system issues. This proactive step can be invaluable for system maintenance and troubleshooting.

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Get information from the documents loaded. How to start the NonStop spooler?

To start the NonStop spooler, you have the option of performing either a warm start or a cold start, depending on your needs:

Warm Start

A warm start recovers existing print jobs and configuration settings. This means that after the spooler is brought up, the printer devices should be in the WAITING state. You can warm start the spooler by using the TACL command:

`OBEY $SYSTEM.STARTUP.SPLWARM`

This command invokes a command file that typically contains the following commands:

`SPOOL /N $SYSTEM.SPL.SPL OUT $ZHOME NAME $SPLS NOWAIT PRI 149 CPU 1/0`

`SPOOLCOM; SPOOLER START`

`SPOOLCOM; SPOOLER STATUS`

Note that '\$ZHOME' is specified as the home terminal in the warm start example. For G-series systems, '\$ZHOME' must be specified as the home terminal.

Cold Start

Cold starting a spooler erases existing print jobs and configuration settings. Before cold starting your spooler, you must purge all existing supervisor control files. The cold start process involves several steps including purging data files, creating new control files, and starting the spooler supervisor. The command sequence for a cold start might look something like this:

1. Purge the existing collector data files (if changing the data file size) and the supervisor control files.

2. Create new data files for the collectors.

3. Run the spooler supervisor with a new control file:

`SPOOL /N new-control-filename NAME $now-supervisor-process /`

4. Enter 'SPOOLCOM'.

5. Specify the names and attributes of the collectors, print processes, devices, and locations.

6. Start the spooler using the 'SPOOLER START' command.

When deciding between a warm start and a cold start, consider whether you need to retain existing print jobs and configurations (warm start) or start fresh (cold start). Always back up the Spooler control files before attempting to start the Spooler to preserve settings in case of a system problem.

28

Compare Spooler and Spooler Plus!

ChatGPT 4.0 -1-

AI PDF GPT -1-

PDF document navigator -1-

NonStop Manual Navigator -1-

Compare Spooler and Spooler Plus!

The comparison between Spooler and Spooler Plus across the documents reveals several distinctions and enhancements brought by Spooler Plus:

- Continuous Operation and Fault Tolerance****: Both Spooler and Spooler Plus are designed for continuous operation, ensuring that printing services remain available even in the event of a processor failure. Spooler Plus, however, is highlighted for its fault-tolerant capabilities, allowing for the uninterrupted running of application processes on the HP NonStop system to prevent data loss or duplication due to failures.
- Flexible Routing and Job Destination Changes****: Spooler Plus offers a flexible routing structure that permits the alteration of a job's destination even after the job has been initiated. This feature provides enhanced control over where and how output is directed, adding a layer of dynamic job management not explicitly mentioned for the standard Spooler.
- Custom Print Processes****: Both versions support custom print processes, but Spooler Plus explicitly encourages the development of user-defined print processes, alongside those supplied by HP, for tailored printing operations.
- Interactive and Operator Control****: Spooler Plus emphasizes its interactive user control through the Spoolcom utility, allowing inspection or modification of job and device status, and routing structure initialization. It enhances support for batch processing by permitting pre-specification of job attributes before creation.
- Extended Component Limits and Virtual Memory Usage****: Spooler Plus supports extended component limits, allowing for a larger number of jobs, devices, and other elements within the Spooler subsystem. It makes greater use of virtual memory, which may necessitate an increase in the system's configured virtual memory to accommodate large configurations.
- Enhanced Command Processing and Support for Larger Job Numbers****: While normal operations like collection, scheduling, and delivery remain largely unaffected by Spooler Plus, command processing that searches through larger tables might take longer due to the increased limits. Additionally, Spooler Plus supports larger job and batch numbers, expanding the scale of print jobs that can be managed.

These enhancements in Spooler Plus indicate a focus on scalability, flexibility, and fault tolerance, making it a more robust solution for complex and large-scale printing environments compared to the standard Spooler.

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Compare Spooler and Spooler Plus!

Spooler and Spooler Plus are two systems within the HPE NonStop server environment that handle print jobs, but they have different capabilities and limits. Here is a comparison based on the provided documents:

- Component Limits**:
 - Spooler: Limited to a maximum of 8,191 jobs, 4095 locations, 45 print processes, 16 collector processes, and other limits.
 - Spooler Plus: Extends these limits significantly, supporting up to 65,534 jobs, 32,767 locations, 255 print processes, 31 collector processes, etc.
- Startup**:
 - Both can be started with extended capacity settings, but operating in extended capacities requires Spooler Plus.
- Virtual Memory Usage**:
 - Spooler Plus uses more virtual memory proportionally to the number of objects configured, which is significant in large configurations.
- Command Processing Performance**:
 - In Spooler Plus, commands that search through the increased table sizes might take longer due to the larger configurations.
- Job and Batch Numbers**:
 - Spooler Plus supports larger job and batch numbers.
- Utilities Integration**:
 - Spooler Plus includes all Peruse functions within the Spoolcom utility, adding Peruse functions as subcommands.
- New Commands and Subcommands**:
 - Spooler Plus introduces new Spoolcom commands and subcommands not found in the Spooler utility.
- Spooler States**:
 - Spooler Plus provides more detailed spooler states and better handling of job states during spooling from a program.
- Additional Features in Spooler Plus**:
 - Enhanced statistical subcommands, extended collector attributes, and changes to library procedures.
- Networking**:
 - Spoolers can be networked together in both systems, but Spooler Plus provides more options for flexible routing and managing print jobs across a network.

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Compare Spooler and Spooler Plus!

The comparison between Spooler and Spooler Plus involves several key enhancements and features that Spooler Plus provides over the traditional Spooler system. Spooler Plus is an optional product that includes Spoolcom and Peruse modules, designed to replace the corresponding modules provided by D41 or later releases of the Spooler subsystem. It is specifically aimed at managing expanded configurations of the Spooler subsystem and is necessary when the maximum number of jobs has been configured above 8,191.

Here are the main differences and enhancements provided by Spooler Plus:

- Extended Component Limits****: Spooler Plus supports significantly higher limits for various components such as jobs, devices, locations, print processes, collector processes, collector copiers, and font jobs compared to the D40 and D41 Spooler versions. For example, Spooler Plus can handle up to 65,534 jobs compared to the 8,191 job limit in the D41 Spooler.
- Extended Capacity Startup****: Both Spooler and Spooler Plus can be started with extended capacity settings. However, operating in extended configurations necessitates the installation of Spooler Plus.
- Greater Use of Virtual Memory****: The Spooler Plus supervisor utilizes virtual memory in proportion to the number of configured objects. This might require an increase in the system's configured virtual memory due to large configurations and the significant memory usage by collectors.
- Improved Command Processing Performance****: While normal operations like collection, scheduling, and delivery remain largely unaffected, command processing that involves searching large tables may take longer in bigger configurations.
- Support for Larger Job and Batch Numbers****: Spooler Plus enhances the Peruse and Spoolcom utilities to display and accept larger job and batch numbers.
- Integration of Peruse Functions into Spoolcom****: Spooler Plus incorporates all Peruse functions into the Spoolcom utility, adding them as commands or subcommands, thus streamlining operations and management capabilities.

These enhancements make Spooler Plus a robust and scalable solution for handling larger spooler configurations, offering improved performance, and integrating more functionalities directly into Spoolcom for enhanced operational efficiency.

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Compare Spooler and Spooler Plus!

Spooler and Spooler Plus provide essential services for managing print jobs within networked environments. Here's a comparison based on the information from the documents:

- Component and Configuration Limits****:
 - Spooler Plus significantly increases the limits for various components compared to the standard Spooler, accommodating more extensive configurations. For example, the maximum number of jobs in Spooler Plus can go up to 65,534 compared to the D41 Spooler's 8,191. Similarly, the number of collector processes and font jobs are also substantially higher in Spooler Plus.
- Operational Enhancements****:
 - Spooler Plus introduces several operational improvements, including extended capacity startup, greater use of virtual memory, and improved command processing performance. These enhancements contribute to better handling of large configurations and more efficient memory usage.
- Functionality and Features****:
 - Spooler Plus extends the functionality of the spooler with features like support for larger job and batch numbers, new Spoolcom commands and subcommands, Peruse functions added to Spoolcom, and an enhanced SPOOLER STATISTICS subcommand.
- Utility Compatibility****:
 - With Spooler Plus, it is recommended to use Spooler Plus utilities exclusively once it has been applied to configure the spooler in extended configurations, using standard Spooler utilities may eventually lead to errors due to the extended API used in Spooler Plus.
- Spooling in a Network****:
 - Spooler Plus can be integrated into a network where spoolers are linked, allowing applications on one node to print jobs on another, with Spooler Plus managing the transfers across the network. This feature is particularly useful in complex, interconnected environments.
- Peruse and Spoolcom Integration****:
 - Spooler Plus integrates Peruse functions into Spoolcom, allowing system operators to monitor and control the spooler subsystem without needing to switch between utilities. This integration streamlines operations and simplifies the user experience for system administrators.

In summary, Spooler Plus offers enhanced capabilities and higher limits for components and configurations, making it suitable for larger and more complex environments. Its operational improvements and integrated functionalities provide a more efficient and user-friendly experience for managing print jobs and spooler subsystems within networks.

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Compare the commands "Peruse" and "Spoolcom"!

ChatGPT 4.0 -1-
AI PDF GPT -4-
PDF document navigator -2-
NonStop Manual Navigator -3-

Compare the commands "Peruse" and "Spoolcom"!

The documents provide detailed information on the commands "Peruse" and "Spoolcom" used within HP systems. The Peruse command allows users to manage and monitor their print jobs within the spooler subsystem. It offers features like examining a job before printing or deleting it, monitoring a job while being spooled, altering job attributes like location and number of copies, and printing specific pages or the entire job. The Peruse command is interactive and users can enter it at the TACL prompt, with various options and parameters to control its operation.

The Spoolcom command, on the other hand, serves as the interface to the spooler subsystem, providing perusal functions similar to Peruse but also allowing users to determine the status of all spooler components and start devices that are offline, and send instructions to devices. It is used by system operators to create and initialize components of the spooler subsystem. Spoolcom can be used interactively to control various aspects of the spooling system, including starting and stopping printers, and managing print jobs and queues.

Overall, Peruse focuses on managing individual print jobs with a user-friendly interactive approach, while Spoolcom offers broader control over the spooler subsystem, making it suitable for system administrators.

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Compare the commands "Peruse" and "Spoolcom"!

Peruse and Spoolcom are both utilities used in the HPE NonStop Spooler subsystem, each with distinct purposes and capabilities. The key differences between Peruse and Spoolcom, based on the documents provided, are as follows:

****Peruse**:**

- Primarily used for monitoring and changing your jobs.
- When you start Peruse, it immediately shows a list of the jobs you own within the spooler subsystem.
- Allows for page-by-page or line-by-line examination of spooler jobs.
- Provides a quicker and more user-friendly way to change job attributes, send jobs to a print device, or delete jobs with fewer keystrokes.
- Peruse offers commands like LIST, FIND, and PAGE for interacting with job files.
- It is suitable for end-users who need to manage their print jobs.

****Spoolcom**:**

- Serves as a tool for system operators to monitor and control the spooler subsystem.
- While all users can use Spoolcom to obtain status information on spooler components and jobs, and change attributes of their own jobs, system operators have the authority to perform tasks that affect the entire spooler subsystem, including starting and stopping printers, and managing print jobs and queues.
- Provides detailed information about the status of collectors, devices, jobs, print processes, and routing structures.
- Spoolcom contains the functionality of Peruse within its job commands, meaning operators do not need to exit Spoolcom to perform Peruse functions.
- Suitable for system administrators or operators who need to manage the spooler at a more comprehensive level.

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Compare the commands "Peruse" and "Spoolcom"!

The comparison between the Peruse and Spoolcom commands, as detailed in the Spooler Utilities Reference Manual, highlights their similarities and differences:

- **Similar Commands**:** Many commands in Peruse and Spoolcom are nearly equivalent. For instance, the Peruse DEV and Spoolcom DEV commands both display the status of devices, and many Peruse commands are also subcommands of the Spoolcom JOB command, such as COPIES, DEL, FORM, HOLDAFTER, OWNER, and PRI.
- **Peruse Usage**:** Peruse is designed for users to conveniently monitor and modify their jobs. Upon entering Peruse, users see a list of their jobs within the spooler subsystem, identified by job number and other attributes. It enables users to examine a spooler job in detail, use the FIND command to locate specific character strings, and perform tasks like changing job attributes, directing a job to a print device, or deleting a job with fewer keystrokes compared to Spoolcom.
- **Spoolcom Functionality**:** Spoolcom serves as a tool for system operators to monitor and control the spooler subsystem. All users can use Spoolcom to obtain status information on all spooler components and jobs in the system. Furthermore, all users can modify attributes of their own jobs through Spoolcom, although Peruse offers a more convenient method for such modifications.

Overall, Peruse provides an easy and efficient way for users to interact with their own spooler jobs, while Spoolcom offers broader capabilities for system monitoring and control, suitable for system operators. The choice between Peruse and Spoolcom depends on the specific needs and permissions of the user within the spooler environment [25.6#HPE_c02132038_Spooler Utilities Reference Manual].

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Compare the commands "Peruse" and "Spoolcom"!

Peruse and Spoolcom are both integral parts of the spooler subsystem, with distinct roles and functionalities:

- **Intended Use**:**
 - ****Peruse**** is designed primarily for everyday users. It allows for monitoring and changing jobs, enabling users to inspect or alter the status of their job, examine the data sent to the spooler, and change the destination of their output interactively from a terminal.
 - ****Spoolcom**** is geared towards system operators. It provides a comprehensive interface to the spooler subsystem, including all the perusal functions of Peruse. Operators use Spoolcom to initialize and modify spooler components and to perform functions similar to those in Peruse but with a broader scope that includes system-wide controls and configurations.
- **Functionality**:**
 - ****Peruse**** focuses on job-level interactions. Users can control and monitor their jobs, display job attributes, change job properties, and manage the print job's lifecycle within the spooler.
 - ****Spoolcom**** extends beyond job-level interactions to spooler subsystem management. It includes capabilities for initializing and modifying spooler components, such as collectors, print processes, and devices, in addition to offering job perusal functions. This makes Spoolcom a more powerful tool for comprehensive spooler management.
- **User Accessibility**:**
 - ****Peruse**** is accessible to all users, allowing them to manage their own print jobs and view job attributes relevant to their submissions.
 - ****Spoolcom****, due to its more extensive set of functions that affect the spooler subsystem as a whole, is intended for system operators or administrators who require broader control over the spooling environment.

In essence, while Peruse provides individual users with the tools to interact with and manage their print jobs within the spooler subsystem, Spoolcom offers system operators comprehensive control over the entire spooler subsystem, including the management of jobs, devices, and spooler components. This delineation ensures that users have the necessary functionalities suited to their roles, from job management to system-wide spooler administration.

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What are the components of the spooler?

ChatGPT 4.0 -1-
AI PDF GPT -4-
PDF document navigator -2-
NonStop Manual Navigator -3-

What are the components of the spooler?

The components of the spooler, particularly in the context of a FASTP network print process, include:

1. **HP NonStop System**: This is the central system that hosts the spooler subsystem and the print processes.
2. **Spooler Subsystem**: The spooler subsystem is a set of utilities that form an interface between the users/application programs and the print devices. It allows storing output as jobs in a disk file to be queued or perused later for printing on a designated printer.
3. **FASTPook Print Process**: This refers to a product-specific print process that communicates with a network print server using a specific communications protocol to manage print jobs.
4. **FASTCIFS File**: A configuration file for the FASTP network print process that communicates with a network print server using a supported by the print process.
5. **User's LAN or WAN**: The local area network (LAN) or wide area network (WAN) through which the print process communicates with the printer.
6. **Printer**: The physical printing device that receives print jobs from the print process through the network.
7. **Print Server**: An intermediary device or software that connects the printer to the network, facilitating the communication between the spooler subsystem/print process and the printer.

These components work together within the spooler environment to manage and process print jobs efficiently, allowing users to store output as jobs in a disk file, and then queue or peruse the output to be sent to a designated printer when available for printing.

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What are the components of the spooler?

The components of the HPE NonStop Spooler, as identified from the provided documents, consist of several key elements that work together to manage printing tasks:

1. **Spooler Supervisor**: A process (usually named \$SPLS) that monitors and communicates with the other spooler processes and controls the printing of spooler jobs. There is only one supervisor per spooler subsystem.
2. **Collector Process**: Accepts output from applications and stores it on disk. Each spooler must include at least one but no more than 15 collectors.
3. **Print Process**: Retrieves a spooler job stored on disk by a collector process and prints the job to an output device. Each printer in the spooler has one print process associated with it; however, each print process can control several output devices.
4. **Device**: The physical or virtual output device to which jobs are sent for printing.
5. **Routing Structure**: Directs jobs to output devices and consists of a set of locations and print devices.
6. **Job**: The set of data sent to the spooler to be printed.
7. **Peruse**: A utility that allows users to control and monitor their jobs, including changing job attributes and sending jobs to print devices.
8. **Spoolcom**: A utility used primarily by system operators to monitor and control the spooler subsystem. It allows users to get the status of spooler components, set job attributes, and start printers that are offline.

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What are the components of the spooler?

The components of the spooler, as outlined in the documentation, include:

1. **Spooler Supervisor**: This is a process that monitors and communicates with other spooler processes and decides when and where to print jobs. There is only one supervisor in each spooler subsystem, but multiple spooler subsystems can operate simultaneously.
2. **Collector Processes**: These processes accept output from applications and store it on disk. A spooler can have up to 15 or 31 collectors associated with it, depending on the system configuration. Collectors are responsible for transferring data from applications to the disk.
3. **Print Processes**: These are responsible for retrieving the output stored on disk by collectors and printing it on a device. Each print device in the spooler subsystem has a print process associated with it. The FASTP print process is commonly used, but custom print processes can also be written.
4. **Peruse**: This utility allows users to control and monitor their jobs. It operates interactively from a terminal, translating user commands into messages for the spooler supervisor, which then executes the instructions. Peruse is designed for examining job data and modifying job attributes without interacting directly with the spooler supervisor.
5. **Spoolcom**: This utility provides a system operator's interface to the spooler, allowing for the declaration and initialization of collectors and print processes, definition and modification of the routing structure, control of job printing, and status monitoring of spooler components. Spoolcom also incorporates perusal functions similar to those in Peruse, enabling it to read spooled data from jobs and modify job attributes.

These components work together to manage the printing process, from job submission to output on print devices, ensuring efficient and organized handling of print jobs within the system [13:13%source].

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What are the components of the spooler?

The spooler consists of several key components that work together to manage print jobs within the system:

1. **Spooler Supervisor**: This component monitors and communicates with other parts of the spooler, determining when and where jobs are printed. There is only one supervisor in each spooler subsystem, but multiple spooler subsystems can operate simultaneously.
2. **Collectors**: These are processes that accept output from applications and store it on disk. There can be up to 31 collectors associated with a given spooler, each responsible for collecting print jobs from applications and preparing them for printing.
3. **Print Processes**: These retrieve the stored output from disk and print it on a device. Each print device in the spooler subsystem has an associated print process. The default print process released with the spooler is FASTP, but you can also write your own print processes.
4. **Peruse**: A utility that allows users to control and monitor their jobs within the spooler. Users can run Peruse interactively from a terminal to inspect or alter the status of their job, examine spooled data, and change output destinations.
5. **Spoolcom**: This is the primary interface to the spooler subsystem for system operators. It provides all the perusal functions of Peruse and additional capabilities for initializing and modifying spooler components. Operators use Spoolcom for comprehensive control over the spooler subsystem up spooler locations with specific fonts or formats needed for printing.
6. **Font Utility**: Assists in creating font jobs by configuring spooler locations with specified font jobs through script files. This utility is used for setting up spooler locations with specific fonts or formats needed for printing.
7. **RPSsetup Utility**: Helps in maintaining spooler configurations in a network, particularly useful in environments where spoolers are linked across multiple nodes for job transfers and printing across the network.

These components work together to ensure efficient handling of print jobs, from submission through to printing, providing both users and system operators with tools for managing print jobs and spooler configurations effectively.

31

Explain the Spooler Interface Procedures!

ChatGPT 4.0 -3-
AI PDF GPT -4-
PDF document navigator -1-
NonStop Manual Navigator -2-

Explain the Spooler Interface Procedures!

The Spooler Interface Procedures detailed in the documents focus on managing and configuring print processes within a Spooler environment, particularly for HP NonStop systems. Here's an overview based on the information found:

- ## Spooler Environment**
 - The Spooler subsystem comprises utilities that create an interface between users or applications and the HP NonStop system's print devices. Instead of sending output directly to a printer, the Spooler stores it as jobs in a disk file, allowing users to manage (e.g., preview or queue) the output for distributed printers when they become available.
 - The configuration of a FASTP network print process within the Spooler subsystem is necessary, involving setting up the process as a print process that's part of the subsystem itself.
- ## Spooler Configuration and Commands**
 - **Device Configuration**: Involves specifying commands and attributes needed for each specific Spooler setup. Documentation provides guidance on device configuration within the Spooler environment, including references to additional manuals for comprehensive instructions.
 - **Spoolcom Commands**: Utilized to configure FASTP network print processes, including:
 - **OPEN**: Accessing a Spooler subsystem other than the default.
 - **PRINT**: Specifying the object code file and the process name for the FASTP network print process, with additional configuration parameters for certain versions.
 - **DEV**: Defining a Spooler device name to represent the network printer, along with device attributes used for print-file formatting and control.
 - **LOC**: Associating a job location with a Spooler device name, helping to manage where jobs are sent within the Spooler system.
- ## Error-Handling and Troubleshooting**
 - FASTP network print processes report errors, and their management is part of the configuration and operational considerations. Specific procedures are outlined for managing errors, including those related to device connectivity and process failures.
- ## Installation and Configuration Guidelines**
 - Before installing and configuring FASTP network print processes, certain prerequisites must be met, including having the Spooler and necessary network data communications products installed and configured.

4

Explain the Spooler Interface Procedures!

The Spooler Interface Procedures provide a mechanism for application programs to spool jobs, which means writing data for a spooler job, using a group of procedures that act as an interface between an application program and a collector process in the spooler subsystem.

1. ****SPOOLSTART****: Used to specify job attributes and optionally initialize a level-3 buffer for spooling. It is the initial point for setting up a spooling job.
2. ****SPOOLWRITE****: Compresses blocks and sends data to the spooler. It is used to send data to the collector and may buffer the data to optimize the spooling process.
3. ****SPOLEND****: Writes any remaining blocked data to the spooler and signals the end of the job. This can also be used to modify the job attributes before finalizing the spooling process.
4. ****SPOOLCONTROL / SPOOLCONTROLBUF****: Replace the Guardian file-system CONTROL and CONTROLBUF procedures when spooling at level 3. These are used to control various aspects of the spooling process.
5. ****SPOOLSETMODE****: Replaces the Guardian file-system SETMODE procedure when spooling at level 3, allowing you to set various modes for the spooling process.
6. ****SPOLENCOMMAND / SPOILERREQUEST****: Issue commands or obtain information from the spooler supervisor to interact with the spooler system for status updates or command execution.
7. ****SPOOLJOBNUM / SPOOLBATCHNAME****: Return the job number or the name of the batch job currently being spooled, respectively. These are used for identifying and managing jobs within the spooler.

The use of these procedures typically involves opening a file to a collector with waited I/O, setting up job attributes with SPOOLSTART, sending data with SPOOLWRITE, and then signaling the end of the job with SPOLEND. These interface procedures facilitate communication between an application and the spooler subsystem, allowing efficient and controlled spooling of jobs.

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Explain the Spooler Interface Procedures!

The Spooler Interface Procedures provide a group of procedures that act as an interface between an application program and a collector process within a spooler subsystem. These procedures enable application programs to spool jobs, meaning to write the data for a spooler job to a collector. The key Spooler Interface Procedures include:

1. ****SPOOLBATCHNAME****: Returns the name of the spooler batch job currently being spooled to the collector.
2. ****SPOOLCONTROL**** and ****SPOOLCONTROLBUF****: These procedures replace the Guardian file-system CONTROL and CONTROLBUF procedures, respectively, when spooling at level 3.
3. ****SPOLEND****: Writes any remaining blocked data to the spooler and signals the end of a job. It can also be used to modify job attributes.
4. ****SPOLENCOMMAND**** and ****SPOILERREQUEST****: The former issues a SPOLENCOM command to the supervisor, while the latter obtains a startup message from the supervisor suitable for reading a job.
5. ****SPOLENCOMMAND**** and ****SPOILERREQUEST****: Similar to SPOLENCOM but includes batch enhancements.
6. ****SPOOLERSTATUS**** and ****SPOOLERSTATUS****: Obtain the status of spooler components, with the latter including batch enhancements.
7. ****SPOOLJOBNUM****: Returns the job number of the job currently being spooled to the collector.
8. ****SPOOLSETMODE****: Replaces the Guardian file-system SETMODE procedure when spooling at level 3.
9. ****SPOOLSTART****: Specifies job attributes and optionally initializes a level-3 buffer.
10. ****SPOOLWRITE****: Compresses blocks and sends data to the spooler.

To use these procedures in a TAL program, they must be declared as external to your program. The external declarations for these procedures are located in the file `SYSTEM.SYSTEM.EXTDECSD` and can be sourced into your program with the compiler command `%SOURCE SYSTEM.SYSTEM.EXTDECSD (SPOOLSTART SPOOLWRITE ...)`.

These procedures facilitate different levels of spooling from an application program, categorized into Level-1, Level-2, and Level-3 spooling, each offering varying degrees of control over job attributes and data handling.

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Explain the Spooler Interface Procedures!

The Spooler Interface Procedures are a set of operations used in application programs for interacting with a collector process within the Spooler subsystem. These procedures serve as the interface between the application and the spooler, allowing the application to spool jobs effectively. Here is a summary of the procedures and their functions:

1. ****SPOOLBATCHNAME****: Returns the name of the spooler batch job currently being spooled to the collector.
2. ****SPOOLCONTROL****: Replaces the Guardian file-system CONTROL procedure when spooling at level 3.
3. ****SPOOLCONTROLBUF****: Replaces the Guardian file-system CONTROLBUF procedure when spooling at level 3.
4. ****SPOLEND****: Writes any remaining blocked data to the spooler and signals the end of the job. It can be used to modify job attributes.
5. ****SPOLENCOMMAND****: Issues a SPOLENCOM command to the supervisor.
6. ****SPOILERREQUEST****: Obtains a startup message from the supervisor suitable for reading a job.
7. ****SPOILERREQUEST****: Similar to SPOILERREQUEST but includes batch enhancements.
8. ****SPOOLERSTATUS****: Obtains the status of spooler components.
9. ****SPOOLERSTATUS****: Similar to SPOOLERSTATUS but includes batch enhancements.
10. ****SPOOLJOBNUM****: Returns the job number of the job currently being spooled to the collector.
11. ****SPOOLSETMODE****: Replaces the Guardian file-system SETMODE procedure when spooling at level 3.
12. ****SPOOLSTART****: Specifies job attributes and optionally initializes a level-3 buffer.
13. ****SPOOLWRITE****: Compresses blocks and sends data to the spooler (3.01 source).

To utilize these procedures in a TAL program, they must be declared as external to the program. The external declarations for these procedures are located in the file `SYSTEM.SYSTEM.EXTDECSD` and can be sourced into your program using the compiler command `%SOURCE SYSTEM.SYSTEM.EXTDECSD (SPOOLSTART SPOOLWRITE ...)`. This inclusion allows the program to communicate with the Spooler subsystem effectively, ensuring data is received.

The Spooler Interface Procedures enable these levels of spooling from an application program:

- **Level-1 Spooling**: Uses default job attributes, with data sent to the collector using WRITEFILE, CONTROL, and SETMODE Guardian file-system procedures.
- **Level-2 Spooling**: Allows specification of job attributes using the SPOLENCOM procedure, with data sent as in level 1.
- **Level-3 Spooling**: In addition to specifying job attributes, this level uses SPOOLWRITE, SPOOLCONTROL, SPOOLCONTROLBUF, and SPOOLSETMODE procedures for data transfer, optimizing efficiency.

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Give an overview of the Spooler FASTP Network Print Process!

ChatGPT 4.0 -2-
AI PDF GPT -4-
PDF document navigator -3-
NonStop Manual Navigator -1-

Give an overview of the Spooler FASTP Network Print Process!

The Spooler FASTP Network Print Process is a component of the Spooler subsystem designed to facilitate printing over various network types, including local area networks (LANs) and wide area networks (WANs), through the use of specific FASTP network print processes. The process involves using the communication protocols they support, such as FASTPTCP for TCP/IP LANs, FASTPSMB for SMB LANs, FASTPNOV for NetWare LANs, FASTPK25 for X.25 WANs, and FASTPKNS for XNS LANs.

The configuration of the FASTP network print processes within the Spooler subsystem is a key aspect, which includes setting up a product-specific print process named FASTPxxx that communicates with a network print server using a specific communications protocol, and a configuration file (FASTCNFG) containing information about each printer device supported by the process. This setup allows for the management of print jobs, including the processing of CONTROL, SETMODE, and CONTROLBUF directives, JOB and BATCH commands, and adherence to general error-handling guidelines.

The FASTP network print processes also support printer-control operations and Spooler job and batch job subcommands, which allow for job customization and specialized output functions. These processes are designed to work seamlessly within the Spooler and IOP environments, providing a robust solution for network printing needs in diverse network configurations.

For detailed information on installing, configuring, and managing the FASTP network print processes, the "Spooler FASTP Network Print Processes Manual" is an essential resource, offering comprehensive guidance on every aspect of the process from initial setup to troubleshooting and error handling.

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Give an overview of the Spooler FASTP Network Print Process!

The Spooler FASTP Network Print Process enables HP NonStop systems to manage and route print jobs through various network protocols. Here's an overview of how it functions:

1. ****Environment****: FASTP network print process environment typically consists of a product-specific print process, named FASTPxxx, where 'xxx' is an acronym for the communication protocol used (e.g., FASTPTCP for TCP/IP).
2. ****Configuration****: This involves setting up the Spooler environment on an HP NonStop system, establishing network connections (IOP subsystem), and installing and configuring the specific FASTP network print process that can communicate with the network printer.
3. ****FASTCNFG File****: A configuration file contains information about each printer device the print process supports. This includes the protocol used, I/O process, printer identification on the network, and other protocol-specific parameters.
4. ****FASTKCON File****: An advanced feature that converts the FASTCNFG file into a key-sequenced file. This facilitates faster printer startup and is useful for large configurations. The FASTKCON file can also be updated online without impacting running FASTPTCP processes.
5. ****Installation****: FASTP network print processes are supplied as a distribution subvolume (DSV). For both G-series and D-series systems, object code for the print process is included. The installation tool recommended is the Distributed Systems Management/Software Configuration Manager (DSM/SCM).
6. ****Configuration Tasks****: Includes assigning a name to the FASTP network print process, configuring a Spooler device name to represent each printer serviced by the print process, defining job locations in the Spooler environment, and configuring network/protocol-specific parameters.
7. ****Operation Control****: Embedded printer-control operations within a Spooler FQNT job and using Spooler job and batch job subcommands allow for alteration of printer operation, supplementing configuration file information.
8. ****Trace Facility****: Each FASTP network print process supports tracing, which can be enabled or disabled as needed to assist with troubleshooting.
9. ****Error Handling****: FASTP network print processes handle errors similarly to standard FASTP print processes. They report device errors back to the Spooler supervisor, and recovery is based on the nature of the error.
10. ****SMS Messages****: From Q06.10 and Q48.02 RvUs onwards, FASTPTCP processes generate tokenized event messages, which include a set of new messages alongside tokenized versions of old ones.

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Give an overview of the Spooler FASTP Network Print Process!

The Spooler FASTP Network Print Process involves a specialized environment tailored for network printing within the HP NonStop system framework. Here's an overview based on the provided documentation:

1. ****FASTP Network Print Process Environment****: This environment typically consists of a product-specific print process, named FASTPxxx, which communicates with a network print server using a specific communications protocol. Additionally, there's a configuration file, referred to as FASTCNFG, containing information about each printer device supported by the print process.
2. ****Configuring the FASTP Network Print Process****: Configuring this process for communication with a network printer device involves several key steps, including:
 - Establishing a Spooler environment on an HP NonStop system.
 - Ensuring an established network connection, typically through an IOP (Input/Output Process) subsystem.
 - Installing a FASTP network print process capable of exchanging messages formatted according to the network printer's required protocol.
 - Configuring this print process within the Spooler subsystem and associating device information so the process knows how to address and communicate with the specific network printer.
3. ****Benefits of FASTKCON File****: For newer product versions of FASTPTCP, it's possible to convert FASTCNFG files into a FASTKCON key-sequenced file using the FASTKCON utility. This provides advantages such as avoiding long sequential searches (thus offering faster printer startups) and enabling online updates with no impact on running FASTPTCP processes, which is particularly useful for large configurations.
4. ****Components****: The components involved in the FASTP Network Print Process include the HP NonStop system, the Spooler subsystem, the FASTPxxx print process, the FASTCNFG file, the user's LAN or WAN, the print server, and the printer itself.
5. ****Process Installation and Configuration****: The installation process for a FASTP network print process is generally consistent across G-series and D-series systems, despite differences in network architecture and WAN activity. Each FASTP network print process product comes with the necessary object code for its print process, supplied as a distribution subvolume (DSV).

This overview provides a glimpse into the complexity and thoroughness of setting up and managing network print processes within HP NonStop systems, ensuring efficient and protocol-compliant communication between the system's spooler environment and networked printers.

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Give an overview of the Spooler FASTP Network Print Process!

The Spooler FASTP Network Print Process involves a series of steps for configuration and operation, designed to facilitate network printing within an HP NonStop system environment. The process integrates the Spooler subsystem with various network print servers using a common communications protocol. Here is an overview of the process:

1. ****FASTP Network Print Process Environment****: This environment typically consists of a product-specific print process, identified by the name FASTPxxx, where 'xxx' refers to the communications protocol used. Each print process is associated with a configuration file (FASTCNFG) containing information about each supported printer device. [15:01source]
2. ****Configuring the FASTP Network Print Process****: The configuration involves establishing a Spooler environment, a network connection through the IOP subsystem, and installing a FASTP network print process capable of communicating with the network printer using the required protocol. This also includes configuring the FASTP network print process within the Spooler subsystem and setting up device-specific parameters in the FASTCNFG file. [15:41source]
3. ****Supported FASTP Network Print Processes****: The Spooler subsystem supports various FASTP network print processes for different network types and protocols, such as FASTPTCP for TCP/IP LANs, FASTPSMB for SMB LANs, FASTPNOV for NetWare LANs, FASTPK25 for X.25 WANs, and FASTPKNS for XNS LANs. [15:01source]
4. ****Configuring FASTP Network Print Processes and Devices****: This can be done during the cold starting of a Spooler subsystem or when the Spooler subsystem is active. It involves configuring the FASTP network print process within the Spooler subsystem using Spoolcom commands and setting up a FASTCNFG file for the print process. [15:21source]
5. ****Spooler and FASTCNFG Configuration****: Key to the setup is the configuration within the Spooler environment and the FASTCNFG file, which holds network/protocol-specific parameters for the devices. This configuration dictates how the FASTP network print process communicates with the network printer. [15:61source]
6. ****Installation of the FASTP Network Print Process****: This involves copying the object code for the FASTP network print process from the Site Update Tape (SUT) to the system using the Distributed Systems Management/Software Configuration Manager (DSM/SCM). [15:141source]
7. ****Spoolcom Commands for Configuration****: The Spooler subsystem configuration for the FASTP network print process is executed using Spoolcom commands, which include specifying the object code file, the process name for the FASTP network print process, and Spooler device names to represent the network printers. [15:101source]

This overview encapsulates the steps and components involved in configuring and utilizing the Spooler FASTP Network Print Process within an HP NonStop system environment, ensuring effective communication and operation with network print servers across various protocols.

And the Winner is ...

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Network vs. private AI Models

- So far, only Network Models were presented.
- First three Models are suited for any collection of pdf-documents
- HPE Nonstop Manuals are public knowledge.
- For private Studies:
Download and install on an isolated PC:
PrivateGPT

Documentation on

<https://docs.privategpt.dev/overview/welcome/introduction>

Compare the features of ChatGPT 4 and PrivateGPT !

ChatGPT 4 and PrivateGPT, while similar in their foundation as language models developed by OpenAI, have distinct features catering to different needs.

ChatGPT 4:

- - **Generative Capabilities:** Capable of producing human-like text based on the input it receives. It's designed for a wide range of tasks including conversation, content creation, and information retrieval.
- - **Pre-trained Knowledge:** Contains a vast amount of information up to its last training cut-off in April 2023, making it knowledgeable across a wide array of topics.
- - **Model Size:** Although specific details about the size are proprietary, it's known to be a large model with billions of parameters, enabling complex understanding and generation capabilities.
- - **Accessibility:** Generally available through OpenAI's API, making it accessible for integration into various applications and services.
- - **Safety Features:** Includes built-in mechanisms to avoid generating harmful or biased content, although it's not foolproof.

PrivateGPT:

- - **Data Privacy:** Tailored for environments where data privacy and security are paramount. It's designed to operate in a way that ensures user data isn't stored or used for model training purposes without consent.
- - **Deployment:** Often deployed in a way that allows businesses and organizations to maintain control over their data, possibly through on-premises or private cloud installations.
- - **Customization:** Might offer more flexibility for customization to specific industries or use-cases, considering the sensitive nature of the data it handles.
- - **Compliance:** Likely to be designed with compliance in mind, adhering to strict data protection regulations such as GDPR, making it suitable for use in sectors like healthcare, finance, and government.
- - **Interactivity:** While it can engage in conversations and generate text like ChatGPT 4, its capabilities might be more aligned with the specific needs and constraints of private, secure environments.

The choice between ChatGPT 4 and PrivateGPT depends on the specific requirements, including the need for data privacy, customization, and compliance with regulatory standards.