SPARTA.DEMO

# Basics

## Links for doc

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| Links for doc |  | TSI home page: <https://www.triangle-systems.com/>doc: https://www.triangle-systems.com/iofdoc.shtmlFischer site: <https://www.fisc.com/products/iof/>8G user guide and other online doc: <https://www.triangle-systems.com/iofdoc.shtml>IOF Videos, white papers, tips/tricks: <https://www.fisc.com/support/iof/>Virtual help desk: <https://www.triangle-systems.com/IOFDIAG.shtml>Quick reference card: [https://www.fisc.com/support/docs/2016-IOF@8FQR.pdf](https://www.fisc.com/support/docs/2016-IOF%408FQR.pdf) |

## Restricted User

|  |  |  |
| --- | --- | --- |
|  | Start IOF  | “I”, “I.” or whatever your site has chosen to use. Perhaps “IOF” |
| Option Menu | Show “IOF Option Menu” | Very restricted list of options. Even so, additional permission may be needed: PUNRDR – restricted. Use PF1 to get long message |
|  | QT command | SDSF compatibilityOption 5: Print the Quick Trainer panelsAlso: Quick Reference card on our websiteNote: SDSF compatibility describes use of the “O” command. This requires specifying OCMD=GROUPS in the B49CMPAT member. Default is: SETCMPAT MVSCHAR=POUND, MVS command character  |
|  | QRF | QRF -> 11 -> 1 -> 15QRF #9: REXX help |
|  | PF1 to get long message | Use After some inscrutable <shortmsg>Examples: * invalid command
* Not authorized
 |
|  | JUMP command | From any panel, get to the Option menu with “JUMP”, or use“/” unless your site uses that for operator commands. Then use “+”, or just say “IOF \*” Whatever is easiest for you to remember. |

## Unrestricted user

## Job List menu

|  |  |  |
| --- | --- | --- |
| Job List Menu |  | Scroll right to show more fields |

### Job List Menu Primary Commands

|  |  |  |
| --- | --- | --- |
|  | SORT <field> [A/D]FIELD command | SORT examples: SORT JOBNAMESORT JOBIDSORT RECS 🡨 error use Field commandSORT RECDCONDSORT alone to give choicesMultiple sort fields: SORT JOBNAME A JOBID D |
|  | EXCLUDE | EXCLUDE JOBNAME NB CALGShow how line command can be issued as primary command “X” line command, or: using <menu#><line command>: 1-5xEXCLUDE ALLOC LT 5Exclude jobs with less than 5 track groups allocatedEXCLUDE SECTION NE OUTPUT Exclude input and running jobs from display. |
|  | EXTEND | EXTEND: Show less frequently used fields. Recommend using LOCK after using EXTEND to reduce overhead. |
|  | LOCK | Prevent refresh of Job List Menu. Normally IOF refreshes the Job List Menu display after every command, or even simply pressing “ENTER”. Lock suppresses this refresh.LOCK can be useful when a very large list is being manipulated, especially after using EXTEND. |
|  | ALTVIEW | Takes over DEST or OWNER column to show m/d/y hh:mm |
|  | CUT/PASTE/ARRANGE |  |

### Job List Menu LINE commands

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Select a job |  |  Show “S” or 2SOr just “2” |
| Browse job |  | BROWSE Line command or <menu#>B |
| EDIT job |  | EDIT line command or <menu#>EDIT |

## Job Summary Panel

|  |  |  |
| --- | --- | --- |
|  | Job Summary Panel | JOB INFO section: Jobname/JOBID/etc.STEP sectionReturn CodeProgramStepname (name on the exec pgm=)PRSTEP (name on the JCL proc invocation) EXEC PROC=PROC (Name of the cataloged procedure)DATASET sectionDDNAMESTATUS |

### Job Summary primary commands

|  |  |  |
| --- | --- | --- |
|  | View Running job | EDIT/SUBMITWatch a running job from Job list: press ENTERFrom job summary: REFRESH (REF) |
|  | B | Browse entire job |
|  | LEFT/RIGHT/UP/DOWN |  |
|  | EXCLUDE |  |
|  | INPUT |  |
|  | SS/SD |  |
|  | VIEW |  |
|  | EDIT |  |
|  | SHOWNULL |  |
|  | ARC (ARCHIVE) |  |

### Job Summary Line Commands

|  |  |  |
| --- | --- | --- |
|  | S/B | Browse the file in IOF |
|  | SB | Brows in ISPF |
|  | EDIT (ED) | Edit the file in ISPF |
|  | SNAP (N) |  |
|  | EXCLUDE (X) |  |
|  | COMP | Compare using SUPERC |
|  | SS/SD | SNAP SYSOUT/ SNAP DATASET |
|  | ALLOC |  |

## BROWSE SYSOUT dataset

|  |  |  |
| --- | --- | --- |
|  | Browse Output | FIND FIND ALLCOND (Condense) |
|  | HEX/COLS/CC |  |
|  | SS/SD/SNAP |  |
|  | NEXT/PREV/NF |  |
|  | INDEX/LOCATE |  |

## FIND string

|  |  |
| --- | --- |
|  | FIND syntax: <string> [FIRST/LAST/NEXT/PREV ] [WORD/PREFIX/SUFFIX] [ALL] [beg-col [end-col] |
|  | JOB -- strings that contain “JOB’JO PREFIX -- strings that begin “JO”JO SUFFIX -- strings that end “JO” |
| ISPF pattern | P’J>B’ -- Find all strings with J<upper>BP’<’ -- find lower case stringsX’82’ strings that contain x’82’ (“b”) |

# Advanced item.

## CONSOLE – MCS console support and LONGCMD

|  |  |
| --- | --- |
| CONSOLE | If authorized to issue operator console commands, there are two ways to do it: 1. “#” or “$” prefix from any IOF panel. Examples:
	1. # D T
	2. $DSPOOL
2. CONSOLE command to start an MCS console
	1. CONSOLE to invoke using default console id
	2. CONSOLE NAME(<consolename>) to specify a desired name
	3. Can be abbreviate CN
3. AUTOCON ON/OFF
	1. Option is saved in the IOF user profile
	2. AUTOCON ON means that any operator command will first invoke the CONSOLE command to start an MCS console
4. Identifying who issued a command
	1. When MCS console is not being used, the System log will show the JOBID of the user issuing the command:

T0945219 00000290 $DSPOOL* 1. When MCS console is being used:
		1. System log will show when the MCS console is started:

T0945219 00000290 IEA630I OPERATOR ISIDSC01 NOW ACTIVE* + 1. Subsequent commands will show the MCS console name:

ISIDSC01 00000290 D T  |
| LONGCMD | Many commands won’t fit in the space IOF provides. To issue these commands, start an MCS console using the CONSOLE command, and then enter LONGCMD to bring up a panel that allows you more characters.This panel also saves previous long commands, much like ISPF Option 6.Very useful for SLIP commands, commands to reload LPA content, etc. |

## ERROR/WARNING <msg#>

|  |  |
| --- | --- |
|  | Sometimes IOF will give a message number that is not accompanied by other text. This is happens in certain error conditions, especially in REXX execs, whether provided with IOF or written locally. The ERROR and WARNING commands can be used to get more information than just a number.EXAMPLES: ERROR 1501 results in: -< Memory >-PF1 then gives: Insufficient memory to perform requested function ERROR 1517 results in: -< Partial List >PF1 then gives: Only partial job list returned due to memory constraintsNote this is a system memory constraint, and a larger region won’t help.ERROR 1503 results in: -< No Match >-PF1 then gives: Nothing matching specified selection criteria was foundWARNING is the same as ERROR  |

## INDEX: Labels, SAVEINDEX, and VIEW command.

|  |  |
| --- | --- |
|  | IOF INDEX provides the ability to give labels to places in a large output dataset, so that returning to a known location is quick. See User Guide Chapter 9 for details. |
| .<label> | Within browse, you can create a label simply by prefixing a string with a “.”:.getbackAs long as you are in the browse session, you can return to this location in the SYSOUT via the “L” command (locate): L getback |
| LOCATEL | L <label> or LOCATE <label> positions you to that label. |
| SAVEINDXSI | Save the index for later use:SI |
| VIEWV | VIEW as a line command on the Job List Menu or as a primary command on the Job SummaryReturns you to BROWSE on that dataset, and reinstates the index |
| INDEXIND | Shows all of the labels currently in use |
| SNAPN | On the INDEX panel, if you use the “N” line command, it snaps the content from that label to the next one, writing to the currently open SNAP dataset, or to SYSOUT if there is none. |

## JAMS – Job Archive Made Simple

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| --- | --- |
| ARC | From any IOF panel, enter the ARC command to invoke JAMS either to: 1. Archive a job
2. View a list of archived jobs.
* Target audience is for individual users. Most sites have Job archive systems (e.g. SARS) for production jobs.
* Individual archived jobs can be migrated. The joblist is displayed using only the system catalog, so the dataset will not be restored unless the job is selected for review.
* By default, the archived job is left on spool
* A Batch job can be set up to archive itself.
 |
|  | * The archive is a PDS which, optionally, can be TERSED. (I prefer to avoid TERSE except for large jobs)
* Dsn format: <Prefix>.<Category>.<jobname>.<date/time>.<Suffix>

Example: ISIDSC.SAMPLE.IEFBR14.ERLXLEQY.IOFJOB* + Prefix -- ISIDSC: Prefix is normally a single level, but can be multiple levels.
	+ Category – SAMPLE: Category is optional.
	+ Jobname – IEFBR14
	+ Date/time – ERLXLEQY: Date/time is encoded into an 8 character gibberish level.
	+ Suffix can be any valid level. Default is IOFJOB
 |
| IOFBLKAR | IOFBLKAR can be used to archive multiple jobs. Can be used to archive the currently running job.Bulk archive: * A batch job can be run using the IOFBLKAR REXX EXEC to archive multiple jobs as a group.
	+ SELECT and EXCLUDE statements can be used to specify which jobs to archive.
		- TRIALRUN can be specified to suppress actual archive until you’re certain the correct jobs will be archived.
	+ When archiving jobs for multiple users, it can be helpful to specify that the owner be used as the Category.
* A job can be archived more than once.
	+ Sometimes it is desirable to Archive a job more than once.
	+ The IOF Users guide suggests techniques for how to mark a job as having been archived when multiple archives should be avoided.

Currently running job: * In the SELECT statement, specify “CURRENT”
 |

## Mail Commands

### MAIL – Overview

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | The IOF Mail interface provides the ability to send emails from an IOF session running in either TSO or Batch. You can:* Send a simple text email
* Send a z/OS dataset as an attachment.
* Send all or part of a job as an HTML attachment so it can be viewed on a Browser.
* Also see: ZDS to email a flattened PDS containing IEBUPDTE control statements.

IOF mail can be invoked by several different commands:

|  |  |
| --- | --- |
| IOFMAIL <dataset name>  | Email the dataset as an attachment. If a PDS, each selected member is sent as a separate attachment. |
| IOFMAIL | Email a brief text, or send a dataset as the mail body, or as an attachment.  |
| IOFXMIT | Email the current ISPF Edit dataset. (It will save the dataset before sending it) |
| SEND | IOF under ISPF, email the specified content as an attachment. See below for details. |

 |

### MAIL – SEND/IOFSEND

|  |  |
| --- | --- |
|  | The SEND command can be used: * As a line command on the IOF Job List to send a job’s output.
* As a line command on the IOF Output Group Display to send an output group.
* As a primary command on the IOF Job Summary to send the current job.
* As a line command on the IOF Job Summary to send an individual sysout data set.
* On any other IOF panel to set defaults for the SEND command.
 |
|  | Notes:* All or part of a job can be sent.
* The output is sent as an attachment, and can be in HTML or TXT format
 |
| IOFSEND JCL PROC | The IOFSEND cataloged procedure can be used to send output from a running job. It uses the IOFSNDME EXEC to send all or part of the currently running job: //ABEND806 JOB (111,1),&SYSUID,NOTIFY=&SYSUID //ALC1 EXEC PGM=ABEND806 // IF (ABEND | RC>4) THEN //ALERT EXEC IOFSEND,DATA=JESDS, // TO='DAVE.CROW@TRIANGLE-SYSTEMS.COM' // ENDIF  |

### MAIL – Problem Diagnosis

|  |  |
| --- | --- |
| Problem diagnosis | The IOF MAIL interface creates a SYSOUT file that contains an email in SMTP format. It requires that an email server such as CSSMTP be configured on the z/OS system. If the email server does not recognize the output as email, the IOF session will have a SYSOUT that looks something like this: **SYS00091 IOFPROC TSIPROC A 22 L TRISYS.SMTP**If you are not getting email:* If this SYSOUT is visible in your TSO session, the SMTP server is not picking it up. The problem is likely that the email server (CSSMTP) is not running, or it is configured to pick up email in a different SYSOUT class or DEST from the one IOF is using.
* If this SYSOUT is not visible, issue the SHOWNULL command on the IOF Job Summary panel for your TSO session. If the SYSOUT dataset is now visible, the email server has processed the email, and deleted the SYSOUT file. The delay is downstream from IOF and the CSSMTP server. Perhaps the CSSMTP email server has lost contact with the target server it communicates with.
* The email can have also violated some limit such as total size. Use a small test email that is known to work to see if any email is working.
 |
| SHOWNULL | The SHOWNULL command shows SYSOUT DDnames that have been completely processed and deleted. However, in many cases, the data is still on SPOOL and can be viewed simply by selecting the SYSOUT as you normally would. |

## REARRANGE PANEL COLUMNS

|  |  |
| --- | --- |
| ALTVIEW | cycles between 3 displays |
|  |  |
| ARRANGE |  |
|  | ARRANGE $TEMP – temporary changes. Or use ARRANGE DEFAULT to get back to where started |
|  | ARRANGE ALLOC BEFORE RECDCOND orARRANGE ALLOC AFTER RECDCOND  |
|  |  |
| CUT |  |
|  | CUT RECDCOND -- remove RECDCOND from display orCUT -- where cursor is positioned |
|  |  |
| PASTE | Paste one or more fields that have been cut |
|  | PASTE BEFORE RECDCOND orPASTE AFTER RECDCOND orPASTE LAST |

## SNAP

### Create SNAP file

|  |  |
| --- | --- |
| SD | SNAP to a disk dataset. (If a snap file already exists, close it). Opens a prompt window.SD DA(<dsn>) other alloc parmsSD $DDNAME(<ddname>) |
| SS | SNAP to a SYSOUT dataset (If a snap file already exists, close it) |
|  |  |

### Create SNAP content

|  |  |
| --- | --- |
| SNAP | Copy specified content to current SNAP file.On Job list menu 1SNAP copies entire job to the snap fileOn Job Summary 1SNAP copies entire SYSOUT to snap file (This is the LOG)Inside Browse: SNAP 100LINES copies the next 100 lines to the SNAP file. |
| CAPTUREALL | CAPTURE: Copy current display screen to SNAP fileCAPTURE ALL: Copy all of the current display to SNAP file, including columns and rows that cannot be seen.  |

### Close a SNAP file

|  |  |
| --- | --- |
| SNAPCLOS | This command will close any open snap file. SNAP file is also closed when you exit the panel that created it. (you can drill down and it stays open) |

# WIDE SCREEN

|  |  |  |
| --- | --- | --- |
| Wide Screen | Wide Screen | Use “USER” 43x132 screen. Keeps font same on mode change, so screen gets really big.1. Requires VTAM logmode to support this. Most systems now use this as default.
2. **Requires ISPF SETTINGS (Option 0): Screen Format is DATA(#1), or MAX (#3)**
 |
|  | View LOG | Use IndexShow creating new index entries |