PrintKit® Network Print Services Version 2.2-6 Release Notes

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Northlake Software
Portland, Oregon

PrintKit Version 2.2-6 Release Notes 1

Contents

Version 2.2-6 of the PrintKit software is a maintenance update to version 2.2. As such, it provides the same feature set, but fixes several problems encountered in the version 2.2 software.

Version 2.2 was a major release of the PrintKit software. As such, it provided significant new features, many of which applied to two key areas: support for production printing, and changes to simplify installation and configuration. The release also contained corrections to problems encountered in the version 2.1 software, and it updated the collection of printer models packaged with the software.

Starting with version 2.2, there are now two versions of the PrintKit software. The PrintKit Production Printing Services (Production PrintKit) software provides all the capabilities of the standard PrintKit Network Printing Services software, and adds features to meet the specific needs of high-volume, print-on-demand, and other production printing environments.

These release notes apply to version 2.2 of the PrintKit software, and updates 2.2-1 through 2.2-6. The New Features and the Known Problems And Work-Arounds sections apply to all versions, and the Problems Corrected section is subdivided by version.

Where to Get Help

If you purchased the PrintKit software from a reseller, they are your first contact for support. In particular, if you purchased the software in combination with a printer, your reseller is often in the best position to diagnose configuration issues or problems that result from specific characteristics of the printer.

Northlake Software also provides direct telephone, e-mail, and FAX support. Support is available to customers for 90 days after purchase of the PrintKit software, and on a continuing basis for customers subscribing to support services. The telephone number for support is +1 503-228-3383, the FAX telephone number is +1 503-228-5662, and the e-mail address is printkit@nls.com.

If you are having a problem with the software, make sure you have followed the suggestions in the PrintKit User Manual, Troubleshooting PrintKit, before you contact your reseller or Northlake for assistance. The support staff will be especially interested your queue configuration — the output from KITCP SHOW QUEUE/FULL — and in specific error messages — operator messages produced with REPLY/ENABLE=PRINTER in effect and error messages produced by using PRINT/NOTIFY.

Web Access to Technical Information

Northlake Software's web site, http://www.nls.com, includes technical support information for the PrintKit products.

This is a good place to check for model definitions for new printers. New printer model definitions are placed on the web site as they are validated. The updates are packaged as a VMSINSTAL patch kit, so it is an easy task to load them into your installed software.

The web site also provides selected bug fixes.

New Features

The descriptions of new PrintKit software features are organized by area: document preparation, job processing, KITCP and configuration database, internals, installation and IVP, and communications.

You can also consult the PrintKit User Manual for more detailed information on changes that affect the interfaces to the PRINT and KITCP commands.

Document Preparation

This release of PrintKit provides major enhancements to the control you have over the printing and assembly of documents. There are powerful new ways to manipulate the media used for printing. It is now possible to specify finishing processes (stapling, binding, folding) to be applied to the document. And there are additional imposition (layup) controls. Because the resulting specifications for document preparation can become quite complex — too complex to conveniently enter from the PRINT command line — the

release also provides methods for storing specifications for later use.

These enhancements involve changes to PrintKit's parameter set and document preparation, and also to the KITCP program and configuration database.

The additions to the PrintKit parameter set represent extensions to the standard DECprint parameter set. They are modeled after the document specifications defined by the ISO 10175 Document Printing Application (DPA) standard. This standard was also the source for the DECprint parameters, so the additions are logically consistent with the base parameter set, and they benefit from the carefully considered design of the DPA standard.

New Media selection parameters

Previously, media could be selected according to input bin or according to size (letter, A4, etc.). The new controls make use of media specifications that designate media according to multiple attributes — size, color, weight, type, and electronic forms overlays.

The DEFAULT_MEDIUM parameter specifies the default medium for the overall document. The default medium may be superseded for selected pages by commands within the document itself, or by the PAGE_MEDIA_SELECT parameter. In addition, the effect of media selection commands within the document may be modified by the MEDIUM_SUBSTITUTION parameter (this applies specifically to ANSI-PPL3 files, and is used to replace tray-based media selection by selection based on media specifications).

Page media selection and medium substitution controls are available only with Production PrintKit.

New finishing parameters

The FINISHING parameter specifies a finishing process to be applied to the document. It makes use of finishing specifications that designate a sequence of finishing steps to be applied to the document. Finishing steps may include stapling, binding, and folding.

Finishing is normally applied just to the document body, and not any separator pages printed as part of the job. The FINISHING_INCLUDES_DOCUMENT parameter causes document body and separator pages to be finished as a unit.

Finishing steps are implemented using PostScript commands, so they are available only with PostScript and ANSI-PPL3 documents. PrintKit determines the commands from the PostScript Printer Definition file for the printer.

Finishing controls are available only with Production PrintKit.

New INITIAL_VALUE_DOCUMENT parameter

The INITIAL_VALUE_DOCUMENT parameter provides a shorthand for specifying a set of parameters to be applied to a document. It makes use of document specifications that define a set of parameters. The INITIAL_VALUE_DOCUMENT may be used to specify the entire set of parameters for printing a document, or it may be combined with other parameters.

Implemented TAB parameter

The TAB parameter controls how tab characters and form margin settings are processed in an ANSI-PPL3 document. NOTAB causes tab characters to be replaced by spaces before being processed by the ANSI-PPL3 translator; TAB leaves the tabs for processing by the translator. So, when NOTAB is in effect, tabs are unaffected by the ANSI-PPL3 controls that normally alter tab placement. Also, NOTAB causes form margins to be implemented with spaces; TAB causes margins to be implemented by changing the initial ANSI-PPL3 state.

Enhanced PAGE_LIMIT parameter and /PAGES qualifier

Previously, the PAGE_LIMIT parameter (and the /PAGES qualifier, which was treated identically) selected only a single range of pages, and its use was limited to printers that supported PJL job control. The PAGE_LIMIT parameter is now also implemented for PostScript printers, and its syntax has been extended to allow more complex page selections.

For PostScript and ANSI-PPL3 documents, you can now select multiple page ranges, and you can select a sequence of

pages at fixed intervals through the document (every other page, for instance). For ANSI-PPL3 documents, you can also select pages based on the printed matter that appears on the page.

Implemented /FEED qualifier

For ANSI-PPL3 documents, the /FEED qualifier now causes a page eject when the current line reaches the bottom margin defined by the form in effect for the job. Without the /FEED qualifier, the page eject occurs at the ANSI-PPL3 bottom margin (which may differ from the form margin).

Enhanced layup controls

The LAYUP parameter may now refer by name to a predefined layup specification, as an alternative to specifying layup options directly. Layup specifications are stored in the PrintKit configuration database (where they are called *imposition* specifications) and are managed by KITCP.

The implementation of the ALTERNATE layup option can now alternate both vertical and horizontal margins independent of duplex mode. Previously, the orientation of alternation was tied to the duplex orientation (normal or tumble).

A new SIGNATURE layup option specifies page arrangement on printers which have the capability of rearranging pages into signatures for booklet printing.

Signature printing controls are available only with Production PrintKit.

Deprecated OVERLAY parameter

The OVERLAY parameter has been replaced by more flexible media handling capabilities. A medium definition may specify overlays for the front and back sides of the sheet.

Job Processing

Printer-generated multiple copies

PrintKit now detects printers capable of producing multiple collated copies, and in these cases directs the printer to produce multiple copies as specified by the /COPIES qualifier. This allows the document to be transferred to the printer only once, instead of multiple times.

Support for printers with collating capabilities is available only with Production PrintKit.

Printer-generated separator pages

PrintKit normally adds code to the document transmitted to the printer to produce separator pages (header, burst, and trailer pages for job and file, and log pages) if specified. Some printers are capable of producing their own separator pages. PrintKit is now capable of using this alternative. For it to do so, the primary PrintKit device control library must contain a special auxiliary PPD module for the printer that specifies the controls used to enable the printer's "built-in" separator pages. An added SHEETS option to the queue /SEPARATOR qualifier selects between KIT and BUILTIN separator pages.

KITCP and Configuration Database

The PrintKit configuration database, used to store printer model and queue specifications, now also contains document, media, imposition, and finishing specifications. All specifications in the database are managed by KITCP. They are referenced by name, by other specifications or by print command parameters.

New KITCP commands for document, media, imposition, and finishing specifications

The ADD, COPY, MODIFY, REMOVE, and SHOW commands have been extended to apply to the DOCUMENT, MEDIUM, IMPOSITION, and FINISHING specifications that are now part of the PrintKit configuration database.

For compatibility with DECprint Supervisor, IMPOSITION specifications may be defined from layup definition files.

New KITCP database operations

The SET DATABASE command selects the PrintKit configuration database on which KITCP is to operate. The SHOW DATABASE command displays the database on which KITCP is currently operating.

KITCP interactive mode

All ADD, COPY, and MODIFY commands can now be entered with a /INTERACTIVE qualifier that causes KITCP to prompt for attributes, rather than requiring you to enter them using

command qualifiers. By default, KITCP prompts for only the most common attributes, but you can specify /FULL along with /INTERACTIVE to be prompted for all of them. To simplify interactive input, the command buffer is preloaded with the current or default setting, and recall buffers are loaded with alternative settings, so you can step through choices. Interactive help is also available.

Changes to qualifiers for KITCP queue commands

The /ON qualifier may now specify TCPIP as the name of the TCP/IP interface, instead of specifying a particular network interface device. This causes PrintKit to automatically determine the appropriate network interface.

The /SEPARATOR qualifier now accepts an additional SHEETS=keyword option that selects how separator pages are generated. BUILTIN indicates printer built-in separator pages, KIT indicates ones generated by PrintKit.

The /DEFAULT qualifier PARAMETERS option has been replaced by a DOCUMENT option. Instead of specifying a list of default parameters, as in the PARAMETERS option, the DOCUMENT option specifies the name of a document specification that supplies the document processing defaults for the queue.

The /PROTOCOL qualifier has been renamed to /COMMUNICATIONS, to remove a naming conflict with the /PROTECTION qualifier. /PROTOCOL is still supported, but its use is deprecated, and it may be removed in a future release.

The /COMMUNICATIONS qualifier SYNCH option, which used to have two settings (SYNCH and NOSYNCH), now has three settings (SYNCH, ASYNCH, and default). The SYNCH settings enables synchronization (if supported by the communications protocol), ASYNCH disables it, and the default is whatever setting is “preferred” for the protocol. The ASYNCH setting replaces the previous NOSYNCH setting; NOSYNCH now selects the default setting. This corrects a problem that caused the SYNCH setting to be selected by default.

There is a new /COMMUNICATIONS qualifier GATEWAY option, which specifies the address of a gateway to be used by PrintKit's built-in TCP/IP networking.

Changes to qualifiers for KITCP model commands

Default settings have been added to model definitions to simplify the process of queue creation. The /DEFAULT qualifier can be used to supply settings for communications, emulations, job control, and printer options that are appropriate to the particular printer model. When a queue is created based on the model, these settings supply the defaults for the queue.

The translation of standard INPUT_TRAY parameter names to the input slots present on a particular printer can now be controlled by the model /INPUT_TRAY_SUBSTITUTION qualifier. It associates the parameter tray names with the slot names used in the PostScript Printer Definition file for the printer model. An equivalent /OUTPUT_TRAY_SUBSTITUTION qualifier associates OUTPUT_TRAY parameter names with output bins.

Moved configuration database to same location as queue manager database

PrintKit first looks for its configuration database in the directory indicated by the logical name QMAN$MASTER, second in SYS$SYSTEM. This matches the procedure used to locate the queue manager database, and allows common databases to be shared across a cluster with multiple system disks.

Internals

Improved handling of PostScript file DSC comment processing

PrintKit now does a better job of maintaining the integrity of Document Structuring Convention (DSC) comments in PostScript documents being printed. Certain printers have adopted the convention of using these comments to allow the user to select document processing options. Previous versions of PrintKit could change the position of DSC comments, effectively hiding them from the printer.

The header section of DSC comments now remains at beginning of the generated output; added PostScript code is placed following the header. PostScript setup modules containing only PostScript comments are now detected and placed in the header section.

%%Page comments are placed in the PostScript output generated from ANSI-PPL3 translation, and a %%Pages comment is placed in trailer section.

Errors in formatting the featuretype/option in the %%Begin-Feature and %%IncludeFeature comments generated by PrintKit have been corrected. A space is now generated following the %%+ continuation comment. Placement of line breaks in generated DSC comments has been improved.

Better handling of files containing PJL commands

PJL commands are now stripped from files being printed. Otherwise, they would interfere with the PJL commands PrintKit itself generates, or cause interpretation problems on printers that do not support PJL controls.

PJL information is used to help determine the data type of the file being printed when automatic data type selection is in effect. The PJL ENTER LANGUAGE command, if present, is parsed to determine the data type.

New implementation of job controls

Printer job control commands are now derived from information in an auxiliary PPD module stored in the primary PrintKit device control library. A default module for each job control protocol provides for most cases, but printer-specific modules can be provided for printers with unusual requirements.

Installation and IVP

Configuration database installed in same location as queue manager database

If the QMAN$MASTER logical name is defined, the installation uses the directory it indicates as the location of the PrintKit configuration database, otherwise it uses SYS$SYSTEM as the directory. This matches the location of the PrintKit configuration database with the queue manager database.

Update existing configuration database and device control libraries

When an installation is performed on a system with PrintKit already installed, the installation now merges the contents of the new PrintKit configuration database and standard

device control libraries with any pre-existing versions. This preserves local definitions added to the configuration database (such as queue definitions) and local additions to the device control libraries. Note, however, that if local modifications have been made to the standard definitions in the configuration database or to standard device control library modules, these will be replaced with the originals.

Communications

Generic TCP/IP device for /ON queue qualifier

If TCPIP is specified as the network interface device for TCP/IP communications, PrintKit automatically determines what TCP/IP interface is present and uses it.

Gateway processing for built-in TCP/IP communications

A gateway address may now be specified for a queue using the /COMMUNICATIONS qualifier GATEWAY option. This is used only for PrintKit's built-in PEP TCP/IP communications interface; the independent TCP/IP interfaces all handle gateways independently of PrintKit. Due to limitations of the PEP interface, only one PrintKit queue per system may be routed through each gateway (the PEP implementation is unable to handle two printers routed through the same gateway).

Corrections in Version 2.2

The descriptions of corrections to the PrintKit software are organized by area: document preparation, job processing, KITCP and configuration database, and communications.

Document Preparation

Corrected default NUMBER_UP parameter setting

The NUMBER_UP parameter now defaults to one if layup is specified and no NUMBER_UP or GRID layup option is specified. This matches the DECprint Supervisor implementation.

Corrected PostScript layup and media handling

Layup and media selection are implemented by PostScript code sent to the printer along with the document being printed. As part of its operation, this code redefines a set

of standard PostScript operations to perform additional processing required for layup or media selection and to keep them from interfering with the layup and media selection. Previously, the set of redefined operators was incomplete, resulting in incorrect layup and media selection. A more complete set of operators is now redefined.

The PostScript layup and media selection code incorrectly set the standard PostScript statusdict dictionary to readonly. It is now left writable.

Job Processing

Adjustments to separator pages

The formats of all separator pages have been adjusted slightly to better position the displayed information. Product identification that was missing from the log page is now displayed. Characters from the ISO Latin-1 character set are now displayed correctly on separator pages.

Corrected job page count displayed on job trailer separator page

The total job page count is now displayed correctly on the job trailer page. This page count is accumulated across all files in job from page accounting information returned by the printer, so it requires printer job control and communications capable of returning the required information.

KITCP and Configuration Database

Improved error reporting

KITCP errors are now reported using OpenVMS error codes and messages. Command errors are reported in a manner matching DCL error reporting.

Communications

Suppressed BADPARAM errors during protocol connection

The normal process of negotiating a connection for TCP/IP-based protocols sometimes generates error indications from attempts to use a port combination that is already in use. Depending on the TCP/IP interface in use, these may be reported either as FILALRACC or BADPARAM errors. Previously, only the FILALRACC errors were filtered out, and BADPARAM errors resulted in spurious error messages. Now BADPARAM errors are also filtered during the connection negotiation.

Correction to LAT protocol disconnect processing

An error in the LAT protocol disconnect processing could cause the loss of the last part of the document being printed. The problem occurred only when communications were configured without synchronization—either for a printer that did not support synchronization, or for a combination of data type and printer job control that did not allow synchronization (such as PCL on a printer without PJL job control). LAT output is now flushed properly.

Corrections in Version 2.2-2

The descriptions of corrections to the PrintKit software are organized by area: document preparation, job processing, KITCP and configuration database, internals, and communications.

Job Processing

PSM$ANNOUNCE text was not displayed on separator pages

This problem has been corrected.

Improved error reporting when unable to create job log file

When PrintKit encounters an error in creating a job log file as requested by the MESSAGES=KEEP parameter, it now produces a more informative error message, including the name of the log file it attempted to create.

KITCP and Configuration Database

Corrected imposition borders specification

By default, page borders are displayed for non-zero NUMBER_UP settings, but not for zero NUMBER_UP. Overriding this default using an imposition specification was not possible, because PrintKit did not distinguish between a specification for no borders and one for default borders.

The imposition /BORDERS qualifier now accepts an ALL or NONE qualifier. Setting /BORDERS=NONE disables border display, while setting /NOBORDERS selects the default.

Updated to handle revised Adobe PPD file structure

Version 4.3 of the Adobe PostScript Printer Description File Format Specification changed the the way manual feed input

was specified, and substituted new names for envelope media sizes. PrintKit is now updated to handle PPD files that conform to this revised specification.

Corrected model name display in DCL format output

Model names are now quoted correctly in the output produced by the SHOW MODEL command when the /DCL qualifier is specified.

Internals

Corrected resource deallocation problems

A problem in the cleanup between jobs has been corrected. It could cause storage to not be deallocated, and could delay deallocation of other resources used by the PrintKit symbiont.

Communications

Corrected TCP/IP keepalive handling

The PrintKit TCP/IP processing attempts to keep communications with the printer active during intervals when no data is being transferred between the PrintKit symbiont and the printer (such as while waiting for the printer to finish printing a document). It does this by sending extra empty packets to the printer.

For some printers, keepalive processing keeps the printer from disconnecting prematurely. Most printers, however, do not require it, and it is not a generally recommended practice, because it generates extra network traffic.

This keepalive processing is now disabled by default, and must be explicitly enabled by specifying KEEPALIVE as a /COMMUNICATIONS OPTION setting for a queue. The KEEPALIVE option also specifies a maximum amount of time to keep an idle connection alive.

Corrected lpr/lpd protocol problems

The lpr/lpd protocol requires that connections use TCP/IP ports from a specified range (721 to 731). When multiple lpr/lpd queues are active or a single queue is generating jobs in rapid succession, it is possible for all the allowed ports to be active, and jobs must wait for ports to become available. In this situation, PrintKit would sometimes generate error messages (FILALRACC, DUPLNAM, or BADPARAM).

Busy ports no longer produce error messages when printing a job — PrintKit silently retries until a port becomes available. FILALRACC or DUPLNAM error messages may still be generated during queue startup, and they can normally be ignored. However, if they appear when other lpr/lpd queues are stopped or idle, they may indicate a persistent problem rather than transient activity.

PrintKit now adjusts the lpr/lpd control file specification to (partially) indicate the data type of the document being printed. PostScript files are indicated by an o command code, all other files by an l command code. Some lpr/lpd server implementations use this information in processing the file.

The PrintKit code to generate lpr/lpd control files could overflow internal storage, causing unpredictable errors. Typically, the problem occurred when very long filenames were used. The problem is corrected.

ACCVIO errors produced by STOP/RESET of active queue

Performing a STOP/RESET on an active PrintKit queue would sometimes cause the symbiont to generate an ACCVIO error. The symbiont reset processing has been changed to avoid these conditions.

When the PrintKit symbiont fails with an unexpected fault, such as ACCVIO, it produces a process dump file, SYS$SYSTEM:PRINTKIT.DMP. If PrintKit dump files are present on your system, you should delete them.

Spurious error messages from direct serial connection

Uninitialized data could cause spurious error messages when performing printer communications over a direct serial connection. The problem appeared primarily when running the PrintKit IVP, which simulates serial communications to a null device to test the software.

Corrections in Version 2.2-3

The descriptions of corrections to the PrintKit software are organized by area: document preparation and internals.

Document Preparation

Corrections to ANSI-PPL3 processing

The Page Format Select for the Digital extended legal landscape page format (PFS ?25) set the page size incorrectly, causing output to be clipped. The page size is now set correctly.

Sixel graphic processing has been changed to correct the vertical positioning of graphics.

Internals

Improvements to finishing controls

Certain printers are capable of applying finishing operations only to collated output. PrintKit now recognizes this case, and selects collation if it is required for finishing.

Nested Adobe PPD file handling

PrintKit now processes the Adobe PostScript Printer Description (PPD) file *Include directive, allowing one PPD file in the PrintKit device control library to refer to another. This makes it possible to add information or make corrections required by PrintKit, without modifying the standard PPD files distributed by printer manufacturers.

Corrections to handling of files containing PJL commands

The code to strip PJL commands from files being printed did not stop properly when the PJL commands were terminated implicitly by the presence of non-PJL data in the file, and could remove valid data from the file. Non-PJL data now properly ends a PJL command sequence.

Improved PostScript DSC comment generation

Several minor changes were made to improve the quality of Document Structuring Convention (DSC) comments in PostScript code produced by PrintKit. This improves interaction with document processing software or printers that interpret the DSC comments.

Corrections in Version 2.2-4

The descriptions of corrections to the PrintKit software are organized by area: document preparation, job processing, KITCP and configuration database, and internals.

Document Preparation

Adjusted position of page heading line

The page heading line produced by the /HEADING PRINT qualifier was placed too high on the page, which could case the top of the heading text to be clipped on many printers. The heading position has been adjusted downward to align with the first line postion.

Corrected handling of page data fields in page selection expressions

Page selection expressions used in PAGE_LIMIT and PAGE_MEDIA_SELECT parameters can select pages using a FIELD function, which refers to data appearing on the page. The code to collect this field data from the input document was incorrect and could cause storage corruption. This problem has been corrected.

Job Processing

Trailing separator pages not included in finishing

In certain cases, trailing separator pages (job and file trailer pages, message log page) were included with the document body when finishing operations were applied. These pages are now separated from the document body.

Media handling carried over from one job to next

In cases where a document with the PostScript data type followed one with the ANSI-PPL3 data type, unnecessary media handling code was added to the PostScript job. This ordinarily had no noticeable effect, but could keep some unusual PostScript documents, such as those containing exitserver commands, for working correctly.

KITCP and Configuration Database

Added standard TRANSPARENT document specification

The specification selects the TRANSPARENT data type. It is for use in situations where data is to be transferred to the printer without modification by PrintKit such as downloading certain types of data to a printer, or for printers that do not interpret PrintKit's usual data types.

Internals

Corrected problem with storage deallocation

Certain cases when a queue was stopped with STOP/RESET command caused an error in storage deallocation, resulting in a BADLOGIC error and a process dump. Storage deallocation has been changed to avoid the condition.

Corrections in Version 2.2-5

The descriptions of corrections to the PrintKit software are organized by area: document preparation, KITCP and configuration database, internals, and installation and IVP.

Document Preparation

Corrections to ANSI-PPL3 processing

The Page Format Select for the Digital extended B-size portrait and landscape page formats (PFS ?26, PFS ?27) set the page bounds incorrectly. The bounds are now set correctly.

Specifying the DEC Technical or DEC Special Graphics character set in combination with a DEC BUILTIN1 font designation selected a bold font, rather than the normal weight font, because some of PrintKit's built-in fonts for the DEC Technical and DEC Special Graphics character sets were incorrectly assigned to the BUILTIN1 font family. They have been reassigned to the PI Font family to correct the problem.

KITCP and Configuration Database

Corrected imposition layup definition processing

Any attempt to use the imposition /LAYUP_DEFINITION qualifier resulted in an error. The qualifier is now processed correctly. Also, the imposition name is now the default for the layup definition file name.

Internals

Reduced delay in completing jobs

For certain combinations of printer job control and communications protocols, the PrintKit symbiont waited for five seconds after job processing was finished before completing the job. In particular, it applied this delay when using the lpr/lpd protocol. The delay could reduce throughput on high-speed printers when the job stream consisted predominantly of small jobs. PrintKit now completes these jobs without a delay.

Corrections to handling of files containing PJL commands

The code to strip PJL commands from files being printed did not properly handle a PJL UEL sequence following a PJL ENTER LANGUAGE command. It removed the UEL sequence, but not the following PJL commands, which then printed as text. The entire PJL sequence is now removed.

When PJL sequences are removed from PCL files, they are replaced with a PCL Printer Reset command. A PJL sequence implicitly performs a printer reset, so this treatment provides better behavior for files subdivided by PJL sequences.

Queue name used as user name when requesting LMF authorization

When PrintKit requests authorization from the License Management Facility, it now specifies the execution queue name as the LMF user name. This allows you to assign a PrintKit License PAK to a particular queue, by specifying the queue name in the reserve list for the PAK. This can be useful if you are using PrintKit and Production PrintKit in combination, and you need to assign the Production PrintKit PAKs to the appropriate queues.

Removed inappropriate PostScript DSC comments

Inappropriate Document Structuring Convention (DSC) comments have been removed from several places in the PostScript code produced by PrintKit. Resource requirement comments (%%DocumentNeededResources, %%IncludeResource) were specified for resources already present in the data stream. Although these comments were normally harmless, because they were ignored by PostScript interpreters,

they could cause problems if the output from PrintKit was processed by a PostScript document manager that attempted modifications based on the DSC information.

Increased amount of file examined during automatic data type detection

To perform automatic data type detection, PrintKit examines the beginning section of the data file being printed. The maximum extent examined has been increased to 1024 bytes from 256. In particular, the old limit was too short for many files with PJL header sections.

Installation and IVP

Added check to ensure previously installed files are in correct locations

The installation now checks for existing files from a previous installation of the PrintKit software and makes sure none are located in sys$specific directories. (The installation places files in sys$common directories — existing files in sys$specific directories will "hide" the new files.) If incorrectly located files are found, you can either let the installation correct the problem, or stop the installation and make corrections manually.

Deinstall procedure did not remove PrintKit configuration database correctly

A typographic error in SYS$MANAGER:PRINTKIT_DEINSTALL.COM has been corrected so the configuration database, SYS$SYSTEM:PRINTKIT_CONFIG.DAT, is removed correctly when deinstalling the PrintKit software.

Corrections in Version 2.2-6

The descriptions of corrections to the PrintKit software are organized by area: internals, and installation and IVP.

Internals

Corrected Fortran carriage control processing

PrintKit's handling of files with Fortran carriage control has been changed to use carriage-return/line-feed character pairs for for prefix carriage controls, instead of line-feed characters. This affects the carriage control sequences that precede records with single space (␣), double space (0), and prompt ($) carriage control.

Corrected automatic detection of ANSI-PPL3 data type

PrintKit's automatic data type detection mistakenly identified a file as having ANSI-PPL3 data type if it contained any escape characters and was otherwise unrecognized. This caused files of PCL data type to be identified as ANSI-PPL3. This check has been removed, and PrintKit now uses the default data type setting for files it cannot unambiguously identify as PCL or ANSI-PPL3.

Installation and IVP

Corrected problem identifying printer emulations in IVP

When the PrintKit IVP was used, separately from the installation, to test the operation of a PrintKit queue, it would often display a "cannot determine emulations for queue" warning message. The IVP now uses a different method of examining the queue configuration to avoid this problem.

Upgrading from PrintKit Version 2.1

For the most part, PrintKit 2.2 is upward-compatible with version 2.1. There are some additional steps you'll need to take during installation to preserve your existing configuration. Your existing print commands will work without change, although some parameters have been deprecated.

Update License PAK

PrintKit upgrade kits for current customers are shipped with a PRINTKIT-UPDATE LMF Product Authorization Key (PAK). This PAK works in combination with your existing PRINTKIT PAK to enable the use of the version 2.2 software.

Load the new PRINTKIT-UPDATE PAK on your system along with your existing PRINTKIT PAK. (Don't remove the existing PAK.) When you use the updated software, the PrintKit queue startup message will display PRINTKIT+PRINTKIT-UPDATE as the license PAKs used by the queue.

Preserving configuration information

The PrintKit configuration database, PRINTKIT_CONFIG.DAT, was located in SYS$MANAGER with the version 2.1 software. With version 2.2, it is placed in the same directory as the queue manager database, QMAN$MASTER.DAT, which is either SYS$SYSTEM or a cluster-common directory.

To preserve your PrintKit configuration during an upgrade, copy PRINTKIT_CONFIG.DAT to the new directory. The installation will create a new version of the file, starting with your existing information. Once you're comfortable with the upgrade, delete the old version of the file in SYS$MANAGER.

If you have specified default parameters for any PrintKit queues, this information will be lost. Use KITCP to create document definitions containing the default settings, and configure your queues to refer to these definitions using the /DEFAULT DOCUMENT option. If your default parameters include the REQUEST_TO parameter, use the queue /REQUEST_TO qualifier instead.

The PrintKit installation defines a standard set of printer models and loads the corresponding PostScript Printer Definition (PPD) modules into the PrintKit device control library. If you have modified any PrintKit models or PPD

modules, your changes will be lost. If you have added any models, they may be superseded by models added to the standard set. In either case, make sure you have a record of any changes you have made, and compare them with the new definitions supplied by the installation to determine whether you need to replace any of your changes.

The version 2.2 configuration database is not backward-compatible with the 2.1 software. If you want to be able to back up to the version 2.1 software, be sure to save a copy of the database.

Deprecated and obsoleted parameters

The OVERLAY parameter has been deprecated, replaced by the new medium definitions and the DEFAULT_MEDIUM parameter. With this new mechanism, overlays are designated as part of the medium specification for the document.

The REQUEST_TO parameter has been obsoleted. Instead, operator classes to receive status and error notification may be specified with the queue /REQUEST_TO qualifier.

Known Problems And Work-Arounds

PATHWORKS for OpenVMS (Macintosh) integration

For the PATHWORKS for OpenVMS (Macintosh) software to work correctly with a PrintKit queue, certain setup modules required by PATHWORKS must be present in the PrintKit Device Control Library. The PATHWORKS product provides a command procedure to supply the required modules. You use it as follows:

```
$ @msa$root:[msa.msap$utility]msap$insert_decprep printkit
```

PATHWORKS examines the Device Control Library to determine the names of the setup modules it uses. To do this, it gets the library name from the queue it is using, and accesses the library in the SYS$LIBRARY: directory. For this procedure to work correctly with PrintKit, the modules must be placed in the primary PrintKit Device Control Library, PRINTKIT.TLB (PrintKit accesses additional libraries through its own configuration database — they are not available from the OpenVMS queue configuration).

In a cluster configuration, the PrintKit Device Control Library must be present in the SYS$LIBRARY: directory on the node on which the PATHWORKS print server is installed. This is normally the case, since the library is placed in the SYS$COMMON:[SYSLIB] directory, but in unusual cases, mixed VAX/AXP clusters in particular, you may need to make a copy of PRINTKIT.TLB for the benefit of PATHWORKS.

PrintKit IVP cannot always determine emulations

The IVP consults the PrintKit configuration database to determine the emulations supported by the printer being tested. It uses DCL commands to read the database record for the queue, and it is possible for the record to be too long to read correctly. If this occurs, a warning message is displayed, and the IVP tests a default set of emulations.

Conformance to ANSI-PPL3 specification

There is a discrepancy between the *Digital ANSI-Compliant Printing Protocol LEVEL 3 Programming Reference Manual* specification and the DECprint implementation of the ANSI-PPL3 data type. The Reference Manual specifies that values for nominal, minimum, and maximum width of space be scaled when using a fixed HAI (JFY command description). However, the DECprint implementation does not adjust the minimum or maximum values. When text is justified with limits, this discrepancy produces a differing minimum spacing when a line is compressed, and a differing cutoff point for unjustified setting when a line is expanded.

At present, the PrintKit implementation conforms to the Reference Manual specification.