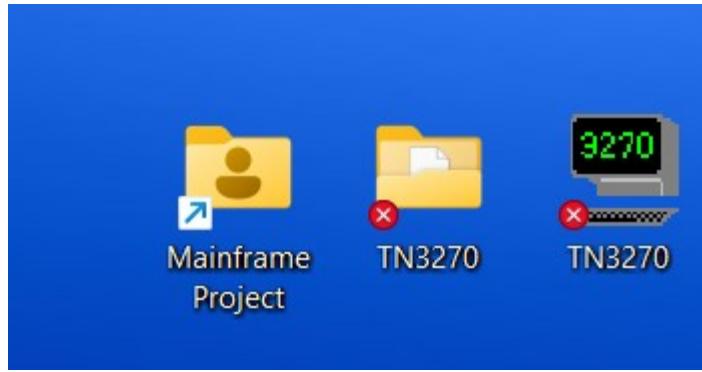


Pós-Graduação MBA Alta Plataforma Mainframe IBM

Professor: Wagner Bellacosa

- Disciplina: Cobol & Além

COBOL



Modulo 02.03 – Configurações de Ambiente

- 1) VPN
- 2) Emulador TN3270 Plus
- 3) Emulador PCCOMM
- 4) TSO
- 5) ISPF
- 6) Barra de Ferramentas ISPF
- 7) Duvidas

COBOL



1) Vagner Bellacosa seu facilitador

Analista programador desde 1989, onde comecei como auxiliar e tecnólogo em processamento de dados desbravando os primórdios da computação brasileira, um eterno aprendiz em processos Mainframe..

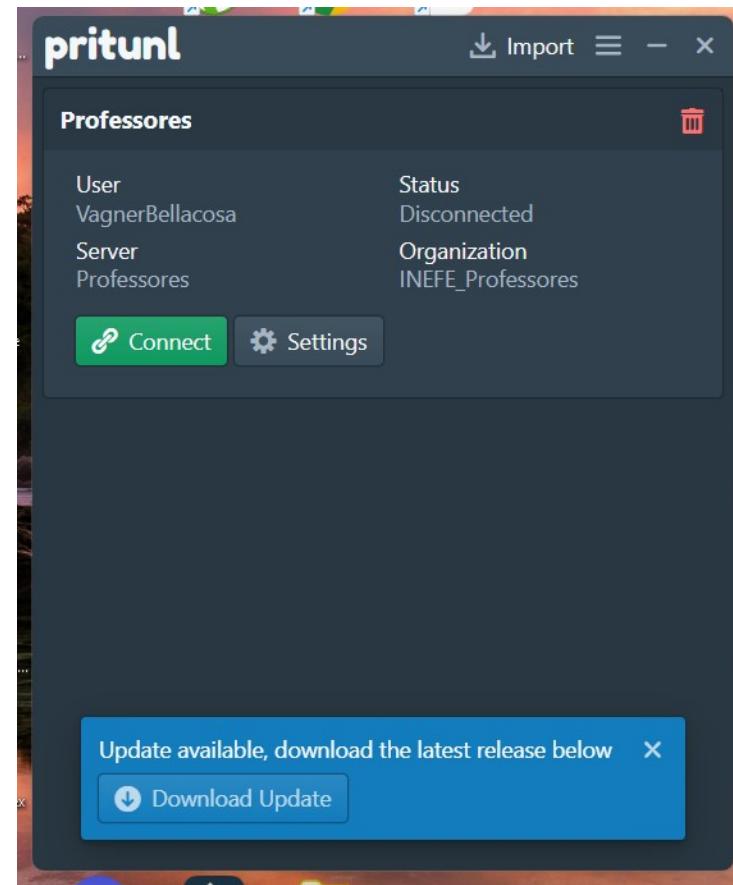
Desde então trabalhei em centenas de projetos, em 4 países e dezenas de instituições financeiras, ora como funcionário, consultor externo e freelancer.

A mais memorável foi o Banco REAL, uma verdadeira escola, onde aprendi muito e tive a oportunidade de participar no aliciante Projeto Y2K, o temível bug do milênio.

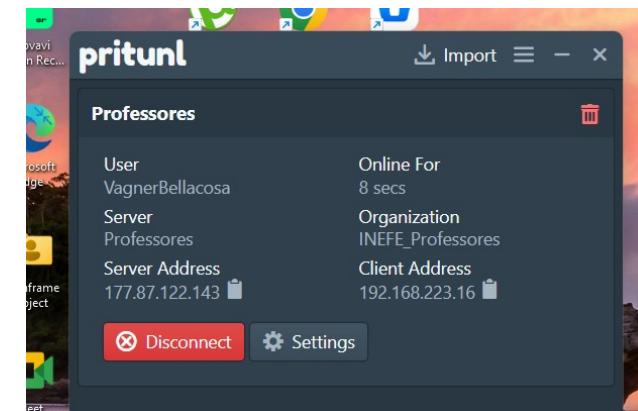
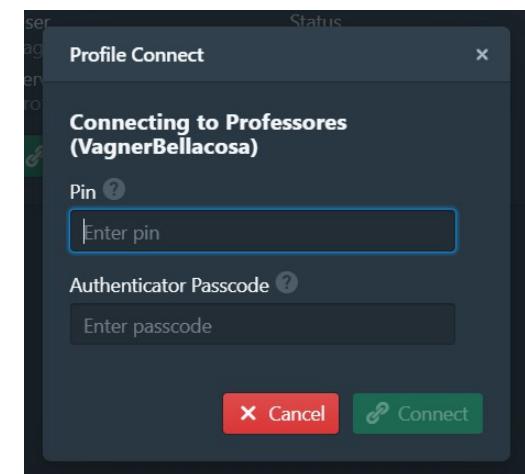
Participei em projetos na CESP, Fundação CESP, Transbrasil, ABSA, Real Seguros, BPN, Skandia, DGITA, BES, CGD, BPI, Barclay, Skandia, IBM Italia, Sistemi Informativi, Unicredit, Zurich Assicurazione, Banco Safra e Banco Itaú.

Atualmente trabalho na Spread no Projeto BRB em Brasília, via remoto.

TSO



VPN PRITUNL



Usuario e Senha serão fornecidos pelo suporte

[zos]10.102.20.129:3270

TSO

Emulador TN3270 Plus



The screenshot shows the homepage of the SDI TN3270 Plus website. The header features the SDI logo and the tagline "Over Thirty Years of Software Innovation...". The main content area is titled "TN3270 Plus Secure Telnet Terminal Emulation for Windows". It includes sections for "Overview", "News", "Security Alerts!", and "Flexible". The "Overview" section describes TN3270 Plus as a flexible, efficient, and inexpensive terminal emulator for various platforms. The "News" section mentions the release of version 4.0.7. The "Security Alerts!" section discusses OpenSSL, POODLE, and Heartbleed vulnerabilities. The "Flexible" section notes compatibility with multiple Windows versions.

Manual do usuário:

<http://www.sdisw.com/tn3270/manual/index.html>

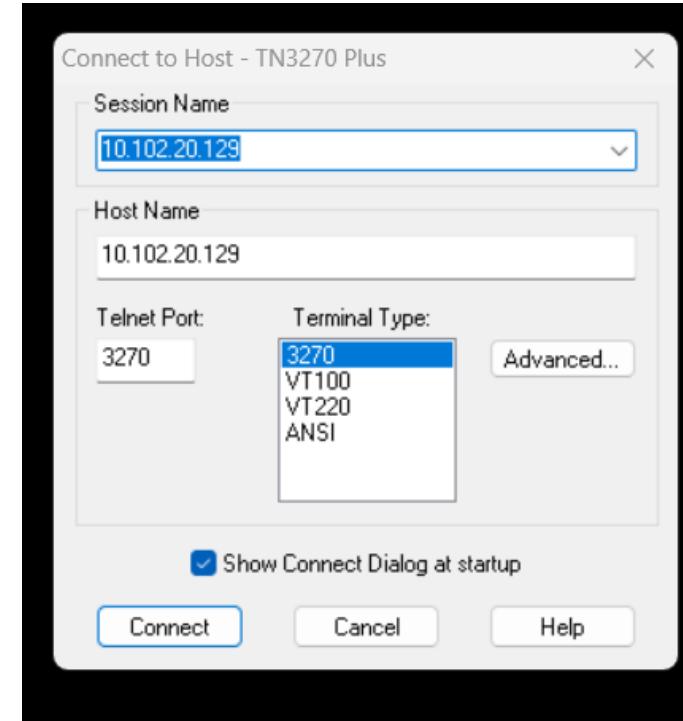
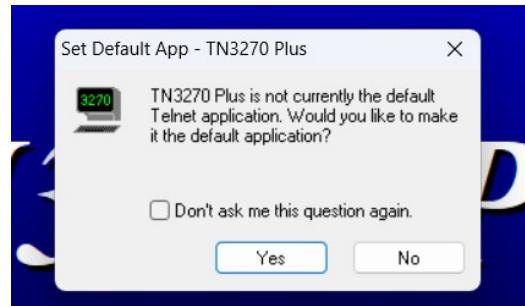
Documentos do suporte:

<http://www.sdisw.com/tn3270/whitepapers.htm>

<http://www.sdisw.com/>

TSO

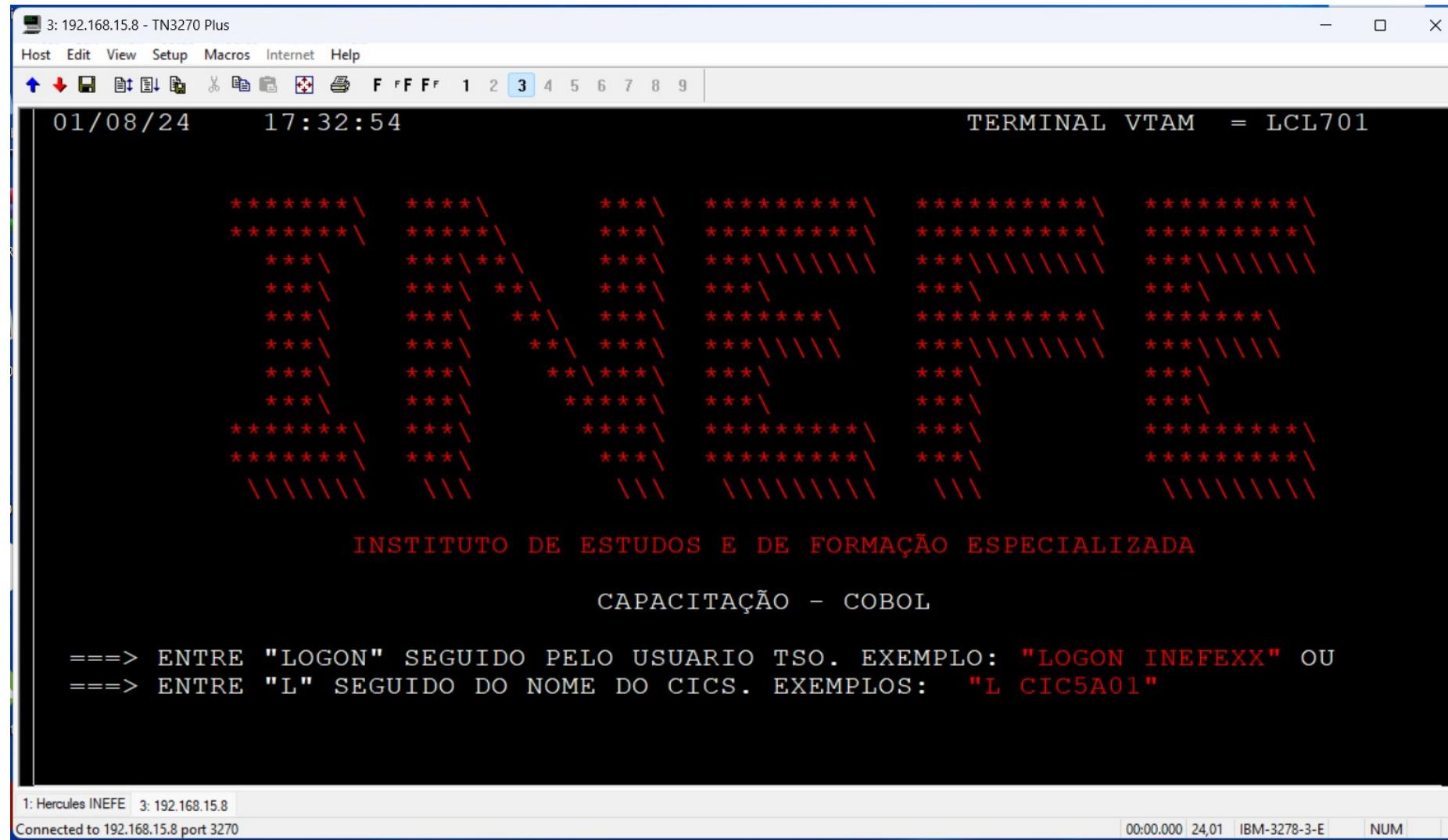
Conectando ao Sistema Central (Formação).



IP de acesso:
10.102.20.129

<http://www.sdisw.com/>

TSO



LOGON USERID

O USER-ID será fornecido via e-mail pelo suporte.

TSO

01/08/24 17:32:54

TERMINAL VTAM = LCL701

CAPACITAÇÃO - COBOI

====> ENTRE "LOGON" SEGUIDO PELO USUARIO TSO. EXEMPLO: "LOGON INEFEXX" OU
====> ENTRE "L" SEGUIDO DO NOME DO CICS. EXEMPLOS:

logon ibmuser

==> ENTRE "LOGON" SEGUIDO P
==> ENTRE "L" SEGUIDO DO NO

logon ibmuser

TSO

Informe sua Password

```
Enter LOGON parameters below:  
Userid      ==> IBMUSER  
Password    ==>
```

TSO

```
-- TSO/E LOGON --

Enter LOGON parameters below:

Userid    ==> KC02746
Password  ==> -
Procedure ==> DBPROCCG
Acct Nmbr ==> ACCT#
Size      ==> 32768
Perform   ==>
Command   ==>

Enter an 'S' before each option desired below:
-Nomail     -Nonotice    S -Reconnect    -OIDcard

PF1/PF13 ==> Help    PF3/PF15 ==> Logoff   PA1 ==> Attention   PA2 ==> Reshow
You may request specific help information by entering a '?' in any entry field

M# 0.4 05/24/23.144 09:34AM zos.kctr.marist.edu  a  8,20
```

**Informe sua senha
Password**

```
Enter LOGON parameters below:

Userid    ==> KC02746
Password  ==>
```

TSO

3: 192.168.15.8 - TN3270 Plus

Host Edit View Setup Macros Internet Help

↑ ↓ ⌂ ⌂ ⌂ ⌂ ⌂ ⌂ ⌂ ⌂ ⌂ F F F F 1 2 3 4 5 6 7 8 9

```
ICH70001I IBMUSER LAST ACCESS AT 17:38:50 ON TUESDAY, JULY 30, 2024
IKJ56455I IBMUSER LOGON IN PROGRESS AT 17:38:14 ON AUGUST 1, 2024
```

Mr Wizards i'm
online...

```
ICH70001I IBMUSER LAST ACCESS AT 17:38:50 ON TUESDAY, JULY 30, 2024
IKJ56455I IBMUSER LOGON IN PROGRESS AT 17:38:14 ON AUGUST 1, 2024
IKJ56951I NO BROADCAST MESSAGES
*****
*
* ISPF RESERVADO PARA EQUIPE DE SUPORTE
*
*****
***
```

TSO

	<u>M</u> enu <u>U</u> nilities <u>C</u> ompilers <u>O</u> ptions <u>S</u> tatus <u>H</u> elp	
ISPF Primary Option Menu (Suporte técnico)		
Option ===>		
0 Settings	Terminal and user parameters	User ID . : IBMUSER
1 View	Display source data or listings	Time. . . : 17:39
2 Edit	Create or change source data	Terminal. : 3278
3 Utilities	Perform utility functions	Screen. . : 1
6 Command	Enter TSO or Workstation commands	Language. : ENGLISH
SD SDSF	System Display And Search Facility	Appl ID . : ISR
RC RACF	Resource Access Control Facility	TSO logon : SUP0PROC
IP IPCS	Interactive Product Control System	TSO prefix:
DI DITTO	Data Interfile Transfer, Testing And O	System ID : ADCD
OM OMVS	Open Edition For MVS	MVS acct. : ACCT#
SM SMP/E	System Management Product	Release . : ISPF 6.1
IS ISMF	Integrated Storage Management Facilit	
S2 SDF II	Screen Definition Facility II	
DB DB2	DB2 user tasks	
AD DB2 Admin	DB2 administrator tasks	
MQ WMQS	WMQ Series Operations and Control	
FM FMOC	File Manager Operations and Control	
Enter X to Terminate using log/list defaults		

TSO

Teclas de Função

F1=HELP	F2=SPLIT	F3=END	F4=RETURN	F5=IFIND	F6=BOOK
F7=UP	F8=DOWN	F9=SWAP lis	F10=LEFT	F11=RIGHT	F12=RETRIEVE
*SDSF					

The screenshot shows a TSO session with the following details:

- Function Key Definitions:**
 - F1=HELP
 - F2=SPLIT
 - F3=END
 - F4=RETURN
 - F5=IFIND
 - F6=BOOK
 - F7=UP
 - F8=DOWN
 - F9=SWAP lis
 - F10=LEFT
 - F11=RIGHT
 - F12=RETRIEVE
 - *SDSF
- SDSF Output:**

```
Display Filter View Print Options Search Help
-----
SDSF JOB DATA SET DISPLAY - JOB CATCOB00 (JOB06094)    LINE 1-5 (5)
COMMAND INPUT ==>                                     SCROLL ==> CSR
PREFIX=CAT* DEST=(ALL) OWNER=* SYSNAME=
NP  DDNAME   C SegID DSName                         Chars
JESMSGLG 5      KC02746.CATCOB00.JOB06094.D0000002.JESMSGLG ****,****,**
JESJCL   5      KC02746.CATCOB00.JOB06094.D0000003.JESJCL   ****,****,**
JESYSMSG 5      KC02746.CATCOB00.JOB06094.D0000004.JESYSMSG ****,****,**
SYSPRINT 5     KC02746.CATCOB00.JOB06094.D0000101.?   ****,****,**
SYSPRINT 5     KC02746.CATCOB00.JOB06094.D0000102.?   ****,****,**
```
- Bottom Status Bar:**

M A 0.2 05/24/23, 144 03:16PM zos.kctr.marist.edu a 4,21

Comando : PFSHOW

Habilita a exibição das teclas de função nas linhas 22 e 23.

ISPF

```
Menu Utilities Compilers Options Status Help
-----
          ISPF Primary Option Menu
Option ==> -
More:      +
0 Settings   Terminal and user parameters
1 View        Display source data or listings
2 Edit         Create or change source data
3 Utilities    Perform utility functions
4 Foreground  Interactive language processing
5 Batch        Submit job for language processing
6 Command     Enter TSO or Workstation commands
7 Dialog Test Perform dialog testing
8 LM Facility Library administrator functions
9 IBM Products IBM program development products
----- r
Licensed Materials - Property of IBM
5650-ZOS Copyright IBM Corp. 1980, 2019.
US Government Users Restricted Rights -
Use, duplication or disclosure restricted
by GSA ADP Schedule Contract with IBM Corp. ity
----- *DB2@PRI
```

**IDE para
desenvolvimento
de programas
Mainframe.**

ISPF

```
Menu Utilities Compilers Options Status Help
-----
          ISPF Primary Option Menu
Option ==> START
More: + User ID . : KC02746
      0 Settings Terminal and user parameters
      1 View     Display source data or listings
      2 Edit      Create or change source data
      3 Utilities Perform utility functions
      4 Foreground Interactive language processing
      5 Batch     Submit job for language processing
      6 Command   Enter TSO or Workstation commands
      7 Dialog Test Perform dialog testing
      8 LM Facility Library administrator functions
      9 IBM Products IBM program development products
      r
      Licensed Materials - Property of IBM
      5650-ZOS Copyright IBM Corp. 1980, 2019.
      US Government Users Restricted Rights -
      Use, duplication or disclosure restricted
      by GSA ADP Schedule Contract with IBM Corp.      ity
*DB2@PRI
M 0.1 05/24/23.144 09:37AM zos.kctr.marist.edu 4,19
```

Comando Start

Cria novas janelas a

```
Option ==> START
```

ISPF

```
Menu Utilities Compilers Options Status Help
-----
ISPF Primary Option Menu
Option ==> _____ More: + <   Calendar   >
0 Settings Terminal and user parameters      May 2023
1 View     Display source data or listings    Su Mo Tu We Th Fr Sa
2 Edit     Create or change source data        1  2  3  4  5  6
3 Utilities Perform utility functions        7  8  9 10 11 12 13
4 Foreground Interactive language processing 14 15 16 17 18 19 20
5 Batch    Submit job for language processing 21 22 23 24 25 26 27
6 Command  Enter TSO or Workstation commands 28 29 30 31
7 Dialog Test Perform dialog testing
8 LM Facility Library administrator functions
9 IBM Products IBM program development products
10 SCLM    SW Configuration Library Manager
11 Workplace ISPF Object/Action Workplace

----- Other Install Products -----
SD SDSF System Display and Search Facility
IP IPCS Inter Problem Control Facility

-DB2@PRI *DB2@PRI
M A 0.2 05/24/23.144 09:38AM zos.kctr.marist.edu a 4,14
```

Comando Start

Esta limitado a oito janelas, que podem ser renomeadas e permite navegação via mouse ou linha de comando.

ISPF

```

Menu Utilities Compilers Options Status Help
-----
ISPF Primary Option Menu
Option ==> SWAP
More: + User ID . : KC02746
0 Settings Terminal and user parameters Time. . . : 08:41
1 View Display source data or listings Terminal. . : 3278A
2 Edit Create or change source data Screen. . : 4
3 Utilities Perform utility functions Language. . : ENGLISH
4 Foreground Interactive language processing Appl ID . : ISR
5 Batch Submit job for language processing TSO logon : DBPROCCG
6 Command Enter TSO or Workstation commands TSO prefix:
7 Dialog Test Perform dialog testing System ID : S0W1
8 LM Facility Library administrator functions MVS acct. : ACCT#
9 IBM Products IBM program development products Release . : ISPF 7.4
10 SCLM SW Configuration Library Manager
11 Workplace ISPF Object/Action Workplace
----- Other Install Products -----
SD SDSF System Display and Search Facility
IP IPCS Inter Problem Control Facility
DB2@PRIM DB2@PRIM -DB2@PRI *DB2@PRI
M8 0.2 05/24/23.144 09:40AM zos.kctr.marist.edu $ a 4,18

```

Comando Swap

Permite Navegar nas janelas abertas, da esquerda para direita num formato carrossel, voltando a

```

Option ==> SWAP
0 Settings Terminate

```

ISPF

```

Menu Utilities Compilers Options Status Help
-----
ISPF Primary Option Menu
Option ==> SWAP
More: + User ID . : KC02746
0 Settings Terminal and user parameters Time. . . : 08:41
1 View Display source data or listings Terminal. : 3278A
2 Edit Create or change source data Screen. . . : 4
3 Utilities Perform utility functions Language. : ENGLISH
4 Foreground Interactive language processing Appl ID . : ISR
5 Batch Submit job for language processing TSO logon : DBPROCCG
6 Command Enter TSO or Workstation commands TSO prefix:
7 Dialog Test Perform dialog testing System ID : S0W1
8 LM Facility Library administrator functions MVS acct. : ACCT#
9 IBM Products IBM program development products Release . : ISPF 7.4
10 SCLM SW Configuration Library Manager
11 Workplace ISPF Object/Action Workplace
----- Other Install Products -----
SD SDSF System Display and Search Facility
IP IPCS Inter Problem Control Facility
DB2@PRIM DB2@PRIM -DB2@PRI *DB2@PRI
M@ 0.2 05/24/23.144 09:40AM zos.kctr.marist.edu $ a 4,18

```

Comando Swap

Permite Navegar nas janelas abertas, da esquerda para direita num formato carrossel, voltando a primeira.

```

Option ==> SWAP
0 Settings Terminate

```

ISPF

```
Menu Utilities Compilers Options Status Help
-----
ISPF Primary Option Menu
Option ==> SWAP LIST
More: + User ID . : KC02746
0 Settings Terminal and user parameters Time. . . : 08:41
1 View Display source data or listings Terminal. : 3278A
2 Edit Create or change source data Screen. . : 4
3 Utilities Perform utility functions Language. : ENGLISH
4 Foreground Interactive language processing Appl ID . : ISR
5 Batch Submit job for language processing TSO logon : DBPROCCG
6 Command Enter TSO or Workstation commands TSO prefix:
7 Dialog Test Perform dialog testing System ID : S0W1
8 LM Facility Library administrator functions MVS acct. : ACCT#
9 IBM Products IBM program development products Release . : ISPF 7.4
10 SCLM SW Configuration Library Manager
11 Workplace ISPF Object/Action Workplace
-----
----- Other Install Products -----
SD SDSF System Display and Search Facility
IP IPCS Inter Problem Control Facility
DB2@PRIM DB2@PRIM -DB2@PRI *DB2@PRI
0.2 05/24/23.144 09:41AM zos.kctr.marist.edu a 4,23
M4
```

Comando Swap LIST

Abre uma janela que permite selecionar a janela diretamente.

```
Option ==> SWAP LIST
```

ISPF

The image shows a terminal window with the following content:

Menu Utilities Compilers Options Status Help

- ISPF Task List -

Active ISPF Logical Sessions

0 . Start a new screen
0 . Start a new application
1 Application Name

2

3

4 ID Name Panelid Applid Session Type

5 - 1 DB2@PRIM ISR 3270

6 . 2 DB2@PRIM ISR 3270

7 . 3- DB2@PRIM ISR 3270

8 . 4* DB2@PRIM ISR 3270

9 .

1 .

1 .

S

IP IPCS Inter Problem Control Facility

DB2@PRIM DB2@PRIM -DB2@PRI *ISPSLIS

0.3 05/24/23.144 09:43AM zos.kctr.marist.edu a 11,7

Comando Swap LIST

Pode ser
selecionado pelo ID
ou colocando S na

- . Start a new screen
- . Start a new application

Application Name

1

ID	Name	Panelid
1		DB2@PRIM

```
Active ISPF Logical Sessions

. Start a new screen
. Start a new application
Application Name
```

ISPF

The image shows a terminal window with the following content:

Menu Utilities Compilers Options Status Help

- ISPF Task List -

Active ISPF Logical Sessions

0 . Start a new screen
0 . Start a new application
1 Application Name

2

3

4 ID Name Panelid Applid Session Type

5 - 1 DB2@PRIM ISR 3270

6 . 2 DB2@PRIM ISR 3270

7 . 3- DB2@PRIM ISR 3270

8 . 4* DB2@PRIM ISR 3270

9 .

1 .

1 .

S

IP IPCS Inter Problem Control Facility

DB2@PRIM DB2@PRIM -DB2@PRI *ISPSLIS

0.3 05/24/23.144 09:43AM zos.kctr.marist.edu a 11,7

Comando Swap LIST

Pode ser
selecionado pelo ID
ou colocando S na
frente.

- . Start a new screen
- . Start a new application

Application Name
1

ID	Name	Panelid
1		DB2@PRIM

```
Active ISPF Logical Sessions

. Start a new screen
. Start a new application
  Application Name
```

ISPF

Menu RefList RefMode Utilities Workstation Help

View Entry Panel

Command ==> SCRNAME VIEWFILE Invalid command

More: +

ISPF Library:

Project . . .	KC02746
Group	ELSON
Type	JCL
Member	(Blank or pattern for member selection list)

Other Partitioned, Sequential or VSAM Data Set, or z/OS UNIX file:

Name	+
Volume Serial	(If not cataloged)

Workstation File:

File Name	+
-------------------	-------------

Initial Macro Options

- Confirm Cancel/Move/Replace
- Browse Mode
- View on Workstation
- ✓ Warn on First Data Change
- Mixed Mode

Record Length

DB2@PRIM -DB2@PRI DB2@PRIM DB2@PRIM *VIEW WORK

M8 0.1 05/24/23.144 10:09AM zos.kctr.marist.edu A 4,18

Comando SCRNAME

Utilizado para
renomear uma
janela

Menu RefList RefMode Utilities Workstation Help

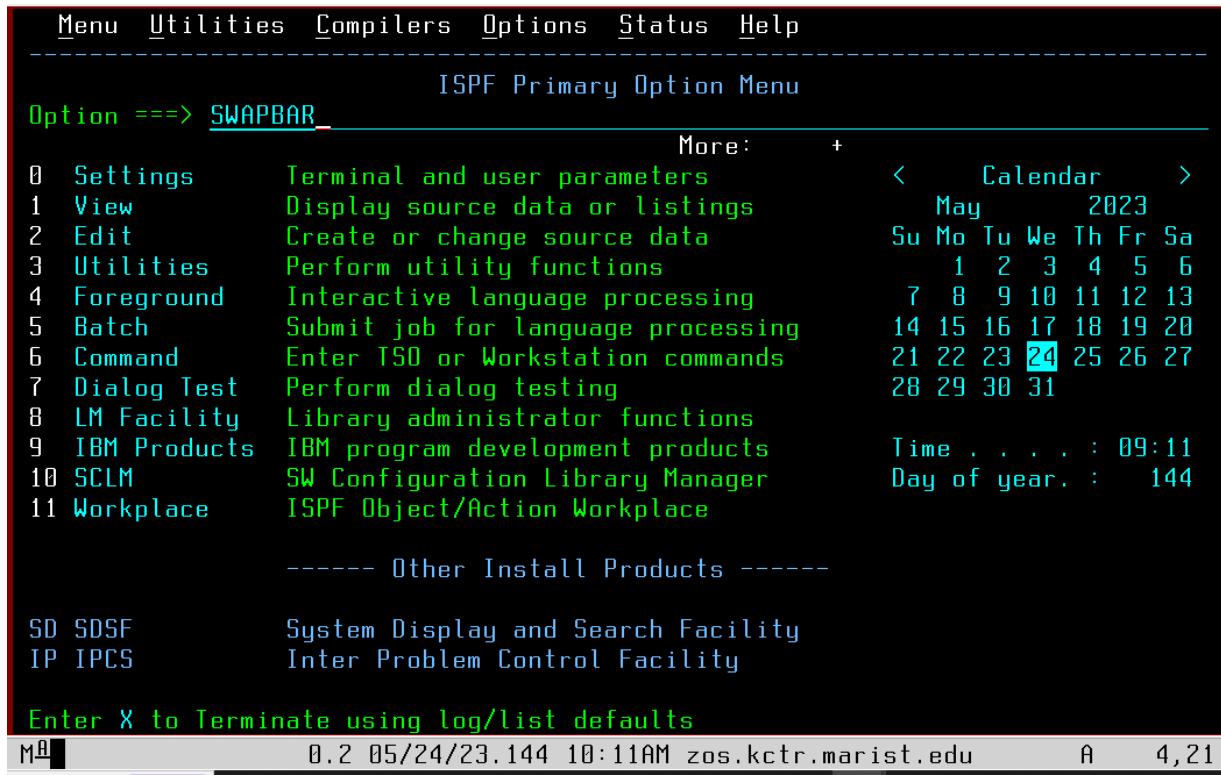
View Entry Panel

Command ==> SCRNAME VIEWFILE

ISPF Library:

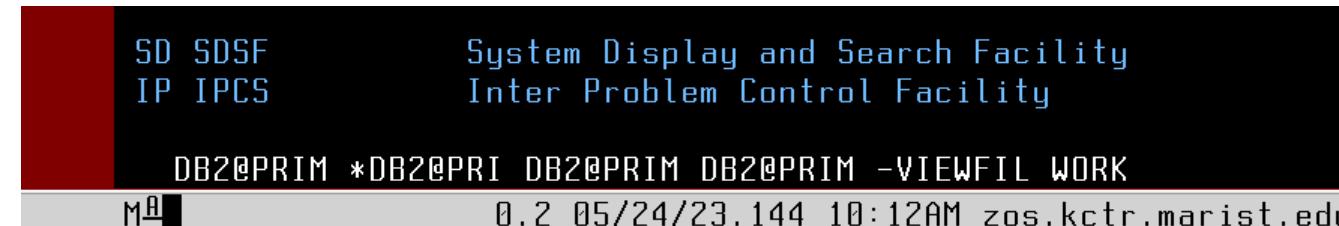
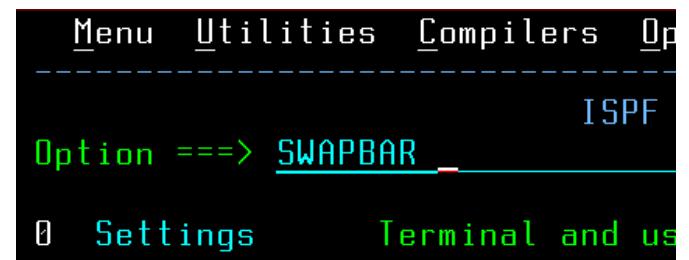
Project	KC02746
---------	---------

ISPF



Comando SWAPBAR

LIGA/DESLIGA a barra de navegação das janelas



ISPF

Outros comandos de interesse

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
-----  
EDIT IBMUSER.WORKBOOK.COBOL(TSOCOMAN) - 01.03 Columns 00001 00072  
Command ===> Top of Data Scroll ===> CSR  
*****  
000001 *****  
000002 *** TTTTTT SSSSSS OOOOOO ***  
000003 *** TTTTTT SS OO OO ***  
000004 *** TT SS OO OO ***  
000005 *** TT SSSSSS OO OO ***  
000006 *** TT SS OO OO ***  
000007 *** TT SS OO OO ***  
000008 *** TT SSSSSS OOOOOO ***  
000009 *****  
000010 *** COMANDOS UTEIS PARA O DIA A DIA NA EDICAO DE PROGRAMAS ***  
000011 ***  
000012 *** CONFIGURACAO DE AMBIENTE DE EDICAO ***  
000013 ***  
000014 [AUTOSAVE] ON / OFF  
000015 GRAVA AS EDICOES DE ARQUIVO NO TSO, QUANDO APERTAMOS O F3  
000016  
000017 [CAPS] ON / OFF  
000018 NA EDICAO DE ARQUIVOS OS CARACTERES AUTOMATICAMENTE FICAM EM MAISCULAS  
000019  
000020 [HEX] ON / OFF  
000021 CONVERTE O ARQUIVO EM EDICAO DO FORMATO EBCDIC PARA HEXADECIMAL  
000022  
000023 [HLITE] JCL / COBOL / SQL  
000024 CORES DE COMANDO NA LINGUAGEM SELECCIONADA, FACILITA A CODIFICACAO  
000025  
000026 [NUMBER] ON / OFF STD / COBOL  
*DSLST
```

IBMUSER.WORKBOOK.COBOL(TSOCOMAN)

ISPF

Outros comandos de interesse

Command	====>	S
000026	[NUMBER]	ON / OFF STD / COBOL
000027	LIGA	A NUMERACAO AUTOMATICA NA EDICAO DE ARQUIVOS
000028		
000029	[AUTONUM]	
000030	RENUMERA	AUTOMATICA O ARQUIVO DE EDICAO
000031		
000032	[START]	
000033	CRIA	UMA NOVA JANELA DE EDICAO NA IDE TSO
000034		
000035	[SPLIT]	
000036	DIVIDE	A JANELA EM DUAS VISOES DE ACORDO COM O CURSO
000037		
000038	[UP]	
000039	SOBE	UMA PAGINA / CSR DE TELA
000040		
000041	[DOWN]	
000042	DESCE	UMA PAGINA / CSR DE TELA
000043		
000044	[SWAP]	START
000045	NAVEGA	NA JANELAS ATIVA NA SESSAO
000046		
000047	[SWAPLIST]	
000048	EXIBE	UMA TELA COM TODAS AS JANELAS ATIVAS
000049		
000050	[SWAPBAR]	
000051	EXIBE	NA LINHA 24 ATALHO PARA AS JANELAS ATIVAS
000052		

IBMUSER.WORKBOOK.COBOL(TSOCOMAN)

ISPF

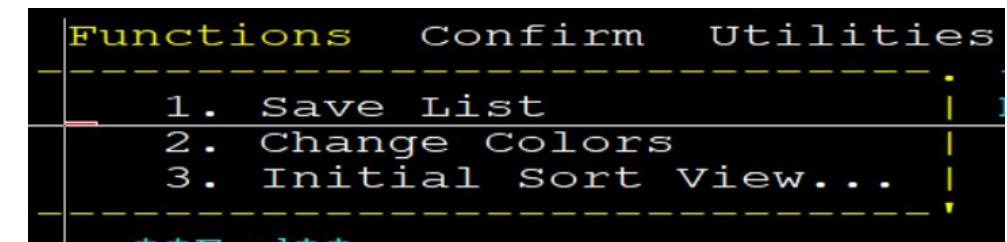
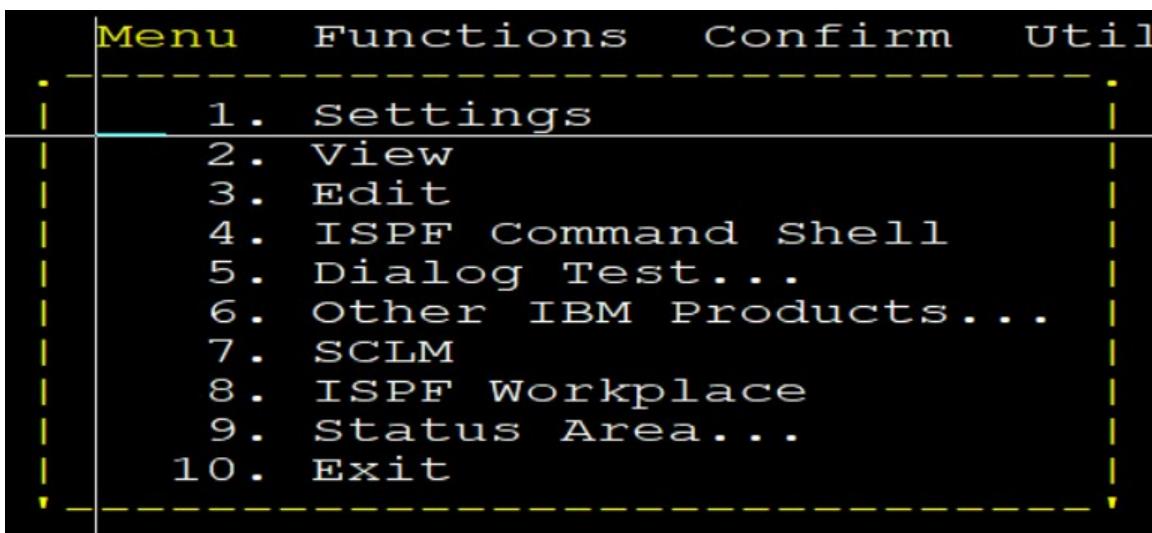
Outros comandos de interesse

Command	====> _____	Scroll ==> CSR
000052		
000053	[SCRNAME] NOME	
000054	RENOMEIA UMA JANELA, UTIL PARA A NAVEGACAO	
000055		
000056	[RESET] [RES]	
000057	LIMPA A JANELA ATIVA, ELIMINANDO WARNINGS E SUJEIRAS	
000058		
000059	[SUB]	
000060	SUBMETE UM JCL PARA A EXECUCAO	
000061		
000062	[SAVE]	
000063	SALVE UM ARQUIVO EM EDICAO	
000064		
000065	[SRCHFOR] ATRIBUTO	
000066	PESQUISA NA BIBLIOTECA UMA DETERMINADA VARIABEL	
000067		
000068	***** FIM DO ARQUIVO *****	
*****	***** Bottom of Data *****	

IBMUSER.WORKBOOK.COBOL(TSOCOMAN)

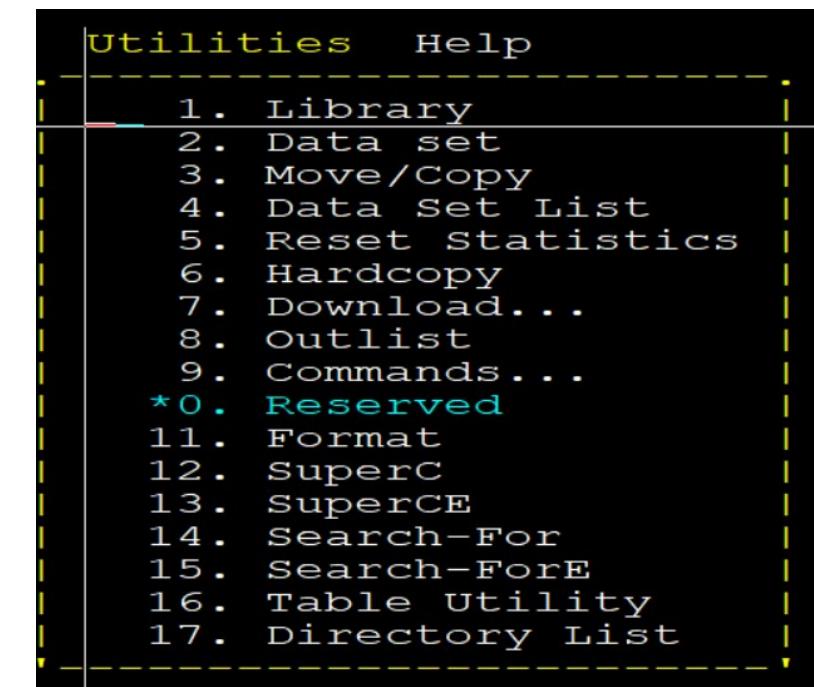
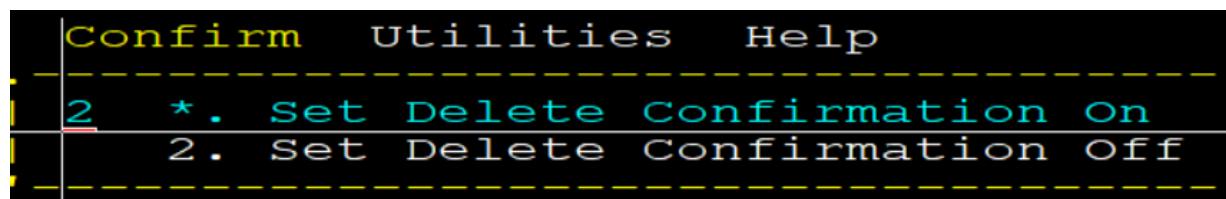
ISPF

Barra de Ferramentas ISPF



ISPF

Barra de Ferramentas ISPF



ISPF

Barra de Ferramentas ISPF



COBOL

DUVIDAS

Vamos conversar e tirar duvidas...

