

# z/OS Introduction and Workshop

Job Entry Subsystem (JES)



# Unit objectives

After completing this unit, you should be able to:

- Understand relationship between JCL and JES
- Describe JES spool
- List 3 JES queue types
- Describe JES initiator
- Describe relationship between SDSF and JES

# Job Management

JES2/JES3

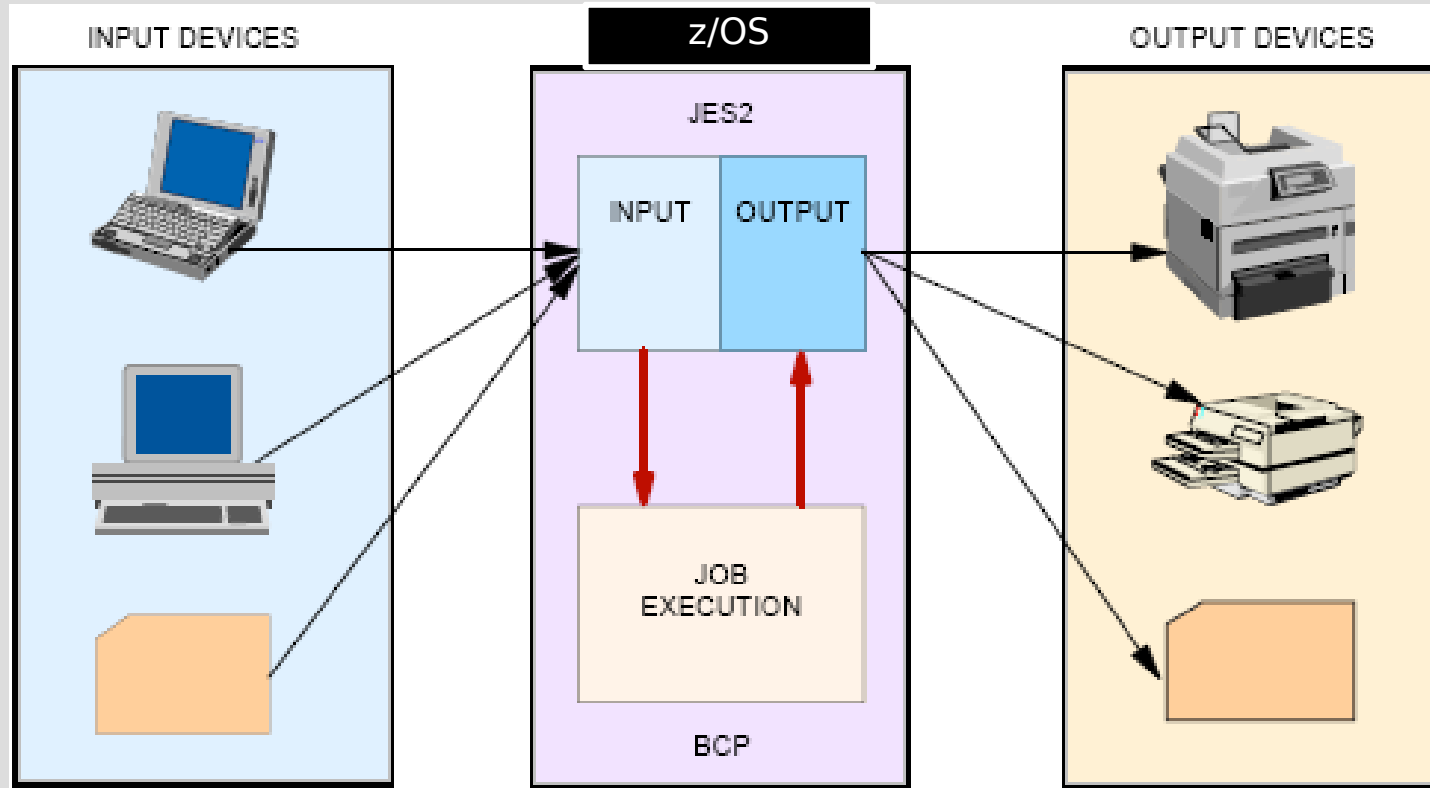
```
//JN  JOB  
//S1  EXEC PGM=  
//DDN DD   DSN=
```

INTERNAL  
READERS

TSO/MVS



# JES Functions



# What is spooling?

Spooling is a method for queuing and holding data for input or output.

JES uses one or more disk data sets for spooling.

Input jobs and printed output from many jobs are stored in the single (conceptual) spool data set.

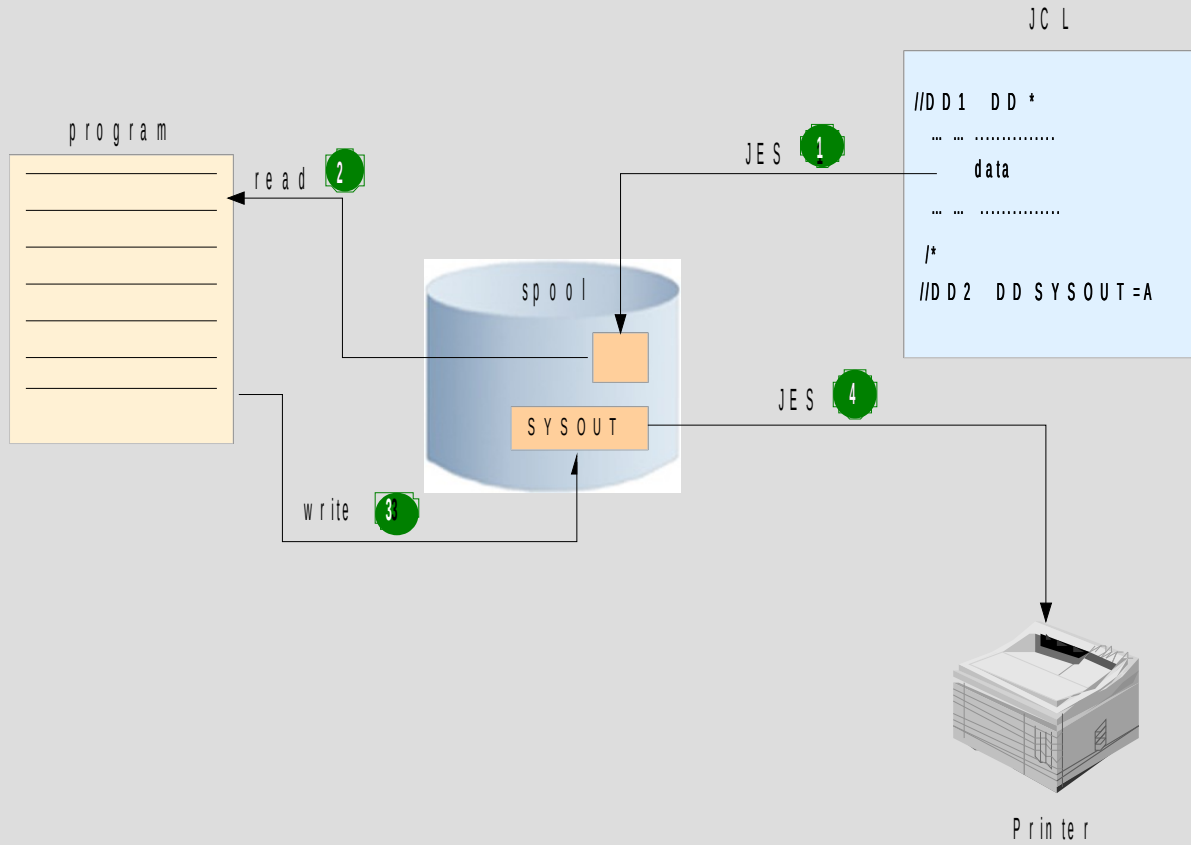
# What an initiator does

To run multiple jobs asynchronously, z/OS uses initiators to:

- Ensure that jobs do not conflict in data set usage
- Ensure that single-user devices (tape drives) are allocated correctly
- Find executable programs requested by jobs
- Clean up after the job ends and request the next job

Preventing two users from accessing the same data at the same time is critical to z/OS and the ability to do this is one of the defining characteristics of the operating system.

# Spooling



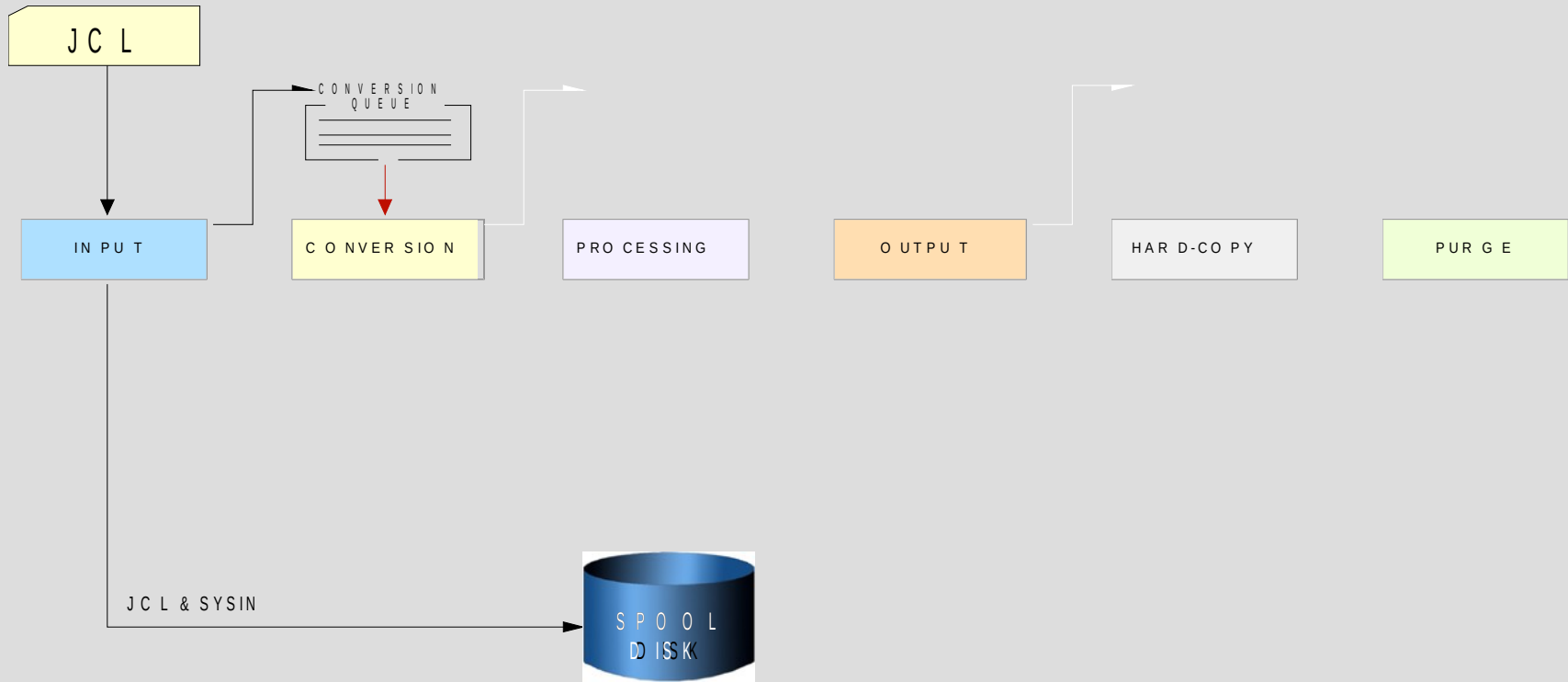
# Job flow through the system

During execution, a job goes through the following phases:

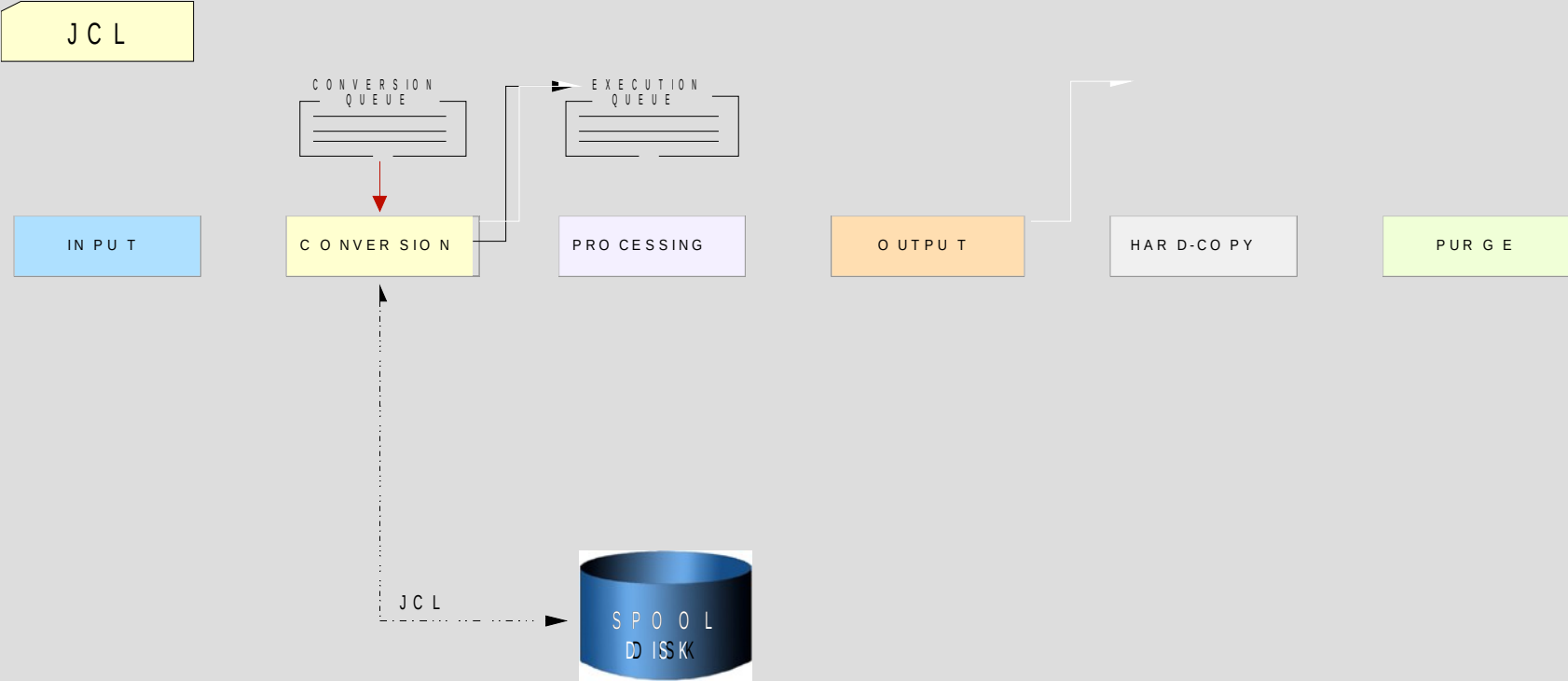
- Input
- Conversion
- Processing
- Output
- Print (to hardcopy or a console display)
- Purge



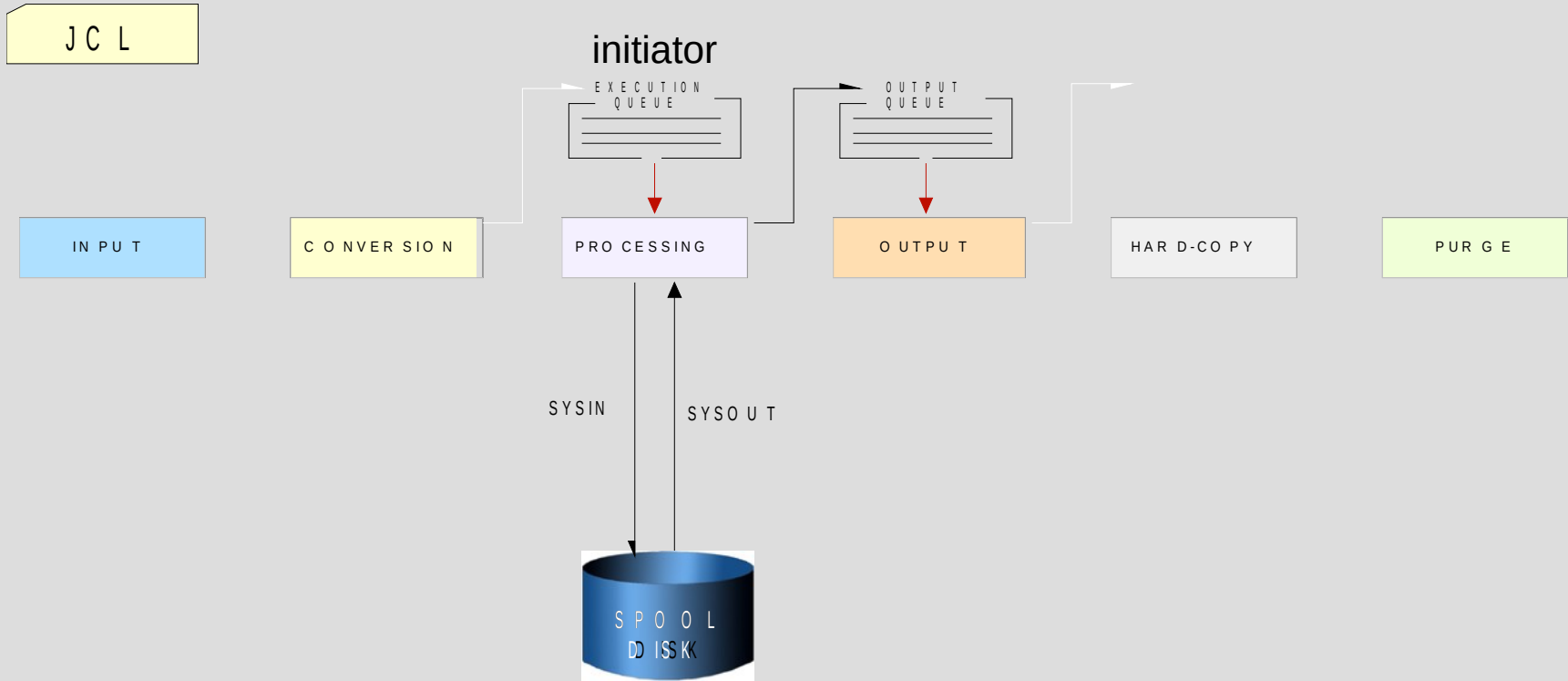
# Phases of job flow: input



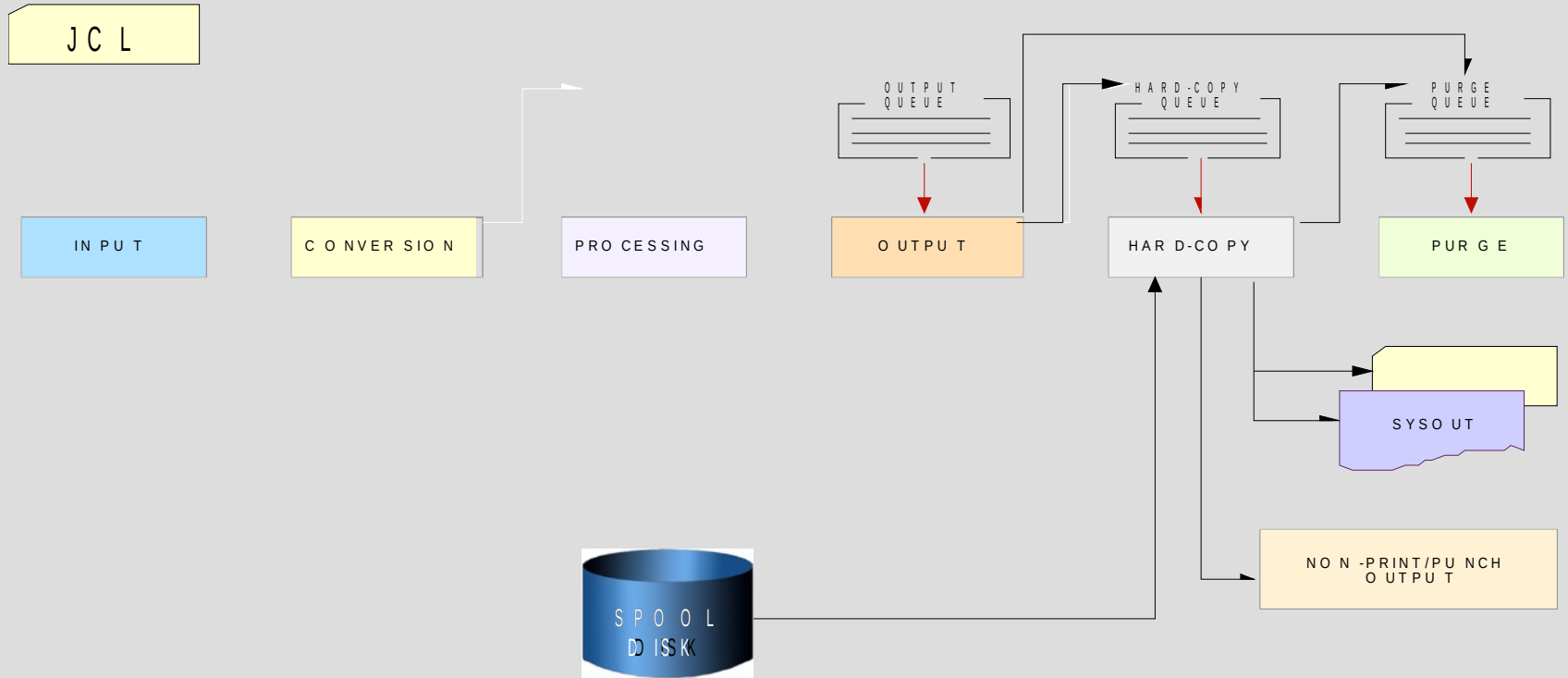
# Phases of job flow: conversion



# Phases of job flow: execution



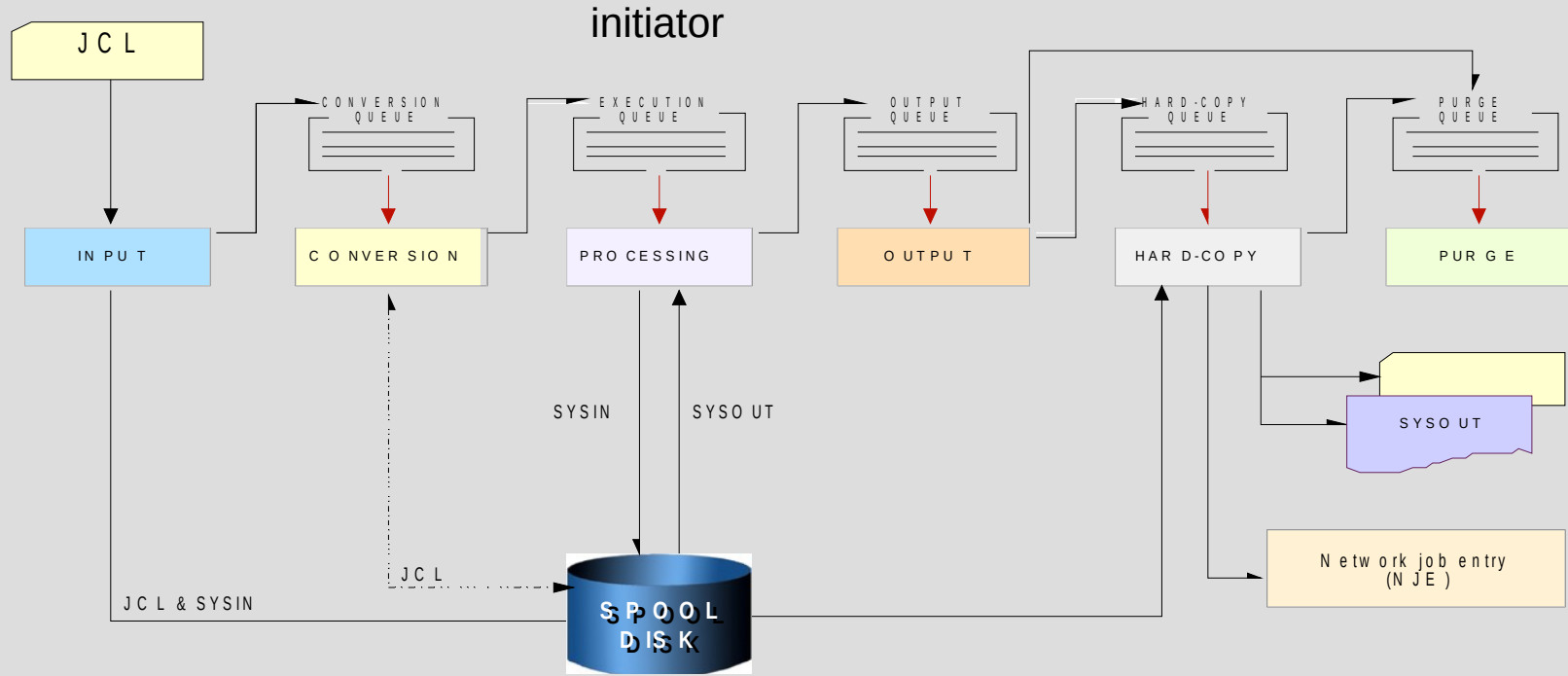
# Phases of job flow: output and hardcopy



# Phases of job flow: purge



# Job flow through the system



# JES Initiators

```
//MYJOB JOB 1,CLASS=A
```

where CLASS=jobclass

In a JES2 system, the assigned job class can affect whether or how a job is executed.

A job class can be defined during JES2 initialization as 'Held'. The system holds any job assigned to this class until the operator releases

Use the CLASS parameter to assign the job to a class. The class you should request depends on the characteristics of the job and your installation's rules for assigning classes.

# JES – Startup JCL & Parameters

```
//JES2    PROC
//IEFPROC EXEC PGM=HASJES20
//PROC00  DD DSN=VENDOR.PROCLIB,DISP=SHR
//        DD DSN=SVTSC.PROCLIB,DISP=SHR
//        DD DSN=LVL0.PROCLIB,DISP=SHR
//        DD DSN=SYS1.PROCLIB,DISP=SHR
//HASPPARM DD DSN=VENDOR.PARMLIB(JES2420A),DISP=SHR
//HASPLIST DD DDNAME=IEFRDER
```



# JES2 Job Initiator Parameter Definitions

## VENDOR.PARMLIB(JES2420A)

INITDEF PARTNUM=99

I(1) NAME=1,  
CLASS=KAB74

I(2) NAME=2,  
CLASS=L74HAB

I(3) NAME=3,  
CLASS=74AB

I(4) NAME=4,  
CLASS=JIFAB74

I(5) NAME=5,  
CLASS=EB74A

I(6) NAME=6,  
CLASS=B,  
DRAIN

JOBCLASS(A) ACCT=NO,  
PGMRNAME=NO,  
TIME=(1440,00),  
REGION=1M,  
COMMAND=VERIFY,  
BLP=YES,  
AUTH=ALL,  
MSGLEVEL=(1,1),  
COPY=NO,  
HOLD=NO,  
JOURNAL=NO,  
LOG=YES,  
OUTPUT=YES,  
PROCLIB=00,

# SDSF Display of JES Initiators

```
Lab System
Display Filter View Print Options Help
-----
SDSF INITIATOR DISPLAY S0W1                               LINE 1-26 (99)
COMMAND INPUT ==>                                         SCROLL ==> CSR
PREFIX=*  DEST=(ALL)  OWNER=*  SYSNAME=
NP      ID Status      Classes  JobName  StepName ProcStep  JobID    C ASID  ASID
  1 ACTIVE      KAB74   SCHDSUB  TSOBATCH JOB04386 A   24  001
  2 INACTIVE   L74HAB
  3 INACTIVE   74AB
  4 INACTIVE   JIFAB74
  5 INACTIVE   EB74A
  6 DRAINED    BA
  7 DRAINED    AB
  8 DRAINED    GAB
  9 INACTIVE   S
 10 DRAINED    AB
 11 DRAINED    AB
 12 DRAINED    AB
 13 DRAINED    AB
 14 DRAINED    AB
 15 DRAINED    AB
 16 DRAINED    AB
 17 DRAINED    AB
 18 DRAINED    AB
 19 DRAINED    AB
 20 DRAINED    AB
 21 INACTIVE   A
 22 INACTIVE   A
 23 INACTIVE   A
 24 INACTIVE   A
 25 INACTIVE   A
 26 INACTIVE   A
                                     46  002
                                     47  002
                                     48  003
                                     49  003
                                     50  003
                                     51  003
                                     52  003
MA a 04/021
Connected to remote server/host 198.81.193.186 using lu/pool TCP00012 and port 623
```

# z/OS Internet Library (JES2 Manuals)

## JES2 Bookshelf

Commands

Initialization and Tuning Guide

Initialization and Tuning Reference

Introduction

# Unit summary

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