



Hands-On Lab

z/OS Operator Consoles

Abstract:

The z/OS Management Facility (z/OSMF) provides a web-based graphical interface for system programmers on z/OS. This hand on lab will give an opportunity to learn about the functions and features in z/OSMF first-hand. Attendees can navigate through the z/OS Operator Consoles task to see system messages and to issue system commands.

This session will be useful to systems programmers and their managers who will be using (or are considering using) the z/OS Management Facility.

Introduction to z/OS Operator Consoles:

The z/OS Operator Consoles task lets you work with z/OS consoles. You can view system messages and issue system commands. The systems that you can work with are defined within the z/OSMF Systems task.

You can see a graphic summary of message activity. With Knowledge Center for z/OS (KC4Z), the z/OS Operator Consoles task can also let you quickly see documentation for a message by hovering over the message ID that is displayed on the console view.

Key features of the z/OS Operator Consoles Task

With the z/OS Operator Consoles task, you can:

- **Use the Overview tab to see the local sysplex and systems that are available for the z/OS Operator Consoles function.**
- **View system messages for a system or local sysplex.** The Console Summary Viewer provides a graphical view of activity. Each bar in the graph represents a unit of time, so higher bars represent more activity. The colors in the bars reflect the colors of the messages that are displayed in the console. Hover the mouse pointer over the summary view to display additional information for that unit of time.
- **Issue system commands** Type a system command or select a command from your command history. The command is issued to the local system, which is indicated in the text for the command line. To issue a command to another system, use a ROUTE command. Click Submit or press Enter, then get command response from web browser.
- **Retrieve historic messages from OPERLOG or SYSLOG.**
- **Quickly see documentation for a message with Knowledge Center for z/OS (KC4Z).**

z/OS Operator Consoles Lab

This lab consists of 12 tasks.

1. Log on to z/OSMF
2. Complete setup
3. Start Console, and open console panel
4. View system messages for a system or local sysplex
5. Association between message bar and messages
6. Hide/Show summary view
7. Show/Hide WTOR and HOLD messages
8. Enter system commands
9. Lock/Resume console
10. Search with keywords
11. Filter messages
12. Retrieve historic messages from SYSLOG
13. Display message help

It is recommended that you execute these tasks in the order listed above. As you get familiar with the z/OS Operator Consoles, you will be able to work directly with the task you need to accomplish.

As with all the labs in this session, all the teams will be working with the same z/OSMF System. Each team will be given a unique id to work with, please make sure you work with the user id assigned to your team to avoid confusing the other teams.

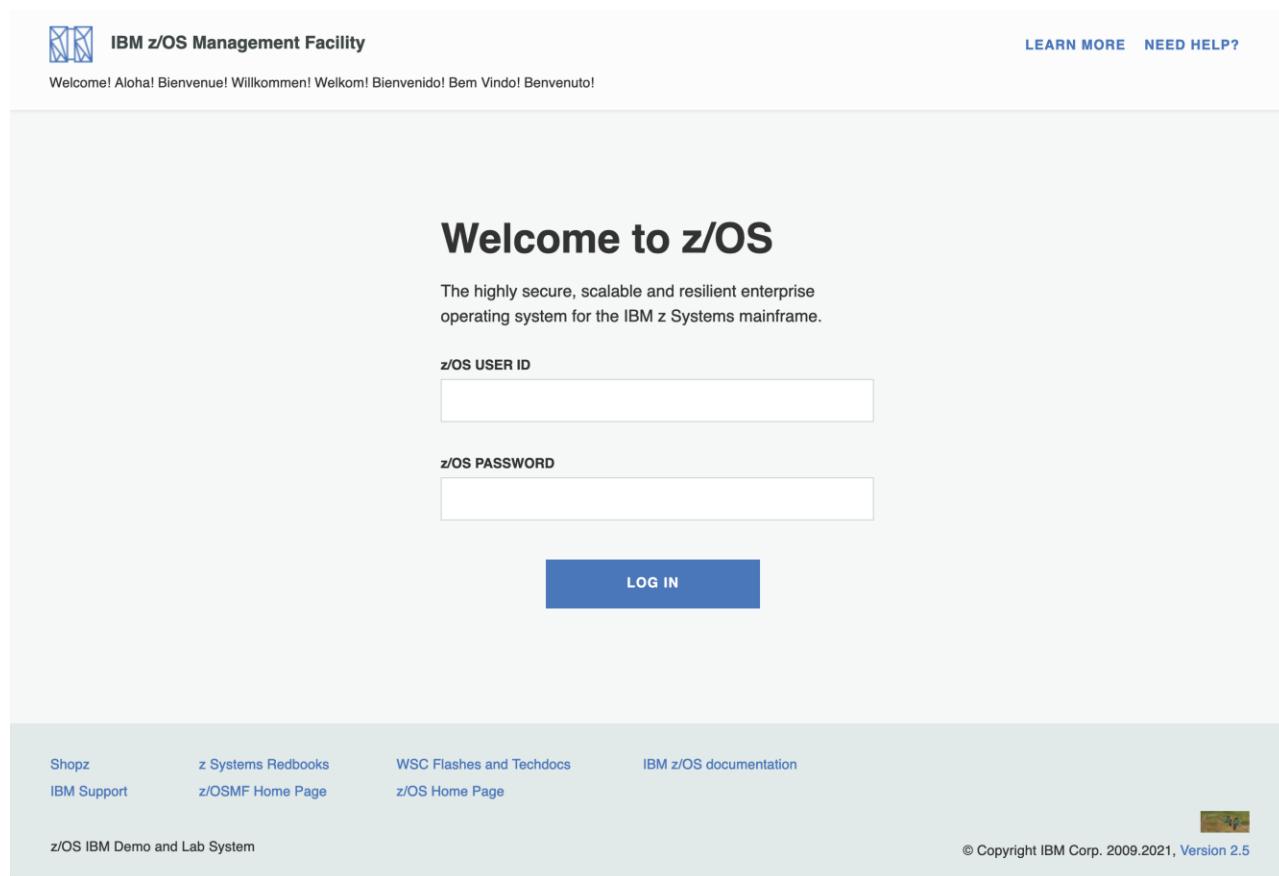
Notes:

Do NOT use the Browser BACK button to go to the prior screen.

1 . Logon to z/OSMF

- Launch browser from your workstation
- Point browser to z/OSMF – enter the following url
<https://share.centers.ihost.com/zosmf>
- Login with SHARE userid/pw as provided by the lab instructor
 - Each workstation has been assigned a unique z/OS user id

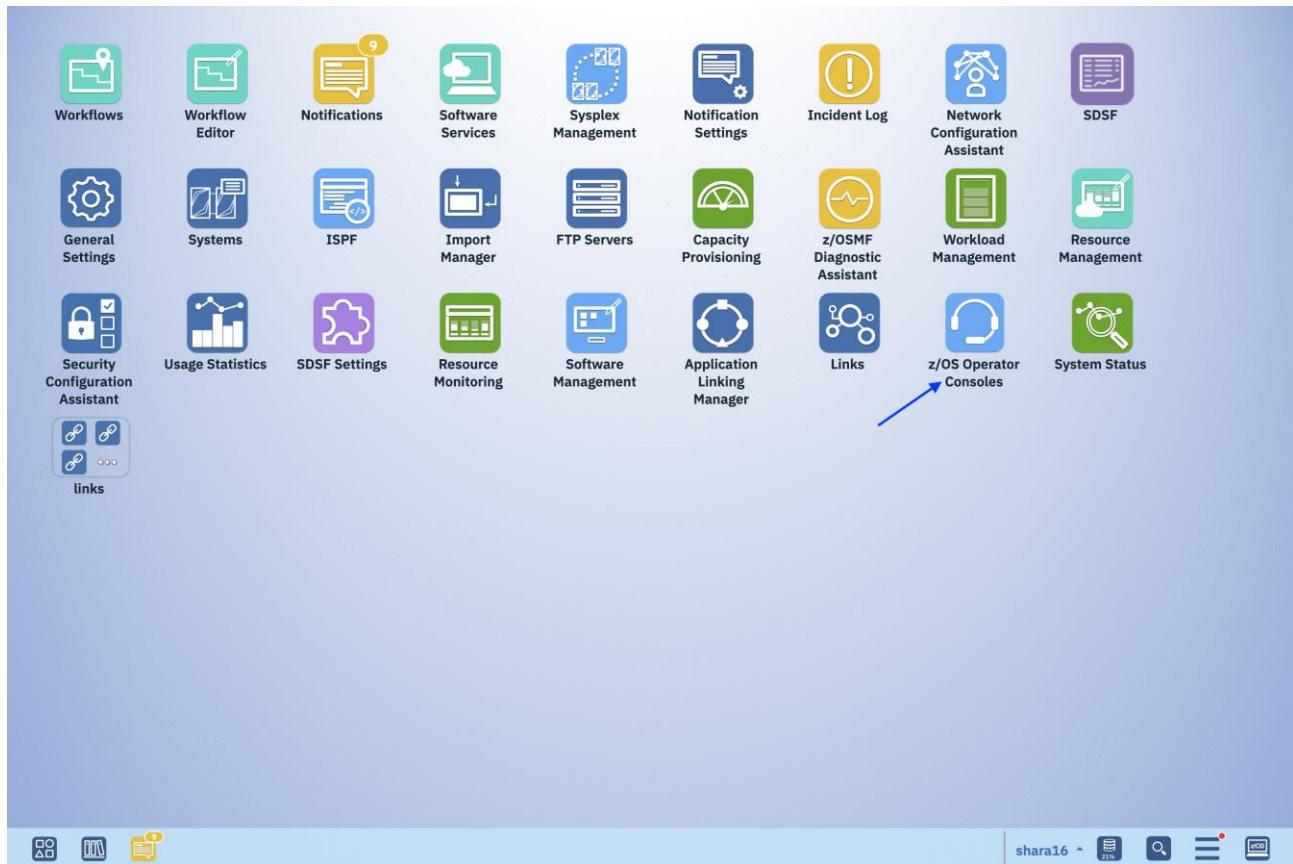
Note: All screen captures in the handout show the ID SHARA04, your browser will be slightly different to reflect the User ID that you were given.



The screenshot shows the IBM z/OS Management Facility login interface. At the top, there is a logo and the text "IBM z/OS Management Facility". To the right, there are links for "LEARN MORE" and "NEED HELP?". Below this, a welcome message is displayed in multiple languages: "Welcome! Aloha! Bienvenue! Willkommen! Welkom! Bienvenido! Bem Vindo! Benvenuto!". The main title "Welcome to z/OS" is centered above a brief description: "The highly secure, scalable and resilient enterprise operating system for the IBM z Systems mainframe.". Below the description are two input fields: "z/OS USER ID" and "z/OS PASSWORD", each with a corresponding empty input box. A large blue "LOG IN" button is positioned below the password field. At the bottom of the page, there is a footer with links to "Shopz", "z Systems Redbooks", "WSC Flashes and Techdocs", "IBM z/OS documentation", "IBM Support", "z/OSMF Home Page", "z/OS Home Page", and "z/OS IBM Demo and Lab System". On the far right of the footer, there is a small globe icon and the copyright notice "© Copyright IBM Corp. 2009.2021, Version 2.5".

2. Complete setup

Step 2a: Double click z/OS Operator Consoles on Desktop



Step 2b: Select z/OS Operator Consoles window

The screenshot shows the z/OS Operator Consoles interface. At the top, there's a blue header bar with the title "z/OS Operator Consoles". Below it is a toolbar with icons for "Overview", "Actions", and "Help". The main area is titled "z/OS Operator Consoles" and contains a table with four columns: "Sysplex or System Filter", "Console Name Filter", "Status Filter", and "Console summary view". There are two rows in the table:

Sysplex or System Filter	Console Name Filter	Status Filter	Console summary view
<input type="checkbox"/> SHARPLEX (Local Plex)	sa16PLEX	Setup Required	
<input type="checkbox"/> S2	sa16S2	Setup Required	

At the bottom of the table, there's a progress bar. Below the table, the text "Total: 2 Selected: 0" is displayed. At the very bottom, there are "Refresh" and "Last refresh" buttons.

Step 2c: Select system S2

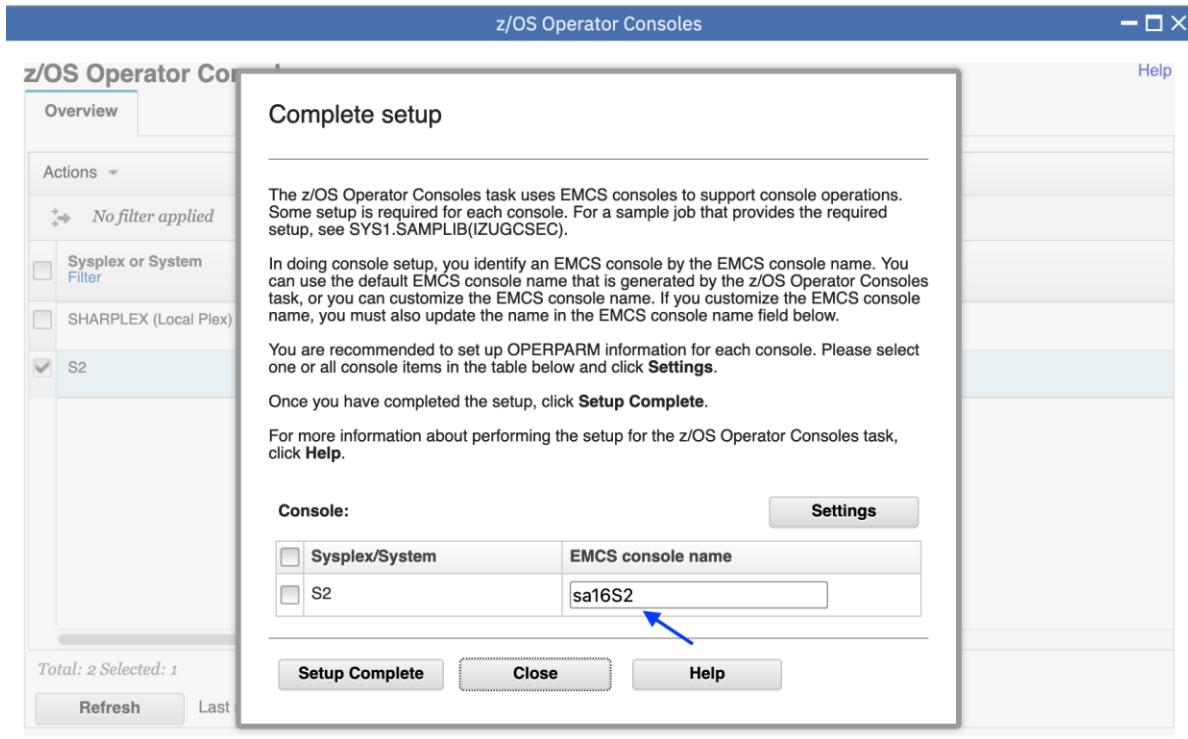
This screenshot is similar to the previous one, showing the z/OS Operator Consoles interface. The "Overview" tab is selected. In the table, the row for "S2" has a blue selection box around its first column and a blue arrow points to the left edge of this box. The other rows are standard white.

If you find the “Status” column in your table has already been “Setup Complete”, please skip the rest child steps of Step 2 and directly go to Step 3.

Step 2d: click Actions → Complete setup

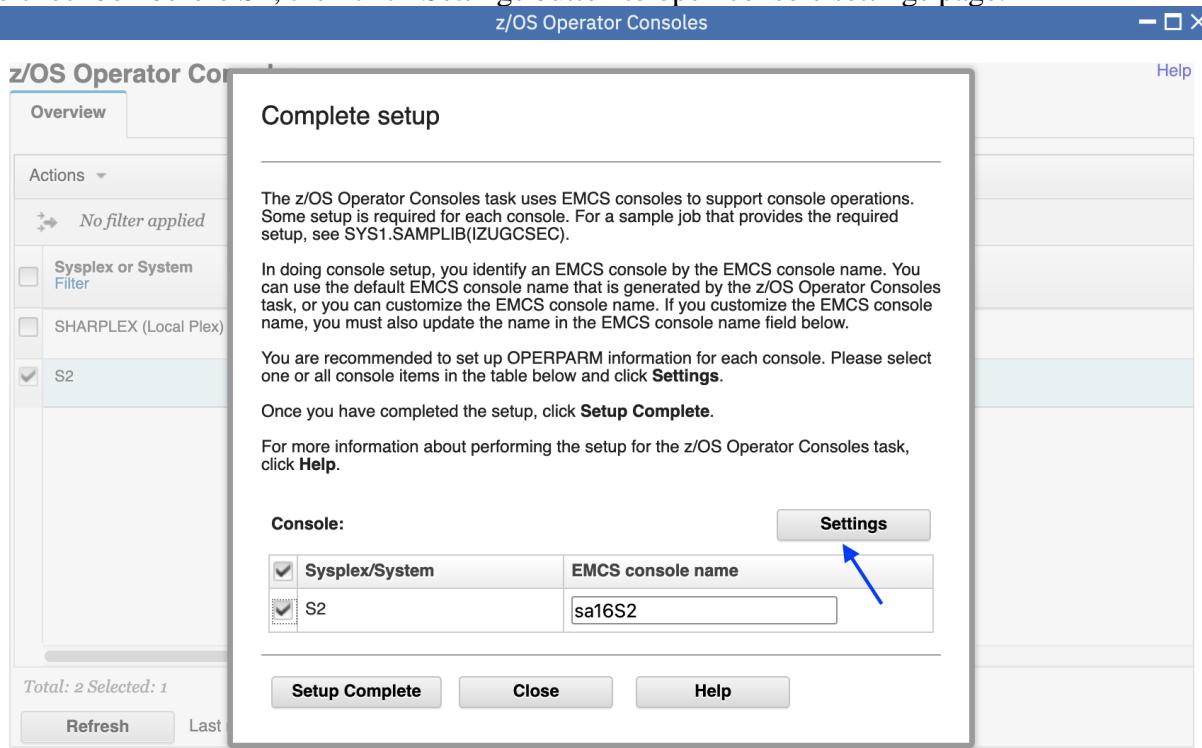
The screenshot shows the z/OS Operator Consoles interface. At the top, there's a blue header bar with the text "z/OS Operator Consoles" and standard window control buttons (minimize, maximize, close). Below the header is a title bar "z/OS Operator Consoles". On the left, a sidebar titled "Overview" contains a dropdown menu labeled "Actions" which is currently expanded. The "Actions" menu includes options like "Open console", "Start console", "Complete setup" (which is highlighted with a blue arrow pointing to it), "Stop console", "Resume console", "Delete", "Change setup", "Lock console", "Configure message help", and checkboxes for "Select All" and "Deselect All", along with "Hide Filter Row" and "Clear Sorts". To the right of the sidebar is a main content area with a table titled "Console summary view". The table has three columns: "Console Name Filter" (with entries "sa16PLEX" and "sa16S2"), "Status Filter" (both showing "Setup Required" with a wrench icon), and an empty column. At the bottom of the content area, it says "Total: 2 Selected: 1". At the very bottom of the page, there are two buttons: "Refresh" and "Last refresh: Mar 9, 2022, 1:15:43 PM local time (Mar 9, 2022, 5:15:43 AM GMT)".

Step 2e: Keep the default value of EMCS console name (for SHARAnn userids it is SAnnS2, for SHARBnn userids it is SBnnS2, for SHARCnn userids it is SCnnS2).



Notes: We have setup the permission for accessing the EMCS console “SxnnS2” for the user SHARxnn, if you need to modify the EMCS console name, it requires the administrator to proper setup.

Step 2f: After validating that the EMCS console name is correct for your assigned userid, Check the checkbox before S2, then click Settings button to open console settings page.



Step 2g: Click the drop list to set the OPERPARM values one by one, or check the “Use recommended values” to auto fill all the OPERPARM values. Then click OK button.

Settings for console "sa16S2"

You are required to have at least READ access for resource profile CONOPER in the TSOAUTH class to specify the following OPERPARM fields.

OPERPARM field	Value
auth:	use SAF setup
routcode:	use SAF setup
mscope:	use SAF setup
storage:	use SAF setup
auto:	use SAF setup

Use recommended values. 

OK **Cancel** **Help**

Settings for console "sa16S2"

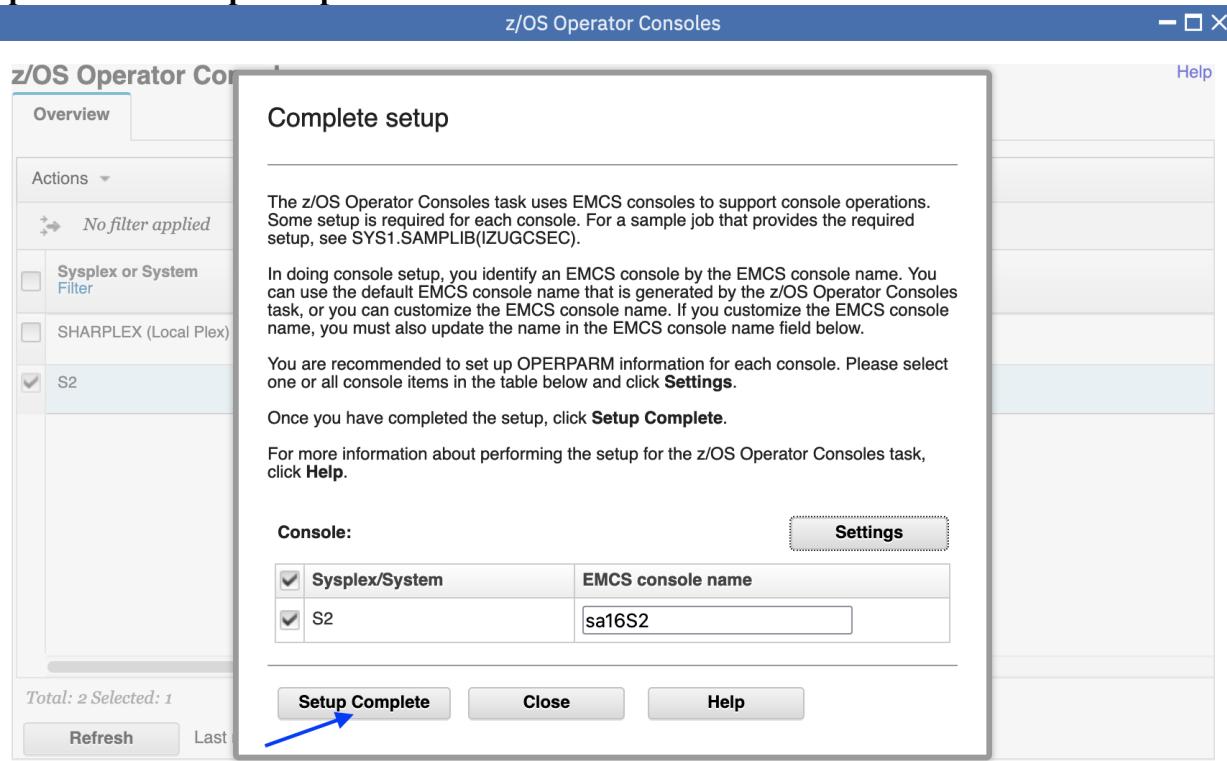
You are required to have at least READ access for resource profile CONOPER in the TSOAUTH class to specify the following OPERPARM fields.

OPERPARM field	Value
auth:	MASTER
routcode:	ALL
mscope:	ALL
storage:	1
auto:	NO

Use recommended values. 

OK **Cancel** **Help**

Step 2h: Click Setup Complete button



Step 2i: The status of S2 is Setup Complete

The screenshot shows the 'z/OS Operator Consoles' interface with a table view. The table has four columns: 'Console Name Filter', 'Status Filter', and 'Console summary view'. The 'Status Filter' column shows 'Setup Required' for 'sa16PLEX' and 'Setup Complete' for 'sa16S2'. The 'Console summary view' column is empty. At the bottom of the interface are 'Refresh' and 'Last refresh' buttons.

Console Name Filter	Status Filter	Console summary view
sa16PLEX	Setup Required	
sa16S2	Setup Complete	

3 . Start Console and open console panel

Step 3a: Select S2, click Actions-> Start Console

The screenshot shows the z/OS Operator Consoles interface. In the center, there is a table with two rows: 'sa16PLEX' and 'sa16S2'. The 'sa16S2' row has a status icon indicating 'Setup Required' and a green checkmark icon next to its name. On the left, a vertical 'Actions' dropdown menu is open, listing options like 'Open console', 'Start console', 'Complete setup', etc. The 'Start console' option is highlighted with a blue arrow pointing to it. At the bottom of the screen, there is a message bar with 'Total: 2 Selected: 1' and a 'Refresh' button.

Console Name Filter	Status Filter	Console summary view
sa16PLEX	Setup Required	
sa16S2	Setup Complete	

Step 3b: The status of S2 is Connected and S2 is clickable, Console Name SxnnS2 is also clickable to display settings of the console.

This screenshot shows the same z/OS Operator Consoles interface as the previous one, but with a different filter applied. The 'Actions' dropdown now shows 'No filter applied'. The table has three rows: 'sa16PLEX' (status: 'Setup Required'), 'S2' (status: 'Connected'), and another row for 'S2' (status: 'Connected'). The 'S2' row with the status 'Connected' is selected, indicated by a checked checkbox in the 'Sysplex or System Filter' column. The bottom message bar shows 'Total: 2 Selected: 1' and a 'Refresh' button.

Sysplex or System Filter	Console Name Filter	Status Filter	Console summary view
<input type="checkbox"/>	sa16PLEX	Setup Required	
<input checked="" type="checkbox"/>	S2	Connected	
<input checked="" type="checkbox"/>	S2	Connected	

z/OS Operator Consoles

Overview

Actions ▾

No filter applied

Sysplex or System Filter	Console Name Filter
SHARPLEX (Local Plex)	sa16PLEX
S2	sa16S2

Total: 2 Selected: 0

Refresh Last refresh: Mar 9, 2022, 1:15:43 PM local time (Mar 9, 2022, 5:15:43 AM GMT)

View settings for console "sa16S2"

OPERPARM field	Value
auth:	MASTER
routocode:	ALL
mscope:	ALL
storage:	1
auto:	NO

Close

Step 3c: Click on the system name “S2”, the console for S2 will be opened in a new tab

z/OS Operator Consoles

Overview **ra16S2 for S2**

Console "ra16S2" for System "S2" is started now.

```

Mar 09 01:14:37          D C,HARDCOPY
Mar 09 01:14:38  S2      CNZ4100I 01.14.38 CONSOLE DISPLAY 630
                        CONSOLES MATCHING COMMAND: D C,HARDCOPY
                        MSG:CURR=0    LIM=9000 RPLY:CURR=0    LIM=200   SYS=S
                        HARDCOPY LOG=(SYSLOG)        CMDLEVEL=CMDS
                        ROUT=(ALL)
                        LOG BUFFERS IN USE: 0      LOG BUFFER LIMIT: 1000
Mar 09 01:14:39          d t
Mar 09 01:14:40  S2      SHARA16   IEE136I LOCAL: TIME=01.14.40 DATE=2022.068 UTC: TIME=
                        DATE=2022.068
Mar 09 01:14:44          d a,l
Mar 09 01:14:45  S2      CNZ4105I 01.14.45 DISPLAY ACTIVITY 634
                        JOBS      M/S     TS USERS    SYSAS   INITs   ACTIVE/
                        00030    00042   00003    00038   00052   00000/
                        HZR       HZR     IEFPROC  NSW     S       VTAM    NET

```

Command:

Select or type

Submit

4 . View system messages for a system or local sysplex

Step 4a: The console messages will be displayed in the Console panel over time. If you don't see a lot of messages, that is fine. This system may not currently have many messages due to low workload.

z/OS Operator Consoles

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Overview ra16S2 for S2

Console "ra16S2" for System "S2" is started now.

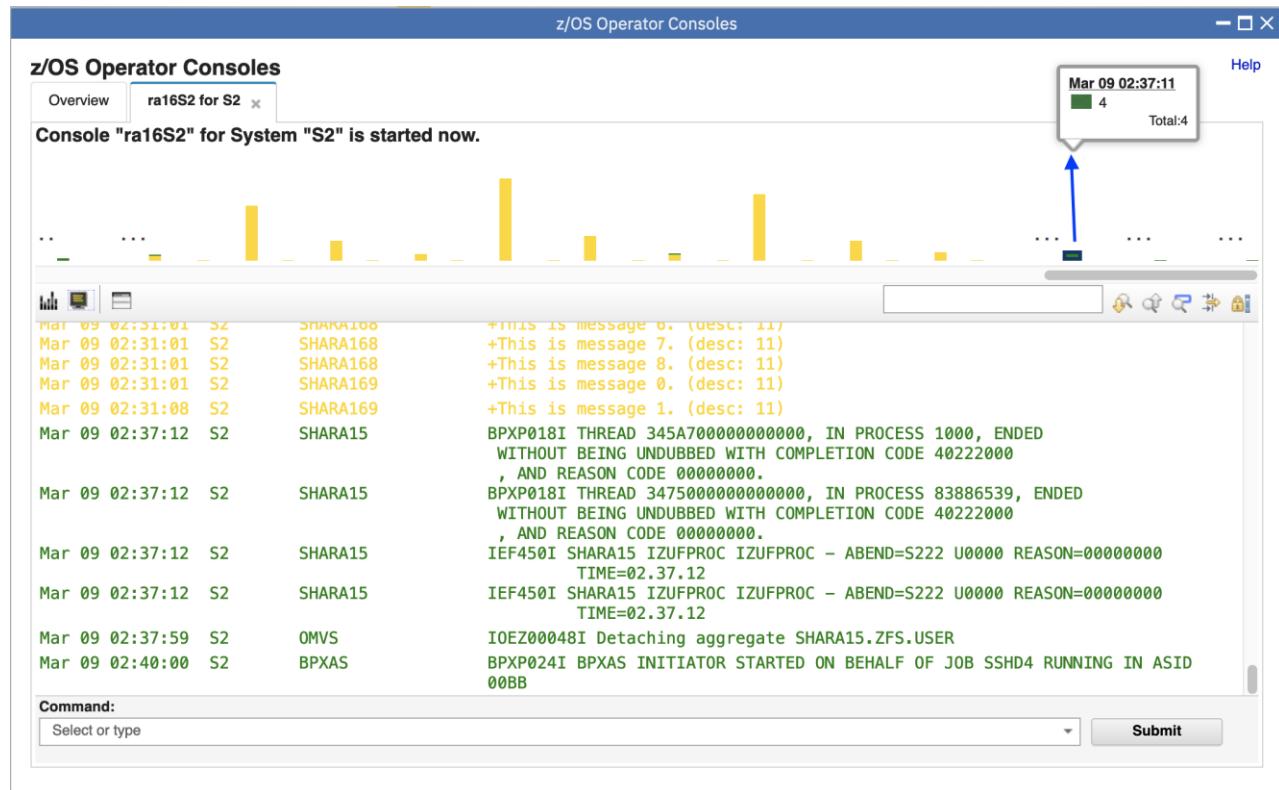
Mar 09 02:31:01 S2 SHARA168 +This is message 3. (desc: 11)
Mar 09 02:31:01 S2 SHARA168 +This is message 4. (desc: 11)
Mar 09 02:31:01 S2 SHARA168 +This is message 5. (desc: 11)
Mar 09 02:31:01 S2 SHARA168 +This is message 6. (desc: 11)
Mar 09 02:31:01 S2 SHARA168 +This is message 7. (desc: 11)
Mar 09 02:31:01 S2 SHARA168 +This is message 8. (desc: 11)
Mar 09 02:31:01 S2 SHARA169 +This is message 0. (desc: 11)
Mar 09 02:31:01 S2 SHARA169 +This is message 1. (desc: 11)
Mar 09 02:31:08 S2 SHARA169 BPXP018I THREAD 345A700000000000, IN PROCESS 1000, ENDED
WITHOUT BEING UNDUBBED WITH COMPLETION CODE 40222000
, AND REASON CODE 00000000.
Mar 09 02:37:12 S2 SHARA15 BPXP018I THREAD 3475000000000000, IN PROCESS 83886539, ENDED
WITHOUT BEING UNDUBBED WITH COMPLETION CODE 40222000
, AND REASON CODE 00000000.
IEF450I SHARA15 IZUFPROC IZUFPROC - ABEND=S222 U0000 REASON=00000000
TIME=02.37.12
IEF450I SHARA15 IZUFPROC IZUFPROC - ABEND=S222 U0000 REASON=00000000
TIME=02.37.12

Command:

Select or type

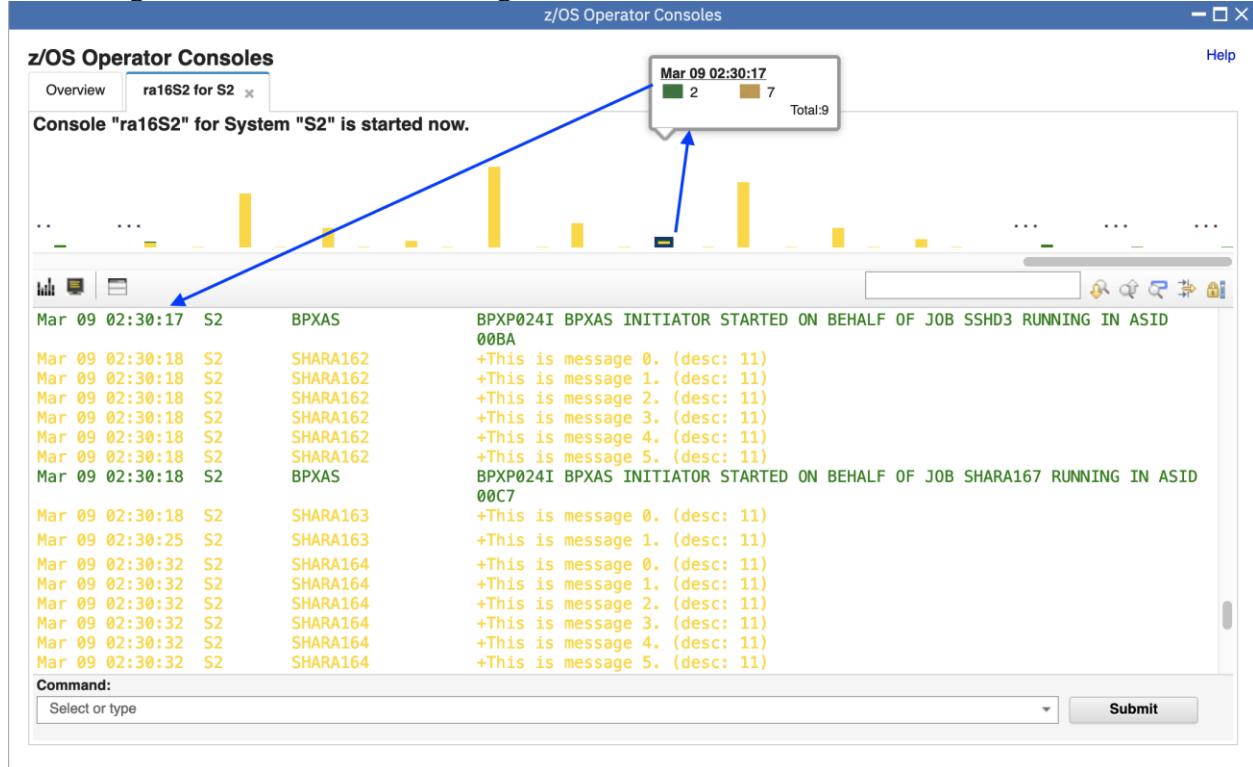
Submit

Step 4b: The message bars will be displayed in console summary view over time.

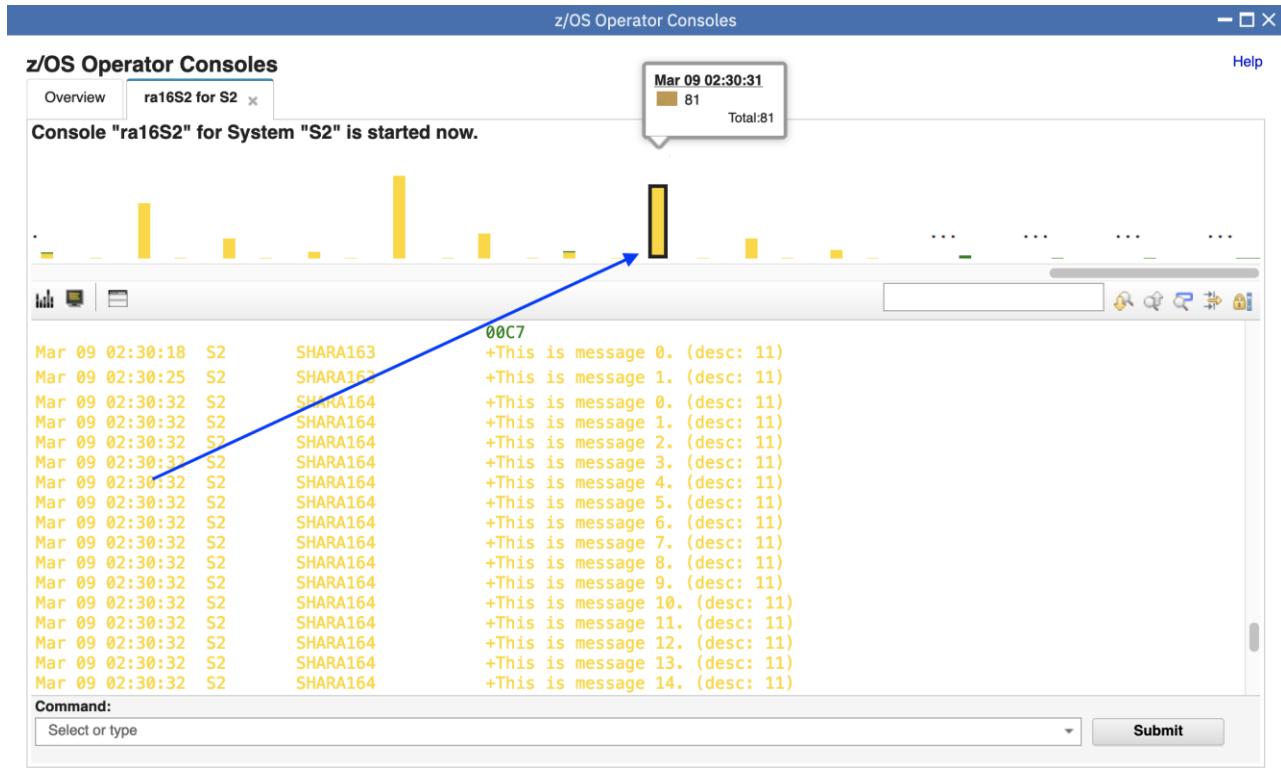


5 . Association between message bar and messages

Step 5a: Click a specific message bar and the console window below will automatically scroll to the first message associated with the message bar.

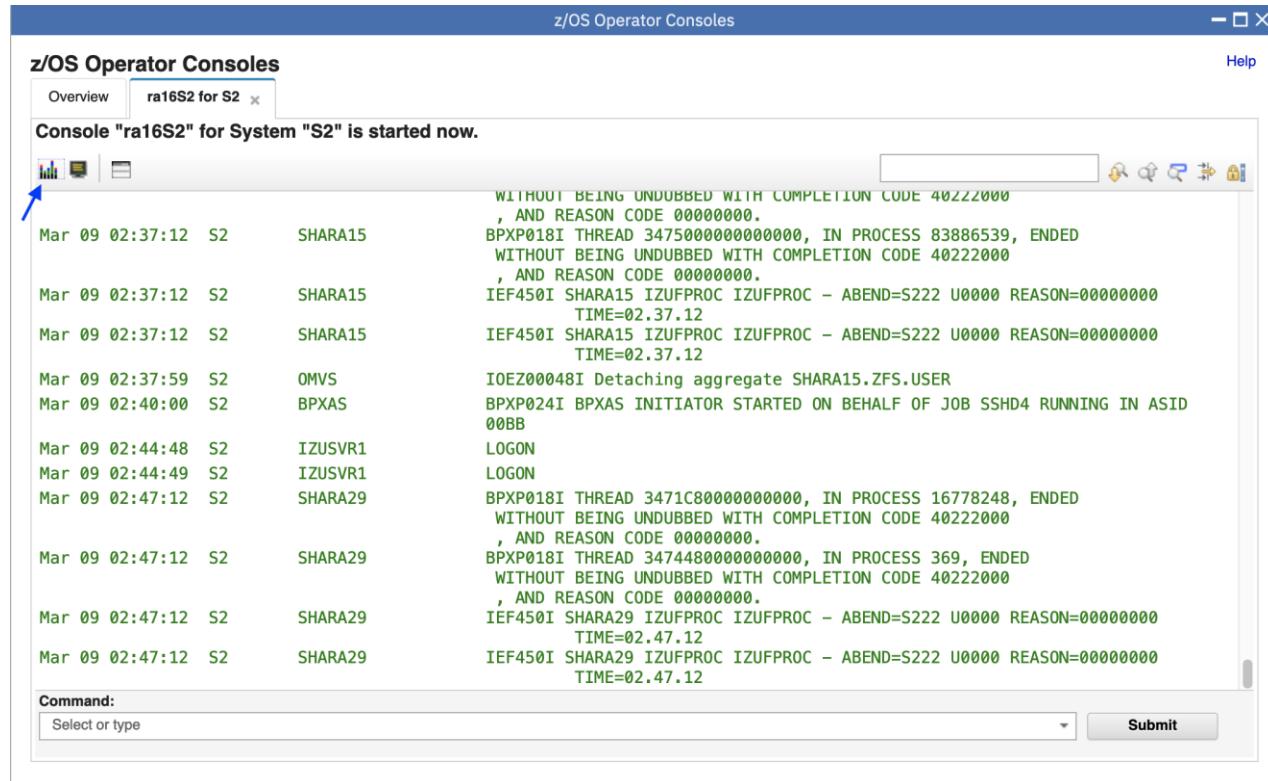


Step 5b: Click date time column of message in the Console Window, the message bar which the selected message belongs to will be highlighted in the console summary view

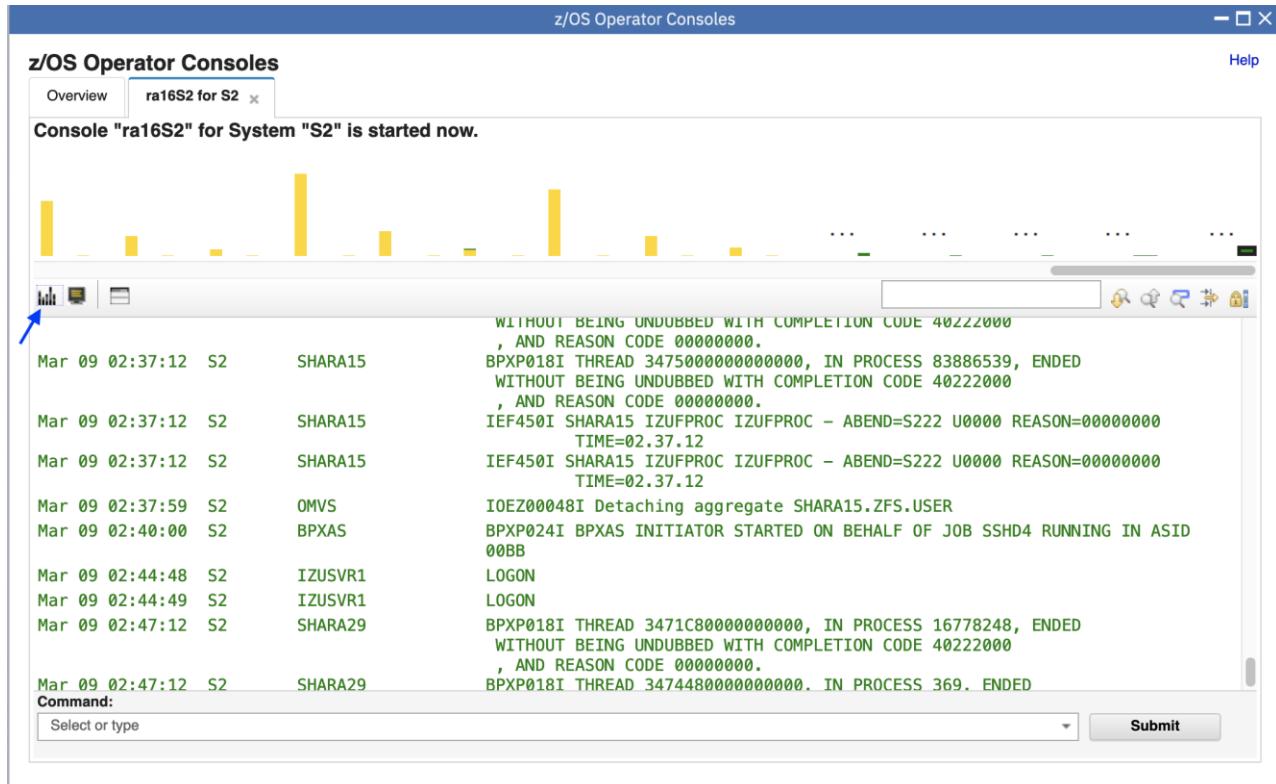


6 . Hide/Show summary view

Step 6a: Click Hide summary view (tiny little bar box on the tool bar), the console summary view will be hidden.



Step 6b: Click Show summary view (same little bar box on the tool bar), the console summary view will then be displayed



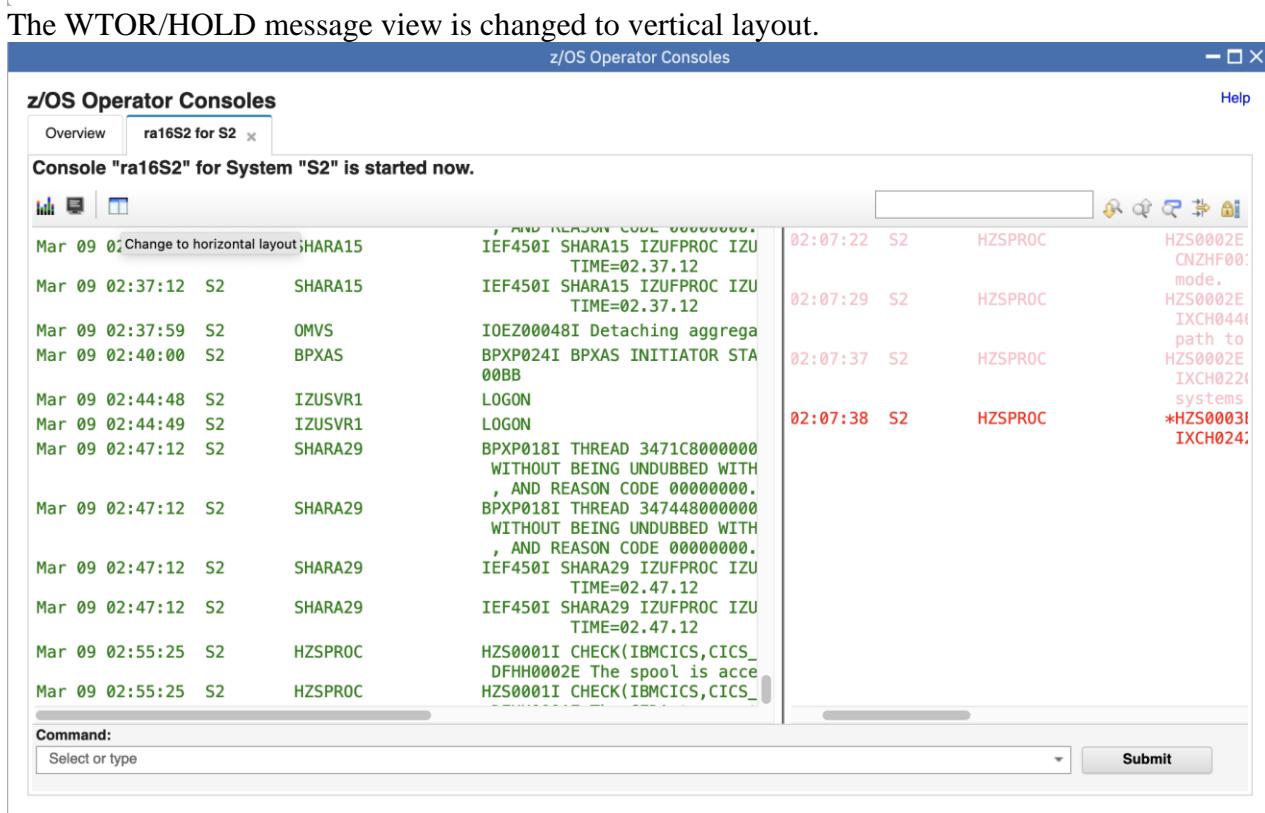
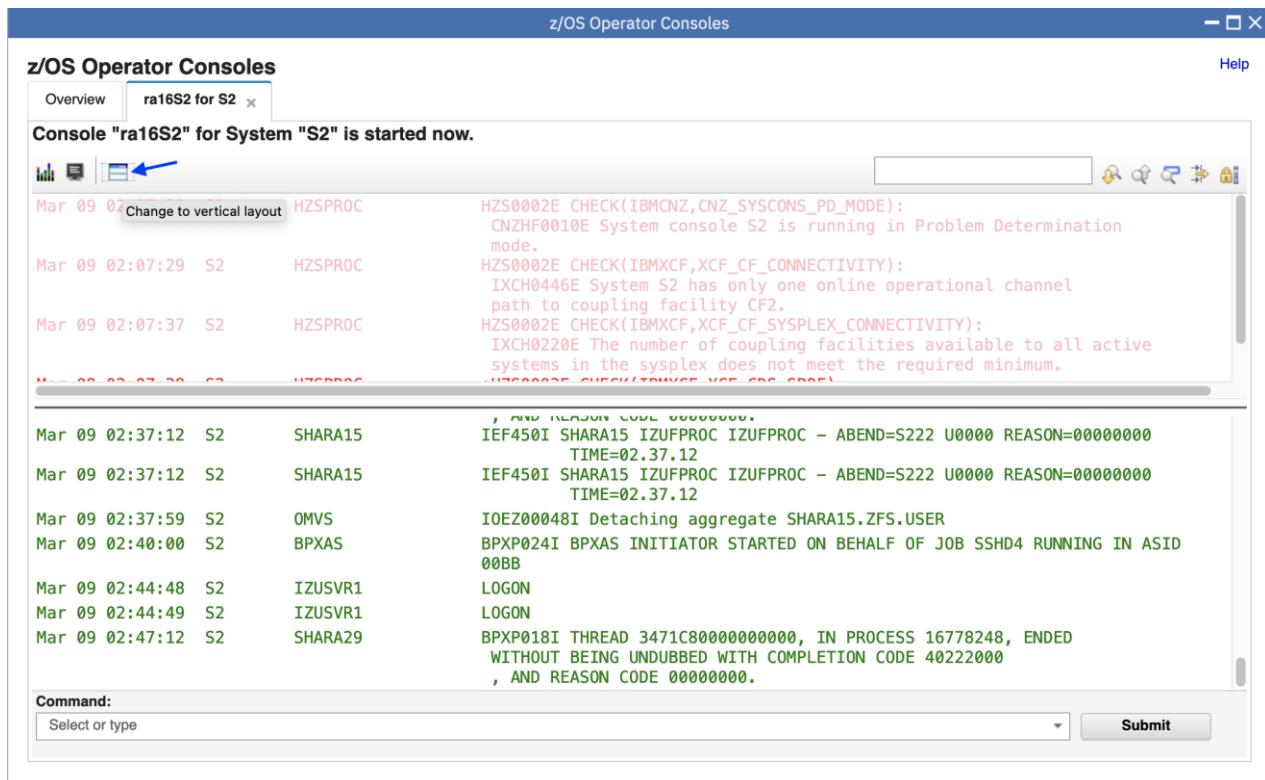
7. Show/Hide WTOR and HOLD messages

Step 7a: Click the icon of “Show WTOR and HOLD messages” to display the WTOR/HOLD view. All WTOR messages and HOLD messages that are issued since the console started will be displayed in the separate view.

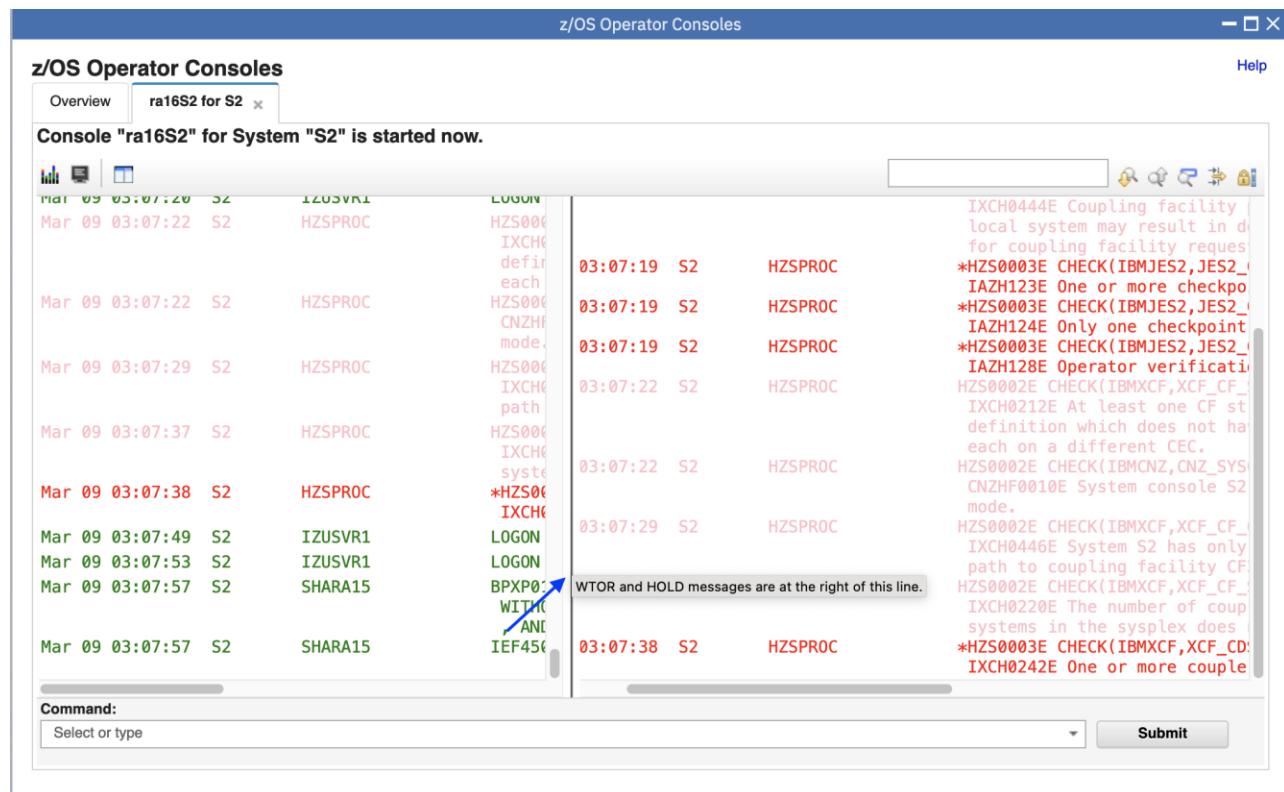
The screenshot shows the z/OS Operator Consoles interface with the title bar "z/OS Operator Consoles". Below the title bar, there is a navigation bar with tabs: "Overview" and "ra16S2 for S2" (which is currently selected). On the right side of the navigation bar are icons for Help, Refresh, and other functions. The main area displays a list of messages. A blue box highlights a group of three messages from HZSPROC on March 9 at 02:07:38, which are categorized as WTOR messages. These messages are in red text and describe connectivity issues. Below this group, there is a list of green text messages from various sources like SHARA15, OMVS, and BPXAS, which are categorized as HOLD messages. At the bottom left, there is a "Command:" input field with a dropdown arrow and a "Submit" button. At the bottom right, there is a "Help" link.

Date	Time	User	Message
Mar 09	02:07:29	S2	HZSPROC
Mar 09	02:07:37	S2	HZSPROC
Mar 09	02:07:38	S2	HZSPROC
Mar 09	02:37:12	S2	SHARA15
Mar 09	02:37:12	S2	SHARA15
Mar 09	02:37:59	S2	OMVS
Mar 09	02:40:00	S2	BPXAS
Mar 09	02:44:48	S2	IZUSVR1
Mar 09	02:44:49	S2	IZUSVR1
Mar 09	02:47:12	S2	SHARA29

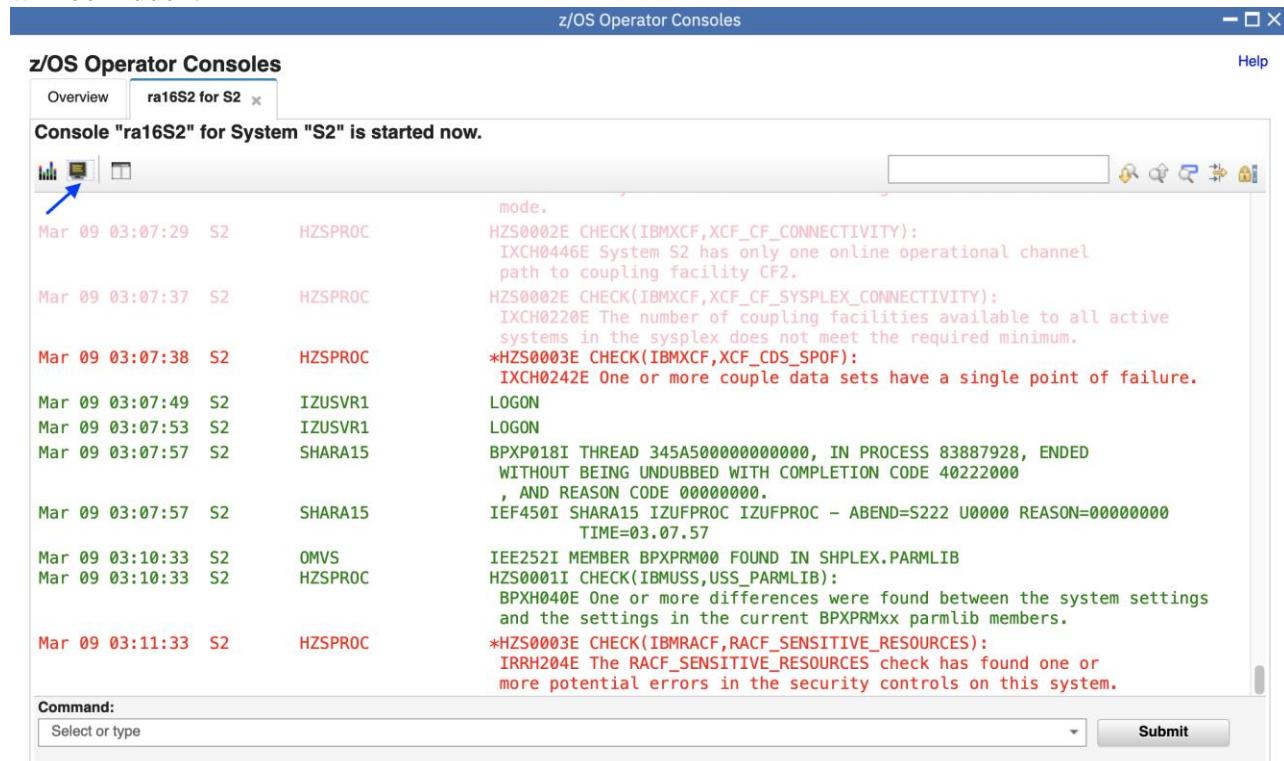
Step 7b: Change layout of WTOR/HOLD message view.



Step 7c: Drag this line to resize windows as you need.



Step 7d: Click the icon of Hide WTOR and HOLD messages, the WTOR/HOLD message view will be hidden.



8 . Enter system commands

Step 8a: Input “D PARMLIB” into the textbox on the bottom, hit enter or click 'Submit' button, the command response will be displayed in the console window.

The screenshot shows the z/OS Operator Consoles window titled "z/OS Operator Consoles". The tab "ra16S2 for S2" is selected. The main area displays a log of system events:

```
Console "ra16S2" for System "S2" is started now.

Mar 09 03:07:29 S2      HZSPROC      mode,
HZS0002E CHECK(IBMXCF,XCF_CF_CONNECTIVITY):
IXCH0446E System S2 has only one online operational channel
path to coupling facility CF2.

Mar 09 03:07:37 S2      HZSPROC      HZS0002E CHECK(IBMXCF,XCF_CF_SYSPLEX_CONNECTIVITY):
IXCH0220E The number of coupling facilities available to all active
systems in the sysplex does not meet the required minimum.

Mar 09 03:07:38 S2      HZSPROC      *HZS0003E CHECK(IBMXCF,XCF_CDS_SPOF):
IXCH0242E One or more couple data sets have a single point of failure.

Mar 09 03:07:49 S2      IZUSVR1     LOGON
Mar 09 03:07:53 S2      IZUSVR1     LOGON
Mar 09 03:07:57 S2      SHARA15    BPXP018I THREAD 345A500000000000, IN PROCESS 83887928, ENDED
WITHOUT BEING UNDUBBED WITH COMPLETION CODE 40222000
, AND REASON CODE 00000000.

Mar 09 03:07:57 S2      SHARA15    IEF450I SHARA15 IZUFPROC IZUFPROC - ABEND=S222 U0000 REASON=00000000
TIME=03.07.57

Mar 09 03:10:33 S2      OMVS        IEE252I MEMBER BPXPRM00 FOUND IN SHPLEX.PARMLIB
```

Below the log, there is a "Command:" label followed by a text input field containing "d parmlib". An arrow points from the text "d parmlib" to the input field. To the right of the input field is a "Submit" button.

Step 8b: Please be aware that the command and command response may be refreshed after unsolicited messages are received.

The screenshot shows the z/OS Operator Consoles application window. The title bar reads "z/OS Operator Consoles". The main area displays a log of messages from the console "ra16S2 for S2". The messages are as follows:

```
Console "ra16S2" for System "S2" is started now.  
...  
Mar 09 03:10:33 S2 HZSPROC HZS0001I CHECK(IBMUSS,USS_PARMLIB):  
BPXH040E One or more differences were found between the system settings  
and the settings in the current BPXPRMxx parmlib members.  
Mar 09 03:11:33 S2 HZSPROC *HZS0003E CHECK(IBMRACF,RACF_SENSITIVE_RESOURCES):  
IRRH204E The RACF_SENSITIVE_RESOURCES check has found one or  
more potential errors in the security controls on this system.  
Mar 09 03:17:00 S2 HZSPROC HZS0001I CHECK(IBMCSV,CSV_APF_EXISTS):  
CSVH0957E Problem(s) were found with data sets in the APF list.  
d parmlib  
Mar 09 03:18:22 S2 SHARA16 D PARMLIB  
IEE251I 03.18.22 PARMLIB DISPLAY 983  
PARMLIB DATA SETS SPECIFIED  
AT IPL  
ENTRY FLAGS VOLUME DATA SET  
1 S S2MCAT SHPLEX.PARMLIB  
2 S S2MCAT SHPLEX.PUBLIC.PARMLIB  
3 S S2RESB SYS1.IBM.PARMLIB  
4 D S2RESB SYS1.PARMLIB
```

A blue arrow points to the "D PARMLIB" message. At the bottom of the window, there is a "Command:" label followed by a text input field containing "Select or type" and a "Submit" button.

Step 8c: Input "d a,l" into the textbox, click 'Submit' button or press Enter, the command response will be displayed in console window.

z/OS Operator Consoles

z/OS Operator Consoles

Overview ra16S2 for S2

Console "ra16S2" for System "S2" is started now.

Mar 09 04:07:38 S2 HZSPROC *HZS003E CHECK(IBMXCF,XCF_CDS_SPOF): IXCH0242E One or more couple data sets have a single point of failure.

Mar 09 04:08:22 S2 HZSPROC HZS1002E CHECK(IBMJES,JES_NJE_SECURITY): AN ERROR OCCURRED, DIAG: 00000400_00000403

BPXH040E One or more differences were found between the system settings and the settings in the current BPXPRMxx parmlib members.

Mar 09 04:25:16 S2 MQZLCHIN +CSQX004I !MQZL CSQXSPRM Channel initiator is using 15 MB of local storage, 1191 MB are free

Mar 09 04:25:25 S2 HZSPROC HZS0001I CHECK(IBM CICS,CICS_CEDA_ACCESS): DFHH0001E The CEDA transaction is accessible to unauthenticated users.

Mar 09 04:25:25 S2 HZSPROC HZS0001I CHECK(IBM CICS,CICS_JOBSSUB_SPOOL): DFHH0002E The spool is accessible to unauthenticated users.

d a,l

Mar 09 04:32:00 S2 CNZ4105I 04.32.00 DISPLAY ACTIVITY 643

JOB S	M/S	T S	U S E R S	S Y S A S	I N I T S	A C T I V E / M A X	V T A M	O A S
00037	00042	00001	00038	00078	00000/00512		00089	
HZR	HZR	IEFPROC	NSW S	VTAM	NET	VTAM	NSW	S
TCP/IP	TCP/IP	TCP/IP	NSW S O	VTAMTSO	VTAMTSO	VTAMTCAS	OWT	S
VLF	VLF	VLF	NSW S	APPC	APPC	APPC	NSW	S
ASCH	ASCH	ASCH	NSW S	TN3270	TN3270	TN3270	NSW	S
SDSF	SDSF	SDSF	NSW S	RRS	RRS	RRS	NSW	S
ICSF	ICSF	ICSF	NSW S	JMON	JMON	JMON	OWT	S O
RSED	RSED	RSED	OWT S O	JES2	JES2	IEFPROC	NSW	S

Command:
Select or type

Step 8d: Enter system command "d p" again to trigger the command history "d parmlib"

The screenshot shows the z/OS Operator Consoles interface with the title bar "z/OS Operator Consoles". Below it, a tab bar has "Overview" and "ra16S2 for S2" selected. The main area displays a log window titled "Console 'ra16S2' for System 'S2' is started now." The log contains the following entries:

```

Mar 09 04:07:38 S2      HZSPROC    *HZS0003E CHECK(IBMXCF,XCF_CDS_SPOF):
                               IXCH0242E One or more couple data sets have a single point of failure.

Mar 09 04:08:22 S2      HZSPROC    HZS1002E CHECK(IBMJES,JES_NJE_SECURITY):
                               AN ERROR OCCURRED, DIAG: 00000400_00000403

Mar 09 04:25:16 S2      MQZLCHIN   BPXH040E One or more differences were found between the system settings
                               and the settings in the current BPXPRMxx parmlib members.
                               +CSQX004I !MQZL CSQXSPRM Channel initiator is using 15 MB of local
                               storage, 1191 MB are free

Mar 09 04:25:25 S2      HZSPROC    HZS0001I CHECK(IBMCICS,CICS_CEDA_ACCESS):
                               DFHH0001E The CEDA transaction is accessible to unauthenticated users.

Mar 09 04:25:25 S2      HZSPROC    HZS0001I CHECK(IBMCICS,CICS_JOBSUB_SPPOOL):
                               DFHH0002E The spool is accessible to unauthenticated users.

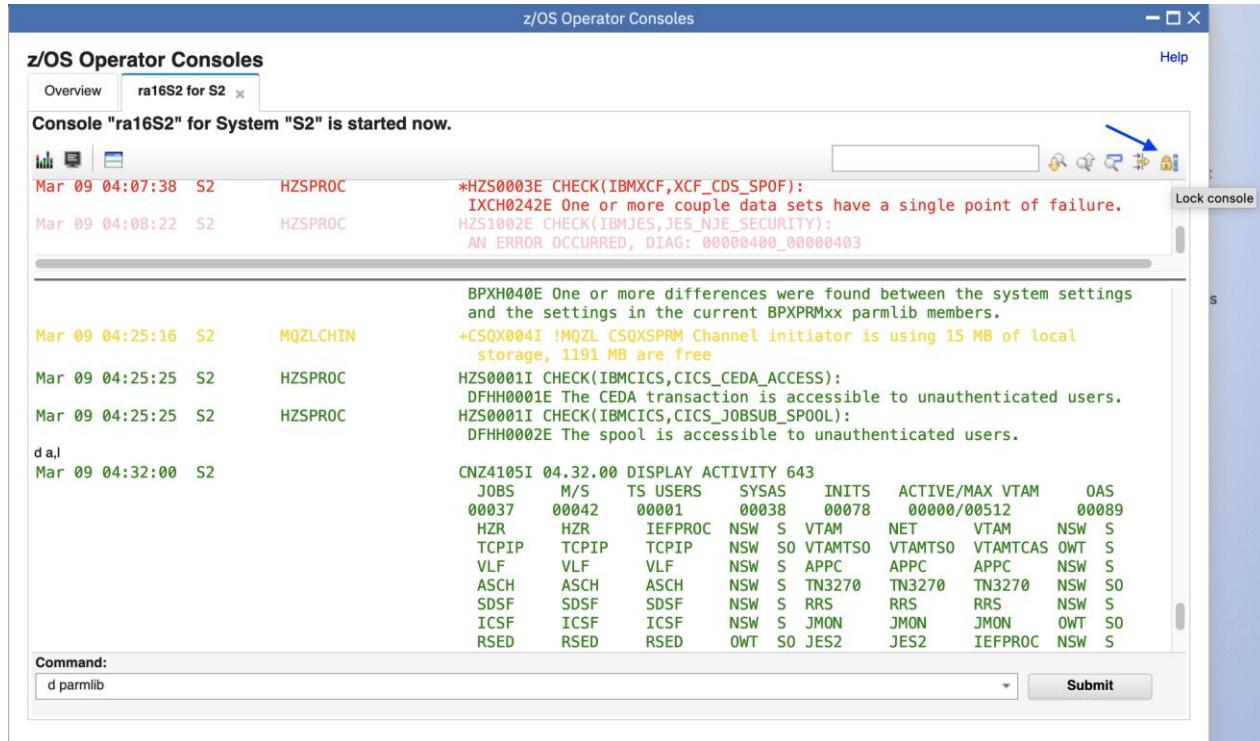
d,a,l
Mar 09 04:32:00 S2      CNZ4105I 04.32.00 DISPLAY ACTIVITY 643
                         JOBS   M/S   TS USERS   SYSAS   INITS   ACTIVE/MAX VTAM   OAS
                         00037  00042  00001  00038  00078  00000/00512  00089
                         HZR     HZR     IEFPROC  NSW   S   VTAM   NET   VTAM   NSW   S
                         TCPIP  TCPIP  TCPIP   NSW   S0   VTAMTSO  VTAMTCAS  OWT   S
                         VLF     VLF     VLF     NSW   S   APPC   APPC  APPC   NSW   S
                         ASCH   ASCH   ASCH   NSW   S   TN3270  TN3270  TN3270  NSW   S0
                         SDSF   SDSF   SDSF   NSW   S   RRS    RRS    RRS    NSW   S
                         ICSF   ICSF   ICSF   NSW   S   JMON   JMON   JMON   OWT   S0
                         RSED   RSED   RSED   OWT   S0   JES2    JES2    IEFPROC  NSW   S

```

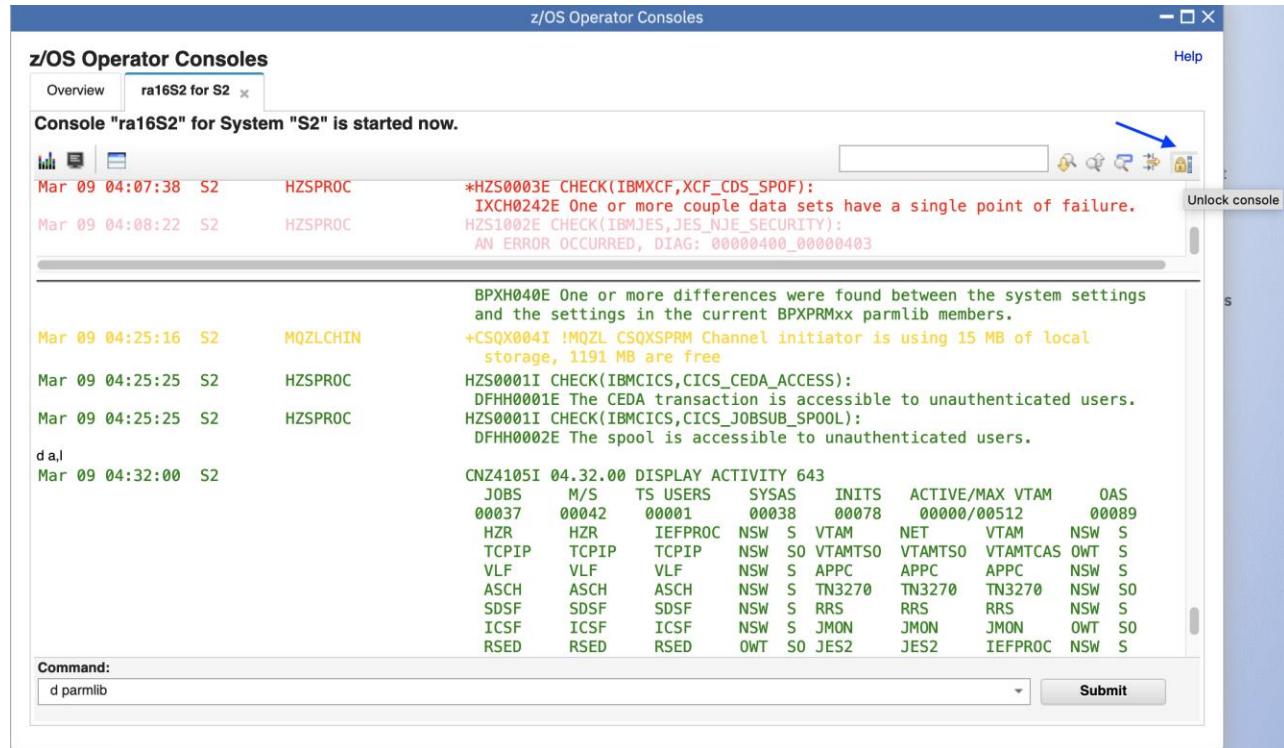
At the bottom of the window, there is a "Command:" input field containing "d parmlib" with a blue arrow pointing to it, and a "Submit" button.

9 . Lock/Resume console

Step 9a: Click Lock console icon, the console for S2 will be locked, no new messages will be retrieved which could help user to focus on previous messages.



Step 9b: Click Unlock console icon, the console for S2 will be resumed and continue to retrieve new messages.



10 . Search keywords

Step 10a: Input "D PARMLIB" into the Search input box, click Search down icon next to the input box, the "D PARMLIB" will be highlighted in the console window, and the console for S2 will be locked.

The screenshot shows the z/OS Operator Consoles interface. The title bar says "z/OS Operator Consoles". The main area displays a log from "Console 'ra16S2' for System 'S2'". A blue arrow points to the search input field at the top right, which contains "d parmlib". Below the input field, there are four matches. The first match is highlighted in blue. The log entries are:

- Mar 09 04:07:38 S2 HZSPROC *HZS0003E CHECK(IBMXCF,XCF_CDS_SPOF): IXCH0242E One or more couple data sets have a single point of failure.
- Mar 09 04:08:22 S2 HZSPROC HZS1002E CHECK(IBMJES,JES_NJE_SECURITY): AN ERROR OCCURRED, DIAG: 00000400_00000403
- Mar 09 04:07:37 S2 HZSPROC d parmlib HZS0002E CHECK(XCF_CF_SYSPLEX_CONNECTIVITY): IXCH0220E The number of coupling facilities available to all active systems in the sysplex does not meet the required minimum.
- Mar 09 04:07:38 S2 HZSPROC *HZS0003E CHECK(IBMXCF,XCF_CDS_SPOF): IXCH0242E One or more couple data sets have a single point of failure.
- Mar 09 04:07:38 S2 IEE251I 04.07.38 PARMLIB DISPLAY 608 PARMLIB DATA SETS SPECIFIED AT IPL ENTRY FLAGS VOLUME DATA SET 1 S S2MCAT SHPLEX.PARMLIB 2 S S2MCAT SHPLEX.PUBLIC.PARMLIB 3 S S2RESB SYS1.IBM.PARMLIB 4 D S2RESB SYS1.PARMLIB
- Mar 09 04:08:22 S2 HZSPROC HZS1002E CHECK(IBMJES,JES_NJE_SECURITY): AN ERROR OCCURRED, DIAG: 00000400_00000403
- Mar 09 04:10:33 S2 HZSPROC HZS0001I CHECK(IBMUSS,USS_PARMLIB): BPXH040E One or more differences were found between the system settings and the settings in the current BPXPRMxx.parmlib members.

At the bottom, there is a "Command:" input field with "Select or type" placeholder text and a "Submit" button.

Step 10b: Click Search down icon again, next occurrence will be highlighted. Click Highlight all icon on the tool bar, all of "D PARMLIB" will be highlighted.

z/OS Operator Consoles

Console "ra16S2" for System "S2" is started now.

3 of 4 matches d parmlib

Mar 09 04:07:38 S2 HZSPROC *HZS0003E CHECK(IBMXCF,XCF_CDS_SPOF):
IXCH0242E One or more couple data sets have a single point of failure.
Mar 09 04:08:22 S2 HZSPROC HZS1002E CHECK(IBMJES,JES_NJE_SECURITY):
AN ERROR OCCURRED, DIAG: 00000400_00000403

```

d parmlib
4 D S2RESB SYS1.PARMLIB
Mar 09 04:39:42 S2
IEE251I 04.39.42 PARMLIB DISPLAY 667
PARMLIB DATA SETS SPECIFIED
AT IPL
ENTRY FLAGS VOLUME DATA SET
1 S S2MCAT SHPLEX.PARMLIB
2 S S2MCAT SHPLEX.PUBLIC.PARMLIB
3 S S2RESB SYS1.IBM.PARMLIB
4 D S2RESB SYS1.PARMLIB

d parmlib
Mar 09 04:41:03 S2
IEE251I 04.41.03 PARMLIB DISPLAY 670
PARMLIB DATA SETS SPECIFIED
AT IPL
ENTRY FLAGS VOLUME DATA SET
1 S S2MCAT SHPLEX.PARMLIB
2 S S2MCAT SHPLEX.PUBLIC.PARMLIB
3 S S2RESB SYS1.IBM.PARMLIB
4 D S2RESB SYS1.PARMLIB

```

Command: Select or type

Step 10c: Click Clear all icon (the same icon of Highlight all), all highlighted text will be restored, and Console for S2 will be resumed

z/OS Operator Consoles

Console "ra16S2" for System "S2" is started now.

d parmlib

Mar 09 04:07:38 S2 HZSPROC *HZS0003E CHECK(IBMXCF,XCF_CDS_SPOF):
IXCH0242E One or more couple data sets have a single point of failure.
Mar 09 04:08:22 S2 HZSPROC HZS1002E CHECK(IBMJES,JES_NJE_SECURITY):
AN ERROR OCCURRED, DIAG: 00000400_00000403

```

d parmlib
4 D S2RESB SYS1.PARMLIB
Mar 09 04:39:42 S2
IEE251I 04.39.42 PARMLIB DISPLAY 667
PARMLIB DATA SETS SPECIFIED
AT IPL
ENTRY FLAGS VOLUME DATA SET
1 S S2MCAT SHPLEX.PARMLIB
2 S S2MCAT SHPLEX.PUBLIC.PARMLIB
3 S S2RESB SYS1.IBM.PARMLIB
4 D S2RESB SYS1.PARMLIB

d parmlib
Mar 09 04:41:03 S2
IEE251I 04.41.03 PARMLIB DISPLAY 670
PARMLIB DATA SETS SPECIFIED
AT IPL
ENTRY FLAGS VOLUME DATA SET
1 S S2MCAT SHPLEX.PARMLIB
2 S S2MCAT SHPLEX.PUBLIC.PARMLIB
3 S S2RESB SYS1.IBM.PARMLIB
4 D S2RESB SYS1.PARMLIB

```

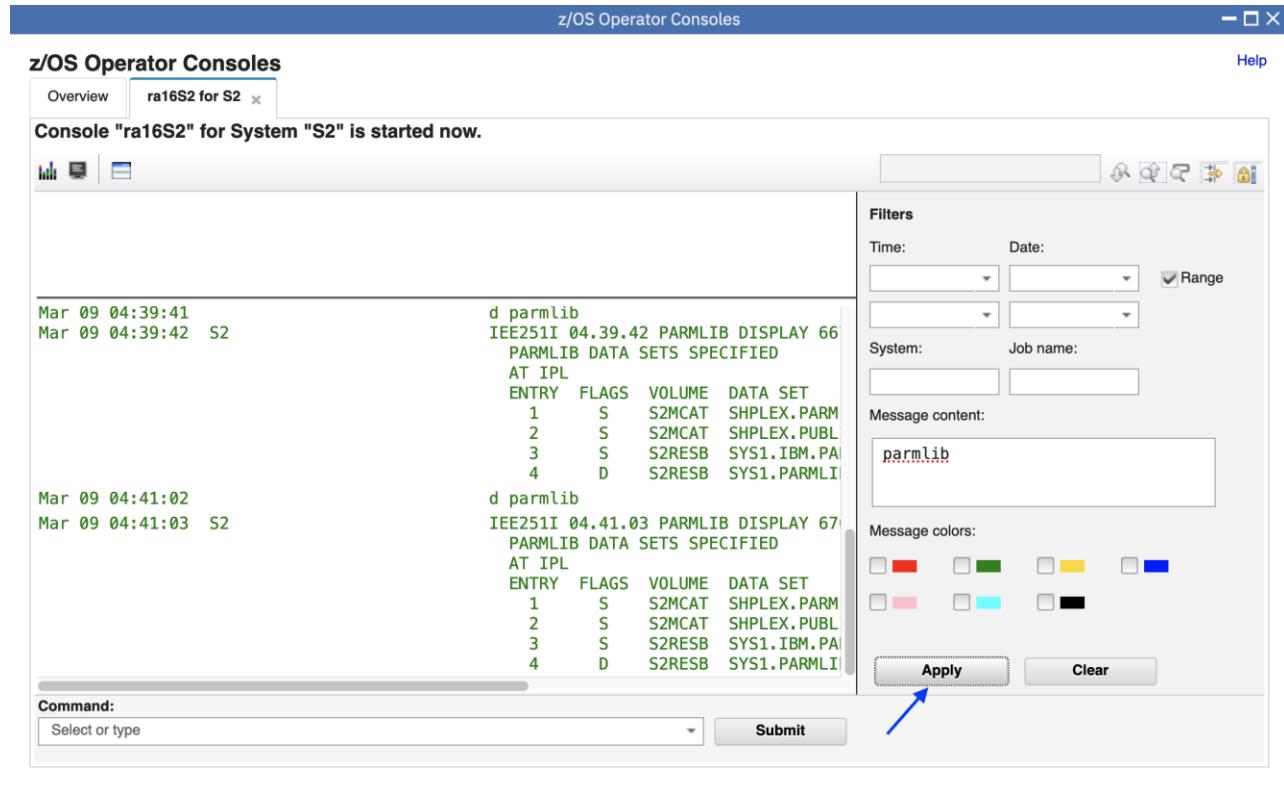
Command: Select or type

11 . Filter messages

Step 11a: Click Filter icon, the console for S2 will be locked

The screenshot shows the z/OS Operator Consoles interface. The title bar says "z/OS Operator Consoles". A tab bar at the top has "Overview" and "ra16S2 for S2" selected. The main area displays a log of messages for system "S2". The log shows several error messages from HZSPROC, such as HZS0003E and HZS1002E, indicating problems with data sets and spool accessibility. There are also some informational messages like IEE251I about parmlib display. On the right side of the window, there is a "Filters" panel with fields for Time, Date, System, and Job name, along with a "Message content:" search field and a "Message colors:" section with color-coded boxes. At the bottom of the filters panel are "Apply" and "Clear" buttons.

Step 11b: Input “PARMLIB” into the textbox of message content, click Apply button, only messages which contain “PARMLIB” will be displayed in the console window.



Step 11c: Click Clear button, filters will be cleaned up and all messages will be displayed.

The screenshot shows the z/OS Operator Consoles interface. The main window displays a log of messages from the console "ra16S2" for System "S2". The messages include system checks and parmlib displays. A 'Filters' panel on the right side allows users to refine the message list based on time, date, system, job name, message content, and message colors. A blue arrow points to the 'Clear' button in the 'Filters' panel, indicating that clicking it will clear the current filters and show all messages again.

z/OS Operator Consoles

z/OS Operator Consoles

Overview ra16S2 for S2

Console "ra16S2" for System "S2" is started now.

Mar 09 04:07:22 S2 HZSPROC HZS0002E CHECK(IBMNCN,CNZ_SYSCONS_P CNZHFO010E System console S2 is ru mode.

Mar 09 04:07:29 S2 HZSPROC HZS0002E CHECK(IBMXCF,XCF_CF_CONNEC

ENTRY	FLAGS	VOLUME	DATA SET
1	S	S2MCAT	SHPLEX.PARM
2	S	S2MCAT	SHPLEX.PUBL
3	S	S2RESB	SYS1.IBM.PA
4	D	S2RESB	SYS1.PARMLI

Mar 09 04:41:02 d parmlib
Mar 09 04:41:03 S2 IEE251I 04.41.03 PARMLIB DISPLAY 67 PARMLIB DATA SETS SPECIFIED AT IPL

ENTRY	FLAGS	VOLUME	DATA SET
1	S	S2MCAT	SHPLEX.PARM
2	S	S2MCAT	SHPLEX.PUBL
3	S	S2RESB	SYS1.IBM.PA
4	D	S2RESB	SYS1.PARMLI

Mar 09 04:55:25 S2 HZSPROC HZS0001I CHECK(IBMCICS,CICS_JOBSUB_ DFHH0002E The spool is accessible

Mar 09 04:55:25 S2 HZSPROC HZS0001I CHECK(IBMCICS,CICS_CEDA_AC DFHH0001E The CEDA transaction is .

Command: Select or type

Submit

Filters

Time: Date: Range

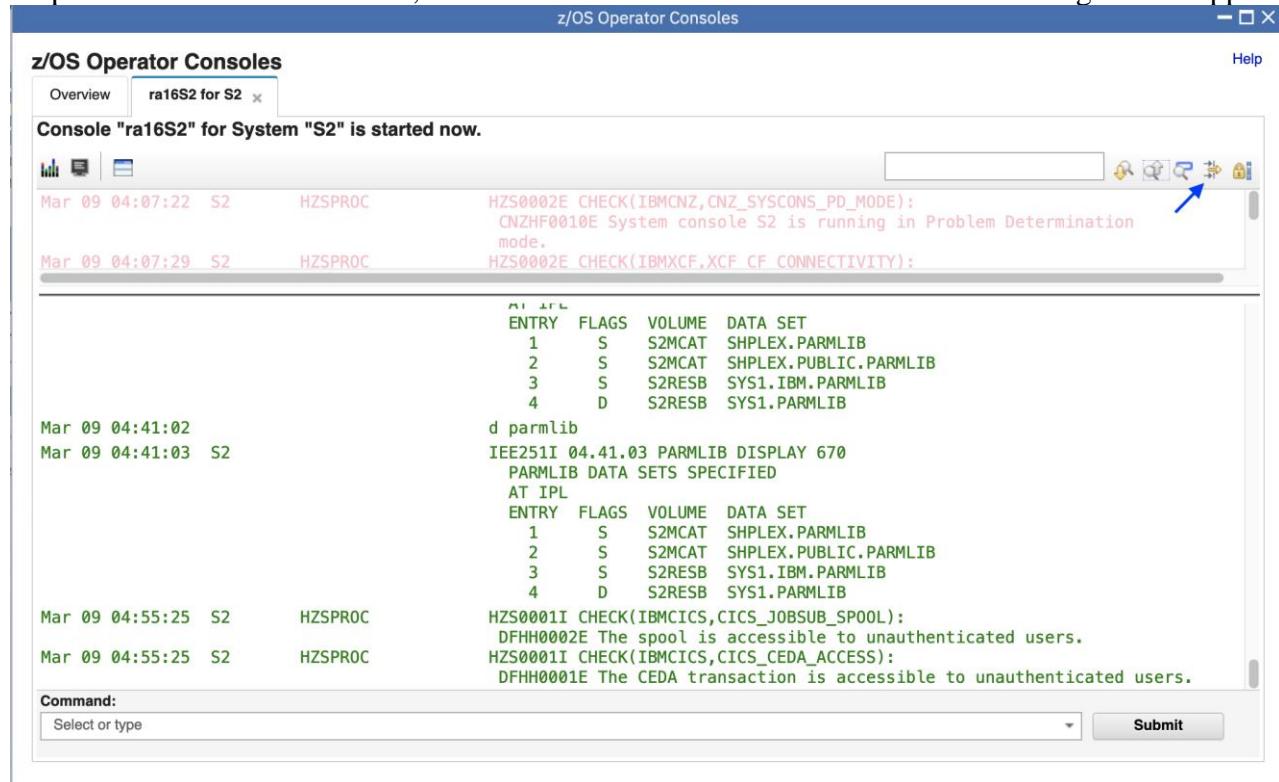
System: Job name:

Message content:

Message colors:

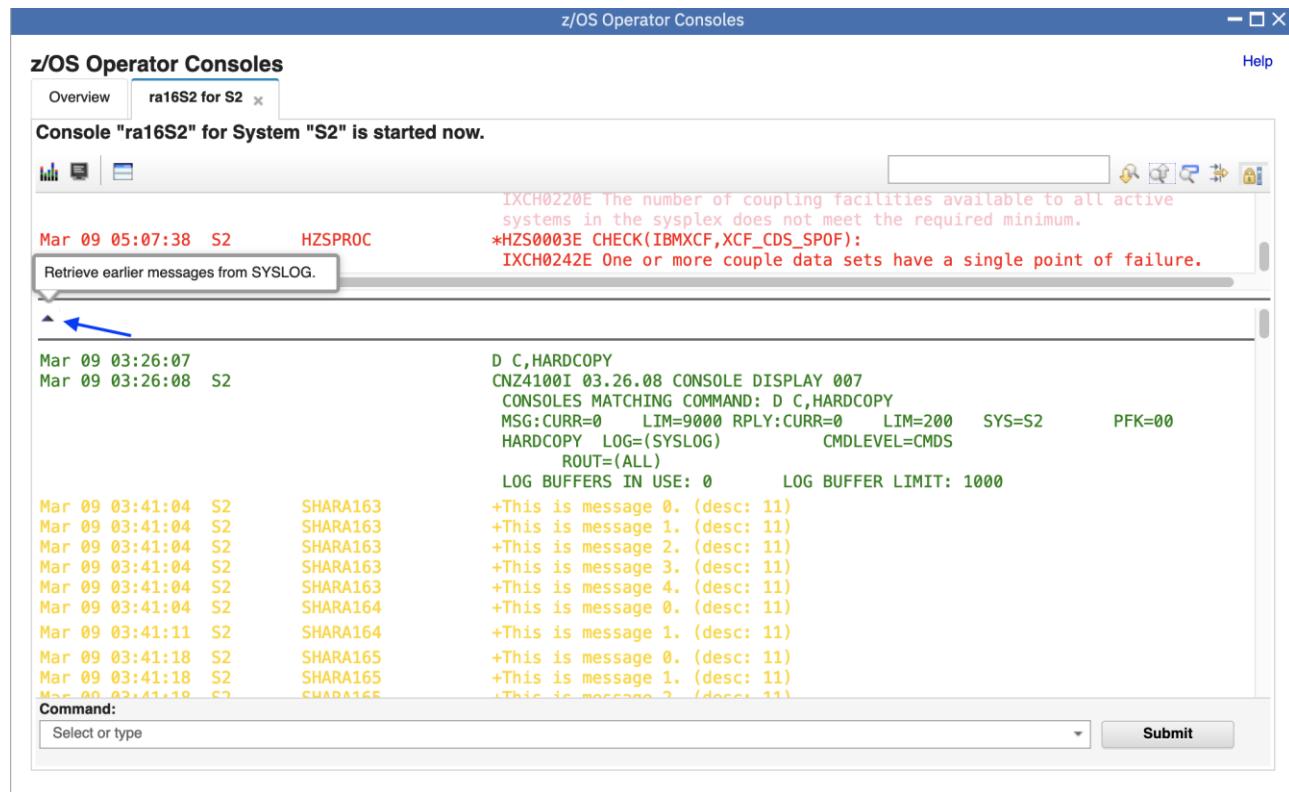
Apply Clear

Step 11d: Click Hide filter icon, the console for S2 will be resumed and Filter dialog will disappear.



12 . Retrieve historic messages from SYSLOG

Step 12a: Historic messages are the messages happened before user starts the console in z/OSMF. You can use the UP icon on top of console window to retrieve historic messages from SYSLOG or OPERLOG. Up to 200 messages can be retrieved at a time. (To avoid automatic refresh when new messages come in, suggest to lock the console before you click on the UP icon).



z/OS Operator Consoles

Overview **ra16S2 for S2** Help

Console "ra16S2" for System "S2" is started now.

IXCH0220E The number of coupling facilities available to all active systems in the sysplex does not meet the required minimum.
 *HZS003E CHECK(IBMXCF,XCF_CDS_SPOF):
 IXCH0242E One or more couple data sets have a single point of failure.

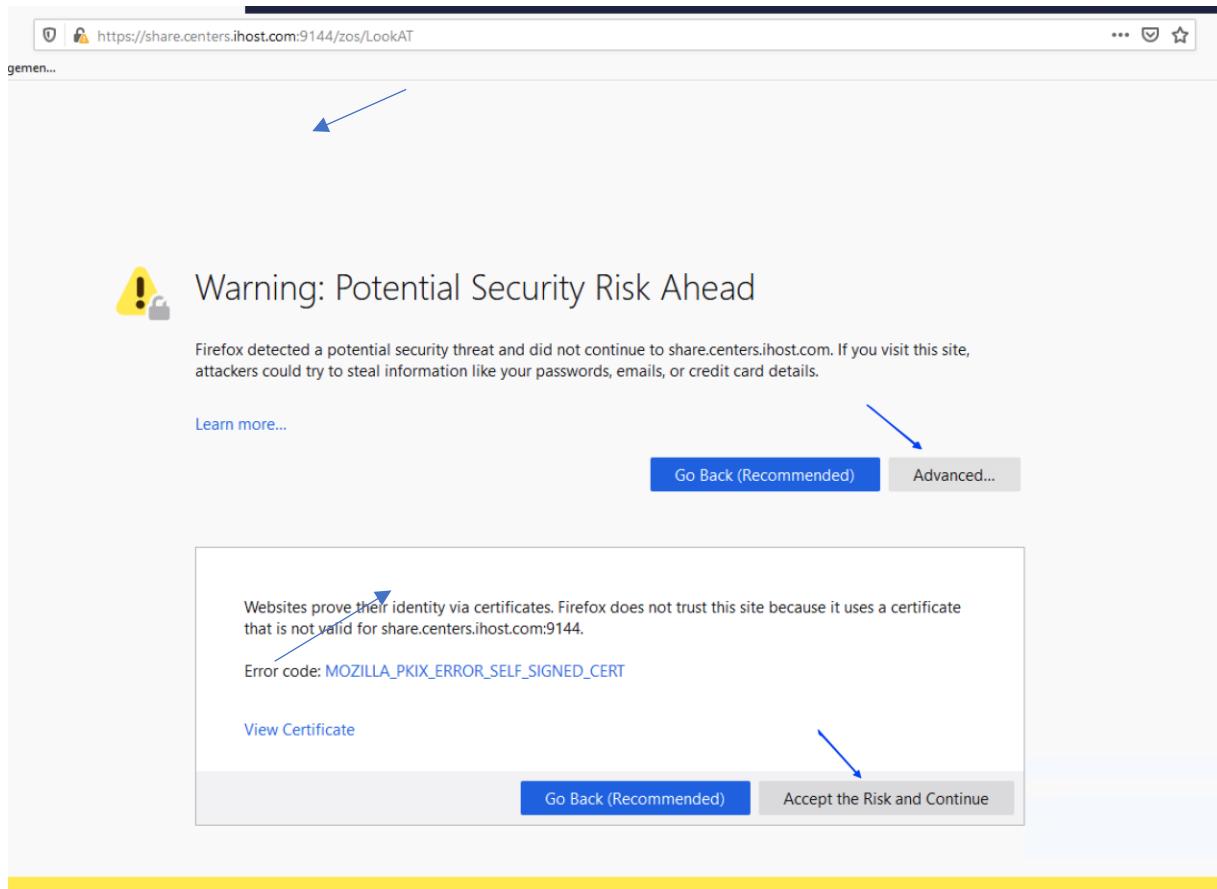
Date	Time	System	Job ID	Message
Mar 09	03:07:14	S2	STC00249	\$HASP686 OUTPUT(BPXAS) 857 \$HASP686 OUTPUT(BPXAS) OUTGRP=IZODAC62.1.1 NOT CANCELLED, \$HASP686 SPECIFY 'PROTECTED'
Mar 09	03:07:14	S2	STC00249	\$HASP686 OUTPUT(BPXAS) 858 \$HASP686 OUTPUT(BPXAS) OUTGRP=IZODAC33.1.1 NOT CANCELLED, \$HASP686 SPECIFY 'PROTECTED'
Mar 09	03:07:14	S2	STC00253	\$HASP686 OUTPUT(BPXAS) 859 \$HASP686 OUTPUT(BPXAS) OUTGRP=IZODAB12.1.1 NOT CANCELLED, \$HASP686 SPECIFY 'PROTECTED'
Mar 09	03:07:14	S2	STC00253	\$HASP686 OUTPUT(BPXAS) 860 \$HASP686 OUTPUT(BPXAS) OUTGRP=IZODAC27.1.1 NOT CANCELLED, \$HASP686 SPECIFY 'PROTECTED'
Mar 09	03:07:14	S2	STC00259	\$HASP686 OUTPUT(BPXAS) 861 \$HASP686 OUTPUT(BPXAS) OUTGRP=IZODAC25.1.1 NOT CANCELLED, \$HASP686 SPECIFY 'PROTECTED'
Mar 09	03:07:14	S2	STC00263	\$HASP686 OUTPUT(BPXAS) 862 \$HASP686 OUTPUT(BPXAS) OUTGRP=IZODAC21.1.1 NOT CANCELLED, \$HASP686 SPECIFY 'PROTECTED'
Mar 09	03:07:14	S2	STC00276	\$HASP686 OUTPUT(BPXAS) 863

Command:

13 . Display message help

Notes: This function needs additional setup of KC4z that has not been done yet for this Lab session. The following steps are your reference only.

This step requires a prerequisite which is a trusted KC4Z certificate in your browser. To do so, visit KC4Z server from the browser. The URL is <https://share.centers.ihost.com:9144/zos/LookAT>. Then add the exception for KC4Z's certificate. Here is example with Firefox.



The screenshot shows a web browser window with the URL <https://share.centers.ihost.com:9144/zos/LookAT>. The page title is "LookAT message topic lookup service using KC4z".

Form fields and buttons:

- Enter Message ID:
- Select One Product Release To Search:
 - z/OS
 - z/OS V2R4
-

Topic Content options (radio buttons):

- KC Topic
- LookAT html
- text
- unformatted text

Text area (inside a box):
Enter Valid message id, select release, click "Retrieve Message Topic" Button to display message topic here.

Step 13a: Input “D PARMLIB” into the textbox of command, click 'Submit' button or press Enter, the command response will be displayed in the console window.

The screenshot shows the z/OS Operator Consoles interface. The title bar says "z/OS Operator Consoles". The main area displays a log message from "HZSPROC" at 04:07:38 on Mar 09. The message is in red and reads:

```
*HZS0003E CHECK(IBMXCF,XCF_CDS_SPOF):  
  IXCH0242E One or more couple data sets have a single point of failure.  
HZS1002E CHECK(IBMJES,JES_NIE_SECURITY):  
  AN ERROR OCCURRED, DIAG: 00000400_00000403
```

Below this, another log entry from "HZSPROC" at 04:07:37 on Mar 09 shows a "PARMLIB" command being issued:

```
d parmlib  
HZS0002E CHECK(IBMXCF,XCF_CF_SYSPLEX_CONNECTIVITY):  
  IXCH0220E The number of coupling facilities available to all active  
  systems in the sysplex does not meet the required minimum.
```

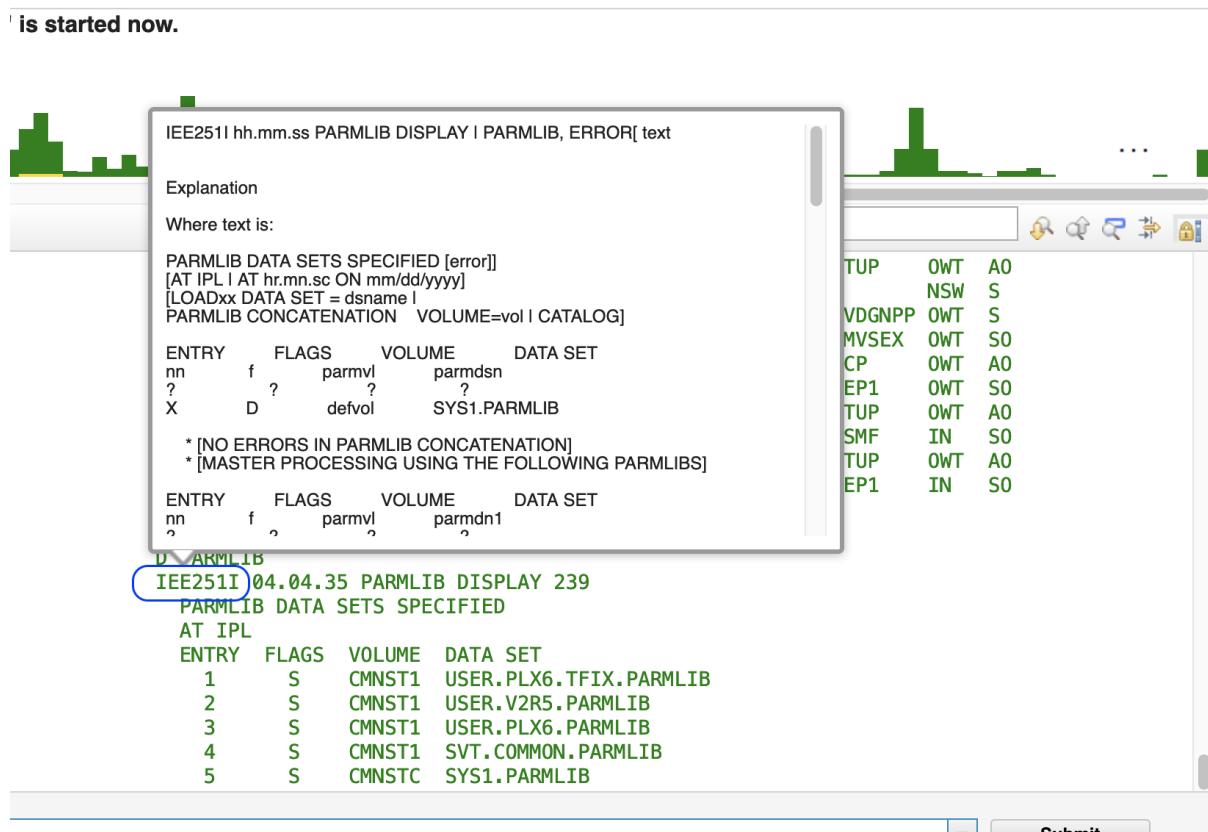
Following this, a log entry from "HZSPROC" at 04:07:38 on Mar 09 shows the output of the "PARMLIB" command:

```
*HZS0003E CHECK(IBMXCF,XCF_CDS_SPOF):  
  IXCH0242E One or more couple data sets have a single point of failure.  
IEE251I 04.07.38 PARMLIB DISPLAY 608  
  PARMLIB DATA SETS SPECIFIED  
  AT IPL  
  ENTRY FLAGS VOLUME DATA SET  
    1   S   S2MCAT SHPLEX.PARMLIB  
    2   S   S2MCAT SHPLEX.PUBLIC.PARMLIB  
    3   S   S2RESB SYS1.IBM.PARMLIB
```

A blue arrow points to the "PARMLIB DATA SETS SPECIFIED" line in the command output. At the bottom left, there is a "Command:" label followed by a text input field containing "Select or type". At the bottom right, there is a "Submit" button.

Step 13b: Hover over message id IEE251I, message help will be popped up automatically.

' is started now.



End of exercise

Exercise Review and Wrap-Up

You now know how to use the z/OS Operator Consoles:

- Log on to z/OSMF
- Complete Setup for one system or local sysplex
- Start console and open console panel
- View system messages for a system or local sysplex
- Association between message bar and messages
- Hide/Show summary view
- Show/Hide WTOR and HOLD messages
- Enter system commands
- Lock/Resume console
- Search keywords
- Filter messages
- Retrieve historic messages from SYSLOG
- Display message help



Thank You