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# Xerox 4635 Laser Printing System System Generation Guide

Xerox Corporation  
701 S. Aviation Boulevard  
El Segundo, CA 90245

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Changes are periodically made to this document. Changes, technical inaccuracies, and typographic errors will be corrected in subsequent editions.

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## Related publications

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The *Xerox 4635 Laser Printing System – System Generation Guide* is part of the ten-manual reference set for your laser printing system. The entire reference set is listed in the table below. Several other related documents are also listed for your convenience. For a complete list and description of available Xerox documentation, refer to the *Xerox Documentation Catalog* (Publication number 610P17417) or call the Xerox Documentation and Software Services (XDSS) at 1-800-445-5554.

<b>Publication</b>	<b>Number</b>
<i>Xerox Dynamic Document Interface Operator Guide</i>	720P13670
<i>Xerox Dynamic Document Interface Command Summary</i>	720P13680
<i>Xerox 4635 Laser Printing System Operator Guide</i>	721P83010
<i>Xerox 4635 Laser Printing System Operations Reference</i>	721P83020
<i>Xerox 4635 Laser Printing System Sysgen Guide</i>	721P83030
<i>Xerox 4635 Laser Printing System Message Guide</i>	721P83040
<i>Xerox 4635 Laser Printing System PDL/DJDE Reference</i>	721P83050
<i>Xerox 4635 Laser Printing System Forms Creation Guide</i>	721P83060
<i>Xerox 4635 Laser Printing System Product Reference</i>	721P83070
<i>Xerox 4635 Laser Printing System Installation Planning Guide</i>	721P83080
<i>Xerox 4635 Laser Printing System Operator Command Summary Card</i>	721P83090
<i>Xerox 4635 Laser Printing System PC UI Reference</i>	721P83100
<i>Xerox Laser Printing Systems Tape Formats Manual</i>	600P86175
<i>Xerox Laser Printing Systems Standard Font Library Font User Guide</i>	600P86174
<i>Helpful Facts About Paper</i>	721P82490

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## Notice

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This publication may contain descriptions of concepts and features not currently available for your Xerox Laser Printing System. Consult your Xerox sales representative or your operating system software program description for additional information.

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# Introduction

The *Xerox 4635 Laser Printing System—System Generation Guide* is one of several manuals that make up the 4635 Reference Set. The guide is divided into four chapters and one appendix as follows.

Chapter	Content
1. Sysgen overview	Types of sysgen available and the resources required to perform a sysgen.
2. Sysgen commands	Sysgen commands and how to use them.
3. System configuration options	System configuration options and parameters.
4. Sysgen and sysgen-related procedures	Step-by-step installation and upgrade procedures for the 4635 PC user interface and procedures for full, update, and mini sysgens.
A. Sample JCL for transmission of system software tapes	Example of a typical host utility for sending concatenated files to the printing system.

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## About the reference set

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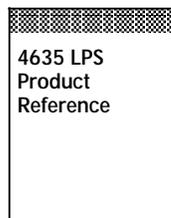
This document is part of a reference set designed to help you receive maximum benefit from your 4635 laser printing system.

To help you select the appropriate document for your needs, the following section identifies the documents in the set and describes the information contained in each.

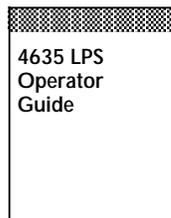
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## 4635 Laser Printing System document set

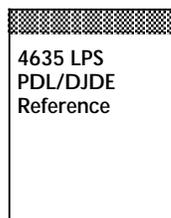
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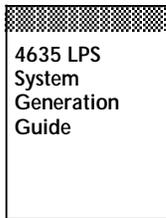
- Product overview
- Hardware and software
- LPS connections
- User considerations
- LPS comparisons



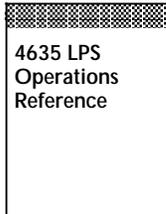
- System overview
- PC UI procedures
- Paper facts and procedures
- Operating procedures
- Maintenance
- Problem solving
- Supplies
- Meter reading and reporting



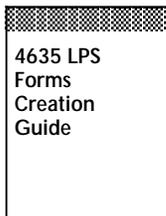
- Print Description Language components and processes
- Input processing functions
- Output processing functions
- PDL/DJDE command summary
- Page formatting guidelines
- Character code assignment tables
- PDL/DJDE programming information with step-by-step instructions



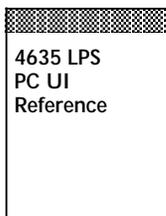
- 
- Configuration options
  - Commands
  - OSS software installation, upgrade, and modification procedures



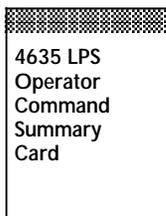
- 
- Command syntax for operator and system administrator procedures
  - LPS defaults
  - LPS resources
  - Command summaries
  - Communication and graphics on the LPS
  - Command files



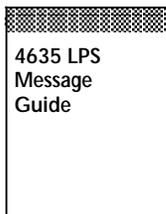
- 
- Basic concepts for creating forms
  - Coding and compiling for LPS Forms Description Language
  - Sample form setup command sets
  - Tips for successful forms creation



- 
- PC UI procedures
  - Hierarchy of PC UI windows



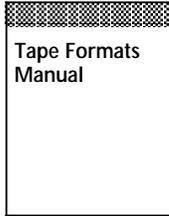
- 
- Provides a quick reference of commonly-used operator commands.



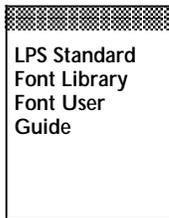
- 
- OSS and other messages
  - Meaning and recovery procedures



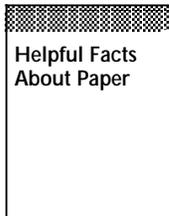
- LPS basic components and options
  - Tasks that must be accomplished before installation
  - Preinstallation requirements
  - Installation process
  - Postinstallation activities
- 



- Characteristics of different formats
  - File organization
  - Data formats
  - Carriage control conventions
- 



- Font naming conventions
  - Listing of standard fonts
  - Data sheets
  - Glossary of typography terminology
- 



- Selection and guidelines
- Storage and handling
- Specifications for different printers

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## Document conventions

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This guide uses the following conventions:

- < > Angle brackets are used for keys on the system controller keyboard.
- { } Curly brackets are used for required characters.
- ... Ellipses indicate that you can repeat a parameter or list a series of parameters.
- [ ] Square brackets are used for optional command characters.
- | Vertical bars are used to separate parameters in a series. The vertical bar stands for "or."
- bold** Bold is used for characters you enter at the command line.
- italics* Italics is used for variable information.
- terminal font** Terminal or monospace font is used to display system responses.
- underline System default parameters are underlined.
- UPPERCASE Uppercase letters are used for command names.

**Note:** You may key in entire words for each command, or the first three characters of each word. In this manual the entire word of each command is spelled out.

**CAUTION:** Cautions alert you to an action that could damage hardware or software.

**WARNING:** Warnings alert you to conditions that may affect the safety of people.



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# 1.

# Sysgen overview

## Sysgen definition

A system generation, or sysgen, is the process you use to install, upgrade, or modify the operating system software (OSS) on a Xerox laser printing system (LPS).

## Types of sysgen

This table lists the purpose of each sysgen type.

Sysgen type	Purpose
Sysgen	<ul style="list-style-type: none"><li>• Build a new operating system on new or existing system disks.</li></ul> Example: <ul style="list-style-type: none"><li>- Installing a brand new system</li><li>- Replacing, formatting or erasing a system disk</li><li>- When required for installing a new software release or patch.</li></ul>
Auto	<ul style="list-style-type: none"><li>• Add new features to an existing operating system</li><li>• Replace the existing version of the operating system with a new version.</li></ul>
Mini	<ul style="list-style-type: none"><li>• Change the configuration options of the current system without affecting user files.</li></ul> Example: <ul style="list-style-type: none"><li>- Changing online host address</li><li>- Adding finishing equipment</li></ul>

**OSS contents**

New versions of the operating system software (OSS) are distributed by Xerox on magnetic tapes or cartridges. These media contain the following items:

OSS software item	Function
New system files	For enabling LPS features.
Sysgen processor program	For loading the new system files onto the LPS system disk and configuring them to a particular system.
(Tapes only) concatenated version of the system files and sysgen processor	For performing an online sysgen in which the files and processor are downloaded to the printing system from a host computer.
Patch files	Modify the new system files for optimal performance.

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**Resource and information checklist**

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**Items you need**

The following checklist will help you determine if you have all the resources and information necessary to begin a sysgen.

To perform a full sysgen, you need the following:

- Installed LPS
- OSS:
  - 9-track reel-to-reel, 18-track 3480 cartridge, -inch cartridge
- Font tapes:
  - Standard font tape
  - Special font tapes (including logo and signature)
- User file tapes
- Documentation:
  - OSS Program Description (-11)
  - LPS Reference Set.

Refer to the Related publications section of the "Introduction" for a list of available documentation.

**Information you need for full or update sysgen**

Before you begin a full or update sysgen, gather the following information:

- Laser image alignment coordinates
- The number of forms, fonts, and (optionally) graphics settings per page in your installation
- A list of all the user files resident on the system disks
- A hardcopy of your current system configuration
- Print file size
- System disk IDs.

**Questions to answer**

Before you begin a sysgen, know the answers to the following questions:

- Is the account file to be saved or deleted during the sysgen?
- Are the Mergenthaler fonts used by your installation?
- Do you have any site-specific patches to be applied in the post-sysgen procedure?
- Are any of your .IPM files corrupt or missing?



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## 2.

# Sysgen commands

This chapter explains the commands used for performing sysgens.

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## Sysgen Command menu

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The Sysgen Command menu, illustrated in figure 2-1, appears on the printing system display screen when you boot the sysgen processor. It also appears when COMMANDS is entered following the sysgen prompt character.

**Note:** The command HOSTCOPY options appears in your Sysgen Command menu only if your system has online capability.

The interactive dialogue for a particular procedure may vary slightly depending upon the release medium (tape or cartridge), input method (online or offline), and product configuration.

Figure 2-1. Sysgen Command menu

```
**** SYSGEN PROCESSOR, VERSION M0.0 ****
COMMAND
  COMMANDS      Display commands
  BOOT          Boot the operating system
  SYSGEN        Build or update system files on disk from tape or host
  FORMAT        Clear and format disk pack
  HOSTCOPY      Copy user files from host to disk
  AUTO          Auto sysgen
  MINI          Configuration change only
  ERASE         Erase all files

Enter Cmd ('C' for Menu)>
```

## Command functions

The following commands may appear in the Sysgen Command menu, depending upon the hardware options present on your system. Command abbreviations are underlined.

Command	Function
<u>C</u> OMMANDS	Displays the Sysgen Command menu on the printing system display screen. (The menu does not have to display for you to enter a command.)
<u>B</u> OOT	Boots the operating system. If a sysgen has been performed, any sysgen patches are applied. This command must be the first entered after completing a SYSGEN command.
<u>S</u> YSGEN	Builds a new operating system on the system disks from a system software tape or from system software tape (SST) files downloaded from a host computer. All system files can be updated. A SYSGEN or AUTO sysgen is performed depending upon whether FORMAT was previously invoked.  This option requires more user interaction than AUTO, and you must use it if the SST is to be downloaded from a host computer.  A BOOT command must follow successful completion of this command.
<u>F</u> ORMAT	Formats any or all of the system disks and performs a sector check. All files on the system disks, except for the MBAIS file, are destroyed. This includes user files. This procedure is not normally needed unless specifically called for in your OSS program description or unless read errors or other disk problems occur. (Refer to ERASE.)
<u>H</u> OSTCOPY	Downloads font files, patch files, and user-generated EBCDIC data files from a host computer to the LPS system disks. This option allows an online printing system, with no magnetic tape drive, to retrieve tape files from the host.
<u>A</u> UTO	Builds a new operating system on the system disks from a SST or diskettes (SSF), except on the 4635/4635MX LPS, and allows all system files to be updated. A SYSGEN or AUTO sysgen is performed depending upon whether FORMAT was previously invoked.  When you use AUTO for a recently formatted disk, configuration information is no longer available to the system from the disks and must be entered, as though the SYSGEN command had been used. The only truly automatic sysgen, using AUTO, can be an update sysgen.  This option requires less user interaction than SYSGEN by automatically invoking a standard sequence of sysgen commands. It differs from SYSGEN in the following ways: <ul style="list-style-type: none"> <li>• AUTO builds from tape input only.</li> <li>• AUTO does not ask for a configuration update.</li> <li>• AUTO automatically saves the accounting file.</li> </ul>

Command	Function
<u>M</u> INI	<p>Modifies the configuration file in response to selections made through the Configuration Options menu. (Refer to the "Sysgen configuration options" chapter.)</p> <p>Note that the only changes to the system configuration that should be made using mini are to those features whose software has been incorporated in the operating system by a previous sysgen. For example, you may deactivate or reactivate a feature or change interface address parameters by using the mini sysgen procedure. (Generally, when you add features to the system, the system files must be changed or patched. This requires an update sysgen, invoked using the SYSGEN, AUTO, or FLOPPY commands to ensure system file integrity.)</p> <p><b>CAUTION:</b> Do not execute the MINI command immediately following completion of a SYSGEN command. This prevents the application of patches.</p>
<u>E</u> RASE	<p>Clears any or all of the system disks. All files on the disks, except for the MBAIS and bad block files, are destroyed. This includes user files. Because the ERASE command does not perform a sector check, it executes faster than the FORMAT command. (Refer to FORMAT.)</p>

## Entering and abbreviating commands

### Entering commands

Enter commands after the sysgen prompt character (>), then press <ENTER>.

After the command has completed processing, the prompt character displays again (except after the BOOT command). The menu need not display for you to issue a command.

### Abbreviating commands

The command may be entered as shown in the menu or may be abbreviated to as few letters as necessary to differentiate it from any other command in the menu.

#### Example

To enter the command SYSGEN, you can enter any of the following abbreviations:

S  
SY  
SYS  
SYSG  
SYSGE

...or by SYSGEN spelled out in full.

### Command strings

You may enter several commands as a string, and the system executes them serially. For example, entering FORMAT, SYSGEN, and BOOT, then pressing <ENTER>, results in each procedure being invoked in turn unless fatal errors occur.



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## 3. Sample system configurations

Use the information provided in this chapter to select your configuration specifications.

### Stages of the sysgen process

Below is an overview description of the sysgen process.

Stage	Description
1	You start the sysgen process.
2	The LPS displays system configuration information on the screen in a format similar to the illustration in figure 3-1. The items differ depending upon your system components and the version of software you are using.
3	The system asks you if you want to make changes to the configuration.
4	You answer "yes."
5	The LPS displays the Configuration Options menu.
6	You enter the number of a listed option to select or deselect a feature. For some options, a further list of suboptions displays.
7	The system incorporates the software for each feature you select into the operating system, and creates a configuration file (DISPCF.SYS). <b>Note:</b> The printing system must have the appropriate hardware installed to support the features specified. Selecting uninstalled features may result in an unsuccessful sysgen, an unusable system, or both.
8	You can modify the configuration file by using the mini sysgen procedure to deactivate or reactivate a feature.
9	Once your system is configured successfully, you can get a copy of the configuration information by printing the customer billing report. Refer to <i>4635 LPS Operations Reference</i> for further details. This configuration information assists you in recreating your basic system configuration during a full sysgen.

Figure 3-1 shows a sample system configuration for the 4635 LPS.

Figure 3-1. **Base System Configuration**

```

**** BASE SYSTEM CONFIGURATION ****
      Machine Type - 4635
CPU MEMORY = 1024K
AIS = Version 2
Bitmap Memory: 256 Megabits
Ink Memory: 2 Megabits
Text and Metrics Memory: 3 Megabytes
Online: Address 30
  - Mode Burst , Device 3211
Enet Addr: AA-52-00-7E, *2-857-500-798
  - Net Address: 00, *0
Raster Image Processor: 0
Communications Interfaces
  - XPAF
Xerox Print Service Manager
Kanji
Terminal Type: PC|Character
SCSI Tape Devices:
- Reel to Reel:      HP-SCSI A/Ch 0/Tg 0
- Streamer Tape:    HP-SCSI A/Ch 0/Tg 1
- 18 Track Tape:    HP-SCSI A/Ch 0/Tg 2
SCSI Disk Units: 0,1,2,3,Floppy
Page Buffer Memory Size = 128 Banks
Page Buffer A,B: 2 BUFFERS
Memory Test at Boot      = no|yes
Auto Boot Enabled        = no|yes
Boot Message Display     = no|yes
Printer Characteristics
  - Speed: 135 ppm
  - Resolution: 300 spi
  - Default Order: 1 to N|N to 1
  - Paper size: 8.50 x 11.00 Inches
MICR Mode Default = OFF|ON
Language: U.S. English
Graphics Type: AIS
Shared Disk
SCSI Tape Device Assignments:
- TD0 = Reel to Reel Tape
- TD1 = Streamer Tape
- TD2 = 18 Track Tape

Do you wish to make any changes? Enter 'y' or 'n'

```

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## Configuration menu

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Figure 3-2 illustrates a sample configuration options menu for the 4635 LPS.

Figure 3-2. Sample Configuration Options menu

```
Select which of the following options are to be added, deleted, or changed?
0)  None
1)  Full Memory Test at Boot
2)  Auto Boot
3)  Message Display during Boot
4)  Shared Disk
5)  MICR Mode Default
6)  On-line Interface
7)  Xerox Print Service Manager
8)  Kanji
9)  Ethernet
10) Language
11) Paper size
12) XPAF
13) Raster Image Processor
14) Terminal Type
15) Tape Device Table
16) Default Printing Order
(Enter numbers)
```

Option	Description
0) None	Returns you to the base system configuration display screen.
1) Full memory test	Determines the amount of system memory test at power on.
2) Auto boot	Determines whether auto boot is enabled at power on.
3) Message display	Determines whether boot diagnostic messages display at power on.
4) Shared disk	Adds or removes the shared disk option.
5) MICR mode default	Adds or removes the MICR mode default option.
6) On-line interface (if installed)	<p>Displays the following question:</p> <p>DOES THIS SYSTEM HAVE AN ONLINE INTERFACE? ENTER 'Y' OR 'N'.</p> <p>If you enter <b>N</b>, the online feature is removed from the system being generated.</p> <p>If you enter <b>Y</b>, the configuration options are automatically selected by the system and the display returns to the base configuration.</p>
7) Xerox Print Service Manager	Adds or removes the Xerox Print Service Manager (XPSM).
8) Kanji	Adds or removes Kanji.
9) Ethernet (if installed)	<p>Displays the following question:</p> <p>IS THIS SYSTEM CONNECTED TO A XEROX ETHERNET? ENTER 'Y' OR 'N'.</p> <p>If you enter <b>N</b>, the Ethernet feature is removed from the system being generated.</p> <p>If you enter <b>Y</b>, the following suboptions display:</p> <p>ETHERNET CHANGE LIST:</p> <p>1) NONE 2) READ PRINTER'S ADDRESS 3) ETHERNET NETWORK ADDRESS</p> <p>Selecting <b>NONE</b> results in no Ethernet changes.</p> <p>Selecting <b>READ PRINTER'S ADDRESS</b> results in the printing system providing its internal address as a parameter to the sysgen processor. This address is shown in figure 3-1, Base system configuration for 4635, in both hexadecimal and decimal format. The decimal value is preceded by an asterisk (*). (The printing system internal address is set by Xerox at the time of manufacture.)</p> <p>Selecting <b>ETHERNET NETWORK ADDRESS</b> results in a prompt for the address of the Ethernet network. You may enter this address in either hexadecimal or decimal form. For a decimal value, enter an asterisk followed by the address (for example, *355). A value not preceded by an asterisk is assumed to be hexadecimal. (The network address is assigned by Xerox. Consult your network system administrator for the correct assignment.)</p>

Option	Description
10) Language	<p>Displays the following suboptions:</p> <pre> 0) NONE 1) U.S. ENGLISH 2) U.K. ENGLISH 3) GERMAN 4) FRENCH 5) DUTCH 6) SWEDISH 7) NORWEGIAN 8) FINNISH 9) DANISH 10) SPANISH 11) ITALIAN 12) PORTUGUESE                     </pre> <p>Selecting <code>NONE</code> results in no change from the default language, which is U.S. English.</p> <p>The display dialogue of the newly generated system will be in the language that you select. (Languages other than those listed above are also available. The suboption list reflects what is on the system software tape or floppy disk.)</p> <p>The only difference between the U.K. English and U.S. English language options is that:</p> <ul style="list-style-type: none"> <li>• U.K. English displays paper sizes in millimeters.</li> <li>• U.S. English displays paper sizes in inches.</li> </ul> <p>Of the other language suboptions, only French, German, and Spanish are currently translated. U.S. English messages are displayed if a sysgen is performed in any of the other languages.</p> <p>The customer must insure that the proper language is installed on the ESS and IOT. The selection of the language icon on the PC UI does not switch the language on the ESS or on the IOT. The PC UI and IOT may have one or two languages installed. The ESS may be sysgened to one language although commands in English are always accepted.</p>
11) Paper size	<p>Displays the paper size menu.</p> <pre> Select paper size       Size      Inches      Millimeters 1)  US Letter  8.5 x 11.0  216 x 279 2)  US Legal   8.5 x 14    216 x 356 3)  A3         16.54 x 11.69  420 x 297 4)  A4         8.27 x 11.69  210 x 297 5)  B4         10.12 x 14.33  257 x 364 6)  B5         7.17 x 10.12  182 x 257 7)  User Selectable Size                     </pre>
12) XPAF (if installed)	<p>Selecting this option adds XPAF; selecting it again removes it.</p>

Option	Description
13) Raster image processor (if installed)	<p>Displays the following question:</p> <pre>DOES THIS SYSTEM HAVE A RASTER IMAGE PROCESSOR? ENTER 'Y' OR 'N'</pre> <p>If you enter <b>N</b>, all raster image processor (RIP) devices are removed from the system.</p> <p>If you enter <b>Y</b>, the following message is displayed:</p> <pre>TYPE THE RIP UNIT NUMBERS (0-3) ENTER OPTIONS</pre> <p>Enter the appropriate numbers. If found, they are added to the system. If RIP is not found, the following message display:</p> <pre>RIP x IS NOT IN THE SYSTEM (PLEASE CONFIRM) ENTER 'Y' OR 'N'</pre>
14) Terminal type	<p>Selecting this option changes the terminal to a PC type; selecting it again changes it to a character type. <b>Note:</b> The character type terminal is not supported.</p>
15) Tape device table	<p>Selecting this option allows you to alter the tape device assignment table.</p>
16) Default printing order	<p>Selecting this option displays the following suboptions:</p> <pre>1) 1 - N 2) N - 1</pre> <p>Enter option 1 for first-to-last page (facedown) output; or option 2 for last-to-first page (faceup) output.</p> <p>You may select either 1TON or NTO1 as the system default.</p> <p>When the system default is 1TON, NTO1 is processed only if it is invoked in the JDE or JDL. The system ignores NTO1 in DJDE-selected job descriptor entries (JDEs) or job descriptor libraries (JDLs).</p> <p>When the system default is NTO1, the system assumes each report is NTO1 until the first data page, even if 1TON is specified in the JDE or JDL. This arrangement allows you to use DJDE-selected JDEs and JDLs that invoke NTO1 after a series of banner pages.</p>

## Additional sysgen parameters

In addition to the configuration options listed previously, you may also need to supply the following information during the system generation process.

Command	Description
Type of sysgen	Sysgen, auto sysgen, or mini sysgen can be performed by selecting appropriate commands from the Sysgen Command menu (figure 2-1).
System ID	<p>Each system can be assigned a name of up to 30 alphanumeric characters, including spaces.</p> <p>The ID displays in the following situations:</p> <ul style="list-style-type: none"> <li>• Whenever the system is booted</li> <li>• When a rollover and recovery occurs</li> <li>• In a rollover dump</li> <li>• Whenever a sysgen is performed</li> <li>• On listings produced by the Editor</li> <li>• On listings produced by the REPORT command to report billing information.</li> </ul>
Accounting file	<p>You are asked if you want to save user accounting information. Remember that if a currently existing accounting file is not saved, you lose not only the accounting data but also the hierarchical data used to structure the file.</p>
Report accounting	<p>You are asked if you want report accounting. This results in run statistics being recorded for each report, as opposed to each job (which may contain several reports).</p> <p>After the sysgen completes, you may want to adjust the following parameters to which the sysgen automatically assigns default values:</p> <ul style="list-style-type: none"> <li>• Maximum fonts per job (default 32)</li> <li>• Maximum forms per job (default 12)</li> <li>• Maximum number of active graphics in GVG memory (default 32)</li> <li>• Print file size (default of 425 cylinders is not determined by a sysgen).</li> </ul> <p>Refer to the <i>Xerox 4635 LPS Operations Reference</i> for information on modifying these values.</p>



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## 4. Sysgen and sysgen-related procedures

This chapter contains information to perform the system generation for the 4635 LPS. It also explains how to install the PC UI system software.

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### Precautions

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Before you begin a sysgen, make sure you comply with the following points:

- Do not overwrite the current version of the system files with system files from previous software versions.
- Do not copy the current version system file types to a system with an older version of software.

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### PC UI software loading procedure summary

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These are the software components you need for the PC UI.

- System UI software
- UI dialog

MS-DOS 6.2 and Windows 3.1 will be preloaded onto the PC UI. The sections that follow provide step-by-step instructions for loading each of the remaining software programs on your PC UI.

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## Installing or upgrading System UI software

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<b>Materials required</b>	System UI diskette.
<b>Time required</b>	System UI software installation takes about 5 minutes to complete.
<b>Procedure</b>	<p>To install or upgrade System UI software, follow these steps:</p> <ol style="list-style-type: none"><li>1. Select "Exit to DOS" from the System Control menu.</li><li>2. Select "Yes" from the "Exit to DOS" window.</li><li>3. Insert the System UI software diskette.</li><li>4. Key in <b>A:</b> and press &lt;ENTER&gt;.</li><li>5. Key in <b>INSTALL</b> and press &lt;ENTER&gt;.</li><li>6. At the "Xerox 4635/4635MX System UI Setup" window, select "CONTINUE".<ol style="list-style-type: none"><li>a. At the "Xerox 4635/4635 MX System UI Setup Message" window, select "CONTINUE".</li><li>b. At the "Xerox 4635/4635 MX PC UI System Configuration" window, select "CONTINUE".</li><li>c. At the "Destination for Xerox 4635/4635 MX System UI" window, select "CONTINUE".</li></ol></li><li>7. Select "Exit Windows" in the "Xerox 4635/4635 MX System UI Setup Exit Message" window.</li><li>8. Remove the diskette.</li></ol> <p>System UI software installation is now complete. If you are performing an upgrade, press the Reset button to finish the procedure. Proceed to the "Installing or upgrading System UI dialog" procedure .</p>

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## Installing or upgrading System UI dialog

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<b>Materials required</b>	UI Dialog software diskette.
<b>Time required</b>	System UI dialog installation takes about 5 minutes to complete.
<b>Procedure</b>	<p>To install System UI dialog, follow these steps:</p> <ol style="list-style-type: none"><li>1. Insert the UI Dialog software diskette into the drive. If needed, perform steps a. and b which follow.<ol style="list-style-type: none"><li>a. Select "Exit to DOS" from the System Control menu.</li><li>b. Select "Yes" from the "Exit to DOS" window.</li></ol></li><li>2. If A&gt; does not display, key in <b>A:</b> and press &lt;ENTER&gt;.</li><li>3. Key in <b>INSTALL</b> and press &lt;ENTER&gt;.</li><li>4. At the "Xerox 4635/4635 MX UI Dialog Setup" window, select "Continue".<ol style="list-style-type: none"><li>a. At the "Xerox 4635/4635 MX UI Dialog Message" window, select "Continue".</li><li>b. At the "Xerox 4635/4635 MX PC UI System Configuration" window, select "Continue".</li><li>d. At the "Destination for Xerox 4635/4635 MX UI Dialog" window, select "Continue".</li><li>e. At the "Xerox 4635/4635 MX UI Dialog Setup Exit Message" window, select "Exit Windows".</li></ol></li><li>5. Remove the diskette from the drive. If you are performing an upgrade, press the Reset button to finish the procedure.</li></ol>

## Performing a full sysgen

### When to use a full sysgen

In the full sysgen procedure, all system disks are formatted and the operating system software is installed on the system disks. A full sysgen is normally performed in the following situations:

- A new system is installed.
- A system disk is replaced.
- Read errors or other disk problems have occurred.
- When required for a specific system or patch.

### Backing up user files

**CAUTION:** If the disk being formatted contains user files, be sure to back up those files before formatting because they will be deleted from the disk.

### Sysgen media

A full sysgen can be performed from tape, cartridge, or host. The step-by-step procedures provided in the following section are for a full sysgen from any medium.

## Choosing a format command

This table lists the differences between the FORMAT and ERASE commands used for formatting the system disks prior to sysgen.

FORMAT command	ERASE command
<ul style="list-style-type: none"> <li>• Deletes all files except the MBAIS file</li> <li>• Performs a sector check</li> <li>• Flags any new bad block areas</li> </ul>	<ul style="list-style-type: none"> <li>• Saves both the MBAIS and bad block files.</li> <li>• Does not perform a new sector check.</li> </ul>
<p>You must use when:</p> <ul style="list-style-type: none"> <li>• replacing a system disk</li> <li>• installing an additional disk into the system</li> <li>• read errors or other disk problems have occurred</li> <li>• verifying the integrity of the system disk and the MBAIS data.</li> </ul>	<p>Use if you are confident of your system disk integrity.</p>

## Full sysgen procedure summary

1. Back up any user files residing on the disks to be formatted.
2. Load the sysgen processor into the main memory.
3. Use either the FORMAT or the ERASE command to format the system disks. Refer to the comparison table above and the "Formatting a system disk" or "Erasing a system disk" procedure later in this chapter.
4. Install the new operating system software (OSS) using the SYSGEN command.
  - a. Define the system configuration
  - b. Load the operating system software
  - c. Apply system patches (automatic)
  - d. Apply any OSS or user patches.

## Steps to perform a full sysgen

Step	Action	System response
1.	Load the SST tape or cartridge tape on the selected peripheral device.	
2.	Press the Boot button.	<p><b>PC UI:</b> The Boot menu window displays:</p> <pre> Operating System System Disk Reel to Reel QIC 18 Track Tape </pre> <p><b>Terminal:</b> The following is displayed:</p> <pre> READY \$ </pre>
3.	<p><b>PC UI:</b> Select your choice of sysgen media with the mouse.</p> <p><b>Terminal:</b> Key in: <b>BT</b> (boot from tape), <b>BC</b> (boot from 1/2-inch cartridge tape), or <b>BX</b> (boot from 18/36 track 3480/3490 cartridge)</p>	<p>The command menu displays:</p> <pre> COMMANDS      Display commands BOOT          Boot the operating system SYSGEN       Build or update system files on disk from               tape or host FORMAT       Format and initialize disk pack HOSTCOPY    Copy user files from host to disk AUTO        Auto Sysgen MINI        Configuration change only ERASE       Erase all files. </pre>
4.	<p>Format the system disks by entering FORMAT or ERASE and pressing &lt;ENTER&gt;.</p> <p><b>NOTE:</b> System responses reflect the format procedure. The Erase procedure mimics the format procedure with the exceptions of "erase appearing in some places where format had been displayed.</p>	<p>The following message displays:</p> <pre> Formatting/Erasing the disks will destroy the data. Do you still want to format/erase the disk(s)? (y or n) </pre>
5.	Enter <b>Y</b> to continue with the format.	Are you sure? [y or n]

## Steps to perform a full sysgen (continued)

Step	Action	System response
6.	<p>Enter <b>Y</b> to confirm that you want to continue the formatting of the disk(s).</p> <p><b>NOTE:</b> DP1: through DP3: will only be displayed if installed.</p>	<p>For Y, the following is displayed:</p> <pre> **SCSI FORMAT/ERASE VERSION XX RUNNING**  Program operating mode: FORMAT  Located DP0: ...(manufacturer) (disk type) Located DP1: ...(manufacturer) (disk type) Located DP2: ...(manufacturer) (disk type) Located DP3: ...(manufacturer) (disk type)  FORMAT OPTIONS: 1. All disks 2. Selected disk(s) &gt;                     </pre>
7.	<p>Enter the option number and press &lt;ENTER&gt;.</p> <p>Option <b>1</b> selects all disk drives installed on the controller.</p> <p>Option <b>2</b> allows individual drives to be selected.</p> <p>Enter the drive unit number to be formatted. If more than one drive unit is to be formatted, enter all selected drive unit numbers separated by commas.</p> <p>Such as: &gt;0,1,3</p> <p>Then press &lt;ENTER&gt;.</p>	<pre> Enter the disk units to format &gt;  DP0: CONFIRM (Y/N)  The following information is displayed for the disks selected to be formatted:  Disk characteristics (DPx:)  Manufacturer &amp; Type: (manufacturer) (disk type) Unit Serial Number: nnnnn  Usable capacity: cccc MB Number of 512-byte sectors: ssssss Number of heads: h Number of tracks: ttttt  Spare sectors per cylinder: s Spare tracks per device: tt                     </pre>

Steps to perform a full sysgen (continued)

Step	Action	System response
7. (cont.)	<p><b>NOTE:</b> Only one disk's information will be displayed at a time. Entering <b>Y</b> will display the next installed disk or cause sysgen to continue.</p>	<pre>&gt;&gt;&gt;Enter "Y" to confirm that you want to continue &gt;</pre>
8.	Enter <b>Y</b> and press <ENTER>	<pre>1. Format Selected Disk(s) 2. Abort Format  Enter selection: &gt;</pre>
9.	Enter <b>1</b> and press <ENTER>.	<p>Entering <b>1</b> causes the formatting of the selected disks to occur.</p> <p>The following is displayed for DPO: selected or it is the only drive in the controller:</p> <pre>***** * Disk Unit          * 0          * 1          * 2          * 3          * ***** * Drive Type         *          *          *          *          * ***** * Disk Status        * Selected   * Not Present * Not Present * Not Present * ***** * Formatting         * In Progress *          *          *          * ***** * Format             *          *          *          *          * * Elapsed           * mm:ss     *          *          *          * * Time              *          *          *          *          * ***** * Total              *          *          *          *          * * Usable             *          *          *          *          * * Sectors            *          *          *          *          * *****</pre> <p>When formatting is completed the following will be displayed:</p> <pre>Format/Erase program completed. System does not have an ID record Enter system id of up to 30 characters ....*....*....*....*....*....* &gt;</pre>

## Steps to perform a full sysgen (continued)

Step	Action	System response
10.	Enter the system ID record of up to 30 characters and press <ENTER>	System ID IS: xxxxxx (the ID record that you just entered.)  Do you want to enter a new system id? 'y' or 'n'
11.	Enter <b>N</b> and <ENTER>.	Initializing disk drive 0 Creating file BITMAP .\$\$ on drive 0 Creating file MSBLK .\$\$ on drive 0 Creating file BADBLK .\$\$ on drive 0 Creating file CECYL .\$\$ on drive 0 ENTER CMD ('C' FOR MENU)>
12.	Key in <b>SYSGEN</b> and press <ENTER>	* Sysgen program running * System ID is: xxxxxx  Do you want to enter a new system id? 'y' or 'n'
13.	Enter <b>N</b> and <ENTER> to allow the sysgen to continue. Go to step 15.	
14.	Enter <b>Y</b> and <ENTER> to allow the previously entered ID to be changed.  Key in the new ID and press <ENTER>.	Enter system ID of up to 30 characters .....*.....*.....*.....*.....*.....* >  System ID IS: xxxxxx Do you want to enter a new system id? 'y or 'n'
<p><b>NOTE:</b> When you enter <b>N</b>, sysgen will continue. If you enter <b>Y</b>, you will be able to change the system ID again.</p>		
15.	If configured, enter the Ethernet address provided by Xerox and press <ENTER>.	Enter Ethernet Network Address >
16.	Enter <b>Y</b> or <b>N</b> and <ENTER>. A <b>Y</b> and <ENTER> response causes the change menu to display. Each time a change is made, the change question is asked until an <b>N</b> and <ENTER> is entered, and the sysgen program continues.	The base configuration and the system configuration options are displayed followed by:  Do you wish to make any changes? Enter 'y' or 'n' >

**Steps to perform a full sysgen (continued)**

Step	Action	System response
17.	<p>To discard the changes you just made and continue sysgen, enter <b>Y</b>.</p> <p>To save the changes you just made and continue sysgen, enter <b>N</b>.</p>	<p>Do you want to discard the changes you just made? Enter 'y' or 'n' &gt;</p>
18.	<p>Enter 'h' (for host/online sysgen) or 't' (for offline sysgen) and press &lt;ENTER&gt;.</p> <p><b>NOTE:</b> The system response is for offline sysgen. For online sysgen refer to step 9 of the Online Update sysgen.</p>	<p>Creating file DISPCF.SYS on drive 0. Should sysgen read from host or tape? 'h' or 't' &gt;</p> <p>Reading files from tape/host is displayed.</p> <p>Each file is read from the online channel or tape and placed on the disk.</p> <p>Creating file xxxxxx.yyy on drive n</p> <p>xxxxxx is the system file name, yyy is the system file type, and n is the drive number that the file is stored onto.</p> <p>When sysgen completes, the following message displays:</p> <pre>* Tape rewinding * Sysgen process successful * * Sysgen program off * Enter Cmd ['C' for Menu]&gt;</pre>
19.	<p>Key in <b>B</b> (boot) and press &lt;ENTER&gt;.</p>	<p>The OSS loads onto the system disk.</p> <p><b>PC UI:</b> The messages window displays:</p> <pre>CPU Test Complete Imaging Devices Present Memory test in progress Memory test complete Loading Start-Up Task XEROX 4635 Laser Printing System Version Revision Disk ID = xxxx</pre> <p>The date window displays.</p> <p><b>Terminal:</b> Loading program . . .</p> <p>Time prompt appears.</p>

## Steps to perform a full sysgen (continued)

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Step	Action	System response						
20.	<p><b>PC UI:</b> Enter the month (MM), day (DD), and year (YY) in the appropriate boxes of the date window (use the &lt;TAB&gt; key to advance from box to box) and select the Apply/Close header button.</p> <p>Enter the hour (HH), minute (MM), and second (SS) in the appropriate boxes of the time window (use the &lt;TAB&gt; key to advance from box to box) and select the Apply/Close header button.</p> <p><b>Terminal:</b> Enter the date and time. Entry of the seconds (ss) is optional.</p> <p>Enter <b>Y</b> or <b>N</b> to indicate whether time and date are correct.</p>	<p>The time window displays.</p> <p>mm/dd/yy hh:mm:ss</p> <p>ARE THE DATE AND TIME CORRECT AS DISPLAYED (Y/N)?</p>						
21.		<p>The system displays:</p> <p><b>**Applying sysgen patches**</b></p> <p>The following patches may be selected by PATCH-ID:</p> <table border="0"> <tr> <td>PATCH-ID</td> <td>INVOKES</td> </tr> <tr> <td>-----</td> <td>-----</td> </tr> <tr> <td>MER001</td> <td>Patch to allow Mergenthaler fonts only.</td> </tr> </table> <p>Enter patch ID's or press ENTER:</p>	PATCH-ID	INVOKES	-----	-----	MER001	Patch to allow Mergenthaler fonts only.
PATCH-ID	INVOKES							
-----	-----							
MER001	Patch to allow Mergenthaler fonts only.							
22.	<p>Enter the patch ID's that are needed for the system and press &lt;ENTER&gt;, <b>OR</b> just press &lt;ENTER&gt;.</p>	<p><b>***RESUMING SYSGEN PATCHES***</b></p> <p><b>** Sysgen patches completed**</b></p> <p><b>** Deleting sysgen patches**</b></p> <p><b>* ! Crash/Reboot will occur in 15 seconds ! *</b></p> <p><b>PC UI:</b> The system reboots, the messages window appears followed by the appearance of the OS2660 accounting reports message window.</p> <p><b>Terminal:</b> The system reboots, the OS2660 accounting reports message appears.</p>						

**Steps to perform a full sysgen (continued)**

Step	Action	System response
23.	Select <b>Yes</b> for 2000 reports or <b>No</b> for 100 reports.	<p>Upon your selection of Yes or No, the system begins and completes the loading and testing process.</p> <p>When complete the following displays:</p> <pre data-bbox="781 533 1419 579">; WOULD YOU LIKE TO COMPILE THE .IPM FILES AT THIS TIME? (Y/N)</pre>
24.	<p>Enter <b>Y</b> and press &lt;ENTER&gt;.</p> <p><b>NOTE:</b> Do not do anything with the keyboard or mouse during this operation.</p>	<pre data-bbox="781 623 997 644">IFU IPFNTS IPFNTS</pre> <p>Lists all font families as they are compiled in the following format.</p> <pre data-bbox="781 770 1328 791">IF1100 Font family "(specific font family)"</pre> <p>Upon completion of compilation, the system automatically goes to logon class 1 and displays:</p> <pre data-bbox="781 917 1240 968">Class 1 selected OS1000 Ready For Commands   hh:mm:ss</pre>
25.	<p>Apply any incremental patches. Refer to the "Steps for loading incremental patches" section at the end of this chapter.</p> <p>This completes a full sysgen.</p>	

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## Performing an offline update sysgen

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**When to use**

An offline update sysgen is normally performed for the following purposes:

- To add major new features to the existing operating system
- To replace the existing version of the operating system with a new version.

**No disk format required**

System disks are not formatted prior to an update sysgen, so user files need not be backed up as long as there is sufficient room on the disks to generate the new system.

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## Choosing a sysgen command

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- The SYSGEN command updates system files from a system software tape (SST) or cartridge, and gives you the option of making configuration changes, deleting the accounting file, and recompiling the font files.
- The AUTO command updates system files from either a SST or a SSC. It enables you to recompile the font files. There is no configuration update, and the account file is saved automatically.

**Note:** If you invoke any one of these commands after a FORMAT command, a full sysgen is performed.

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## Offline update sysgen procedure summary

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1. Load the sysgen processor into main memory. If you are installing a new version of the operating system, make sure to load the new sysgen processor.
2. Install the new OSS using either the SYSGEN or AUTO command.
3. Apply patches.

**Note:** An update sysgen resets the patch history file.

## Steps to perform an offline update sysgen using the AUTO command

Step	Action	System response
1.	<p><b>Load</b> the SST tape or cartridge tape on the selected peripheral device.</p> <p><b>Verify</b> the existence of sufficient disk space, using the FCHECK command. Each disk must have a minimum of 3000 contiguous sectors free. If the number of available sectors is below 3000:</p> <ul style="list-style-type: none"> <li>• Back up as many files as necessary to obtain the minimum number of free sectors.</li> <li>• Delete the saved files from disk.</li> <li>• Compress the disk.</li> </ul> <p>Refer to the <i>4635 LPS Operations Reference</i> for additional information.</p>	
2.	<p><b>Press</b> the Boot button.</p>	<p><b>PC UI:</b> The Boot menu window displays:</p> <pre>Operating System System Disk Reel to Reel QIC 18 Track Tape</pre> <p><b>Terminal:</b> The following is displayed:</p> <pre>READY \$</pre>
3.	<p><b>PC UI:</b> Select your choice of sysgen media with the mouse.</p>	<p>The command menu displays:</p> <pre>COMMANDS      Display commands BOOT          Boot the operating system SYSGEN        Build or update system files on disk from               tape or host FORMAT        Format and initialize disk pack HOSTCOPY      Copy user files from host to disk AUTO          Auto Sysgen MINI          Configuration change only ERASE         Erase all files.</pre> <p><b>Terminal:</b> Key in: <b>BT</b> (boot from tape), <b>BC</b> (boot from 1/2-inch cartridge tape), or <b>BX</b> (boot from 18/36 track 3480/3490 cartridge)</p>

## Steps to perform an offline update sysgen using the AUTO command (continued)

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Step	Action	System response
4.	Key in <b>AUTO</b> and press <ENTER>.	<pre>* Sysgen program running *   System ID is: xxxxxx  Do you wish to continue auto sysgen? 'y' or 'n'</pre>
5.	Key in <b>Y</b> and press <ENTER>.	<pre>This will be an auto sysgen  Reading files from tape/host is displayed.  Each file is read from tape and placed on the disk.  Creating file xxxxxx.yyy on drive d    xxxxxx is the system file name,   yyy is the system file type, and   a is the drive number that the file is stored onto.  When sysgen completes, the following message displays:  * Tape rewinding * Sysgen process successful * * Sysgen program off * Enter Cmd ['C' for Menu]&gt;</pre>
6.	Key in <b>B</b> (boot) and press <ENTER>.	<pre>The OSS loads onto the system disk.  <b>PC UI:</b> The messages window displays:  CPU Test Complete Imaging Devices Present Memory test in progress Memory test complete Loading Start-Up Task XEROX 4635 Laser Printing System Version Revision Disk ID = xxxx  The date window displays.  <b>Terminal:</b> Loading program . . .  Time prompt appears.</pre>

**Steps to perform an offline update sysgen using the AUTO command (continued)**

Step	Action	System response						
7.	<p><b>PC UI:</b> Enter the month (MM), day (DD), and year (YY) in the appropriate boxes of the date window (use the &lt;TAB&gt; key to advance from box to box) and select the Apply/Close header button.</p> <p>Enter the hour (HH), minute (MM), and second (SS) in the appropriate boxes of the time window (use the &lt;TAB&gt; key to advance from box to box) and select the Apply/Close header button.</p> <p><b>Terminal:</b> Enter the date and time. Entry of the seconds (ss) is optional.</p> <p>Enter <b>Y</b> or <b>N</b> to indicate whether time and date are correct.</p>	<p>The time window displays.</p> <p>mm/dd/yy hh:mm:ss</p> <p>ARE THE DATE AND TIME CORRECT AS DISPLAYED (Y/N)?</p>						
8.		<p>The system displays:</p> <p><b>**Applying sysgen patches**</b></p> <p>The following patches may be selected by PATCH-ID:</p> <table border="0"> <tr> <td>PATCH-ID</td> <td>INVOKES</td> </tr> <tr> <td>-----</td> <td>-----</td> </tr> <tr> <td>MER001</td> <td>Patch to allow Mergenthaler fonts only.</td> </tr> </table> <p>Enter patch ID's or press ENTER:</p>	PATCH-ID	INVOKES	-----	-----	MER001	Patch to allow Mergenthaler fonts only.
PATCH-ID	INVOKES							
-----	-----							
MER001	Patch to allow Mergenthaler fonts only.							
9.	<p>Enter the patch ID's that are needed for the system and press &lt;ENTER&gt;, <b>OR</b> just press &lt;ENTER&gt;.</p>	<p><b>***RESUMING SYSTGEN PATCHES***</b></p> <p><b>** Sysgen patches completed**</b></p> <p><b>** Deleting sysgen patches**</b></p> <p><b>* ! Crash/Reboot will occur in 15 seconds ! *</b></p> <p>The system reboots and displays:</p> <p>; WOULD YOU LIKE TO COMPILE THE .IMP FILES AT THIS TIME? (Y/N)</p>						

## Steps to perform an offline update sysgen using the AUTO command (continued)

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Step	Action	System response
10.	Enter <b>Y</b> and press <ENTER>.  <b>NOTE:</b> Do not do anything with the keyboard or mouse during this operation.	<pre> IFU IPFNTS IPFNTS  Lists all font families as they are compiled in the following format.  IF1100 Font family "(specific font family)"  Upon completion of compilation, the system automatically goes to logon class 1 and displays:  Class 1 selected OS1000 Ready For Commands   hh:mm:ss                     </pre>
11.	Apply any incremental patches. Refer to the "Steps for loading incremental patches" section at the end of this chapter.  This completes the update sysgen using the auto command.	

## Steps to perform an offline update sysgen using the SYSGEN command

Step	Action	System response
1.	<p>Load the SST tape or cartridge tape on the selected peripheral device.</p> <p><b>Verify</b> the existence of sufficient disk space, using the FCHECK command. Each disk must have a minimum of 3000 contiguous sectors free. If the number of available sectors is below 3000:</p> <ul style="list-style-type: none"> <li>• Back up as many files as necessary to obtain the minimum number of free sectors.</li> <li>• Delete the saved files from disk.</li> <li>• Compress the disk.</li> </ul> <p>Refer to the <i>4635 LPS Operations Reference</i> for additional information.</p>	
2.	<p><b>Press</b> the Boot button.</p>	<p><b>PC UI:</b> The Boot menu window displays:</p> <pre>Operating System System Disk Reel to Reel QIC 18 Track Tape</pre> <p><b>Terminal:</b> The following is displayed:</p> <pre>READY \$</pre>
3.	<p><b>PC UI:</b> Select your choice of sysgen media with the mouse.</p>	<p>The command menu displays:</p> <pre>COMMANDS    Display commands BOOT        Boot the operating system SYSGEN      Build or update system files on disk from             tape or host FORMAT      Format and initialize disk pack HOSTCOPY    Copy user files from host to disk AUTO        Auto Sysgen MINI        Configuration change only ERASE       Erase all files.</pre> <p><b>Terminal:</b> Key in: <b>BT</b> (boot from tape), <b>BC</b> (boot from 1/2-inch cartridge tape), or <b>BX</b> (boot from 18/36 track 3480/3490 cartridge)</p>

## Steps to perform an offline update sysgen using the SYSGEN command (continued)

Step	Action	System response
4.	Key in <b>SYSGEN</b> and press <ENTER>	<pre>* Sysgen program running * System ID is: xxxxxx  Do you want to enter a new system id? 'y' or 'n'</pre>
5.	Enter <b>N</b> and <ENTER> to allow the sysgen to continue. Go to step 7.	
6.	Enter <b>Y</b> and <ENTER> to allow the previously entered ID to be changed.  Key in the new ID and press <ENTER>.	<pre>Enter system ID of up to 30 characters ....*....*....*....*....*....* &gt;  System ID IS: xxxxxx Do you want to enter a new system id? 'y or 'n'</pre>
	<b>NOTE:</b> When you enter no, sysgen will continue. If you enter yes, you will be able to change the system ID again.	
7.	Enter <b>Y</b> or <b>N</b> and press <ENTER>.	<pre>Do you want to save the accounting file? enter 'y' or 'n'</pre>
8.	Enter <b>Y</b> or <b>N</b> and <ENTER>. A <b>Y</b> and <ENTER> response causes the change menu to display. Each time a change is made, the change question is asked until an <b>N</b> and <ENTER> is entered, and the sysgen program continues.	<pre>The base configuration and the system configuration options are displayed followed by:  Do you wish to make any changes? Enter 'y' or 'n' &gt;</pre>
9.	To discard the changes you just made and continue sysgen, enter <b>Y</b> .  To save the changes you just made and continue sysgen, enter <b>N</b> .  Enter <b>Y</b> and <ENTER>.	<pre>Do you want to discard the changes you just made? Enter 'y' or 'n'' &gt;  Is continuation of sysgen required? (y or n)  Should sysgen read from host or tape? 'h' or 't'</pre>

---

## Steps to perform an offline update sysgen using the SYSGEN command (continued)

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Step	Action	System response
10.	Enter 't' and press <ENTER>.	<p>Reading files from tape/host is displayed.</p> <p>Each file is read from the online channel or tape and placed on the disk.</p> <p>Creating file xxxxxx.yyy on drive n</p> <p>xxxxxx is the system file name, yyy is the system file type, and n is the drive ID number that the file is stored onto.</p> <p>When sysgen completes, the following message displays:</p> <pre>* Tape rewinding * Sysgen process successful * * Sysgen program off * Enter Cmd ['C' for Menu]&gt;</pre>
11.	Key in B (boot) and press <ENTER>.	<p>The OSS loads onto the system disk.</p> <p><b>PC UI:</b> The messages window displays:</p> <pre>CPU Test Complete Imaging Devices Present Memory test in progress Memory test complete Loading Start-Up Task XEROX 4635 Laser Printing System Version Revision Disk ID = xxxx</pre> <p>The date window displays.</p> <p><b>Terminal:</b> Loading program . . .</p> <p>Time prompt appears.</p>

---

## Steps to perform an offline update sysgen using the SYSGEN command (continued)

---

Step	Action	System response
12.	<p><b>PC UI:</b> Enter the month (MM), day (DD), and year (YY) in the appropriate boxes of the date window (use the &lt;TAB&gt; key to advance from box to box) and select the Apply/Close header button.</p> <p>Enter the hour (HH), minute (MM), and second (SS) in the appropriate boxes of the time window (use the &lt;TAB&gt; key to advance from box to box) and select the Apply/Close header button.</p> <p><b>Terminal:</b> Enter the date and time. Entry of the seconds (ss) is optional.</p> <p>Enter <b>Y</b> or <b>N</b> to indicate whether time and date are correct.</p>	<p>The time window displays.</p> <p>mm/dd/yy hh:mm:ss</p> <p>ARE THE DATE AND TIME CORRECT AS DISPLAYED (Y/N)?</p>
13.		<p>The system displays:</p> <pre> **Applying sysgen patches**  The following patches may be selected by PATCH-ID:  PATCH-ID      INVOKES -----      - MER001        Patch to allow Mergenthaler fonts only.  Enter patch ID's or press ENTER: </pre>
14.	<p>Enter the patch ID's that are needed for the system and press &lt;ENTER&gt;, <b>OR</b> just press &lt;ENTER&gt;.</p>	<pre> ***RESUMING SYSTGEN PATCHES***  ** Sysgen patches completed** ** Deleting sysgen patches**  * ! Crash/Reboot will occur in 15 seconds ! *  The system reboots and displays:  ; WOULD YOU LIKE TO COMPILE THE .IMP FILES AT THIS TIME? (Y/N) </pre>

---

## Steps to perform an offline update sysgen using the SYSGEN command (continued)

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Step	Action	System response
15.	Enter <b>Y</b> and press <ENTER>.  <b>NOTE:</b> Do not do anything with the keyboard or mouse during this operation.	<pre>IFU IPFNTS IPFNTS</pre> <p>Lists all font families as they are compiled in the following format.</p> <pre>IF1100 Font family "(specific font family)"</pre> <p>Upon completion of compilation, the system automatically goes to logon class 1 and displays:</p> <pre>Class 1 selected OS1000 Ready For Commands   hh:mm:ss</pre>
16.	Apply any incremental patches. Refer to the "Steps for loading incremental patches" section at the end of this chapter.  This completes update sysgen using the sysgen command.	

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## Performing an online update sysgen

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**When to use** You can use the SYSGEN command to download SST files from a host computer to an online-only or an online/offline switchable printing system to generate a new system. This type of sysgen is normally performed for the following purposes:

- To add major new features to the existing operating system
- To replace the existing version of the operating system with a new version.

**No disk format required** System disks are not formatted prior to an update sysgen. You do not need to back up your files as long as there is sufficient room on the disks to generate the new system.

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### Online update sysgen procedure summary

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1. Load the current sysgen processor into main memory.
2. Use a SYSGEN command to download the new sysgen processor into main memory.
3. Use another SYSGEN command to download system files that are then used by the processor to build the new operating system.
4. Apply patches.

**Note:** An update sysgen resets the patch history file.

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## Steps to perform an online update sysgen

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Step	Action	System response
1.	<p>Load the SST tape or cartridge tape on the selected peripheral device.</p> <p><b>Verify</b> the existence of sufficient disk space, using the FCHECK command. Each disk must have a minimum of 3000 contiguous sectors free. If the number of available sectors is below 3000:</p> <ul style="list-style-type: none"> <li>• Back up as many files as necessary to obtain the minimum number of free sectors.</li> <li>• Delete the saved files from disk.</li> <li>• Compress the disk.</li> </ul> <p>Refer to the <i>4635 LPS Operations Reference</i> for additional information.</p>	
2.	<p><b>Press</b> the Boot button.</p>	<p><b>PC UI:</b> The Boot menu window displays:</p> <pre> Operating System System Disk Reel to Reel QIC 18 Track Tape </pre> <p><b>Terminal:</b> The following is displayed:</p> <pre> READY \$ </pre>

---

## Steps to perform an online update sysgen (continued)

Step	Action	System response
3.	<p><b>PC UI:</b> Select <b>System Disk</b> from the Boot menu.</p> <p><b>Terminal:</b> Enter <b>BD</b> and press &lt;ENTER&gt;.</p> <p><b>Note:</b> This step assumes that a version of the operating system already resides on the disks. If this is not the case, you must load a version of the sysgen processor from tape (by entering <b>BT</b>) and perform a full or update sysgen.</p>	<p>The command menu displays:</p> <pre> COMMANDS      Display commands BOOT          Boot the operating system SYSGEN       Build or update system files on disk from               tape or host FORMAT       Format and initialize disk pack HOSTCOPY     Copy user files from host to disk AUTO        Auto Sysgen MINI        Configuration change only ERASE       Erase all files.           </pre>
4.	Enter <b>SYSGEN</b> and press <ENTER>.	<p>This starts the current processor sysgen procedure and the following message displays:</p> <pre> * Sysgen program running *   System ID is: xxxxx  Do you want to enter a new system id? 'y' or 'n'           </pre>
5.	Enter <b>N</b> to retain the existing ID or <b>Y</b> to enter a new system ID and press <ENTER>.	<pre> Do you want to save the accounting file? enter 'y' or 'n'           </pre>
6.	Enter <b>Y</b> or <b>N</b> and press <ENTER>.	<p>The base configuration and the system configuration options are displayed followed by:</p> <pre> Do you wish to make any changes? Enter 'y' or 'n' &gt;           </pre>
7.	Enter <b>Y</b> or <b>N</b> and <ENTER>. A <b>Y</b> and <ENTER> response causes the change menu to display. Each time a change is made, the change question is asked until an <b>N</b> and <ENTER> is entered, and the sysgen program continues.	<pre> Do you want to discard the changes you just made? Enter 'y' or 'n' &gt;           </pre>

## Steps to perform an online update sysgen (continued)

Step	Action	System response
7. (cont.)	To discard the changes you just made and continue sysgen, enter <b>Y</b> .  To save the changes you just made and continue sysgen, enter <b>N</b> .	Is continuation of sysgen required? (y or n)
8.	Enter <b>Y</b> and <ENTER>.	Should sysgen read from host or tape? 'h' or 't'
9.	For an online sysgen, Enter <b>H</b> (host) and press <ENTER>.  Request the host operator to vary the printing system online.  <b>Notes:</b> You must use a host utility program to advance the SST to the next-to-last file. This file, which consists of 128-byte and 8192-byte fixed-format blocks, must be deblocked to 128-block records (without adding page numbering or reformatting the data) before transmission to the LPS. Refer to the appendix for an example of a typical host utility program for file transmission.  If you have a user-created SST for an online system, you do not need to advance the tape to transfer the first file (which contains the new sysgen processor). Simply mount the tape and initiate the file transfer process at the host.  Enter <b>N</b> and <ENTER>.	Waiting to read files from host.  You can then submit a job from the host to transmit the next-to-last SST file to the printing system. This file contains the new sysgen processor, which you must use to build the new operating system.  System files are listed as they are read in from the host onto the system disks.  End of tape found. Is another tape to be sent? y or n  Vary offline at host. Then enter 'C'
10.	Request the host operator to vary the printing system offline, then enter <b>C</b> . (You need not press <ENTER>.)	When the sysgen completes processing, the following is displayed.  * Sysgen process successful * * Sysgen program off * Enter Cmd ['C' for Menu]>

## Steps to perform an online update sysgen (continued)

Step	Action	System response
11.	Press the Boot button.	<p><b>PC UI:</b> The Boot menu window displays:</p> <pre> Operating System System Disk Reel to Reel QIC 18 Track Tape                     </pre> <p><b>Terminal:</b> The following is displayed:</p> <pre> READY \$                     </pre>
12.	<p><b>PC UI:</b> Select <b>System Disk</b> from the Boot menu.</p> <p><b>Terminal:</b> Enter <b>BD</b> and press &lt;ENTER&gt;.</p>	<p>This loads the new sysgen processor, that you just retrieved from the host, into main memory from the system disks.</p> <p>The command menu displays:</p> <pre> COMMANDS      Display commands BOOT          Boot the operating system SYSGEN        Build or update system files on disk from               tape or host FORMAT        Format and initialize disk pack HOSTCOPY      Copy user files from host to disk AUTO          Auto Sysgen MINI          Configuration change only ERASE         Erase all files.                     </pre>
13.	Enter <b>SYSGEN</b> and press <ENTER>.	<p>This starts the sysgen procedure from the new sysgen processor.</p> <pre> * Sysgen program running *   System ID is: xxxxx                     </pre> <p>Do you want to enter a new system id? 'y' or 'n'</p>
14.	Enter <b>N</b> to retain the existing ID or <b>Y</b> to enter a new system ID and press <ENTER>.	<p>Do you want to save the accounting file? enter 'y' or 'n'</p>
15.	Enter <b>Y</b> or <b>N</b> and press <ENTER>.	<p>The base configuration and the system configuration options are displayed followed by:</p> <pre> Do you wish to make any changes? Enter 'y' or 'n' &gt;                     </pre>

Steps to perform an online update sysgen (continued)

Step	Action	System response
16.	Enter <b>Y</b> or <b>N</b> and <ENTER>.	A <b>Y</b> and <ENTER> response causes the change menu to display. Each time a change is made, the change question is asked until an <b>N</b> and <ENTER> is entered, and the sysgen program continues with the following.  Do you want to discard the changes you just made? Enter 'y' or 'n' >
17.	To discard the changes you just made and continue sysgen, enter <b>Y</b> .  To save the changes you just made and continue sysgen, enter <b>N</b> .  Enter <b>Y</b> and <ENTER>.	Is continuation of sysgen required? (y or n)  Should sysgen read from host or tape? 'h' or 't' >
18.	For an online sysgen, enter <b>H</b> (host) and press <ENTER>.	waiting to read files from host.
19.	Request the host operator to vary the printing system online.  <b>Note:</b> The host job is identical to the one used in step 10, except that it spaces one file farther down the SST.	You can then submit a job from the host to transmit the last SST file to the printing system. This file contains a concatenation of all system files on the SST. The new sysgen processor uses these files to build a new operating system on the LPS system disks.  System files are listed as they are read in from the host onto the system disks.  End of tape found. Is another tape to be sent? y or n
20.	Enter <b>Y</b> or <b>N</b> depending on whether additional data is to be transmitted.	When <b>N</b> is selected the following is displayed.  Vary offline at host. Then enter 'C'
21.	Request the host operator to vary the printing system offline, then enter <b>C</b> and press <ENTER>.	The sysgen finishes processing and the  * Sysgen process successful * * Sysgen program off * Enter Cmd ['C' for Menu]>

## Steps to perform an online update sysgen (continued)

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Step	Action	System response
22.	Key in <b>B</b> (boot) and press <ENTER>.	<p>The OSS loads onto the system disk.</p> <p><b>PC UI:</b> The messages window displays:</p> <pre>CPU Test Complete Imaging Devices Present Memory test in progress Memory test complete Loading Start-Up Task XEROX 4635 Laser Printing System Version Revision Disk ID = xxxx</pre> <p>The date window displays.</p> <p><b>Terminal:</b> Loading program . . .</p> <p>Time prompt appears.</p>
23.	<p><b>PC UI:</b> Enter the month (MM), day (DD), and year (YY) in the appropriate boxes of the date window (use the &lt;TAB&gt; key to advance from box to box) and select the Apply/Close header button.</p> <p>Enter the hour (HH), minute (MM), and second (SS) in the appropriate boxes of the time window (use the &lt;TAB&gt; key to advance from box to box) and select the Apply/Close header button.</p> <p><b>Terminal:</b> Enter the date and time. Entry of the seconds (ss) is optional.</p> <p>Enter <b>Y</b> or <b>N</b> to indicate whether time and date are correct.</p>	<p>The time window displays.</p> <p>mm/dd/yy hh:mm:ss</p> <p>ARE THE DATE AND TIME CORRECT AS DISPLAYED (Y/N)?</p>

---

Steps to perform an online update sysgen (continued)

Step	Action	System response
24.		<p>The system displays:</p> <pre> **Applying sysgen patches**  The following patches may be selected by PATCH-ID:  PATCH-ID      INVOKES -----      - MER001         Patch to allow Mergenthaler fonts only.  Enter patch ID's or press ENTER: </pre>
25.	<p>Enter the patch ID's that are needed for the system and press &lt;ENTER&gt;, <b>OR</b> just press &lt;ENTER&gt;.</p>	<pre> ***RESUMING SYSTGEN PATCHES***  ** Sysgen patches completed** ** Deleting sysgen patches**  * ! Crash/Reboot will occur in 15 seconds ! *  The system reboots and displays:  ; WOULD YOU LIKE TO COMPILE THE .IPM FILES AT THIS TIME? (Y/N) </pre>
26.	<p>Enter <b>Y</b> and press &lt;ENTER&gt;.</p> <p><b>NOTE:</b> Do not do anything with the keyboard or mouse during this operation.</p>	<pre> IFU IPFNTS IPFNTS  Lists all font families as they are compiled in the following format.  IF1100 Font family "(specific font family)"  Upon completion of compilation, the system automatically goes to logon class 1 and displays:  Class 1 selected OS1000 Ready For Commands   hh:mm:ss </pre>
27.	<p>Apply any incremental patches. Refer to the "Steps for loading incremental patches" section at the end of this chapter.</p> <p>This completes online sysgen.</p>	

---

## Performing a mini sysgen

---

**When to use**

You can use the MINI command to make changes to the logical configuration of the system, such as:

- change the configuration options of the current system
- deactivate or reactivate features and configuration options that were installed as part of a previous full or update sysgen.

**Note:** Make sure the logical configuration (the features specified in the configuration options) and the physical configuration (the hardware that supports those features) are the same before performing a sysgen.

If you perform a sysgen and some device in the physical configuration is missing from the logical configuration, that device may be unusable after the sysgen is performed.

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### Mini sysgen procedure summary

---

1. Review the configuration options provided in the "Configuration menu" section of the "Sysgen configuration options" chapter.
2. Use the MINI command to display the Configuration Options menu.
3. Select or specify your desired options.

**Note:** If you are using a LINK terminal, do not use the <BACKSPACE> key. If you use <BACKSPACE>, characters will scroll across the screen and you will have to start the SYSGEN process again.

## Steps to perform a mini sysgen

Step	Action	System response
1.	Press the Boot button.	<p><b>PC UI:</b> The Boot menu window displays:</p> <pre>Operating System System Disk Reel to Reel QIC 18 Track Tape</pre> <p><b>Terminal:</b> The following is displayed:</p> <pre>READY \$</pre>
3.	<p><b>PC UI:</b> Select your choice of sysgen media with the mouse.</p> <p><b>Terminal:</b> <b>BD</b> (boot from system disk).</p>	<p>The command menu displays:</p> <pre>COMMANDS      Display commands BOOT          Boot the operating system SYSGEN       Build or update system files on disk from               tape or host FORMAT       Format and initialize disk pack HOSTCOPY    Copy user files from host to disk AUTO        Auto Sysgen MINI        Configuration change only ERASE       Erase all files.</pre>
4.	Key in <b>MINI</b> and press <ENTER>	<p>The base configuration and the system configuration options are displayed followed by:</p> <pre>Do you wish to make any changes? Enter 'y' or 'n' &gt;</pre>
5.	<p>Enter <b>Y</b> or <b>N</b> and &lt;ENTER&gt;. A <b>Y</b> and &lt;ENTER&gt; response causes the change menu to display. Each time a change is made, the change question is asked until an N and &lt;ENTER&gt; is entered, and the sysgen program continues.</p> <p>To discard the changes you just made and continue sysgen, enter <b>Y</b>.</p> <p>To save the changes you just made and continue sysgen, enter <b>N</b>.</p> <p>Enter N and &lt;ENTER&gt;.</p>	<pre>Do you want to discard the changes you just made? Enter 'y' or 'n'</pre>

## Steps to perform a mini sysgen (continued)

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Step	Action	System response
6.		Creating file DISPCF.SYS on drive 0. * Sysgen program off * Enter Cmd ('C' for Menu)>
7.	Key in <b>B</b> (boot) and press <ENTER>.	The OSS loads onto the system disk.  The system begins and completes the loading and testing process.  When complete the following displays:  Class 1 selected OS1000 Ready For Commands    hh:mm:ss
8.	This completes a mini sysgen.	

---

## Formatting a system disk

---

- When to use** You can use the FORMAT command to format one or more of the LPS system disks and to flag any new bad block areas. Disks are formatted when:
- A new system is generated from a SST.
  - An additional disk is factored into the system.
  - A system disk is replaced.
  - Read errors or other disk problems have occurred.
  - A new version of software is installed that has a new format program.
  - A patch is installed which explicitly requires that the disk be formatted.

**Note:** The FORMAT command deletes all files except the MBAIS file, performs a sector check, and flags any new bad block areas. The ERASE command saves the existing MBAIS and bad block files; no new sector check is performed.

**CAUTION** Contact your site representative before formatting system disks.

**CAUTION** When you are installing a new system or a new version of software, do not boot from disk. You must boot the sysgen processor from the system software tape or floppy disks, so that you use the format program contained in the new version of software.

---

## Disk formatting summary

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1. Back up any user files residing on the disk to be formatted.
2. Load the sysgen processor into main memory.
3. Invoke the FORMAT command.
4. Select the disks to be formatted.
6. When the format procedure is complete, continue the full sysgen process.

---

## Steps to format a system disk

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Refer to steps 1 through 11 of the full sysgen procedures for the format procedures.

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## Erasing a system disk

---

You can use the ERASE command is used to remove all files from the LPS system disks. Disks may be erased when:

- A new system is generated from a SST.
- A new version of software must be installed on a disk which has first been formatted or erased.

**Note:** The ERASE command saves the existing MBAIS and bad block files; sector check is not performed. To erase all four disks takes less than 1 minute. The FORMAT command deletes all files except the MBAIS file, formats the disk, performs a sector check, and flags any bad blocks.

---

## Disk erasing summary

---

1. Back up any user files residing on the disk to be erased.
2. Load the sysgen processor into main memory.
3. Invoke the ERASE command.
4. Select the disks to be erased.
5. When the erase procedure is complete, continue the full sysgen process.

---

## Steps to erase a disk

---

Refer to steps 1 through 11 of the full sysgen procedures for the format procedures. Instead of entering FORMAT in step 4, enter ERASE. The Erase procedure mimics the format procedure with the exceptions of "erase appearing in some places where format had been displayed.

---

## Steps for loading incremental patches

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Step	Action	System response
1.	Load the incremental tape on the selected peripheral device. The system should be at logon level 3 or higher.	OS1000 Ready For Commands hh:mm:ss
2.	Enter <b>COP TAP ALL</b> and press <ENTER>.	Creating or replacing of files takes place followed by:  **_End of tape read OS1000 Ready For Commands hh:mm:ss
3.	Enter <b>@V3AINC</b> and press <ENTER>.	The patches are applied, and the system displays:  PCH (patch name) ** Processing the file . . .** *** START of (version) SST Incremental Patches **** **** END of (version) SST Incremental Patches **** DID THE PATCHES APPLY WITHOUT ANY ERRORS? (Y/N)
4.	Enter <b>Y</b> or <b>N</b> . Answering <b>Y</b> indicates that the patches were loaded successfully.  If you answer <b>N</b> , you may need to complete the procedure again.	The system deletes the files applied by the incremental tape and displays:  SYSTEM WILL ROLLOVER IN 1 SEC  The system initializes and displays:  OS1000 - Ready For Commands hh:mm:ss



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## A. Sample JCL for transmission of system software tapes

You must use a host utility program to advance the system software tape (SST) to the beginning of the next-to-last and last files. These files, which consist of 128-byte and 8192-byte blocks, must be deblocked to 128 byte records before transmission to the Xerox printing system.

The following is a sample JCL using the IEBGENER host utility to send the concatenated files to a Xerox laser printing system. In the example, 01E is the device address of the printer. For illustration purposes, the tape to be transmitted contains 421 individual system files. Appended to these 421 files is a dummy ENDFIL file, a file containing the sysgen processor program, and a concatenated file containing the preceding 423 files. The first parameter after LABEL= is the file number of the file to be transmitted (in this case, file number 424).

```
//LOADXERX      EXEC   PGM=IEBGENER,REGION=80K
//SYSPRINT      DD     SYSOUT=A
//SYSIN         DD     DUMMY
//SYSUT2        DD     UNIT=01E,DCB=(RECFM=FB,LRECL=128,BLKSIZE=128)
//SYSUT1        DD     UNIT=TAPE,DCB=(RECFM=FB,LRECL=128,BLKSIZE=8192),DSN=XEROX,
//              DISP=OLD,LABEL=(424,NL,EXPDT=98000),VOL=SER=XEROXO
```

**Note:** Some host operating systems may require that an FCB and UCSB be transmitted with the job. These are accepted but ignored.

The program (for example, IEBGENER) that transmits files to the Xerox printer does not add page numbers or reformat the data. No additional records may be added between the files.



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## Glossary

<b>A3</b>	A paper size measuring 297 by 420 mm.
<b>A4</b>	A paper size measuring 210 by 297 mm.
<b>abort</b>	To terminate the printing of a job or execution of a program before it completes.
<b>application</b>	Use to which a computer program or system is put, for example, sorting employee records.
<b>asynchronous</b>	Transmission in data communications controlled by start and stop elements at the beginning and end of each character; thus, time intervals between transmitted characters may be unequal in length.
<b>auxiliary menu</b>	A menu that contains options not displayed in a window. The symbol for an auxiliary menu is a box containing three horizontal lines.
<b>B4</b>	A paper size measuring 250 by 353 mm.
<b>carriage return</b>	Control character that (unless set to be interpreted as a line end) causes the printing system to start printing at the left margin of the current line.
<b>character</b>	Single printable letter (A-Z), numeral (0-9), symbol (& % #), or punctuation mark (, . ! ?) used to represent data. Characters can also be nonprinting, such as space, tab, or carriage return.
<b>character code</b>	Code representing alphanumeric information, for example, ASCII.
<b>character set</b>	Number of different characters used by a particular device, including alphabetic, numeric, and special characters such as symbols.
<b>cluster</b>	A group of paper feeder trays, usually containing the same size and type of paper (stock). Each cluster has a name, consisting of one to six alphanumeric characters.
<b>collate</b>	To arrange or assemble into ordered sets.

<b>column</b>	Vertical arrangement of characters.
<b>command</b>	User instruction to a computer, via the system controller keyboard or the PC UI. Commands are words, mnemonics, or characters that cause a computer to perform predefined operations. Coded instruction to a computer or computer-based system.
<b>compatibility</b>	Characteristic of computer equipment permitting one device to use the same information or programs as another device without conversion or code modification.
<b>configuration</b>	One or a group of computers and related devices (terminals, printers, etc.) interconnected and programmed to operate as a system (sharing resources, communicating data, accepting input, etc.).
<b>console</b>	Functional unit containing devices used by an operator to communicate with an operating system. It may consist of a display, keyboard, and certain switches or other controls.
<b>continuous printing</b>	Refers to Interpress job integrity under any of the following conditions: excessive graphics, forms, or font use problems.
<b>cpi</b>	characters per inch. Designates the number of characters per inch for a particular typeface. See also <i>pitch</i> .
<b>CPU</b>	Central processing unit. Interprets and executes instructions, performs all operations and calculations, and controls input and output units and auxiliary attachments.
<b>data</b>	1. In general, facts, numbers, letters, symbols, etc., which can be processed or produced by a computer. 2. In data processing, the source data or raw data entered for processing (as opposed to the results obtained by processing).
<b>data file</b>	Collection of related data records organized in a specific manner so that each record is similarly structured, for example a payroll file set up with one record for each employee, last name first, indicating the rate of pay and all deductions.
<b>data rate</b>	In data communications, the rate at which a channel carries data, measured in bps (bits per second).
<b>data storage</b>	Preservation of data on various media (for example tape, disks, magnetic bubble memory, etc.).
<b>desktop</b>	The basic display screen of the PC UI.
<b>device</b>	Any piece of hardware other than the CPU (Central Processing Unit).

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<b>disk drive</b>	Device that can read or write magnetic media.
<b>display</b>	Viewing device (monitor) that visually communicates system warnings, status, and error messages and reflects operator interaction with the system on a display.
<b>document</b>	1. Data medium and the data recorded on it, usually permanent, which can be read by you or a computer. 2. Collection of information pertaining to a specific subject or related subjects.
<b>dot</b>	Unit of measurement representing a fraction of an inch, for example, 300 dots per inch (dpi). May also be referred to as a picture element (pixel) or spot.
<b>duplex</b>	Ability to send and receive information simultaneously. See also <i>simplex printing</i> .
<b>duplex printing</b>	Printing on both sides (front and back) of a page.
<b>EBCDIC</b>	Extended Binary Coded Decimal Interchange Code. Coded character set consisting of 8-bit coded characters. It can accommodate 256 characters.
<b>Ethernet</b>	Xerox local area network (LAN) that allows data to be transmitted by cable from one device to another, enabling it to share the network.
<b>field</b>	1. Part of a record that serves a similar function in all records of that group (such as name and address field). 2. Area or setting of practical activity or application.
<b>file</b>	Set of records or text that can be stored and retrieved. Organized, named collection of records treated as a unit. For offline, it is the data between the two tape marks. For online, it is the data between banner pages.
<b>FIS</b>	Font Interchange Standard. A standard that defines the digital representation of fonts and character metrics for the generation of an entire series of Interpress fonts.
<b>fixed pitch</b>	Font set in which every character cell has the same width. In reference to character sets, this term describes typefaces in which all character cells are of equal width. Monospaced as opposed to proportional spaced.
<b>fixed spacing</b>	Arrangement of characters on a line so that all characters occupy the same amount of horizontal space.
<b>format</b>	1. Layout of a document, including margins, page length, line spacing, typeface, etc. 2. In data storage, the way the surface of a disk is organized to store data. 3. To prepare the surface of a disk for acceptance of data.

<b>function keys</b>	Keyboard keys that produce no character but initiate a particular machine function, such as delete.
<b>hardcopy</b>	Machine output in permanent form, such as printed reports, listings, etc. Output in a permanent form (usually on paper or paper tape) rather than in temporary form, as on a display. Contains readable printed copy of machine (for example computer) output.
<b>HCF</b>	high-capacity feeder. A feeder tray capable of holding 2500 sheets of 20 pound/75 gsm paper. The high-capacity feeder trays are the primary paper supply for the 4135 LPS. They are located in the bottom half of the feeder/stacker modules.
<b>HCS</b>	high-capacity stacker. A stacker bin capable of holding 2500 sheets of 20 pound/75 gsm paper. In the 4135 LPS, the high-capacity stacker bins are located in the top half of the feeder/stacker modules.
<b>icon</b>	A symbol appearing on the PC UI or printer control console that can be opened to display a window or screen options.
<b>image area</b>	Area on a physical page that may contain text or graphics.
<b>implementation</b>	Process of installing hardware or software to a system. Also the process of converting a design into an actual working system.
<b>input</b>	Data or text introduced into a computer-based system.
<b>input devices</b>	Keyboards, magnetic media, or any device used to give a system information.
<b>insert</b>	To add text or graphics to a document.
<b>landscape page orientation</b>	Orientation of print lines or top of an illustration parallel to the long edge of the paper if the sheet is within the standard size range. (Sheets larger than standard have the reverse print orientation.)
<b>language</b>	Defined set of characters and symbols combined together by specific rules. Refer to <i>high-level language</i> and <i>low-level language</i> .
<b>legal size</b>	Sheet the standard size of legal briefs, 8.5 by 14 inches.
<b>letter size</b>	Paper sized 8.5 by 11 inches/216 by 279 mm.
<b>logical page</b>	In the Xerox printing systems environment, a logical page is a formatted page that is smaller than the physical page. A logical page is defined by an origin, thus allowing more than one logical page to be placed on a physical page.

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<b>logo</b>	Small illustration or design, usually simple, typically used to identify a company.
<b>log on</b>	Procedure by which a user begins a session between an application program and a logical unit.
<b>MB</b>	megabyte. Unit of one million bytes.
<b>menu</b>	List of available functions, commands, and options.
<b>MHz</b>	megahertz. 1. Unit of cycling speed (one million cycles per second) for an electromagnetic wave (in particular, a radio wave). 2. Sending and receiving stations of a radio wave transmission must be tuned into the same unit of megahertz.
<b>MICR</b>	Magnetic Ink Character Recognition. MICR allows a computer to read characters printed in special metallic ink by scanning the shapes of their magnetic fields. MICR fields are often imprinted on bank checks before processing.
<b>mode</b>	Manner in which an activity or process is carried out.
<b>operating system</b>	Basic host-resident or LPS-resident controlling program that governs the operations of a computer, such as job entry, input/output, and data management. The operating system is always running when the computer is active. Unlike other types of programs, it does not run to an end point and stop. The operating system of a Xerox LPS is referred to as the OSS (operating system software).
<b>orientation</b>	1. In reference to image area, orientation describes whether the printed lines are parallel to the long edge of the paper or the short edge of the paper. 2. Choice of printing portrait (vertically) or landscape (horizontally).
<b>origin</b>	In reference to image area, this is the upper left corner of a sheet.
<b>output</b>	1. Material produced by a peripheral device of a computer, such as a printout or a magnetic tape. 2. The result of completed operations.
<b>page</b>	1. In computer programming, a block of instruction, data, or both that can be located in main or auxiliary storage. 2. In word processing, a defined section of a document.
<b>page orientation</b>	Direction in which data is printed on a report. See also <i>landscape page orientation</i> and <i>portrait page orientation</i> .
<b>parameter</b>	Part of a command, other than the keyword. Refer to <i>keyword</i> , <i>operator command</i> .

<b>PC UI</b>	PC user interface. The PC hardware and Xerox-supplied software which allows the operator to control the LPS by means of a mouse, windows, and icons. Refer to <i>object mode</i> , <i>terminal emulation mode (TEM)</i> .
<b>portrait page orientation</b>	Orientation of print lines or the top of an illustration parallel to the short edge of the paper if the sheet is within the standard size range. (Sheets larger than standard have the reverse print orientation.)
<b>prompt</b>	Message or symbol displayed on a system console requiring the operator to take action.
<b>PSC</b>	printer subsystem controller. Command and task that download any of the following to the appropriate board: <ul style="list-style-type: none"><li>• SCSI controller software</li><li>• RIP software</li><li>• CSI software.</li></ul>
<b>RAM</b>	random access memory. Storage that allows data (such as documents) to be stored and retrieved directly by address location without reading through any other data.
<b>repagination</b>	In word processing, a function allowing pages to be readjusted as text is added or deleted from a document. Page length can be altered or preserved as required.
<b>report</b>	In setting a separation boundary through the Bin Full Criteria task, report refers to a subset of a job (a job may consist of one or more reports).
<b>resolution</b>	The number of dots per unit. The LPS imaging system converts a character from digitized data into a printed image composed of these tiny dots. The greater the number of dots per inch (such as the resolution), the clearer the image is produced. Note: The terms dots, spots, and pixels are synonymous.
<b>RIP</b>	raster image processor. LPS option that supports the Interpress V3.0 Publications Set.
<b>SCSI</b>	small computer system interface. Accepted standard for connecting peripheral devices to computers.
<b>simplex printing</b>	Printing on one side of the page. Contrast with duplex printing.
<b>stack</b>	An internal structure for storing data.
<b>string</b>	Connected sequence of alphanumeric characters treated as one unit of data by a program.

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<b>symbol</b>	Character(s) used in a computer language to specify a particular function.
<b>system</b>	1. In data processing, a collection of parts and procedures organized to accomplish a set of specific functions. 2. Assembly of components united by some form of regulated interaction to form an organized whole. 3. Operations or procedures through which a business activity is accomplished.
<b>system controller</b>	The part of the LPS that provides interfacing capability, data handling, formatting, buffering, and operator control for the system. Also referred to as the "ESS."
<b>system generation</b>	Process whereby the system is made ready to operate. Typically involves selecting the operative parameters and activating the relevant software.

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## Acronyms

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<b>ASCII</b>	American Standard Code for Information Interchange
<b>bps</b>	bits per second
<b>CM</b>	control module
<b>CME</b>	copy modification entry
<b>cpi</b>	characters per inch
<b>CPU</b>	central processing unit
<b>CR</b>	carriage return
<b>DOS</b>	disk operating system
<b>EBCDIC</b>	Extended Binary Coded Decimal Interchange Code
<b>ENET</b>	Ethernet network
<b>EOT</b>	end of tape
<b>ESS</b>	electronic subsystem, also referred to as the system controller
<b>HCF</b>	high-capacity feeder
<b>HIP</b>	host interface processor

<b>IO</b>	input/output
<b>ips</b>	inches per second
<b>JCL</b>	job control language
<b>LPS</b>	laser printing system
<b>OLI</b>	online interface
<b>OS</b>	operating system
<b>OSS</b>	operating system software
<b>PC</b>	personal computer
<b>PC UI</b>	personal computer user interface
<b>PDL</b>	print description language
<b>ppm</b>	pages per minute
<b>PQA</b>	print quality adjustment
<b>PSC</b>	printer subsystem controller
<b>pt</b>	point
<b>QIC</b>	1/4 inch cartridge
<b>RAM</b>	random access memory
<b>RIP</b>	raster image processor
<b>ROS</b>	raster output scanner
<b>SCSI</b>	small computer system interface
<b>spi</b>	spots per inch
<b>SST</b>	system software tape
<b>sysgen</b>	system generation
<b>tpi</b>	tracks per inch

<b>UI</b>	user interface
<b>XCSC</b>	Xerox Customer Support Center
<b>XDSS</b>	Xerox Documentation and Software Services
<b>XMP</b>	xerographic mode persistence
<b>XMS</b>	xerographic mode switching
<b>XPAF, XPF</b>	Xerox Printer Access Facility



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