IBM GLOBAL SERVICES







IMS Control Center

Tracy Hutcheson, tracyhut@us.ibm.com

IMS

Technical Conference

Sept. 27-30, 2004

Orlando, **FL**



Questions

- How many people are using IMS V8?
- How many people are using IMS Control Center (CC)?
- How many people will be moving to IMS V8 or V9 soon?
- How many of you are thinking about leveraging CC?



Customer value of IMS Control Center

- Simplify management of IMSplex operations and problem determination
- Consistency and integration of IBM user interfaces
- Provide a platform for modernization of the IMS systems management user interface
- Provide an easy to use GUI for the new V8 Single-Image Operations Manager
- Leverage newer market-place skills and free up valuable and overburdened 390 skills



Context of IMS Control Center

- Within the scope of the resource types addressed in the V8 (and now V9) systems management
- DB2 Control Center as the IBM solution for system administration ease-of-use



How might I use it?

- As an easy-to-use GUI for a SPOC
- As an integrated admin client for DB2 and IMS
- As a training tool for newer-skilled employees
- As an interface for newer-skilled employees
- As a talking bridge between 390 skills and newer GUI skills



Requirements

- V9 resources
- Command dialog (expert dialog)
- Command editor
- - syntax assist
- Command shortcut
- Results panel
 - compare two sets of command outputs
- - direct edit from command output (e.g., change the class on the output page, run an Update under the covers and refresh results)

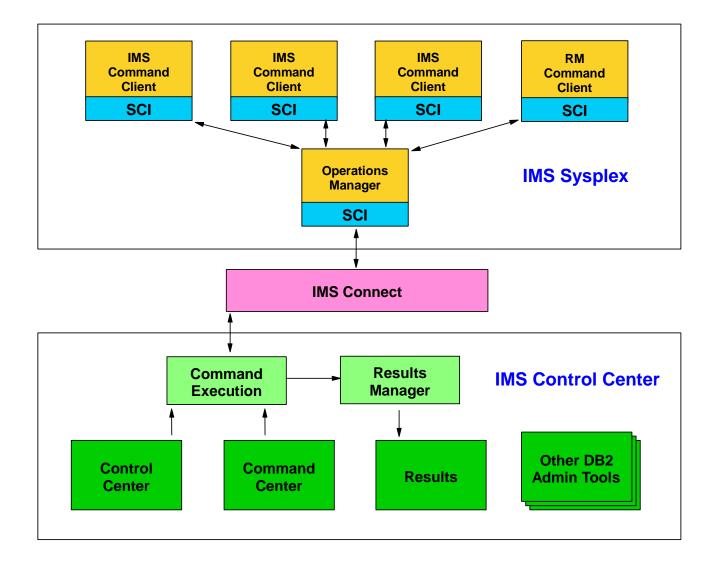


Questions

- Has anyone changed their minds about using it given the previous slides?
- How many would consider using it who said no before?



IMS Control Center Overview





IMS Control Center Up and Running

- Install IMS V8
- Configure V8 Operations Manager (OM)
 - APAR PQ69527 to enable CC support
- Install IMS Connect
 - APAR PQ62379 to precondition OM support
 - APAR PQ70216 to enable OM support
 - Two statements in the configuration file (HWSCFGxx)
 - EXIT=(...,HWSCSLO0,HWSCSLO1)
 - IMSPLEX=()
- Install DB2 V8 GUI Administration Tools
 - No DB2 engine installation required
 - Part of any DB2 license
 - DB2 for z/OS V7 is packaged with DB2 Connect includes an upgrade to the V8 GUI Admin Tools



DB2 Control Center Installation

re-	DB2 Setup Wizard - DB2 Enterprise Server Edition 🔀
Select the features you want to install	
Click on an icon in the list below to change how a feature is installed	i.
DB2 Enterprise Server Edition Administration tools Control Center Client Tools Command Center Configuration Assistant Database Tools Event Analyzer DB2 Web Tools Application Development tools Server support Client support	Description The Control Center is a Java-based tool that provides a central administration point for DB2. This feature requires 0KB on your hard drive.
Installation directory	
Drive C_DRIVE (C:) Space r -117M	required:jisk Space
Directory C:\Program Files\IBM\SQLLIB\	hange,.,
InstallShield	Next > Cancel Help



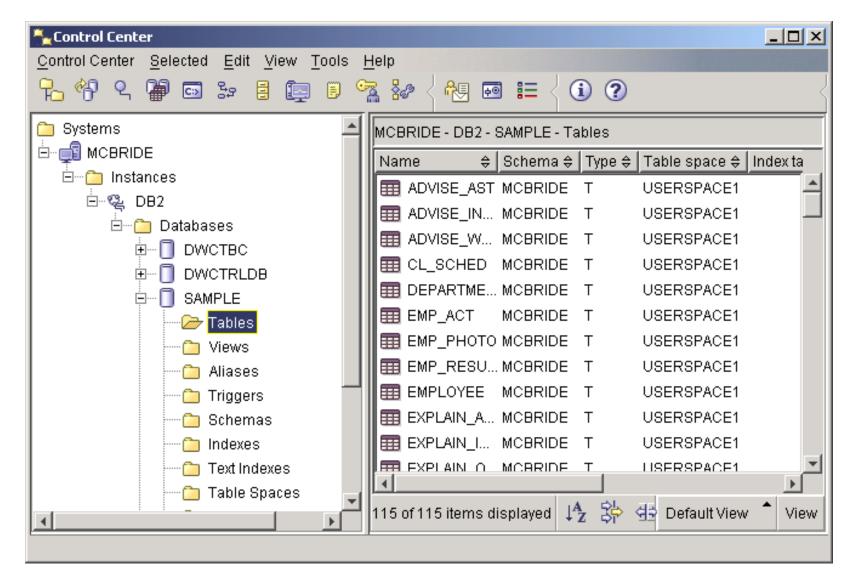
Control Center – DB2 System Tree

- Manage DB2 workstation systems / instances •
- Manage DB2 for z/OS subsystems
- Create databases and related objects
- Explorer-style tree structure for navigation •
- Wizards and simple dialogs for ease of use
- Launch the other GUI admin tools
 - Command Center
 - Health Center
 - Event Analyzer
 - Task Center and Journal
 Replication Center

- Data Warehouse Center
- Information Catalog Center
- Development Center



Control Center – DB2 System Tree





Control Center – Add IMSplex System

- Add an IMSplex from a pop-up menu of the Systems root of the Control Center tree
- Specify the IMSplex name
- Specify the z/OS host IP address
- Specify the port where IMS Connect is listening



Control Center – Add IMSplex System

Control Center
Control Center Selected Edit View Tools Help
▙ ੀ ♀ ◙ ☞ ☞ ▤ ◙ ▣ % 삶 < 원 ◙ ☷ < ① ②
Systems Open New Control Center Systems Add Name Node name \$ Operating system \$ Type \$ Protocol \$ Pro Refresh BHUYNH BHUYNH
Add System
System type C DB2 IMS
System name IMSPLEXONE
Host name 9.112.345.5
Port Number 9999
Operating system OS/390 or z/OS
Comment North Plex
OK Cancel Apply <u>R</u> eset Show Command Help
I of 1 items displayed ↓A ↓A



IMSplex Login

- Security provided on z/OS by RACF or equivalent security tool
- User ID and Password entered on client
- Login required for every session before active members become visible



Control Center – IMSplex Login

🛼 Control Center	
<u>Control Center</u> <u>Selected</u> <u>Edit</u> <u>View</u> <u>Tool</u>	s <u>H</u> elp
ት 😚 ዓ 🗭 🖬 🖕 🗄 🔯	· 🚰 ‰ < ॡ 💀 📰 🗧 🛈 🕐
🔁 Systems	Members
🗄 🗐 внолин	Login for PLEX1
E <mark>∰</mark> PLEX1	Enter your userid and password
⊕ PLEX2	User ID
-	Password
	OK Cancel Help
	4 of 4 items displayed ↓ ↓ 🖓 🕸 🛱 🖓 Default View 🏠 View



IMSplex Tree

- Lists the IMSplexes you have added
- Lists active IMSplex command client members (in V8, IMS and RM type members)
- Lists resource types for each member
- During a session, the list of members can be updated using Refresh from the IMSplex menu
- All IMSplex members can be listed using Query... from the IMSplex pop-up menu



Control Center – IMSplex and Members

Sontrol Center			
Control Center Selected Edit View Too	s <u>H</u> elp		
16 아이 오 🖗 📼 🌫 🛢 💷 🗉	🗠 🖓 🖓 🖓 💀	≡ < ① ②	4
ີອ Systems ່≞∽ຼຼີີ BHUYNH	Members		
E PLEX1	Name	Subtype ⇔ Version ⇔	
		DBDC 00080100	
All_Members	🗀 IMS2 🛛 IMS	DBDC 00080100	
Online Change	🗀 SYS3 🛛 IMS	DBDC 00080100	
	4 of 4 items displayed	↓Az \$\$> ∰ ∰ ₩ №	Default View 📩 View



IMSplex Member Groups

- Named groups for any subset of members
- All_Members group provided as the singlepoint-of-control (SPOC)
- A command sent to a group is sent to all members of that group
- OM gathers all member responses before returning results to the Control Center



Control Center – IMSplex Member Groups

🏪 Control Center		
Control Center Selected Edit View Too		
▙ ᄵᆉ ♀ @ @ ▷ ▷ ፤ @ □	🖄 🦗 < 🔁 🖬 🏣 < 🛈 🕐	<
Systems 	Groups Name \$ Members \$ Comment \$ Comment \$	
All_Members All_M	Add Group Group Name North Available SYS3 >> SYS3 >> Selected IMS2 IMS3 Comment Northern Region Production Systems	×
	1 of 1 iter OK Cancel Apply <u>R</u> eset	Help



New (Type II) IMSplex Commands

- Query IMSplex
- Query Member
- Query LE
- Update LE
- Delete LE
- Initiate Online Change
- Query Online Change
- Terminate Online Change

- Query Structure
- Query Tran
- Update Tran



Control Center – New IMSplex Commands

🏪 Control Center		Ľ
Control Center Selected Edit View Too	ols <u>H</u> elp	
╊ॎऀ९ॗऀॼॎॗः ॾऀ ॾ	9 🐕 🚧 < 🖶 💀 🏣 < 🕦 🍞	
Systems BHUYNH DLEX1 DLEX1 D. Members D. All_Members D. Language Environment Donline Change C. Resource Structure Transaction D. IMS3 Query D. MS2 Dydate SYS3 D. Groups	Members All_Members IMS3 IMS DBDC 00080100 IMS2 IMS DBDC 00080100 SYS3 IMS DBDC 00080100	
	4 of 4 items displayed ↓ 2 3 ↔ ⊕ ⊕ ♥ ♥ ♥ Default View Vie	ЭW

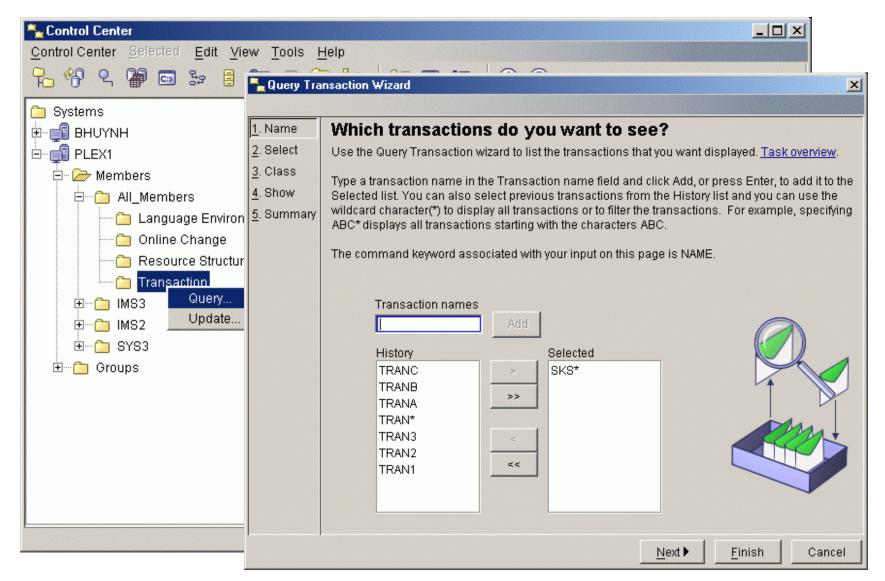


New IMSplex Command Wizards

- Wizards for each of the Type II commands
- Query wizards displayed automatically when clicking on a resource type folder
- Launched from pop-up menus in Control Center or objects in Results window
- Provide step-by-step prompts and instructions
- Previous names remembered in history list



New IMSplex Command Wizards





Wizard Help for Command Options

- Select command options from lists
- Help pop-ups for each option
- Option keywords listed for learning commands



Wizards – Help Selecting Command Options

👆 Query Tra	nsaction Wizard
<u>1</u> . Name	Which transaction statuses do you want to see?
2. Select	Click the LIST radio button if you want to select the transaction status types you want to query.
3. Status	The common discussed eccessisted with your input on this name is OTATUO
. Show	The command keyword associated with your input on this page is STATUS.
5. Summary	If you are ready to issue the command, click Finish.
	O DEFAULT - AII
	LIST - Select from list
	BAL - Balancing
	CONV - Conversational
	🗖 DYN - Dynamic
	🗖 FPE - Fast Path exclusive
	🗖 FPP - Fast Path potential
	DIOPREV - I/O previous
	LCK-Lock
	🗆 QERR - Queue error
	RESP - Response mode
	RMT - Transaction is stopped for scheduling. This might be
	SUSPE due to a previous UPDATE TRAN, /PSTOP TRAN STARS or /STO TRAN command or an application about
	STOQ - or /STO TRAN command or an application abend.
	STOSCHD - Stopped for scheduling



Wizard Generated Command

- Command generated by user selections is displayed on the Summary page
- IMSplex and Route are also displayed
- Finish button sends command to OM through IMS Connect



Wizards – Generated Command

🟪 Query Tra	insaction Wizard	×
<u>1</u> . Name <u>2</u> . Select <u>3</u> . Status <u>4</u> . Show <u>5</u> . Summary	Do you want to query your transactions now? Review the command syntax in the Command field. Click Finish to perform all specified actions an close the wizard, when all required fields are complete. If you opened your wizard by right-clicking the resource member in the Control Center tree, your command results, if error-free, appear in the right-hand pane of the Control Center. If errors result from issuing your command, or if you opened the wizard by clicking on the resource member in the Control Center tree, your results, with the errors, are returned to you in a separate window. Click Back to go to the previous wizard page. Click Cancel to cancel any changes and close the wizard. IMS sysplex: PLEX1 Route: All_Members Command: QUERY TRAN NAME(SKS*) STATUS(STOQ, STOSCHD)	d
	▲Back Finish Cancel	



Question

- How important is it to have a batch or script option?
 - 1 Not at all important to
 - 5 Very important
- What about multiple commands?



Displayed Resources in Control Center

- Resources displayed as the contents of the resource type folder
- Resources displayed in a tabular format
- Resources ordered by member as they were returned by OM
- Columns can be reordered by drag and drop or using the customize columns dialog
- Find enables search for specific values



Control Center – Displayed Transactions

[™] Control Center Control Center Selected Edit View Too [™] [™] [™] [™] [™] [™] [™] [™]		ê .	≡ {	i ?				<u>_ ×</u>
 Systems BHUYNH PLEX1 Members All_Members Canguage Environment Online Change Resource Structure Transaction IMS3 IMS2 SYS3 Groups 	Transaction Trancode ≑ SKS3 SKS6 SKS7 SKS7 SKS1 SKS2 SKS5 SKS8 SKS9 SKS3 SKS6 SKS4 SKS7 SKS1 ▲ 27 of 27 item	MbrName IMS3 IMS3 IMS3 IMS3 IMS3 IMS3 IMS3 IMS3 IMS2 IMS2 IMS2 IMS2 IMS2 IMS2 IMS2 IMS2 IMS2 IMS2 IMS2 IMS2 IMS2 IMS2 IMS2 IMS2 IMS2	CC ≑ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	STLDDLT3 STLDDLT6 STLDDLT4 STLDDLT7 STLDDLT1 STLDDLT2 STLDDLT5 STLDDLT8 STLDDLT8 STLDDLT3 STLDDLT3 STLDDLT6 STLDDLT4 STLDDLT7	LCIS ≑ 3 6 4 7 1 2 5 8 9 3 6 4 7 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	65535 65535 65535 65535 65535 65535 65535 65535 65535 65535 65535 65535 65535	LPL(655: 655: 655: 655: 655: 655: 655: 655: 655: 655: 7

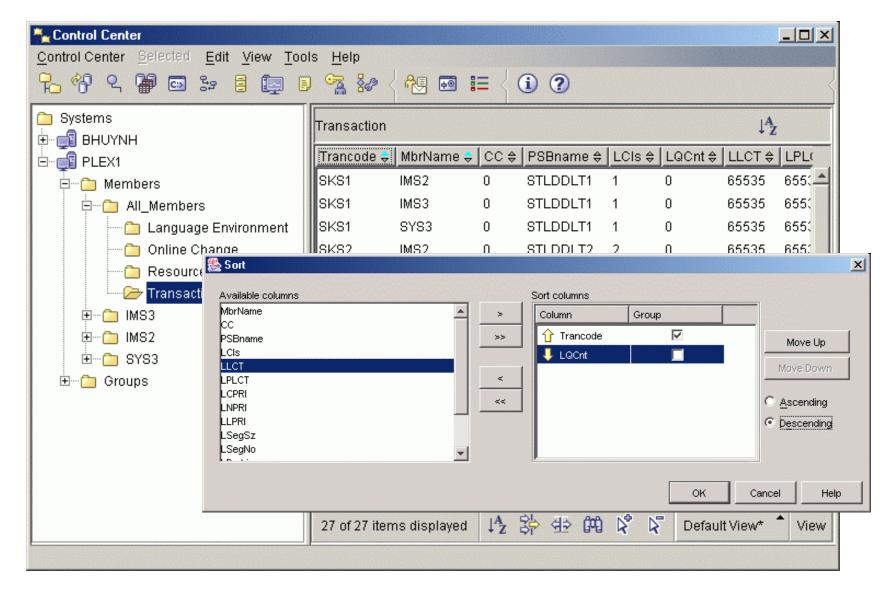


Command Results Sorting

- Resources can be sorted on any column by clicking on the column header
- Click again to reverse ascending/descending
- Sort dialog available from view toolbar enables multi-level sorting and grouping



Control Center – Results Sorting





Command Results Filtering

- Filter dialog available from view toolbar
- Filter resources on any columns
- All resource information is saved locally, allows applying any number of successive filters to study data



Control Center – Results Filtering

🏪 Control Center					-OX
Control Center Selected Edit View Too	ls <u>H</u> elp				
16 아이 오 🖗 📼 16 💷 🛙) 🚰 🍇	S Filter			×
Constems 	Transacti Trancod	Column Trancode		Values (separated by a blank)	
É⊷ 🗊 PLEX1 È î⊇ Members	SKS1	And MbrName	In T	1	555
E-C All_Members	SKS1	And PSBname			655:
Language Environment	SKS1 SKS2	And LCIs And LQCnt	In Equal to	10	5551 5551
Carl Resource Structure	SKS2	And LLCT	In 💌		355:
······	SKS2 SKS3	And LPLCT		-	355:
	SKS3	And LNPRI	In 💌		655:
⊡ Groups	SKS3 SKS4	And LLPRI And LSegSz	In 💌		- ^{355:}
	SKS4	And LSegNo	In 💌		555
	SKS4	And LParLim	In 💌		355:
	SKS5 SKS5	And LMaxRgr			355: 355: ▼
	•	And LclStat	In 💌		
	27 of 27			OK Cancel Help	View



Command Center

- Command types
 - SQL statements and DB2 CLP commands
 - IMSplex and IMS Type I (classic) commands
 - Host commands
- Command and response log
- Command script (not currently supported for IMS)



Command Center – DB2 Commands

🖙 Command Center	<u>_ ×</u>
Command Center Interactive Edit Tools Help	
🐁 < ▙ 생 오 🖗 ☞ 🗄 🔯 🗉 🧏 🐼 < 원 ☷ < ඬ & <	() () () () () () () () () ()
Command type	
SQL statements and DB2 CLP commands	•
System	
Interactive Script Results Access Plan	
Database connection	
BHUYNH - DB2 - SAMPLE	
Command history	
connect to SAMPLE ;	-
Command	
connect to SAMPLE	<u>S</u> QL Assist
	Append to Script
Database Connection Information	<u>R</u> efresh
Database server = DB2/NT 8.1.0 SQL authorization ID = BHUYNH	
Local database alias = SAMPLE	



IMS Commands

- Select the IMS commands type
- Select IMSplex connection
- Select member route
- Type command or select from history
- Commands executed asynchronously you do not need to wait for a response before executing the next command



Command Center – IMS Commands

😅 Command Center	
Co <u>m</u> mand Center Interactive Edit Tools Help	
% { ि % ? ₩ ≫ 目 □ % ₩ { ₩ ⊡ ≔ { ● & <	i ?
Command type	Select Connection
IMS commands	Select a connection.
System	🥟 Systems
	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
Interactive Script Results Access Plan	🖻 🦢 🌽 Members
	All_Members
IMS sysplex Route	IMS3
	IMS2
Command history	SYS3
QUERY TRAN NAME(SKS*) SHOW(ALL)	- ⊕ PLEX2
Command	E PLEX3
	-
	-
Database Connection Information	-
	-
Database server = DB2/NT 8.1.0	
SQL authorization ID = BHUYNH	
Local database alias = SAMPLE	
	OK Cancel Help



Member Route

- Route commands to selected members
 - All_members
 - Individual members
 - Defined groups



Command Center – Member Route

Command Center				
o <u>m</u> mand Center <u>I</u> nteractive <u>E</u> dit <u>T</u> ools <u>H</u> el	p			
🖕 🧏 😚 ዲ 🚇 🍃 🛢 🔯 🔋	🐕 🦗 < 🏘 🖬 🏭 <	🖻 💰 < 🛈 (2	
Command type				
IMS commands			-	
System				
teractive Script Results Access Plan				
IMS sysplex R	oute			
Command history	🖽 Select Route			
	Choose the IMSnley men	nhers to which you	I want to send comman	ahe
QUERY TRAN NAME(SKS*) SHOW(ALL)	Choose the IMSplex men	nbers to which you	u want to send comman	nds.
		nbers to which you		nds.
QUERY TRAN NAME(SKS*) SHOW(ALL)	Available	nbers to which you	Selected	nds.
QUERY TRAN NAME(SKS*) SHOW(ALL)	Available IMS3			nds.
QUERY TRAN NAME(SKS*) SHOW(ALL)	Available		Selected	nds.
QUERY TRAN NAME(SKS*) SHOW(ALL)	Available IMS3 IMS2	>	Selected	nds.
QUERY TRAN NAME(SKS*) SHOW(ALL)	Available IMS3 IMS2 SYS3	>	Selected	nds.
QUERY TRAN NAME(SKS*) SHOW(ALL) Command	Available IMS3 IMS2 SYS3	>	Selected	nds.
QUERY TRAN NAME(SKS*) SHOW(ALL) Command	Available IMS3 IMS2 SYS3	>	Selected	nds.
QUERY TRAN NAME(SKS*) SHOW(ALL) Command Database Connection Information Database server = DB2/NT 8.1 SQL authorization ID = BHUYNH	Available IMS3 IMS2 SYS3	>	Selected	nds.
QUERY TRAN NAME(SKS*) SHOW(ALL) Command Database Connection Information Database server = DB2/NT 8.1	Available IMS3 IMS2 SYS3	>>>	Selected All_Members	nds.
QUERY TRAN NAME(SKS*) SHOW(ALL) Command Database Connection Information Database server = DB2/NT 8.1 SQL authorization ID = BHUYNH	Available IMS3 IMS2 SYS3	>	Selected All_Members	nds. Help



Command History

- Recent commands saved and selectable from the Command history drop-down list
- User can specify the number of commands saved in the Command Center options



Command Center – IMS Command History

🖼 Command Center		_ 🗆 ×
Command Center Interactive Edit Tools		
🌯 🔁 🕈 S 🗭 🌬 🛢 🔯	. 🖪 🐕 < 🔠 🖬 🎞 < 💼 🎄 < 🛈 🤅	2 <
Command type		
IMS commands		•
System		
Interactive Script Results Access Plan		
IMS sysplex	Route	
PLEX1	All_Members	
Command history		
QUERY TRAN NAME(SKS*) SHOW(PSB, C	LASS, STATUS)	-
QUERY TRAN NAME(SKS*) SHOW(PSB, C	LASS, STATUS)	
UPDATE TRAN NAME(SKS1) START(Q) DIS ACT		
query tran name(sks*) show(all)		
4		
QUERY TRAN NAME(SKS*) SHOW(PSB, 0 RC = 00000000 RSN = 00000000		efresh



IMS Command Results

- Results tab in the Command Center
- By default, appears automatically when results are available
- Shows IMSplex, command master, and route
- Same sorting, grouping, filtering, and column customizing as in the Control Center



Command Center – Results Tab

Command Cen	ter								
	r <u>I</u> nteractive <u>E</u>	the second s	A REAL PROPERTY AND A REAL						
; { b @	ዲ 🛱 ኔ፡	8 🗔	E 🚰	** { *!	₽	• { •	\$	i ?	
Command type									
IMS command:	6								-
System									
r									
teractive Scrip	t Results Acce	ess Plan							
Results history									
	NAME(SKS*) SHO) W/(ALL)							-
MS sysplex		ommand	master	Route					
D1 ED //		100		011	MEMBER	28			
PLEX1		v1S3		JALL_					
Results Error	rs Time						<u></u>	Locat	<u> </u>
Results Error	rs Time	\$ cc		\$ PSBname	÷ \$	LCIs	¢	LQCnt	÷
Results Error Trancode SKS3	rs Time MbrName IMS3	\$ CC			: ¢ 3		¢	0	÷
Results Error	rs Time	\$ cc		\$ PSBname	:	LCIs 3	¢		÷
Results Error Trancode SKS3 SKS6	rs Time MbrName IMS3 IMS3			♦ PSBname STLDDLT STLDDLT	e ⇒ 3 6 4	LCIs 3 6	¢	0 0	4
Results Error Trancode SKS3 SKS6 SKS4	rs Time MbrName IMS3 IMS3 IMS3			♦ PSBname STLDDLT STLDDLT STLDDLT STLDDLT	e ⇔ 3 6 4 7	LCIS 3 6 4	\$	0 0 0	÷
Results Error Trancode SKS3 SKS6 SKS4 SKS7 SKS1 SKS2	rs Time MbrName IMS3 IMS3 IMS3 IMS3 IMS3 IMS3 IMS3	♦ CC 0 0 0 0 0 0 0 0		 PSBname STLDDLT STLDDLT STLDDLT STLDDLT STLDDLT STLDDLT 	2	LCIs 3 6 4 7 1 2	\$	0 0 0 0	÷
Results Error Trancode SKS3 SKS6 SKS4 SKS7 SKS1 SKS2 SKS5	rs Time MbrName IMS3 IMS3 IMS3 IMS3 IMS3 IMS3 IMS3 IMS3	♦ CC 0 0 0 0 0 0 0 0 0 0 0		 PSBname STLDDLT: STLDDLT: STLDDLT: STLDDLT: STLDDLT: STLDDLT: STLDDLT: STLDDLT: 	2	LCIS 3 6 4 7 1 2 5	\$	0 0 0 0 0 0 0	◆
Results Error SKS3 SKS6 SKS4 SKS7 SKS1 SKS2 SKS5 SKS8	rs Time MbrName IMS3 IMS3 IMS3 IMS3 IMS3 IMS3 IMS3	♦ CC 0 0 0 0 0 0 0 0		 PSBname STLDDLT STLDDLT STLDDLT STLDDLT STLDDLT STLDDLT 	2	LCIs 3 6 4 7 1 2	\$	0 0 0 0 0 0	
Results Error Trancode SKS3 SKS6 SKS4 SKS7 SKS1 SKS2 SKS5	rs Time MbrName IMS3 IMS3 IMS3 IMS3 IMS3 IMS3 IMS3 IMS3	♦ CC 0 0 0 0 0 0 0 0 0 0 0		 PSBname STLDDLT: STLDDLT: STLDDLT: STLDDLT: STLDDLT: STLDDLT: STLDDLT: STLDDLT: 	2	LCIS 3 6 4 7 1 2 5	\$	0 0 0 0 0 0 0	
Results Error SKS3 SKS6 SKS4 SKS7 SKS1 SKS2 SKS5 SKS8	rs Time		÷ (#4) \\$	 PSBname STLDDLT: STLDDLT: STLDDLT: STLDDLT: STLDDLT: STLDDLT: STLDDLT: STLDDLT: 	:	LCIS 3 6 4 7 1 2 5		0 0 0 0 0 0 0	♦ ▲ ↓ ↓ ↓ ↓
Results Error Trancode SKS3 SKS6 SKS4 SKS7 SKS1 SKS2 SKS5 SKS8 ■ 27 of 27 items	rs Time		÷ (#0 \%	 PSBname STLDDLT STLDDLT STLDDLT STLDDLT STLDDLT STLDDLT STLDDLT STLDDLT 	:	LCIS 3 6 4 7 1 2 5		0 0 0 0 0 0 0 0	
Results Error Trancode SKS3 SKS6 SKS4 SKS7 SKS1 SKS2 SKS5 SKS8 ■ 27 of 27 items	s Time MbrName IMS3 IMS3 IMS3 IMS3 IMS3 IMS3 IMS3 IMS3		÷ (#4) \\$	 PSBname STLDDLT STLDDLT STLDDLT STLDDLT STLDDLT STLDDLT STLDDLT STLDDLT 	:	LCIS 3 6 4 7 1 2 5		0 0 0 0 0 0 0 0	



Type I (Classic) Command Results

• Scrollable text box showing the same command response as a terminal



Command Center – Type I Command Results

Command Center Interactive Edit Tools Help Image: Second Structure Edit Tools Help Image: Second Structure Edit Tools Help Image: Second Structure Edit Tools Help Image: Second Structure Edit Tools Help Interactive Script Results Access Plan	
Command type IMS commands System	.
IMS commands System	•
System	-
nteractive Script Results Access Plan	100000
nteractive Script Results Access Plan	
Relactive ochor recours Access Fram	
Results history	
DIS ACT	-
IMS sysplex Command master Route	
PLEX1 IMS3 ALL_MEMBERS	
IMS3 REGID JOBNAME TYPE TRAN/STEP PROGRAM STATUS CLASS IMS3 JMPRGN JMP NONE IMS3 MSGRGN TP NONE IMS3 JBPRGN JBP NONE IMS3 BATCHREG BMP NONE	
IMS3 JMPRGN JMP NONE IMS3 MSGRGN TP NONE IMS3 JBPRGN JBP NONE	
IMS3JMPRGNJMPNONEIMS3MSGRGNTPNONEIMS3JBPRGNJBPNONEIMS3BATCHREGBMPNONEIMS3FPRGNFPNONEIMS3DBTRGNDBTNONE	
IMS3JMPRGNJMPNONEIMS3MSGRGNTPNONEIMS3JBPRGNJBPNONEIMS3BATCHREGBMPNONEIMS3FPRGNFPNONEIMS3DBTRGNDBTNONEIMS3DBRRCTCCDBRC	
IMS3JMPRGNJMPNONEIMS3MSGRGNTPNONEIMS3JBPRGNJBPNONEIMS3BATCHREGBMPNONEIMS3DBTRGNFPNONEIMS3DBTRGNDBTNONEIMS3DBRRCTCCDBRCIMS3DLIRCTCCDLS	
IMS3JMPRGNJMPNONEIMS3MSGRGNTPNONEIMS3JBPRGNJBPNONEIMS3BATCHREGBMPNONEIMS3FPRGNFPNONEIMS3DBTRGNDBTNONEIMS3DBRRCTCCDBRC	



Command Center Result Options

- Automatically display results
- Display results in a separate results window
- Specify the number of command responses to be saved in the results history



Command Center – Result Options

👿 Command Center	
Command Center Interactive Edit Tools He	lp
🐁 < 🔂 😚 오 🗿 🌫 🛢 🔯 🗉	
· · · · · · · · · · · · · · · · · · ·	Command Center Options
Command type	History Execution Results Access Plan
IMS commands	
System	Verbose (echo command text to output)
	🗖 Display SQLCA data
Interactive Script Results Access Plan	
Results history	Display SQL statement warning messages
QUERY TRAN NAME(SKS*) SHOW(ALL)	Display SQL <u>C</u> ODE
IMS sysplex Command mast	Display SQLSTATE
PLEX1 IMS3	
,, ,	Epe output to file
Results Errors Time	
Trancode	Automatically display query results on the query results page
SKS3 IMS3 0	
SKS6 IMS3 0	Size of result fields 50 🚆 kilobytes
SKS4 IMS3 0 SKS7 IMS3 0	IMS results options
SKS1 IMS3 0	Automatically display IMS results
SKS2 IMS3 0	
SKS5 IMS3 0 SKS8 IMS3 0	Display results in separate window
	Size of IMS result history 1000 🏺 entries
27 of 27 items displayed 🔓 🕸 🛱	
Display Results in New Window	OK Cancel Help



Separate Results Window

- Separate results window displayed for
 - Results from wizards (except folder queries)
 - Command Center when option selected
 - Display Results in New Window button
- Multiple windows can be open simultaneously
- Enables side-by-side comparisons



Separate Results Window

MS sysplex		Command	master	Route						
PLEX1		IMS3		ALL_MEM	IBER	88				
Results Errors Time										
Trancode 🔶	MbrName	\$ CC	; 🔤	PSBname	\$ I	LCIs	¢	LQCnt	₽	LLC
SKS3	IMS3	0		STLDDLT3	3	3		0		65:
SKS6	IMS3	0		STLDDLT6	6	6		0		65:
SKS4	IMS3	0		STLDDLT4	2	4		0		65:
SKS7	IMS3	0		STLDDLT7	7	7		0		65:
SKS1	IMS3	0		STLDDLT1	1	-		0		65:
SKS2	IMS3	0		STLDDLT2		2		0		65:
SKS5	IMS3	0		STLDDLT5		5		0		65:
SKS8	IMS3	0		STLDDLT8		8		0		65:
SKS9	IMS3	0		STLDDLT9		9		0		65:
SKS3	IMS2	0		STLDDLT3		3		0		65:
SKS6	IMS2	0		STLDDLT6		6		0		65:
SKS4	IMS2	0		STLDDLT4		4		0		65:
SKS7	IMS2	0		STLDDLT7		7		0		65:
SKS1	IMS2	0		STLDDLT1	1			0		65:
SKS2	IMS2	0		STLDDLT2	2	2		0		65:
4										▶
27 of 27 items di		2 34 4		2 🖷 🖽				Default Viev		Viev



Results Errors

- Displays return and reason codes for IMSplex and each member
- If no errors, all return and reason codes are 0
- If errors occurred, Error tab displays first
- Displays message ID, text, and help from Messages and Codes book



Results Window – Error Messages

👿 IMS Results	Window							_ <u> </u>
Results histor	у							
UPDATE TRA	N NAME(SKS111)	START(Q)						•
IMS sysplex	с	ommand m	aster	Route				
PLEX1		MS3		ALL_ME	MBERS			
Results Err	ors Time							1
IMS Sysplex	Error							4
Message		Message ID	Return Code	Reason Code	9			
_	sts were successful.	-	00000008	0000200C	Explain			
IMS Member	r Errors							
Member	Message				Message ID	Return Code	Reason Code	
IMS1	The command ente					02000008	00002028	Explain
IMS2	The command ente					02000008	00002028	Explain
SYS3	The command ente	ered contained	d an invalid prim	hary keyword.	CSLN029W	02000008	00002028	<u>Explain</u>
Explanat	Error Help 4I No requests we ion: The entries we lients but none of th	re processed	but no informa	tion was retur ss the reques	ned. The cor t successfully.	nmand you jus	t issued was ro	outed to
Display Re	sults in New Wind	ow					Close	Help



Command Time

- Host start time, stop time, and duration
- Workstation start time, stop time, and duration



Results Window – Command Time

PDATE TRAN NAME	(SKS111) START(Q)		
1S sysplex	Command maste	r Route	
LEX1	IMS3	ALL_MEMBERS	
	_		
Results Errors Tim	ie		
	Host time		
	Start August 1	5, 2002 4:56:33:825 PM PDT	
	Stop August 1	5, 2002 4:56:35:211 PM PDT	
	Duration 1 second	(s) 386 millisecond(s)	
	Workstation time		
	Start August 15	5, 2002 4:46:00:716 PM PDT	
	Stop August 15	5, 2002 4:46:01:57 PM PDT	
	Duration		



Results History

- Lists up to 1000 previous results by command
- Results include all data, errors, time stamps
- Most recent results at the top
- Pop-up shows complete command and workstation start time to aid identification



Results Window – Results History

JPDATE TRAN	N NAME(SKS111) S	BTART(Q)				
JPDATE TRAN	NAME(SKS111) S	GTART(Q)				
IS DB	· · ·					1
UERY TRN N	AME(SKS*) SHOV	V(ALL)				
	NAME(SKS*) SHQ			_		
	· · ·	QUERY TRAN NA	ME(SKS*) SHOW(ALL)]		
UERY TRAN	NAME(SKS*) SH	، 15, 2002 August 15, 2002	4:33:41:283 PM PDT			
UERY TRAN	NAME(SKS*) SHO	W(PSB, CLASS	STATUS)			
	NAME(SKS1) ST/	, , ,	,			1
SKS6	IMS3		STLDDLT6	6	0	65:
SKS4	IMS3	0	STLDDLT4	4	0	65:
SKS7	IMS3	0	STLDDLT7	7	0	65:
SKS1	IMS3	0	STLDDLT1	1	0	65:
SKS2	IMS3	0	STLDDLT2	2	0	65:
SKS5	IMS3	0	STLDDLT5	5	0	65:
SKS8	IMS3	0	STLDDLT8	8	0	65:
SKS9	IMS3	0	STLDDLT9	9	0	65:
SKS3	IMS2	0	STLDDLT3	3	0	65:
SKS6	IMS2	0	STLDDLT6	6	0	65:
SKS4	IMS2	0	STLDDLT4	4	0	65:
SKS7	IMS2	0	STLDDLT7	7	0	65:
SKS1	IMS2	0	STLDDLT1	1	0	65:
SKS2	IMS2	0	STLDDLT2	2	0	65: 👻
4						<u>ا</u>
27 of 27 item	is displayed \downarrow^{A}_{Z}	황 🕸 🛱	k k 🖬 🖽	=	Default Vi	ew 📩 View



Results Grouping

- Results can be grouped on any column using the Group checkbox in the Sort dialog
- Combines all rows with the same column value into an expandable roll-up row
- Can be grouped on multiple levels



Results Window – Grouping Results

		mand master	Route				
'LEX1	IMS3		ALL_MEM	BERS			
Results Errors	Time						
Trancode 🗧	MbrName :	e cc	\$ PSBname	\$ LCIs	\$ LQCnt	\$ <u>LL(</u>	
V SKS1							
	IMS3	0	STLDDLT1	1	0	65:	
	IMS2	0	STLDDLT1	1	0	65:	
	SYS3	0	STLDDLT1	1	0	65:	
V SKS2	🌺 Sort						
	IMS3	ole columns			Sort columns		
	IMS2 MbrNa			▲ >		Group	
	SYS3 CC PSBna			>>	Trancode		
V SKS3	LCIs	me			LQCnt		Move Up
	IMS3 LLCT			<		_	Move Down
	IMS2 LPLCT						C
•	LNPRI						C Ascending
	LLPRI LSegS	-					Descending



Highlighting Result Differences

- Toolbar buttons
 - Highlight all column differences
 - Highlight selected column differences
 - Clear all highlights
- Groups results by resource name and compares column values across members
- If one cell value is different from the others, that cell is highlighted
- If more than one value differs, all cells in that column for that resource are highlighted



Results Window – Highlighting Differences

_ ·					Deute						
MS sysplex MSPLEXB		Command r IMS2	naster		Route ALL						
		19102		JALL							
Results Error	rs Time										
Trancode	MbrName	\$ CC		PSBname	≑L	Cls		\$ LLCT			
V SKS1											
	IMS2	1		STLDDLT1	1		0	65535			
	SYS3	0		STLXDLT1	1		0	65535			
	IMS3	0		STLDDLT1	1		0	65535			
V SKS2											
	IMS2	0		STLDDLT2	2	!	0	65535			
	SYS3	0		STLDDLT2	2	!	0	65535			
	IMS3	0		STLDDLT2	7		0	65535			
V SKS3											
	IMS2	0		STLDDLT3	3		0	65535			
	SYS3	3		STLDDLT3	3		0	65535			
	IMS3	12		STLDDLT3	3		0	65535			
V SKS4											
•											
27 of 27 items	displayed 🕌	h 詩 相		k 🖷 🖽			Defaul	t View* 📩 Viev			



Results Window – Saved Views

- Sort, filter, grouping, and column settings can be saved as a 'view'
- Views can be applied to any results
- User names a view using the View menu
- View pop-up list enables quick switching



Results Window – Saved Views

/IS sysplex		Comm	and master		Route	Route					
PLEX1		IMS3			ALL_MEMBERS						
Results Erro	ors Time										
Trancode	\$ MbrName	¢	CC	≑	PSBname :	\$	LCIs	¢	LQCnt	¢Ll	_(
SKS3	IMS3		0		STLDDLT3		3		0	65	je 🔺
SKS6	IMS3		0		STLDDLT6		6		0	65	ji 🚺
SKS4	IMS3		0		STLDDLT4		4		0	65	ji 🛛
SKS7	IMS3		0		STLDDLT7		7		0	65	ji 🛛
SKS1	IMS3		0		STLDDLT1		1		0	65	j.
SKS2	IMS3		0		STLDDLT2		2		0	65	ji.
SKS5	IMS3		0		STLDDLT5		5		0	65	j.
SKS8	IMS3		0		STLDDLT8		8		0	65	ji
SKS9	IMS3		0		STLDDLT9		9	Г	efault View	65	ji 🛛
SKS3	IMS2		0		STLDDLT3		3		ans Class 20	66	ji.
SKS6	IMS2		0		STLDDLT6		6		ans Class 20	65	ji.
SKS4	IMS2		0		STLDDLT4		4		ans Class 40	65	
SKS7	IMS2		0		STLDDLT7		7		ans QCnt≻9	65	j.
SKS1	IMS2		0		STLDDLT1		1		rans Stopped	65	je 🛛
SKS2	IMS2		0		STLDDLT2		2		ans DeadQ	65	je 🗣
•								1000000000	ans by PSB		
27 of 27 items displayed 🛛 🛧 🔅 🖶 🛱 🧏 🧏 🛱 📰 🃰							23298	rans Class 20	• v	iew	



Results View Menu

- Enables the naming and saving of views
- Alternative access to the Sort, Filter, Customize Columns dialogs
- Enables print of data as a report
- Enables export to a delimited ASCII file



Results Window – View Menu

MS sysplex		Command master			Route							
MSPLEXB			IMS2			ALL						
Results Erro	rs Time											
Trancode	♦ MbrName	Ş	cc	⇔	PSBname	ŧ	LCIs	¢	LQC	Cnt ⇔	LLCT	
SKS9	IMS2		0		STLDDLT9		9		0		65535	
SKS7	IMS2		0		STLDDLT7		7		0		65535	10000
SKS5	IMS2		0		STLDDLT5		5		0		65535	a la
SKS3	IMS2		0		STLDDLT3		3		0		65535	
SKS1	IMS2		1		STLDDLT1		1		0		65535	a state
SKS8	IMS2		0		STLDDLT8		8		0	<u>N</u> ew	05505	
SKS6	IMS2		0		STLDDLT6	6	6		0	Save As		
SKS4	IMS2			STLDDLT4	DDLT4 4	4	0	Saved Views				
SKS2	IMS2		0		STLDDLT2		2		0	Filter		
SKS3	SYS3		3		STLDDLT3		3		0	Sort		
SKS6	SYS3		0		STLDDLT6		6		0	 Customize C	olumns	
SKS4	SYS3		0		STLDDLT4		4		0	Page Setup.		
SKS7	SYS3		0		STLDDLT7		7		0	Print		
4										<u>E</u> xport		
27 of 27 item:	s displayed	各路	4 PH 4	4	s 🖷 🔳					Default Viev	~ V	'iew



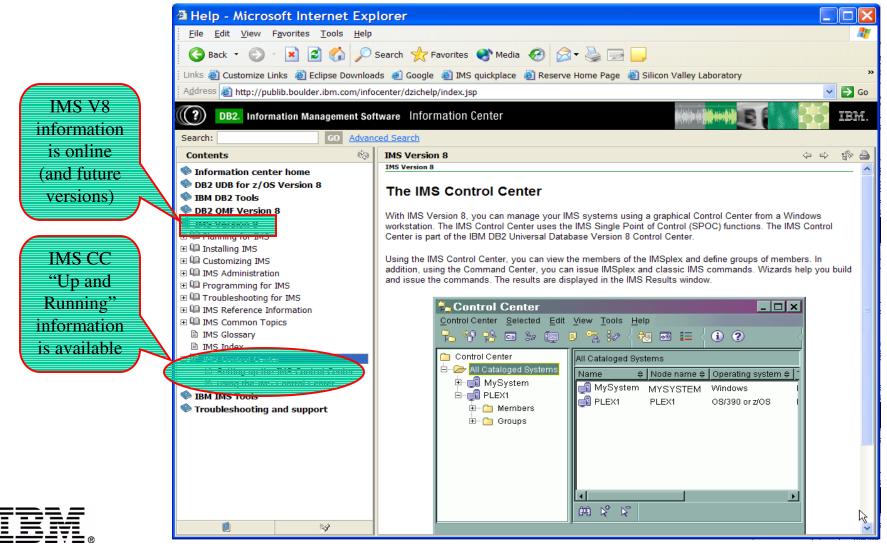
Online Help

- Information Center article outlines IMS CC
- HTML Help for all tasks and dialog fields
- Wizard task overviews
- IMS Messages and Codes



Information Center

http://publib.boulder.ibm.com/infocenter/dzichelp/index.jsp



Translation Languages

- IMS Control Center user interface and help translated into the following languages
 - Brazilian
 Portuguese
 - Danish
 - Finnish
 - French
 - German

- Italian
- Japanese
 - Korean
 - Norwegian
 - Polish
- Russian

- Simplified Chinese
- Spanish
- Swedish
- Traditional
 Chinese



Usability Labs sessions

- Sign up for our Usability Lab sessions here at the conference
 - and see the new support being added to CC for future versions that I can't show you here!
- <u>tracyhut@us.ibm.com</u>

