What's New in OMEGAMON for Messaging?

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Brief Overview

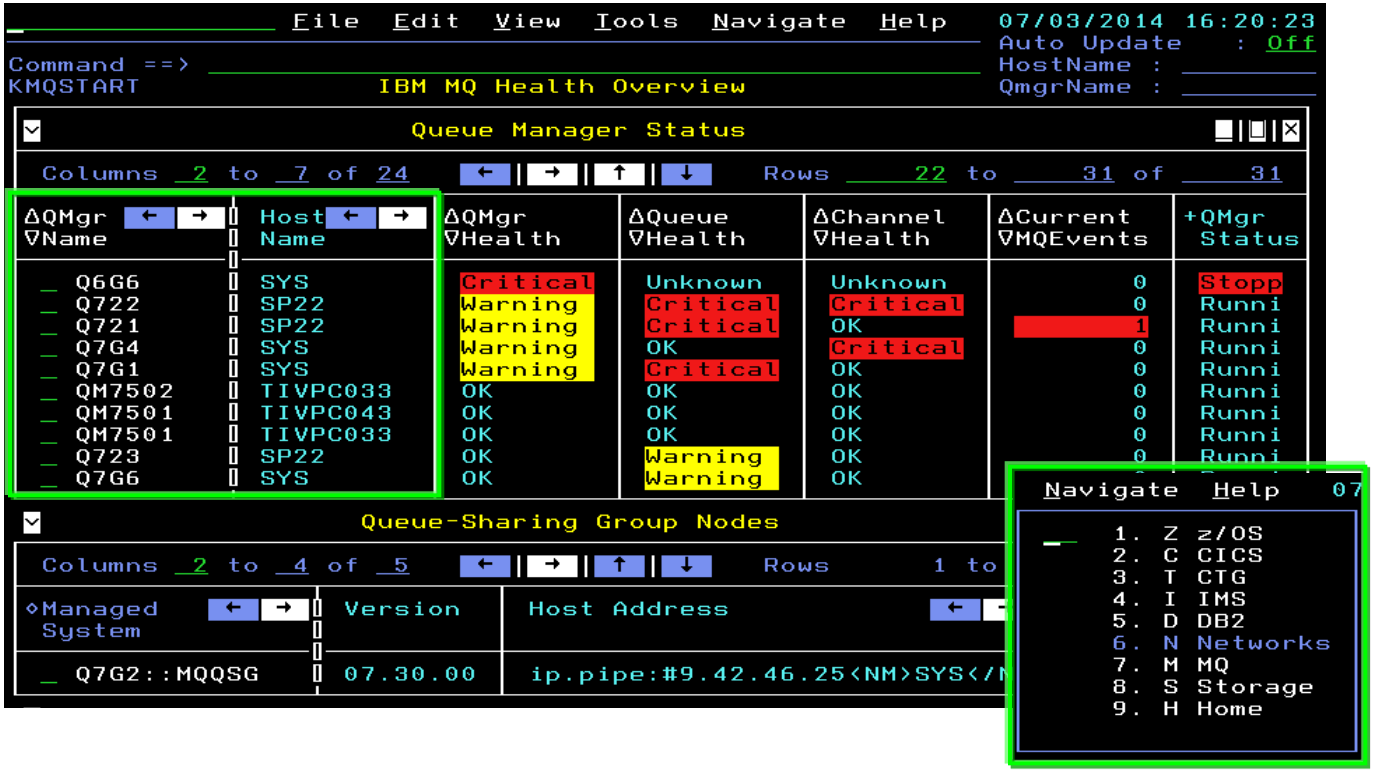
OMEGAMON for Messaging - Brief Overview
Provides complete solution for MQ and Broker monitoring

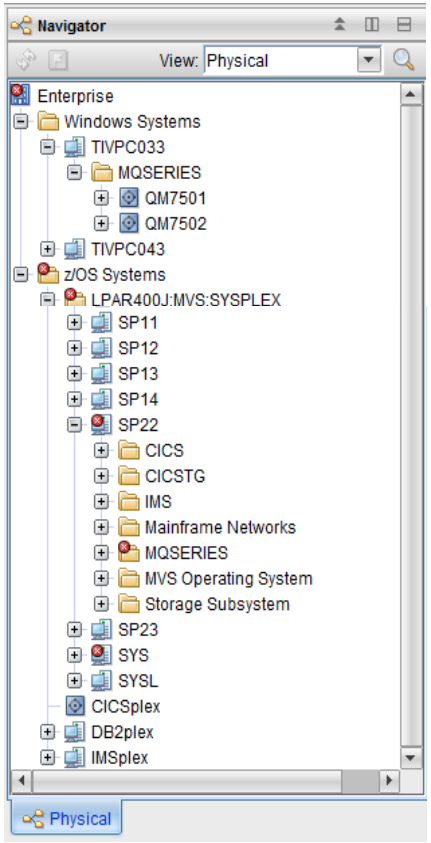
- OMEGAMON for Messaging (*IBM Tivoli Composite Application Manager Agents for WebSphere Messaging on Distributed*) includes capability to gain ***improved visibility and management*** of messaging subsystems
  - IBM MQ for z/OS (WebSphere MQ)
  - IBM Integration Bus for z/OS (WebSphere Message Broker)

- ***Efficiency and cost saving*** through integration, Messaging offers an enterprise-wide single point of control with other OMEGAMONs and distributed platform ITCAM Agents for WebSphere Messaging within both the Tivoli Enterprise Portal and the Enhanced 3270 User Interface
- ***Superior problem determination*** capability with real-time status and statistical monitoring about availability and performance, along with historical data collection for reporting, performance analysis, trend prediction and enterprise-wide business impact analysis
- ***Reduced time-to-resolution*** of problems with automated problem situation detection and corrective actions, in conjunction with a wealth of workspaces for root cause analysis and correlation with related data about other monitored subsystems

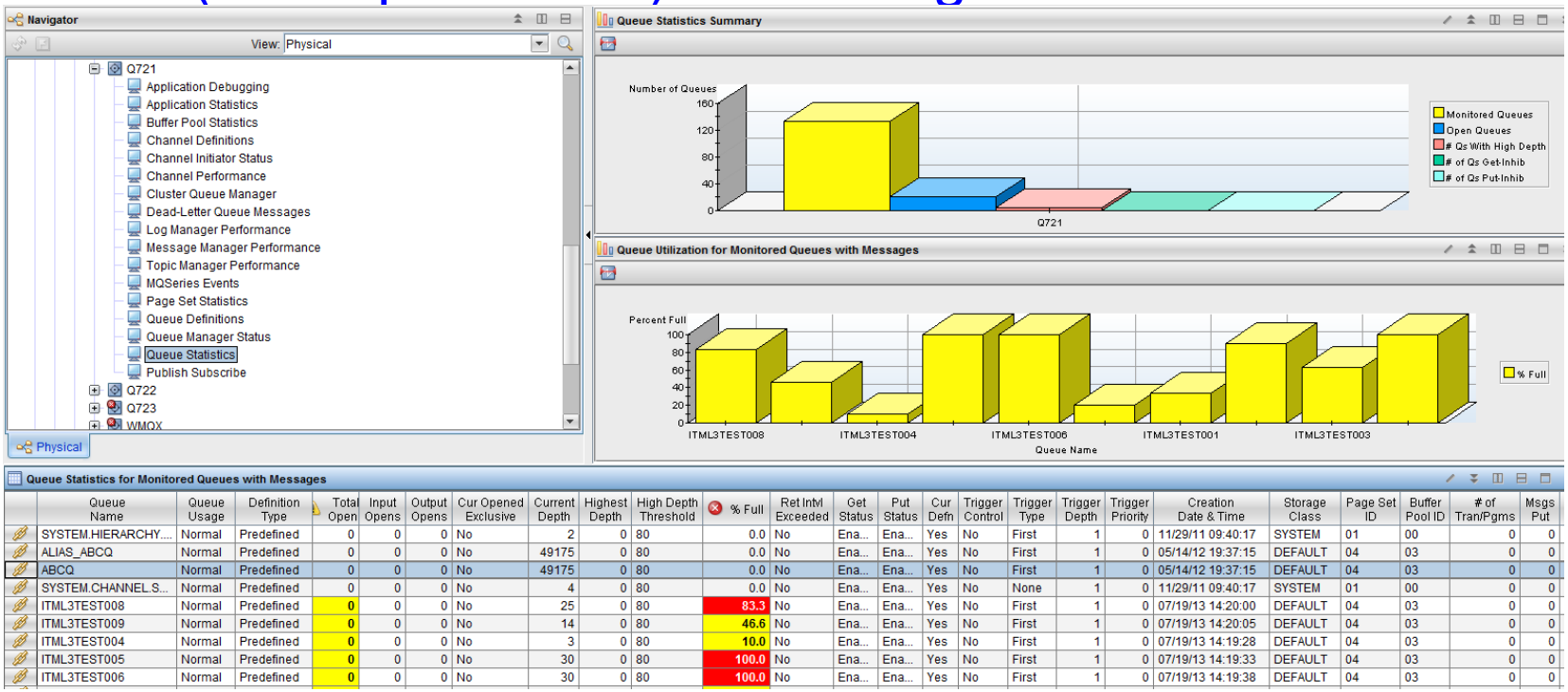
OMEGAMON for Messaging - Brief Overview
Integrated health monitoring solution

- Monitor the health of all queue managers in your enterprise using either the Enhanced 3270 UI or the Tivoli Enterprise Portal
- Navigate directly to other OMEGAMONs





OMEGAMON for Messaging - Brief Overview
IBM MQ (WebSphere MQ) Monitoring



Queue Name	Queue Usage	Definition Type	Total Open	Input Opens	Output Opens	Cur Opened Exclusive	Current Depth	Highest Depth	High Depth Threshold	% Full	Ret Intvl Exceeded	Get Status	Put Status	Cur Defn	Trigger Control	Trigger Type	Trigger Depth	Trigger Priority	Creation Date & Time	Storage Class	Page Set ID	Buffer Pool ID	# of Tran/Pgms	Msgs Put
SYSTEM.HIERARCHY....	Normal	Predefined	0	0	0	No	2	0	80	0.0	No	Ena...	Ena...	Yes	No	First	1	0	11/29/11 09:40:17	SYSTEM	01	00	0	0
ALIAS_ABCQ	Normal	Predefined	0	0	0	No	49175	0	80	0.0	No	Ena...	Ena...	Yes	No	First	1	0	05/14/12 19:37:15	DEFAULT	04	03	0	0
ABCQ	Normal	Predefined	0	0	0	No	49175	0	80	0.0	No	Ena...	Ena...	Yes	No	First	1	0	05/14/12 19:37:15	DEFAULT	04	03	0	0
SYSTEM.CHANNEL.S...	Normal	Predefined	0	0	0	No	4	0	80	0.0	No	Ena...	Ena...	Yes	No	None	1	0	11/29/11 09:40:17	SYSTEM	01	00	0	0
ITML3TEST008	Normal	Predefined	0	0	0	No	25	0	80	83.3	No	Ena...	Ena...	Yes	No	First	1	0	07/19/13 14:20:00	DEFAULT	04	03	0	0
ITML3TEST009	Normal	Predefined	0	0	0	No	14	0	80	46.6	No	Ena...	Ena...	Yes	No	First	1	0	07/19/13 14:20:05	DEFAULT	04	03	0	0
ITML3TEST004	Normal	Predefined	0	0	0	No	3	0	80	10.0	No	Ena...	Ena...	Yes	No	First	1	0	07/19/13 14:19:28	DEFAULT	04	03	0	0
ITML3TEST005	Normal	Predefined	0	0	0	No	30	0	80	100.0	No	Ena...	Ena...	Yes	No	First	1	0	07/19/13 14:19:33	DEFAULT	04	03	0	0
ITML3TEST006	Normal	Predefined	0	0	0	No	30	0	80	100.0	No	Ena...	Ena...	Yes	No	First	1	0	07/19/13 14:19:38	DEFAULT	04	03	0	0

- Queue manager availability, health and performance
- Queue status, usage and statistics
- Channel status and performance
- MQ event monitoring and archival
- Application connections and topology
- Supports ITM features with historical reporting, situations, event forwarding, take-action

- Buffer pool, page set, message manager, log manager and topic manager statistics
- Pub/sub topics and subscriptions
- Dead letter queue and message manipulation
- Application (MQI monitoring) statistics
- Queue sharing group status
- MQ cluster monitoring

OMEGAMON for Messaging for z/OS Version 7.3.0 Fix Pack 2

Version 7.3.0 Fix Pack 2 Overview

- Planned to be available for both z/OS and distributed platform agents

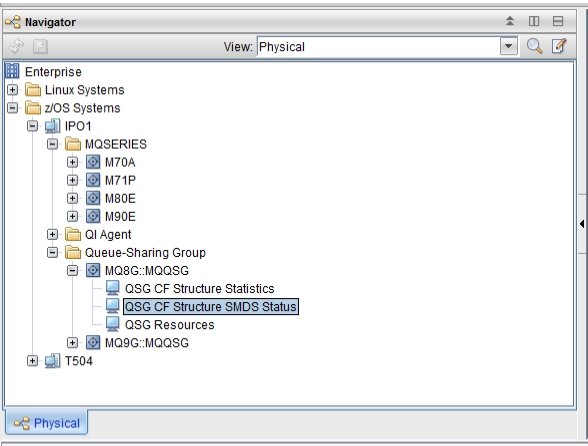
- IBM MQ Monitoring:
  - MQ Queue Sharing Group SMDS data fully supported
  - New channel attributes added
  - Better stopped listener support on z/OS
  - Queue manager CPF (command prefix) attribute added
  - Queue manager level queue health indicator added for queues not being read
  - Remote queue transmission queue name support added
  - Capability added to create message monitoring situations
  - Clear Current Event take-action supported by agent for Current Events table
  - Setting MQ agent parameters dynamically now supported in Enhanced 3270 UI
  - MQ Application debug trace data now fully supported in Enhanced 3270 UI
  - MQ v9 support (PTF already available)

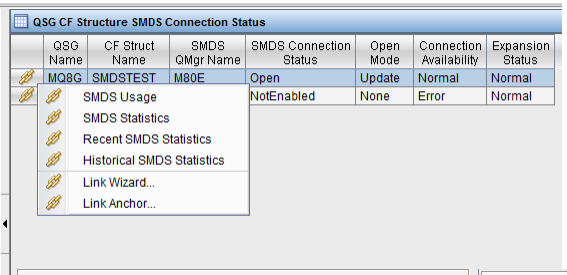
- IBM Integration Bus Monitoring:
  - Broker monitoring data now supported in new set of Enhanced 3270 UI workspaces
  - New message flow status deployment attributes added
  - IIB v10 recent fix pack support

MQ Monitoring: QSG SMDS Data

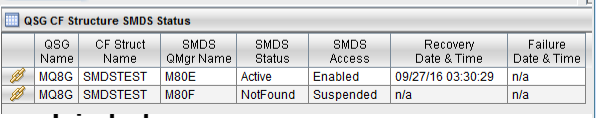
- Recent releases of MQ now allow choosing whether message data for shared queues should be offloaded to DB2 (the previous only option) or to an IBM MQ managed data set called a shared message data set (SMDS)
- This offloading always occurs for messages larger than 63 KB, but smaller messages may also optionally be offloaded to reduce coupling facility space usage
- SMDS is faster and uses less CPU than storing large shared messages in DB2
- When using SMDS, each queue manager in the given queue sharing group must have one SMDS data set, which it owns and tracks space for, etc.
- There are capacity, performance and operational considerations, so monitoring data about SMDS is important, for example:
  - How many of messages are being offloaded to SMDS: Has this changed? Are the offloading rule parameters causing more than expected to be offloaded?
  - How full is the SMDS? Is it being expanded automatically?
  - Are there enough buffers in the queue manager for accessing SMDS?

MQ Monitoring: QSG SMDS Data in TEP (1)



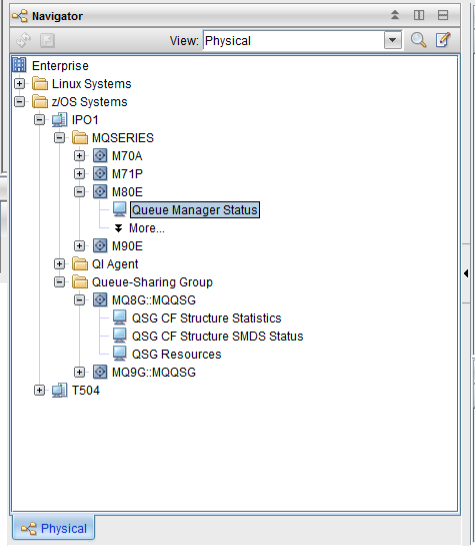


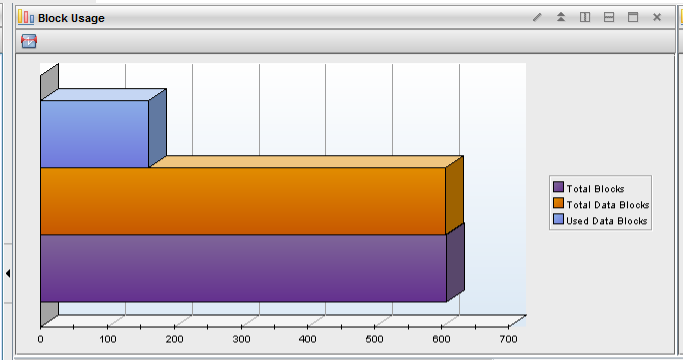
Agent collects SMDS data from MQSC commands and from SMF

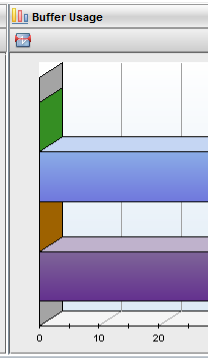


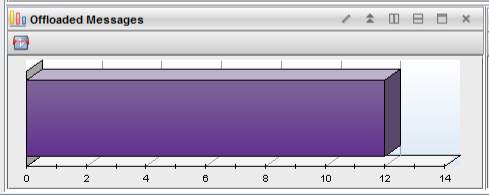
Link to:

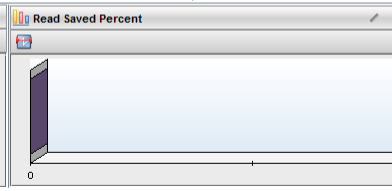
- SMDS Usage
- SMDS Statistics
- Recent Statistics
- Historical Statistics

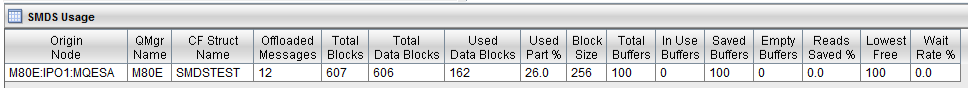












MQ Monitoring: QSG SMDS Data in TEP (2)

Navigator — View: Physical

- Enterprise
  - Linux Systems
  - z/OS Systems
    - IPO1
      - MQSERIES
        - M70A
        - M71P
        - M80E
          - Queue Manager Status
          - More...
        - M90E
      - QI Agent
      - Queue-Sharing Group
        - MQ8G::MQQSG
          - QSG CF Structure Statistics
          - QSG CF Structure SMDS Status
          - QSG Resources
        - MQ9G::MQQSG
    - T504

Physical

Recent SMDS Buffer Pool Statistics

Buffer Size	Total Buffers	Buffers In Use	Buffers In Use %	Highest Buffers In Use	Highest Buffers In Use %	Shared Buffers	Buffers Free	Buffers Free %	Lowest Buffers Free	Lowest Buffers Free %	Saved Buffers	Empty Buffers	Waiting Request Queue For Free Buffer	Highest Waiting Request Queue For Free Buffer	Waiting Request Queue For Busy Buffer	Hi
64	64	0	0.0	0	0.0	0	100	156.2	100	156.2	100	0	0	0	0	
64	64	0	0.0	0	0.0	0	100	156.2	0	0.0	100	0	0	0	0	
64	64	0	0.0	0	0.0	0	100	156.2	100	156.2	100	0	0	0	0	
64	64	0	0.0	0	0.0	0	100	156.2	100	156.2	100	0	0	0	0	
64	64	0	0.0	0	0.0	0	100	156.2	0	0.0	100	0	0	0	0	
64	64	0	0.0	0	0.0	0	100	156.2	100	156.2	100	0	0	0	0	
64	64	0	0.0	0	0.0	0	100	156.2	100	156.2	100	0	0	0	0	
64	64	0	0.0	0	0.0	0	100	156.2	0	0.0	100	0	0	0	0	
64	64	0	0.0	0	0.0	0	100	156.2	100	156.2	100	0	0	0	0	
64	64	0	0.0	0	0.0	0	100	156.2	100	156.2	100	0	0	0	0	
64	64	0	0.0	0	0.0	0	100	156.2	0	0.0	100	0	0	0	0	
64	64	0	0.0	0	0.0	0	100	156.2	100	156.2	100	0	0	0	0	

M80E:IPO1:MQESA

Recent SMDS I/O Statistics

High Allocated Control Interval	High Formatted Control Interval	Control Interval Size	Control Area Size	Format Requests	Format Pages	Format Pages Per Request	Avg Format I/O Time	Avg Format Wait Time	Write Requests	Write Pages	Write Pages Per Request	Avg Write I/O Time	Avg Write Wait Time	Read Local Requests	Read Local Pages	Read Local Pages Per Request	Avg R I/C
38880	38880	4096	737280	0	0	0	0	0	0	0	0	0	0	0	0	0	
38880	38880	4096	737280	0	0	0	0	0	0	0	0	0	0	0	0	0	
38880	38880	4096	737280	0	0	0	0	0	0	0	0	0	0	0	0	0	
38880	38880	4096	737280	0	0	0	0	0	0	0	0	0	0	0	0	0	
38880	38880	4096	737280	0	0	0	0	0	0	0	0	0	0	0	0	0	
38880	38880	4096	737280	0	0	0	0	0	0	0	0	0	0	0	0	0	
38880	38880	4096	737280	0	0	0	0	0	0	0	0	0	0	0	0	0	
38880	38880	4096	737280	0	0	0	0	0	0	0	0	0	0	0	0	0	
38880	38880	4096	737280	0	0	0	0	0	0	0	0	0	0	0	0	0	
38880	38880	4096	737280	0	0	0	0	0	0	0	0	0	0	0	0	0	
38880	38880	4096	737280	0	0	0	0	0	0	0	0	0	0	0	0	0	
38880	38880	4096	737280	0	0	0	0	0	0	0	0	0	0	0	0	0	

M80E:IPO1:MQESA

Recent SMDS Space Management Statistics

QMgr Name	Structure Number	Structure Name	Message Count	Highest Message Count	Total Blocks	Space Map Blocks	Message Data Blocks	Data Blocks Used	Data Block Used %	Highest Data Blocks Used	Highest Data Block Used %	Free Data Blocks	Data Block Free %	Lowest Data Blocks Free	Lowest Data Block Free %	Allocated Space	Allocated Pages	No Space	Released Space	Released Pages	Reallocated Space	Reallocated Pages	Cleaned Up Space	Cleaned Up Pages	Interval Time	Sample Date & Time
M80E	4	SMDSTEST	12	12	607	1	606	162	26.7	162	26.7	444	73.2	444	73.2	0	0	0	0	0	0	0	0	0	300.00	09/29/16 19:45:
M80E	4	SMDSTEST	12	12	607	1	606	162	26.7	162	26.7	444	73.2	444	73.2	0	0	0	0	0	0	0	0	0	300.01	09/29/16 19:40:
M80E	4	SMDSTEST	12	12	607	1	606	162	26.7	162	26.7	444	73.2	444	73.2	0	0	0	0	0	0	0	0	0	300.00	09/29/16 19:35:
M80E	4	SMDSTEST	12	12	607	1	606	162	26.7	162	26.7	444	73.2	444	73.2	0	0	0	0	0	0	0	0	0	300.00	09/29/16 19:30:
M80E	4	SMDSTEST	12	12	607	1	606	162	26.7	162	26.7	444	73.2	444	73.2	0	0	0	0	0	0	0	0	0	300.00	09/29/16 19:25:
M80E	4	SMDSTEST	12	12	607	1	606	162	26.7	162	26.7	444	73.2	444	73.2	0	0	0	0	0	0	0	0	0	300.00	09/29/16 19:20:
M80E	4	SMDSTEST	12	12	607	1	606	162	26.7	162	26.7	444	73.2	444	73.2	0	0	0	0	0	0	0	0	0	300.00	09/29/16 19:15:
M80E	4	SMDSTEST	12	12	607	1	606	162	26.7	162	26.7	444	73.2	444	73.2	0	0	0	0	0	0	0	0	0	300.00	09/29/16 19:10:
M80E	4	SMDSTEST	12	12	607	1	606	162	26.7	162	26.7	444	73.2	444	73.2	0	0	0	0	0	0	0	0	0	300.00	09/29/16 19:05:
M80E	4	SMDSTEST	12	12	607	1	606	162	26.7	162	26.7	444	73.2	444	73.2	0	0	0	0	0	0	0	0	0	300.00	09/29/16 19:00:
M80E	4	SMDSTEST	12	12	607	1	606	162	26.7	162	26.7	444	73.2	444	73.2	0	0	0	0	0	0	0	0	0	300.00	09/29/16 18:55:
M80E	4	SMDSTEST	12	12	607	1	606	162	26.7	162	26.7	444	73.2	444	73.2	0	0	0	0	0	0	0	0	0	300.00	09/29/16 18:50:

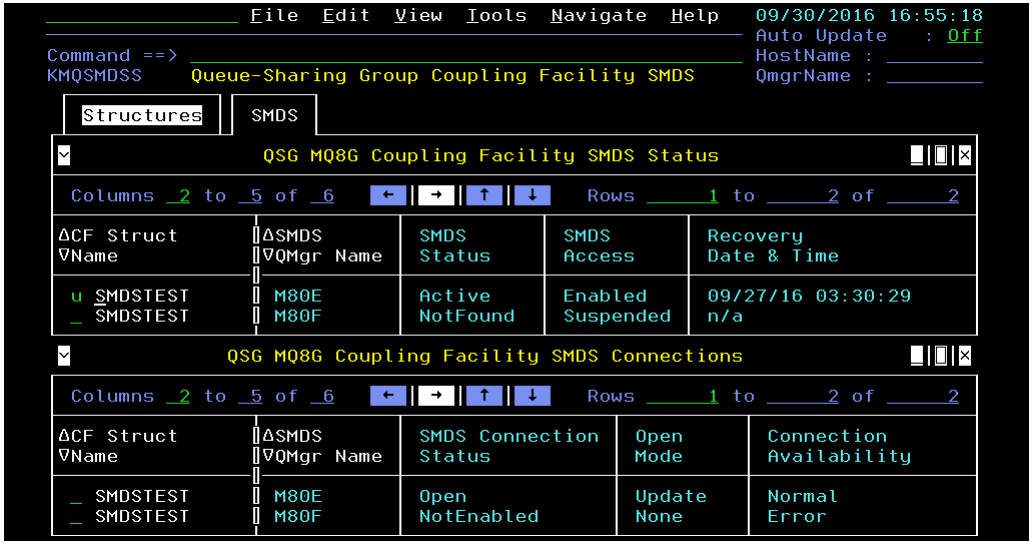
M80E:IPO1:MQESA

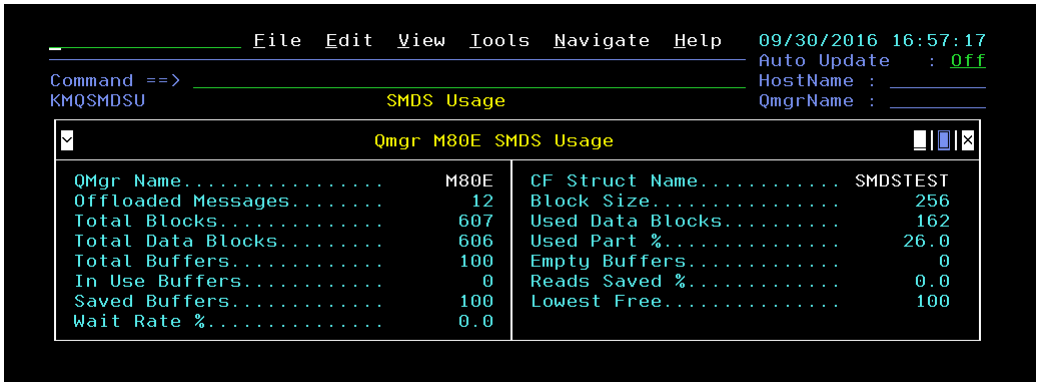
MQ Monitoring: QSG SMDS Data in Enhanced 3270 UI

Navigate to new SMDS data via QSG Coupling Facility option

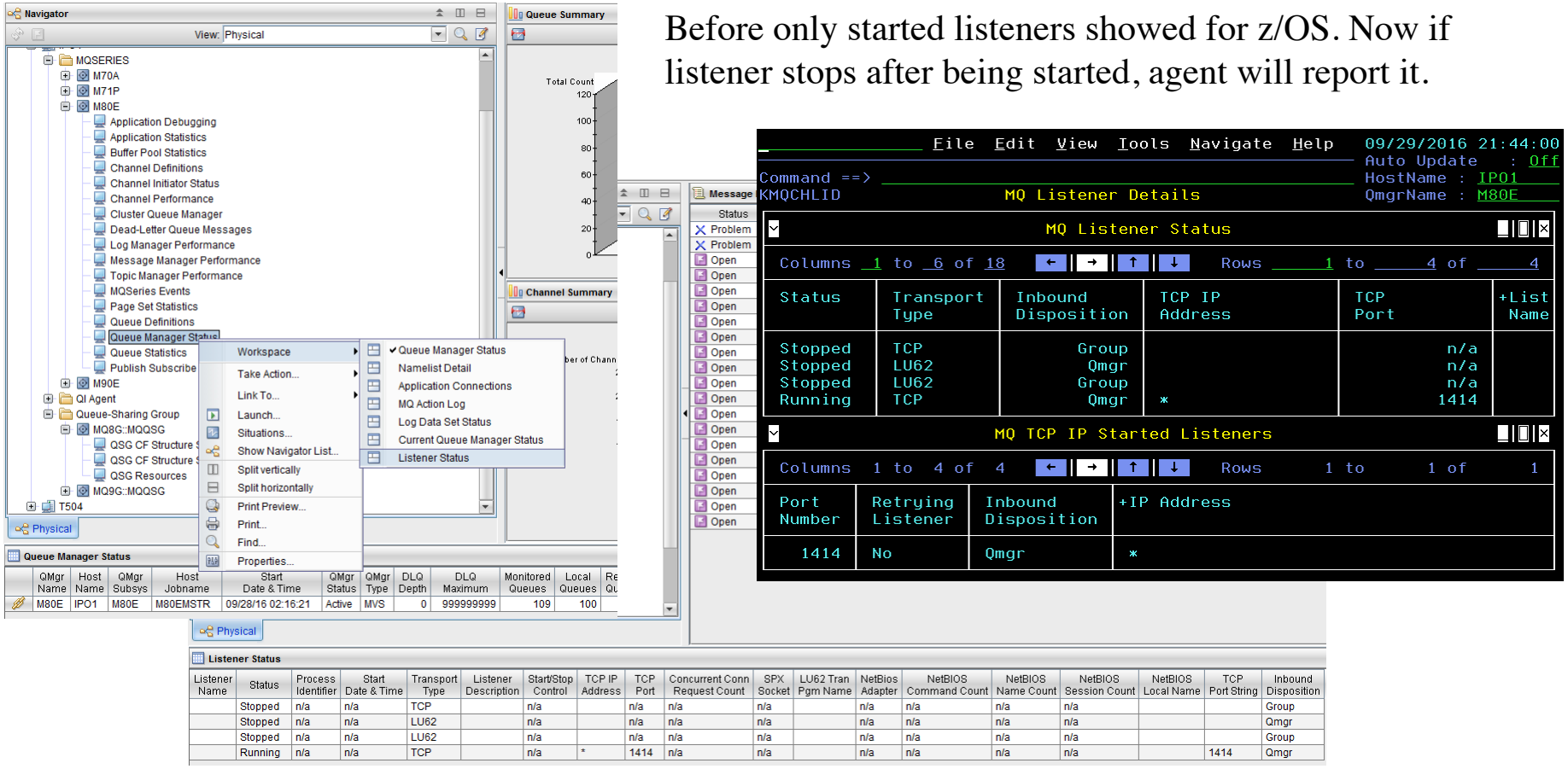
New tab added for SMDS

Options for SMDS rows go to other SMDS data



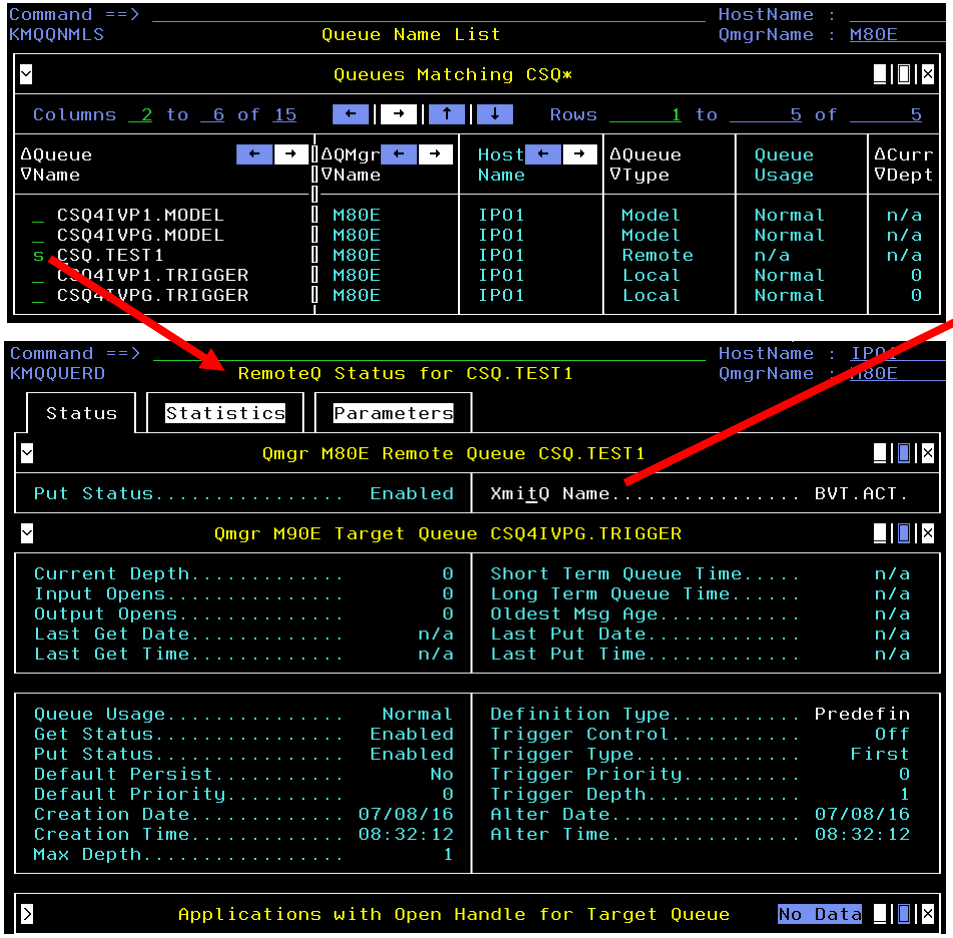


MQ Monitoring: Better Stopped Listener Support

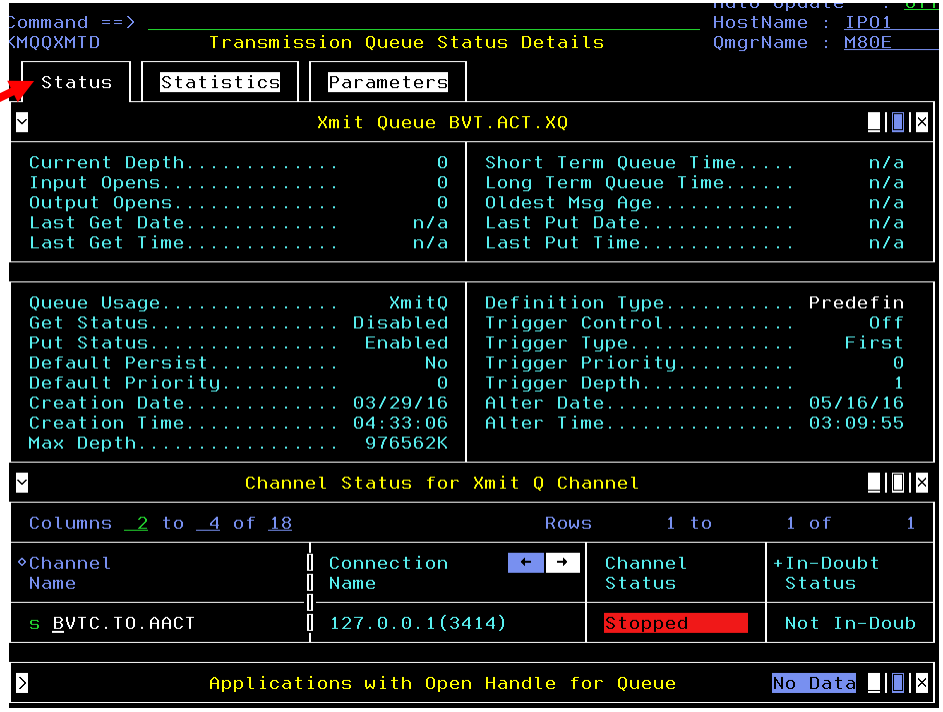


Before only started listeners showed for z/OS. Now if listener stops after being started, agent will report it.

MQ Monitoring: Remote Q's Transmission Q Name



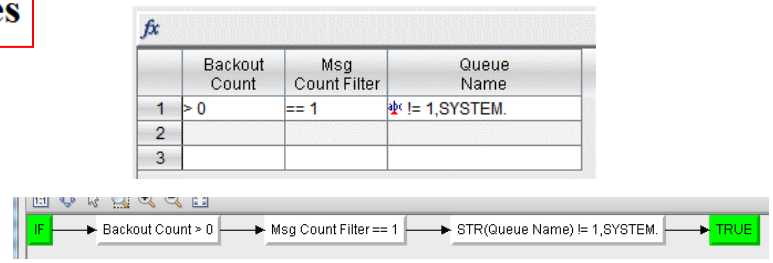
Given only the name of the remote queue used by the application, do a find queue command and find out more completely the status of queues and channels involved.



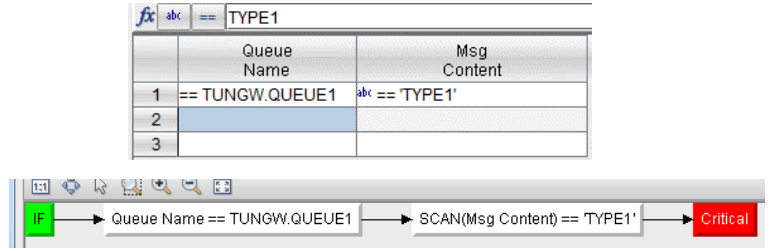
MQ Monitoring: Message Monitoring Situations (1)

Message Summary attributes

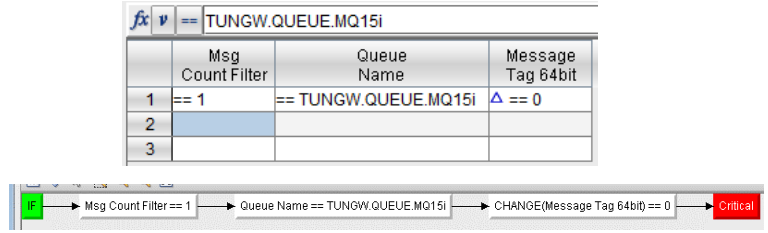
1. Detect when the first (oldest) message on a queue has gone through backout processing.
➔Use the Queue Name filter to determine queues covered; here the test is for non-system queues.



2. Detect an application has queued a message for a particular type of error on its application error queue, using first the 256 content bytes in UTF8.
➔Note: If *any* message put to that queue should raise the same alert, use queue depth monitoring instead.



3. Detect that the first message on a queue is not changing as it should normally; that is, it has not changed since the last situation interval.
➔The message tag value is computed from header to uniquely identify message; it does not include the backout count from header.



MQ Monitoring: Message Monitoring Situations (2)

- Message Summary attribute group is the same as feeds Queue Messages and Dead-Letter Queue Messages workspaces, which have links to details and allow forward, retry, and delete
- In TEP, customize a link from your situation's event view to Queue Messages to facilitate this
- A variety of MQMD and DLQ header attributes can be used in situations

Caution: Limit the matching queue(s) and number of messages browsed

- Filter on queue name allows four constructs:
  1. Queue Name == <value>
  2. STR(Queue Name) != 1,<value>
  3. STR(Queue Name) == 1,<value>
  4. SCAN(Queue Name) == <value>
- A maximum of 500 messages is considered for matching the situation

Security: For security reasons, this feature is not enabled by default

- Restrictive new agent parameters apply:
  - Specified on SET GROUP, or SET MANAGER, or SET QACCESS
    - MSGSITACCOUNT(MQAGENT|USER=user_id) - no default
    - MSGSITMON (YES|NO|STATONLY) - STATONLY default as pre-FP2 behavior
  - Documentation will specify the processing rules for all related parameters
- Message content attribute will only be filled in if allowed by the applicable MSGACCESS and even then, only if it is part of the situation filter

MQ Monitoring: Setting Agent Parameters in Enhanced 3270 UI

```
KMQQMACT     Take Actions for Queue Manager
             Q821

Select an action and then press ENTER

a _1. A Update Monitoring Agent Parameters
   2. D Set System Default (z/OS Only)
   3. L Set Log (z/OS Only)
   4. R Resume Cluster Queue Manager
   5. S Set System (z/OS Only)
   6. Z Issue MQSC Action Command
```

```
KMQUPMAP Options for Updating Monitoring Agent Parameters

 Note:All changes made to agent parameters via these options are
 temporary and effective only until the agent is stopped. To make
 changes permanent, please update agent parameters using PARMGEN.

 Select an action and then press ENTER

 _   1. A Update SET APPL Parameters
     2. K Issue KMQCMD Command
     3. M Update SET MQIMONITOR Parameters
```

1.

```
KMQSAPPL     Update SET APPL Parameters

Specify the values and then press ENTER

 NAME       ==> *_______  required, 1-8 char
 TRANPGM    ==> ________  optional, 1-8 char, default "*"
 MGRNAME    ==> ____      optional, 1-48 char, default "*"
 TRACE      ==> YES       optional, NO|YES, default "NO"
 TRACELIMIT==> 1000_      optional, 1-12000, default 1000
 STATISTICS==> ________   optional, NONE|NOQDATA|NODYNAMQ|ALL,
                          default "NODYNAMQ"
 STATUS     ==> _______   optional, ADD|DELETE, default "ADD"

Refer to the MQ Monitoring Agent User's Guide for details
```

```
KMQTAMSG                  Take Action Results

 Action F QID0MQ,KMQCMD SET APPL NAME(*) TRACE(YES)
 TRACELIMIT(1000) is issued.
```

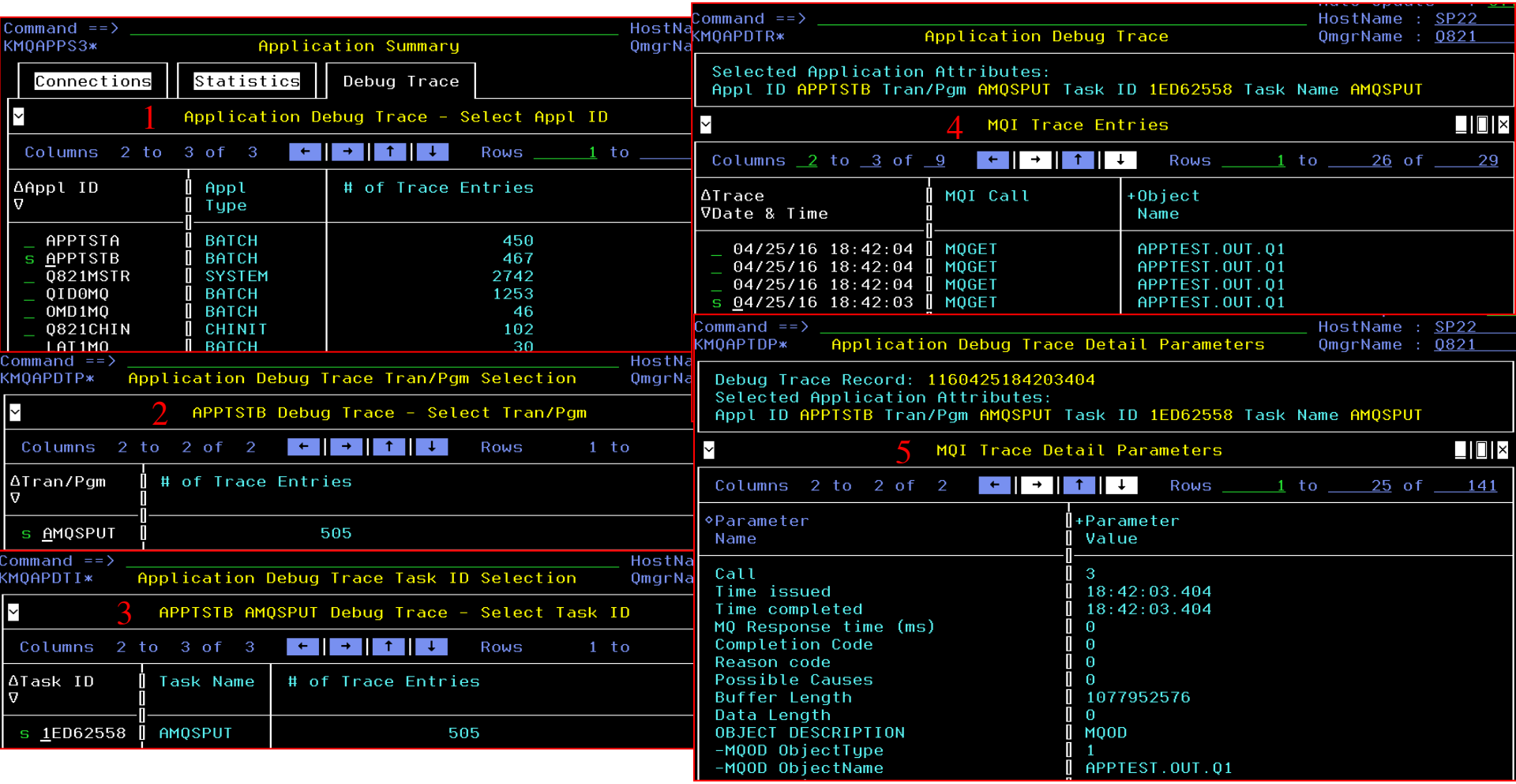
2.

```
KMQCMDCL     Issue KMQCMD Command

Specify the command and then press ENTER

 SET QUEUE NAME(*) GROUP(DEFAULT) STATISTICS(YES)_____________
 ____________________________________________________________
 ____________________________________________________________

Note:
 1. Enter only one free-form KMQCMD at a time, as documented
    in the MQ Monitoring Agent User's Guide except without
    specifying the prefix: "F CANSMQ,KMQCMD".
 2. The maximum length of command supported is limited to
    180 bytes.
 3. Make sure no word is split on two lines.
```

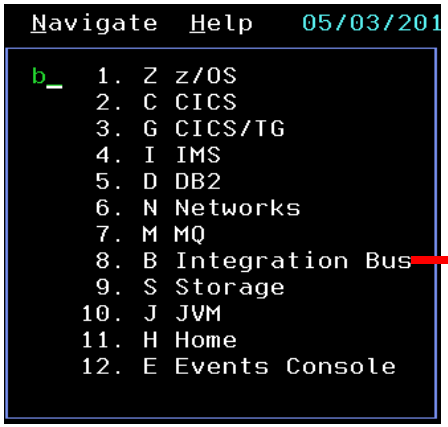
3.

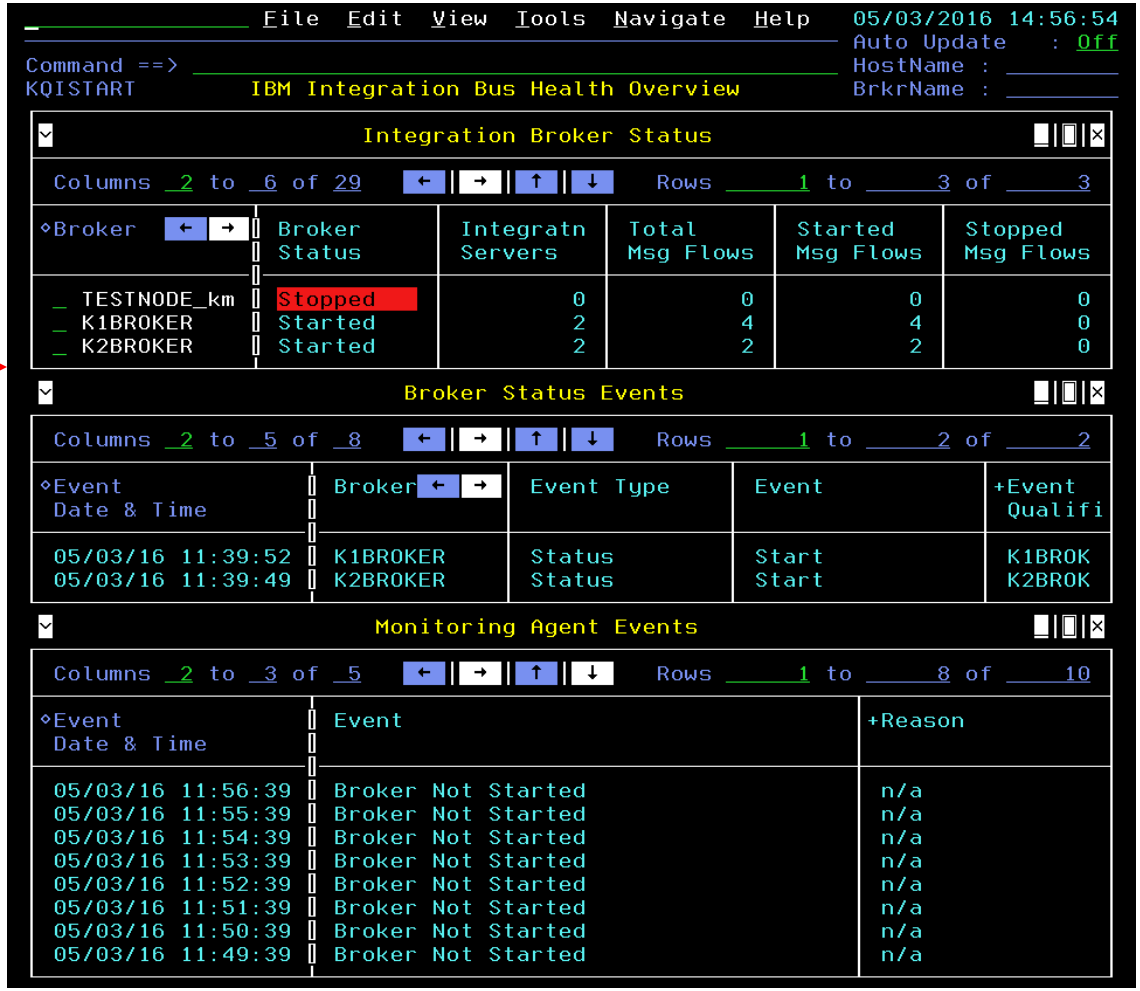
```
KMQSMQIM     Update SET MQIMONITOR Parameters

Specify the values and then press ENTER

 STATUS      ==> INSTALL_ required, INSTALL|REMOVE|FREMOVE
 MGRNAME     ==> ____     required if GROUP not set
 GROUP       ==> DEFAULT_____________________________________
                          required if MGRNAME not set
 BUFFERSIZE      ==> 64__     optional, maximum 2048, default 32
 BUFFERSIZEMAX   ==> 512_     optional, maximum 2048, default 512
 BUFFERINCREMENTSIZE==> 64_   optional, maximum 2048, default 32

Refer to the MQ Monitoring Agent User's Guide for details
```

MQ Monitoring: Application Debug Trace in Enhanced 3270 UI

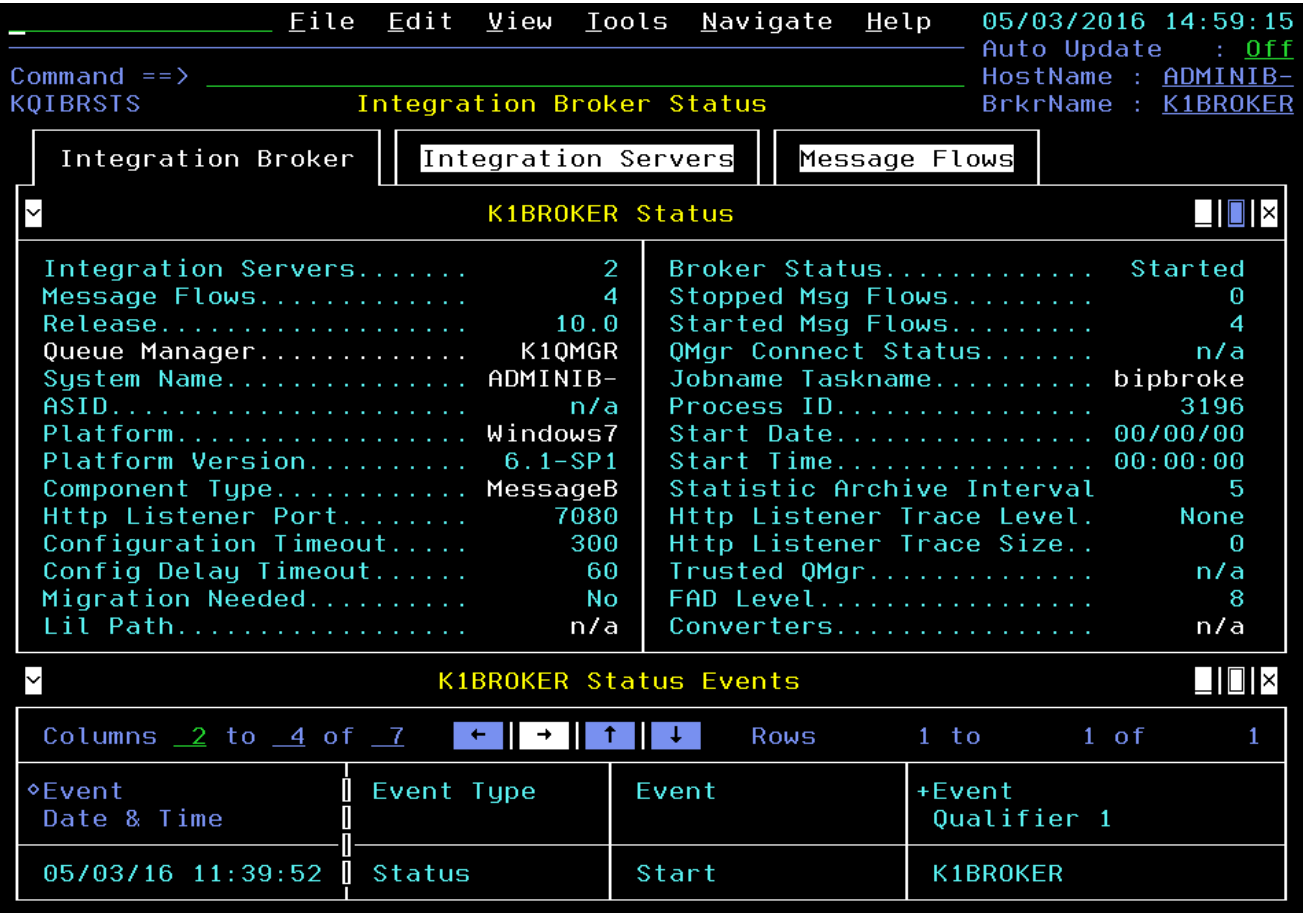


Broker Monitoring: Enhanced 3270 UI Workspace Examples (1)

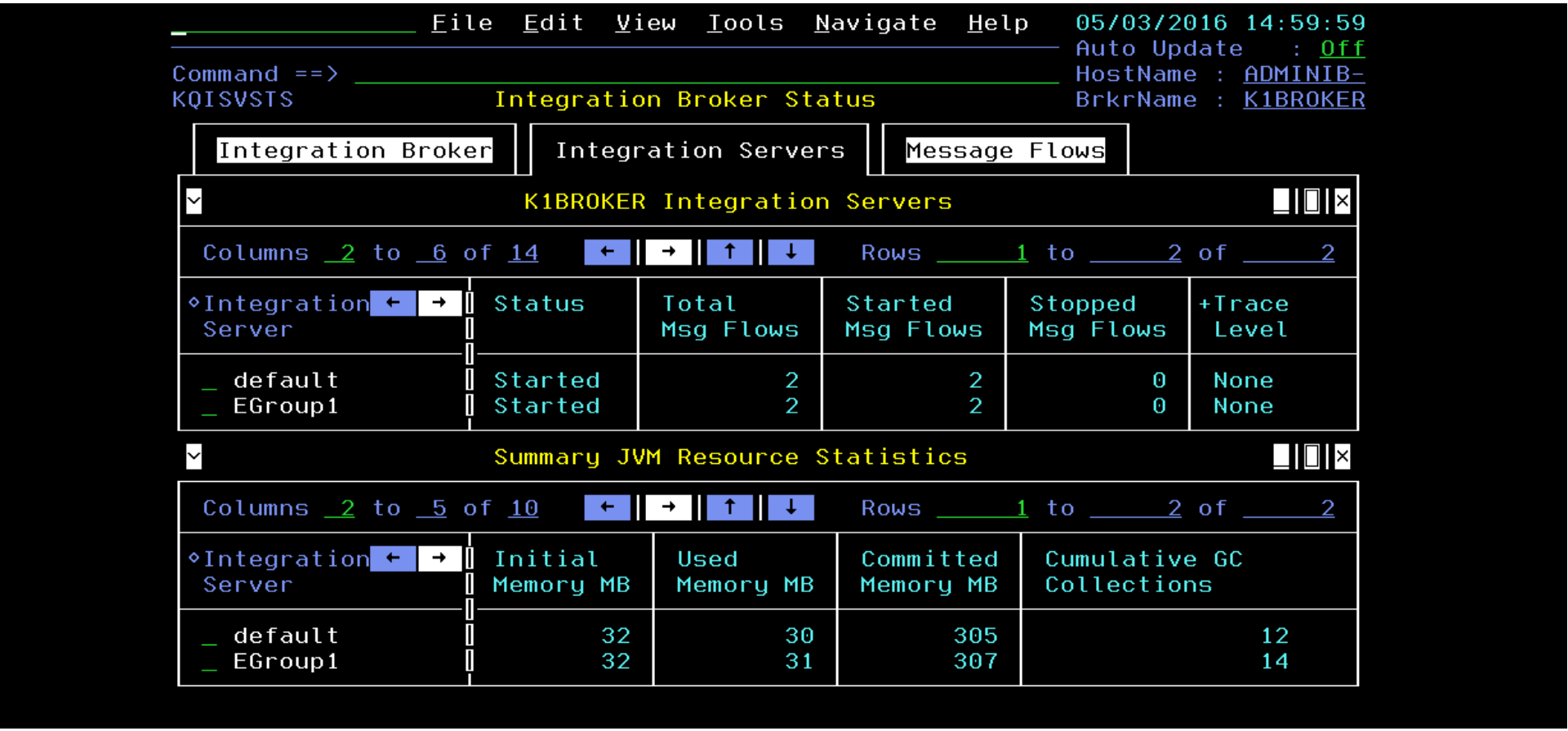




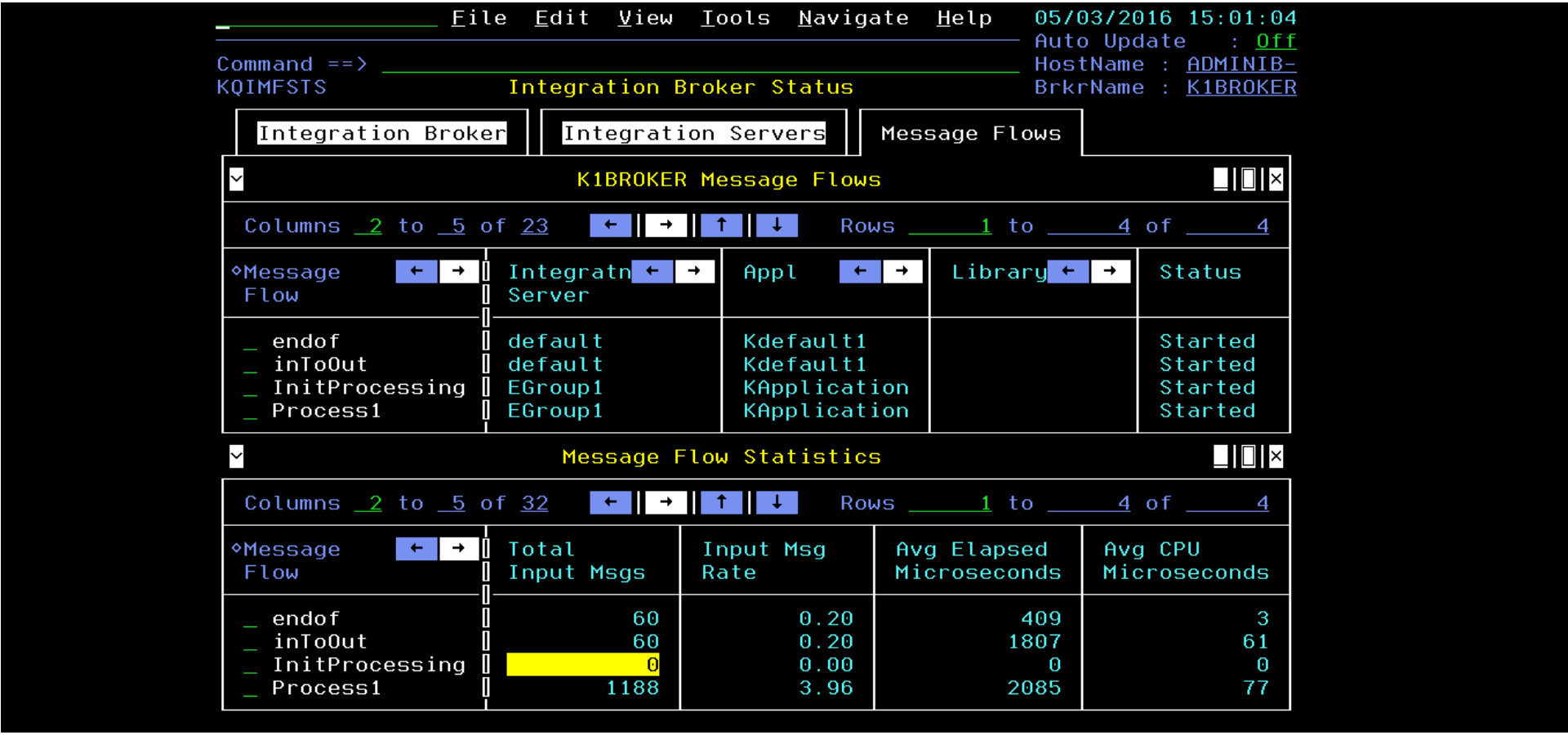
Broker Monitoring: Enhanced 3270 UI Workspace Examples (2)



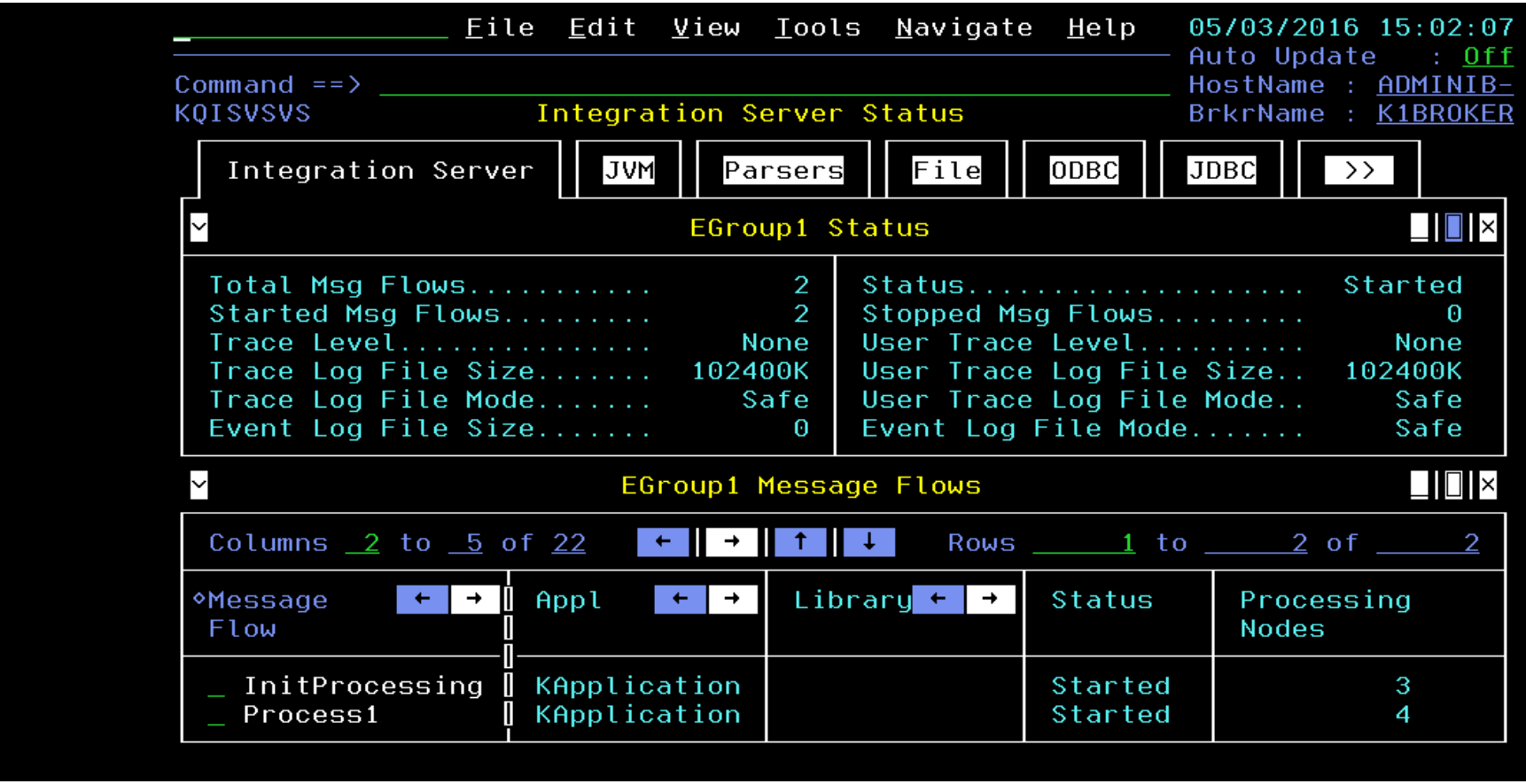
Broker Monitoring: Enhanced 3270 UI Workspace Examples (3)



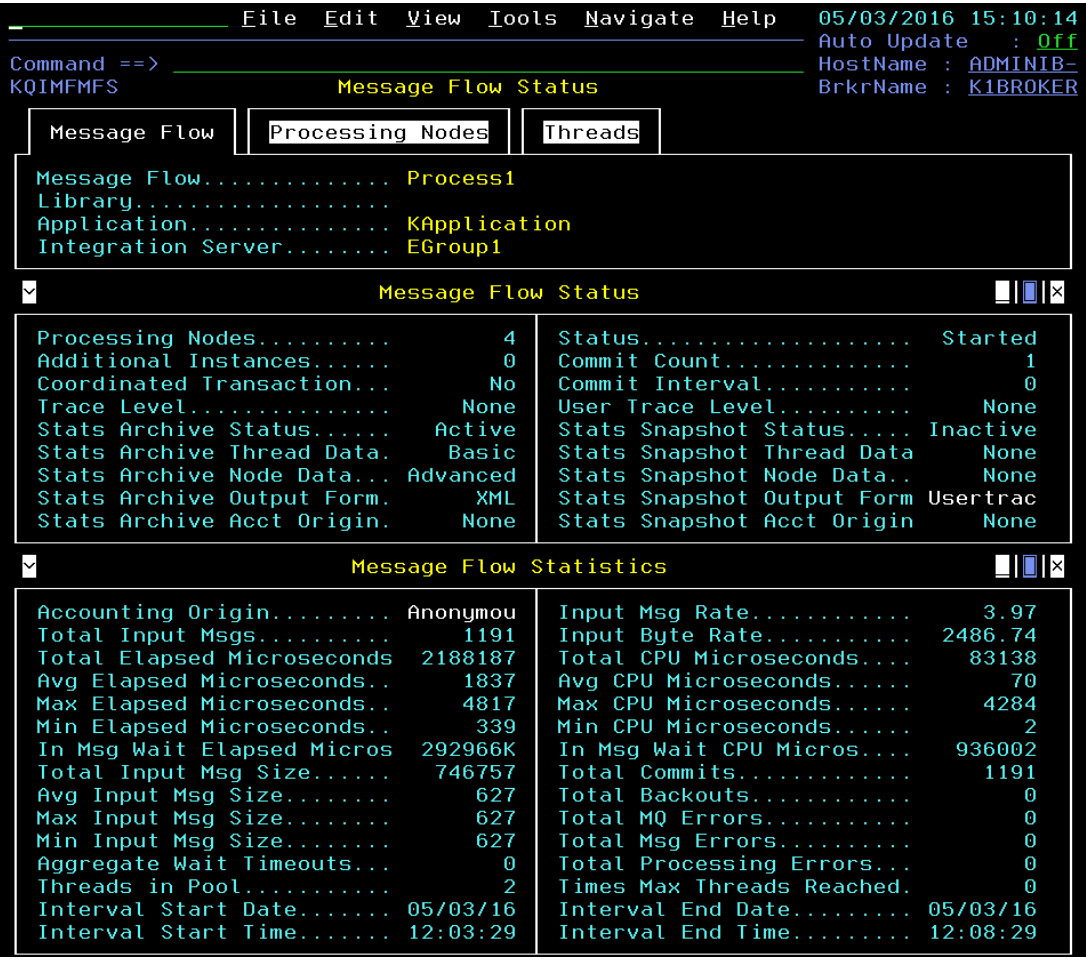
Broker Monitoring: Enhanced 3270 UI Workspace Examples (4)



Broker Monitoring: Enhanced 3270 UI Workspace Examples (5)



Broker Monitoring: Enhanced 3270 UI Workspace Examples (6)



Broker Monitoring: Enhanced 3270 UI Workspace Examples (7)

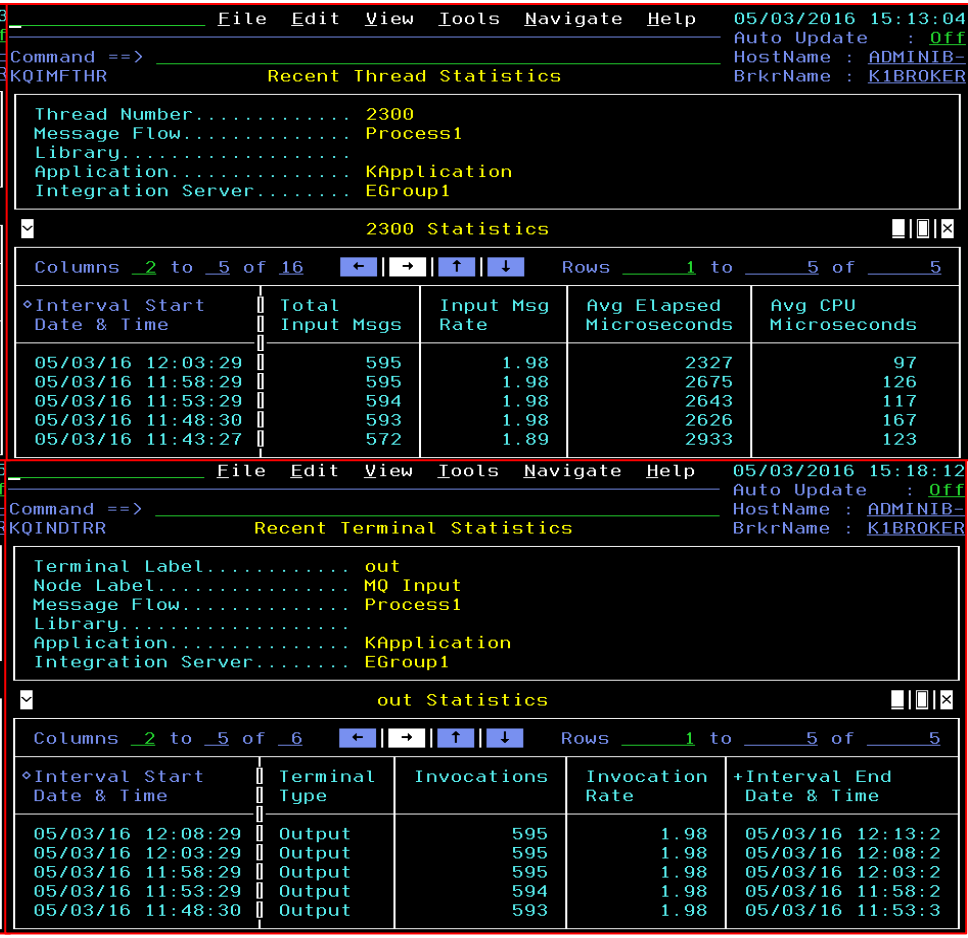
File Edit View Tools Navigate Help 05/03/2016 15:20:23
Auto Update : Off
Command ==> HostName : ADMINIB-
KQIMFMFR Recent Message Flow Statistics BrkrName : K1BROKER

Message Flow..... Process1
Library.....
Application..... KApplication
Integration Server..... EGroup1

Process1 Statistics

Columns 2 to 5 of 28 Rows 1 to 6 of 6

Interval Start Date & Time	Total Input Msgs	Input Msg Rate	Avg Elapsed Microseconds	Avg CPU Microseconds
05/03/16 12:13:29	1192	3.96	2106	98
05/03/16 12:08:29	1189	3.96	2091	85
05/03/16 12:03:29	1191	3.97	1837	70
05/03/16 11:58:29	1189	3.96	2112	82
05/03/16 11:53:29	1188	3.96	2085	77
05/03/16 11:48:30	1187	3.96	2078	108



File Edit View Tools Navigate Help 05/03/2016 15:13:04
Auto Update : Off
Command ==> HostName : ADMINIB-
KQIMFTHR Recent Thread Statistics BrkrName : K1BROKER

Thread Number..... 2300
Message Flow..... Process1
Library.....
Application..... KApplication
Integration Server..... EGroup1

2300 Statistics

Columns 2 to 5 of 16 Rows 1 to 5 of 5

Interval Start Date & Time	Total Input Msgs	Input Msg Rate	Avg Elapsed Microseconds	Avg CPU Microseconds
05/03/16 12:03:29	595	1.98	2327	97
05/03/16 11:58:29	595	1.98	2675	126
05/03/16 11:53:29	594	1.98	2643	117
05/03/16 11:48:30	593	1.98	2626	167
05/03/16 11:43:27	572	1.89	2933	123

File Edit View Tools Navigate Help 05/03/2016 15:18:55
Auto Update : Off
Command ==> HostName : ADMINIB-
KQINDNDR Recent Processing Node Statistics BrkrName : K1BROKER

Node Label..... MQ Input
Message Flow..... Process1
Library.....
Application..... KApplication
Integration Server..... EGroup1

MQ Input Statistics

Columns 2 to 5 of 18 Rows 1 to 6 of 6

Interval Start Date & Time	Node Type	Invocations	Invocation Rate	Avg Elaps Microseco
05/03/16 12:13:29	MQInputNode	596	1.98	399
05/03/16 12:08:29	MQInputNode	595	1.98	395
05/03/16 12:03:29	MQInputNode	595	1.98	345
05/03/16 11:58:29	MQInputNode	595	1.98	401
05/03/16 11:53:29	MQInputNode	594	1.98	397
05/03/16 11:48:30	MQInputNode	593	1.98	388

File Edit View Tools Navigate Help 05/03/2016 15:18:12
Auto Update : Off
Command ==> HostName : ADMINIB-
KQINDTRR Recent Terminal Statistics BrkrName : K1BROKER

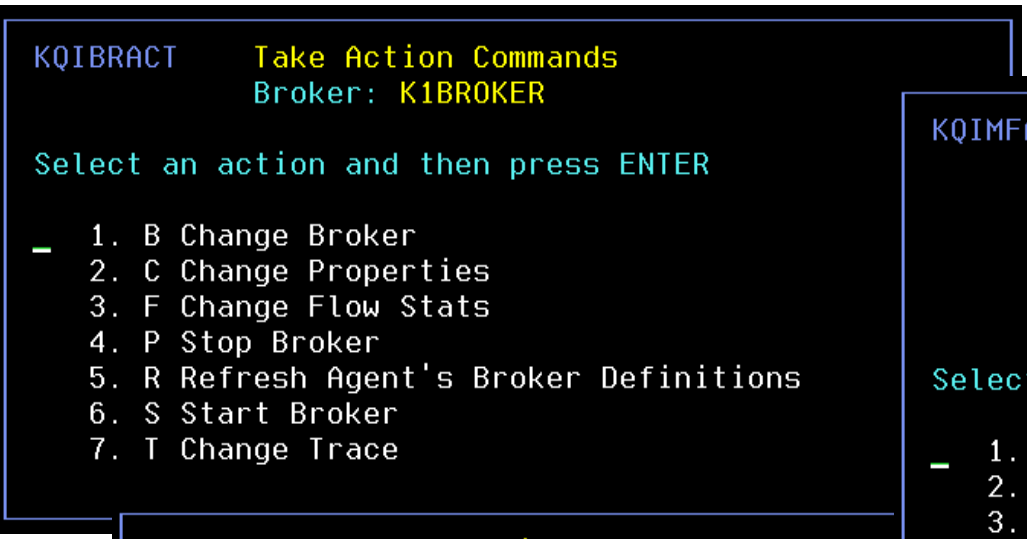
Terminal Label..... out
Node Label..... MQ Input
Message Flow..... Process1
Library.....
Application..... KApplication
Integration Server..... EGroup1

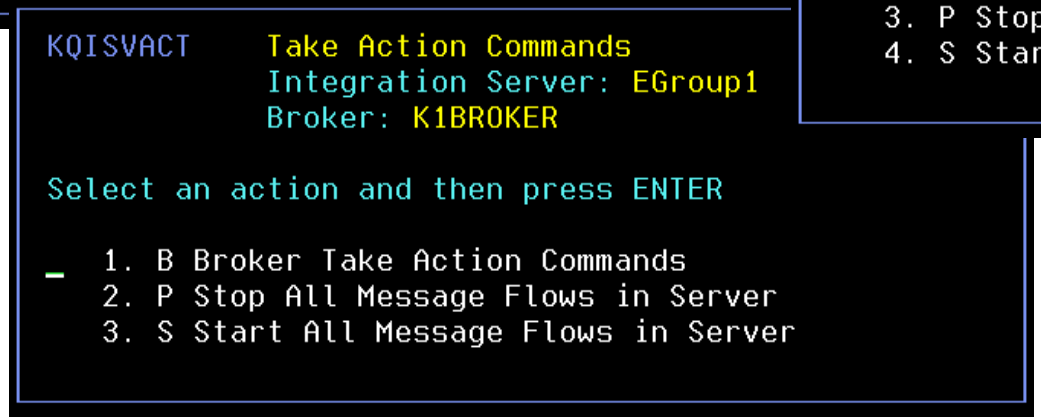
out Statistics

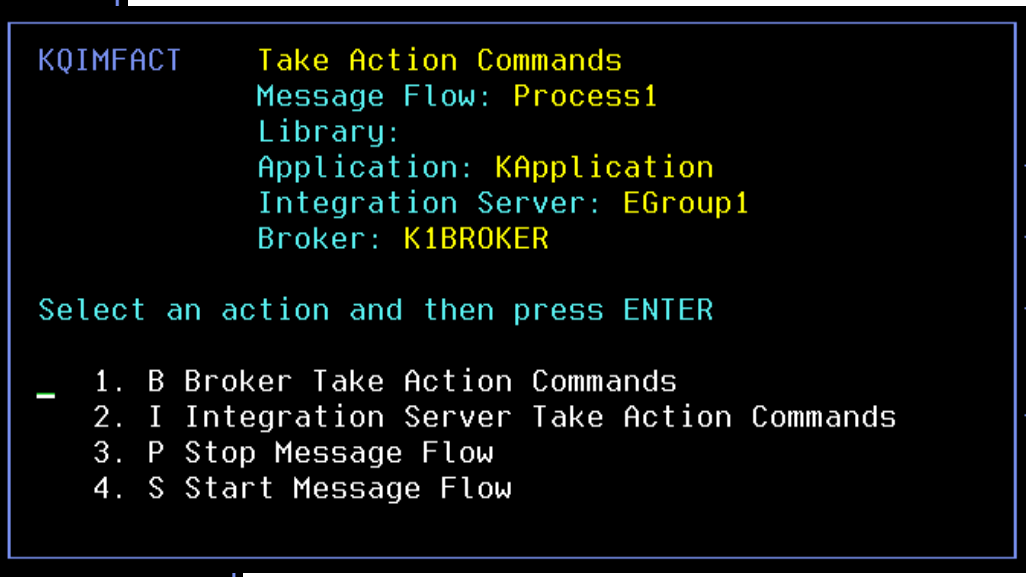
Columns 2 to 5 of 6 Rows 1 to 5 of 5

Interval Start Date & Time	Terminal Type	Invocations	Invocation Rate	Interval End Date & Time
05/03/16 12:08:29	Output	595	1.98	05/03/16 12:13:2
05/03/16 12:03:29	Output	595	1.98	05/03/16 12:08:2
05/03/16 11:58:29	Output	595	1.98	05/03/16 12:03:2
05/03/16 11:53:29	Output	594	1.98	05/03/16 11:58:2
05/03/16 11:48:30	Output	593	1.98	05/03/16 11:53:3

Broker Monitoring: Enhanced 3270 UI Workspace Examples (8)





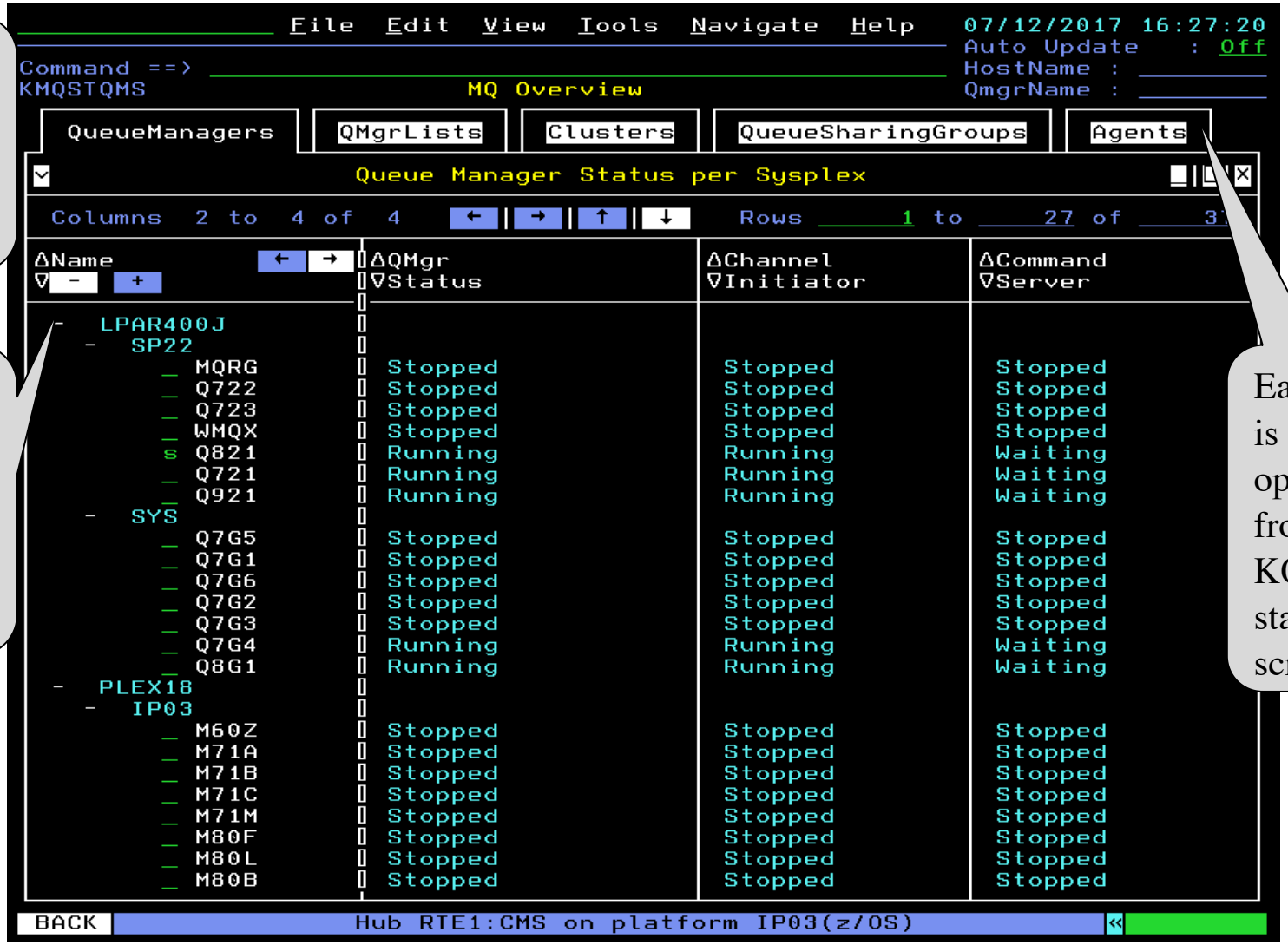


IBM OMEGAMON for Messaging on z/OS V7.5.0

OMEGAMON for Messaging v750 Content Overview

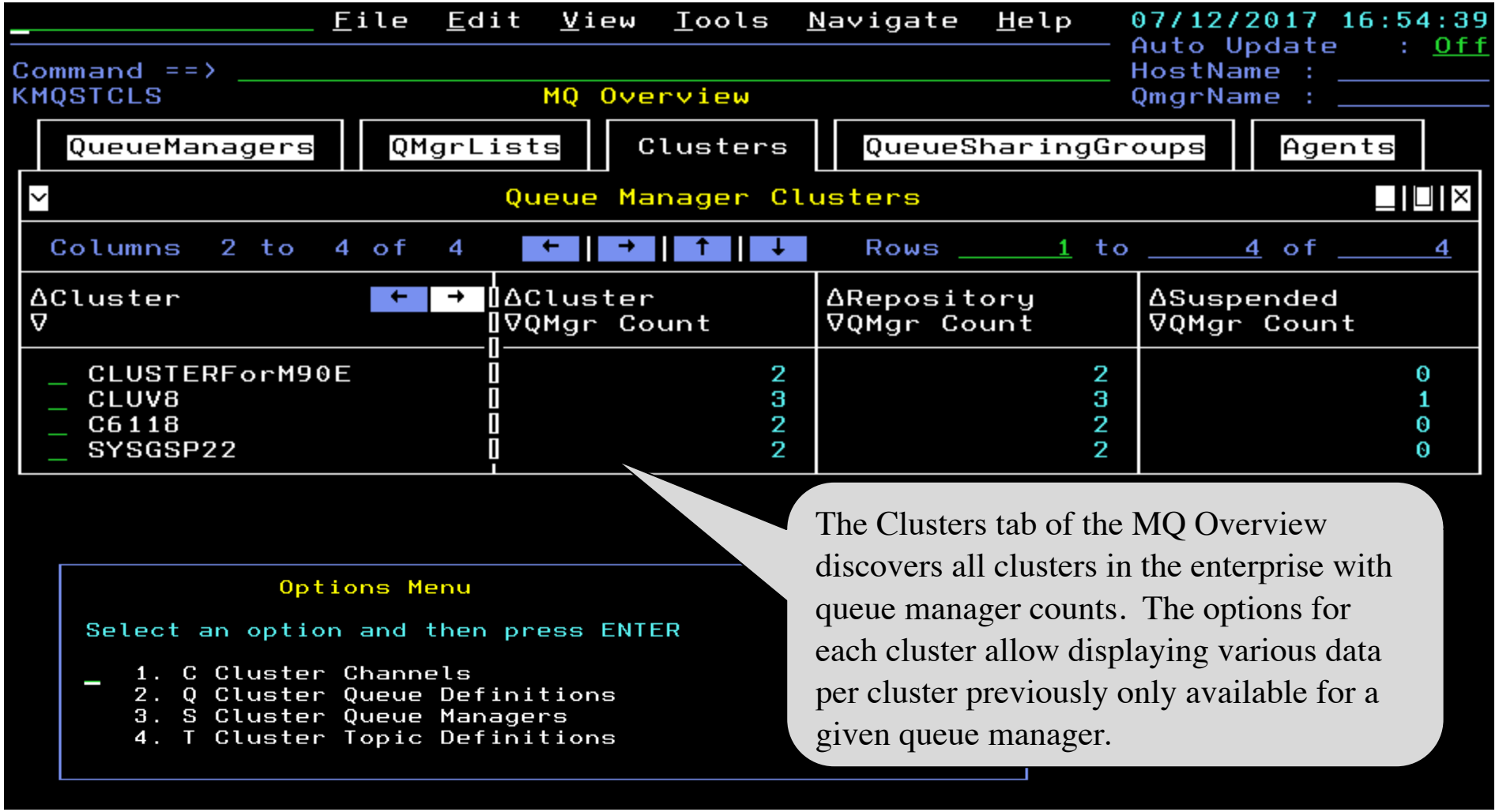
- Log Manager performance attributes added to current, recent and historical attribute groups
- Process Information attributes added for MQ process definitions
- Pub/Sub attributes added to Publish Subscribe Status, Topic Definitions and Topic Status
- Attributes added to QSG Coupling Facility Structures for offload information
- Attributes added to Queue Data for better characterization of a z/OS queue
- Transmission queue name added to Channel Data, also for cluster queue manager
- Attributes added to Current Queue Manager Status to identify Sysplex and LPAR names
- DLQ reason code enumerations clarified; Application Type enumerations added
- Numerous updates to MQ Enhanced 3270UI:
  - Pub/Sub data now available, including subscription definitions and status and topic definitions and status
  - Improved support for monitoring IBM MQ across multiple systems, including sysplex tree view of queue managers, managed system list views, enterprise-wide cluster and QSG views, and monitoring agent status
  - Changes for improved usability and completeness, such as with tabbed queue summary by type, tabbed channel summary by type, clear display of log names and 6/8 byte RBAs, more queue manager detail tabs, options for listing DLQ and queue messages, and improved MQ Event workspaces
- Message added to identify when agent cannot discover queue managers due to MQ ERLY support level
- Attributes added in broker monitoring agent for CICS, Global Cache and JMS Resource Statistics
- Agent configuration deployment simplification in PARMGEN
- Agent names updated to reflect the IBM MQ and IBM Integration Bus names
- Product name changed to IBM OMEGAMON for Messaging on z/OS
- The old MQ 3270 is withdrawn; please use the Enhanced 3270UI
- MQ Configuration component is withdrawn; please use features provided in IBM MQ and other IBM products
- Note: v750 is planned for z/OS only; distributed agents will remain at the v7.3.0 Fix Pack 2 level

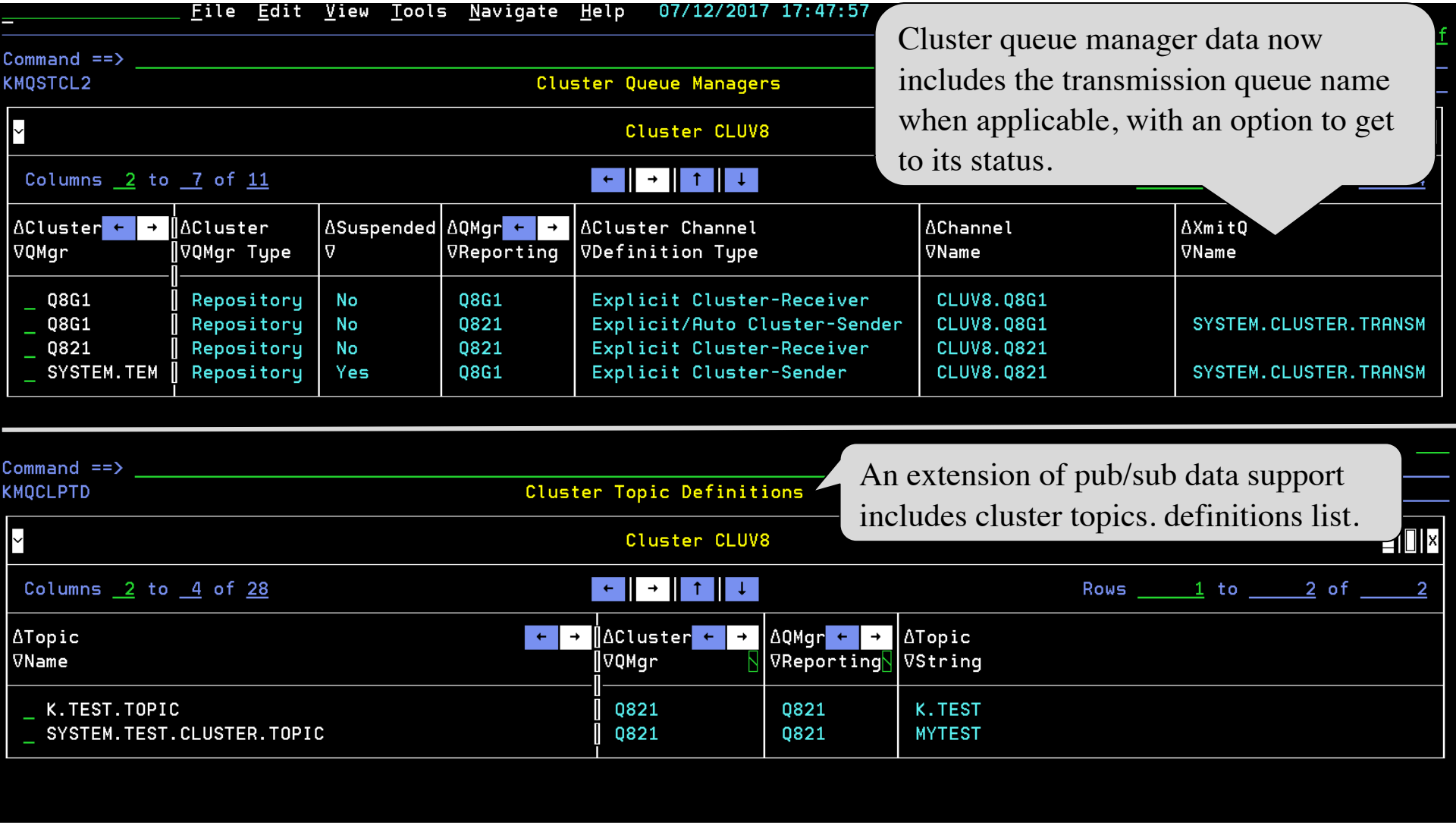
New MQ Overview Tabbed Workspace

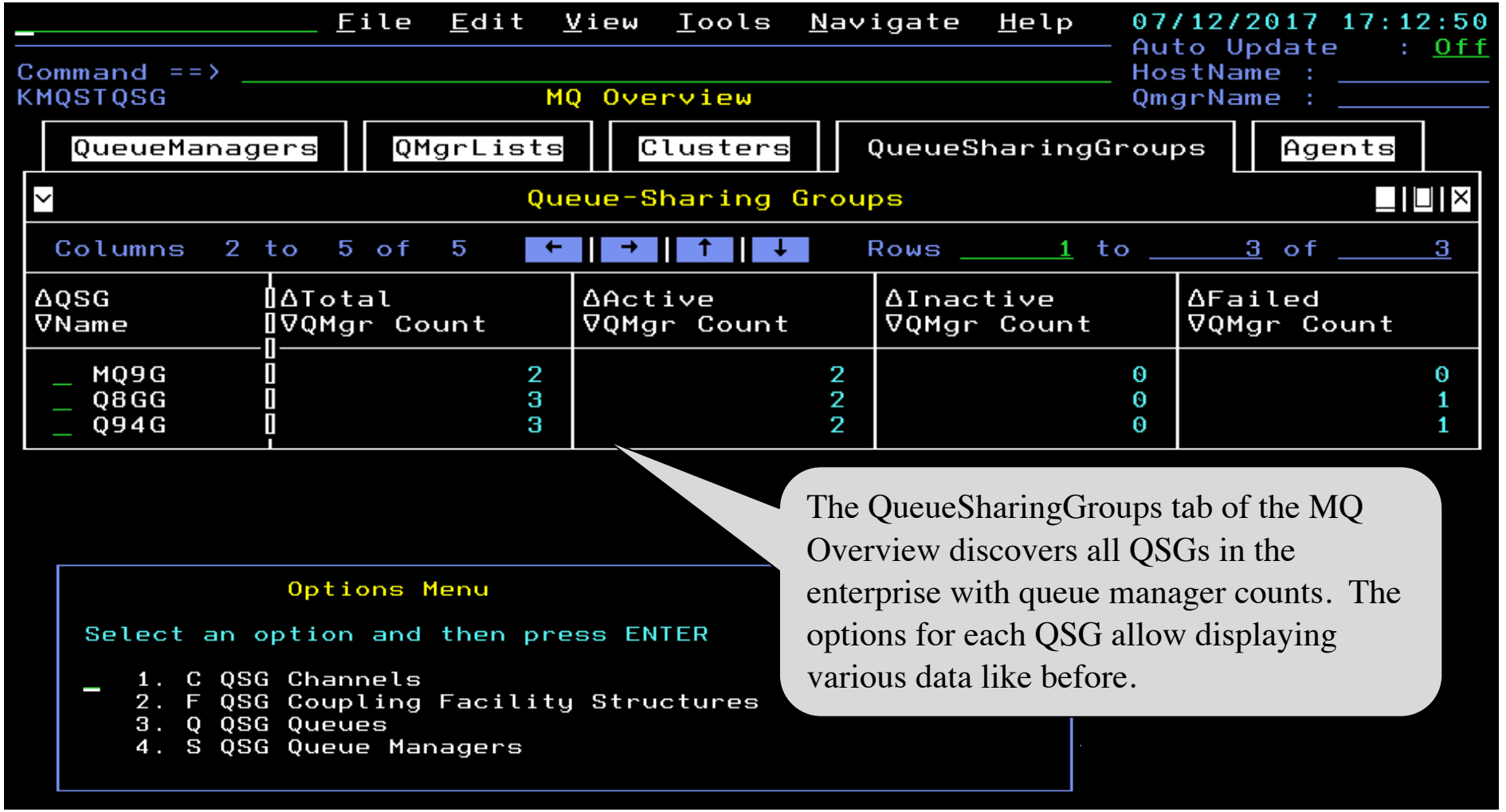


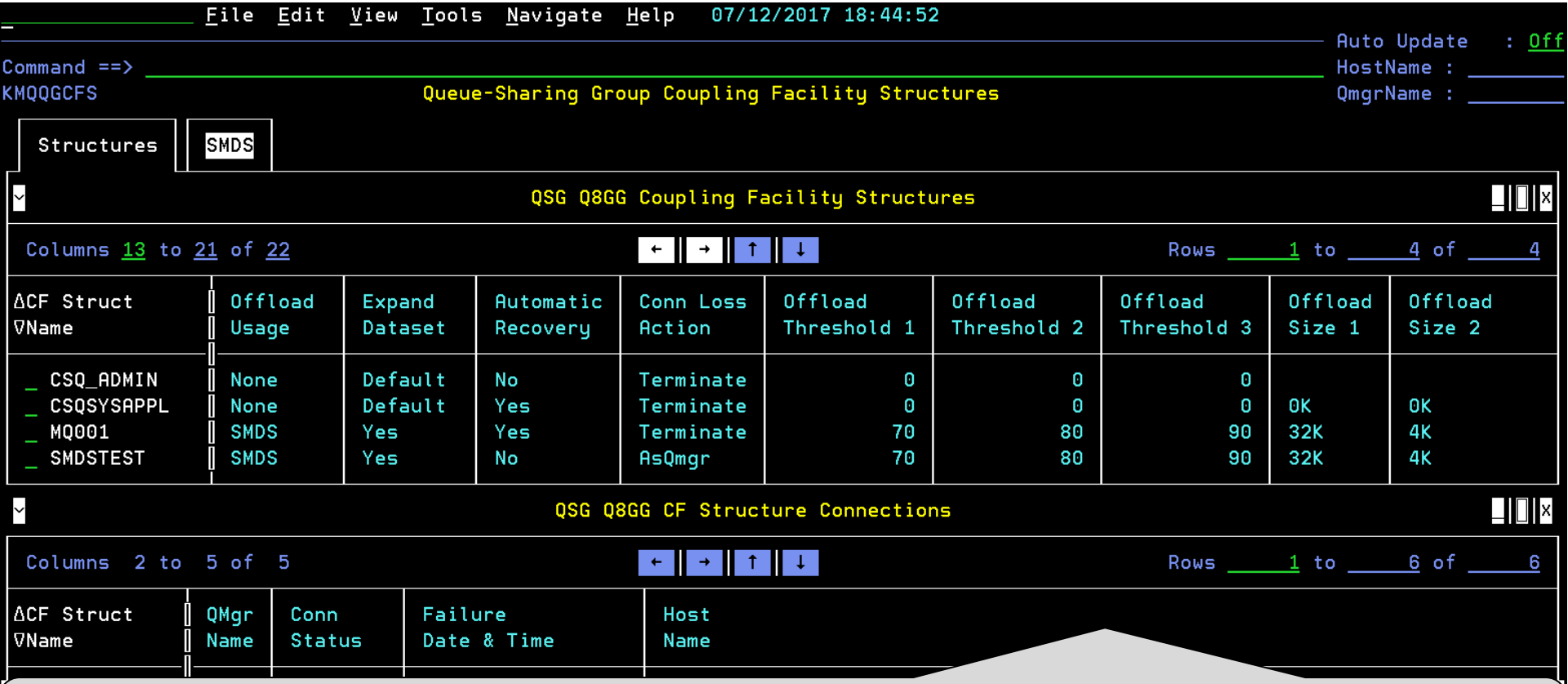
Queue Managers are shown organized in Sysplex Tree View.

Each tab is also an option from the KOB MQ start screen.

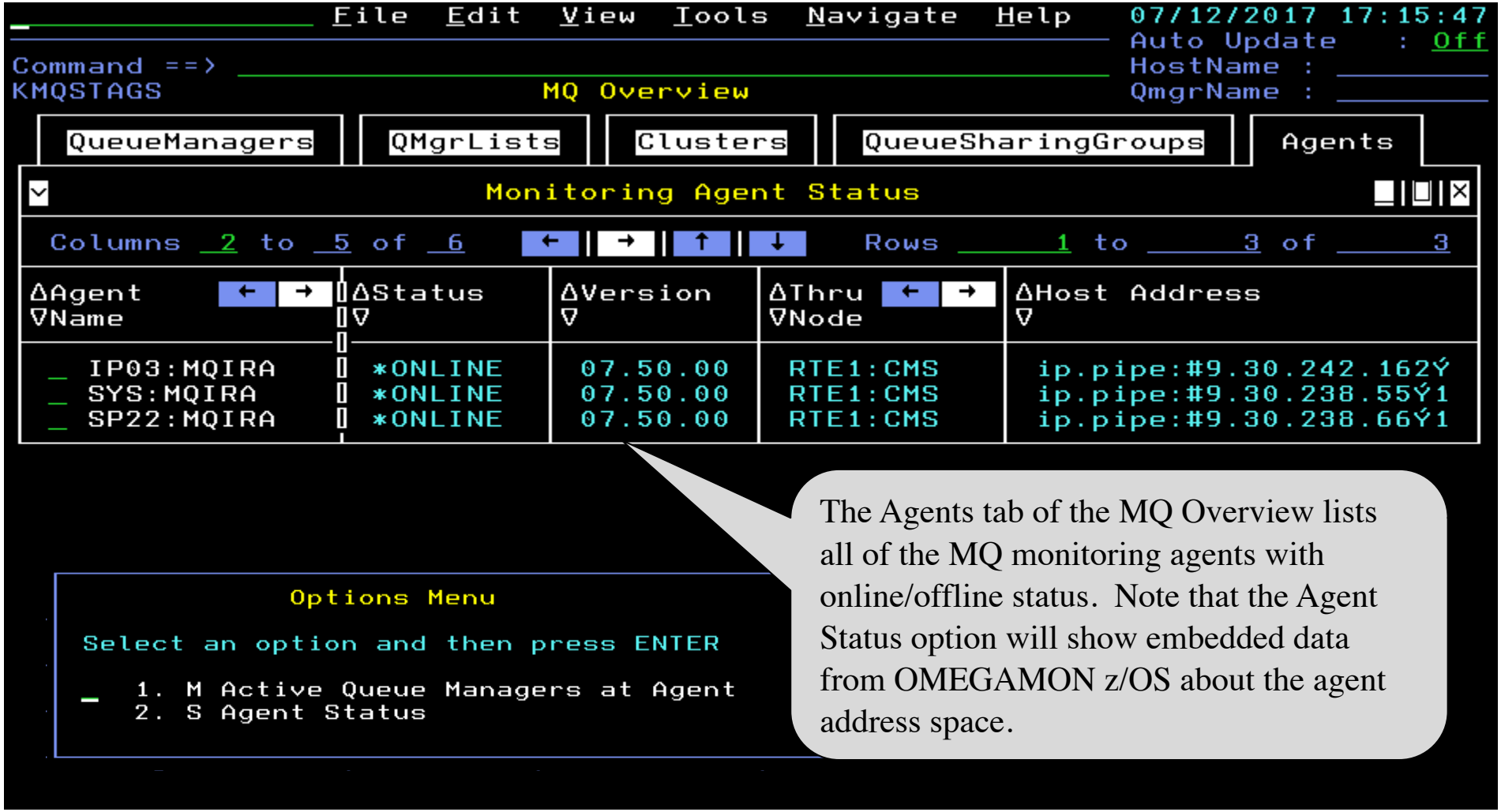

File Edit View Tools Navigate Help
07/12/2017 16:54:39
Auto Update : Off
Command ==>
HostName :
KMQSTCLS
MQ Overview
QmgrName :
QueueManagers
QMgrLists
Clusters
QueueSharingGroups
Agents
Queue Manager Clusters
Columns 2 to 4 of 4
Rows 1 to 4 of 4
ΔCluster ∇
ΔCluster ∇QMgr Count
ΔRepository ∇QMgr Count
ΔSuspended ∇QMgr Count
CLUSTERForM90E 2 2 0
CLUV8 3 3 1
C6118 2 2 0
SYSGSP22 2 2 0
Options Menu
Select an option and then press ENTER
1. C Cluster Channels
2. Q Cluster Queue Definitions
3. S Cluster Queue Managers
4. T Cluster Topic Definitions
The Clusters tab of the MQ Overview discovers all clusters in the enterprise with queue manager counts. The options for each cluster allow displaying various data per cluster previously only available for a given queue manager.

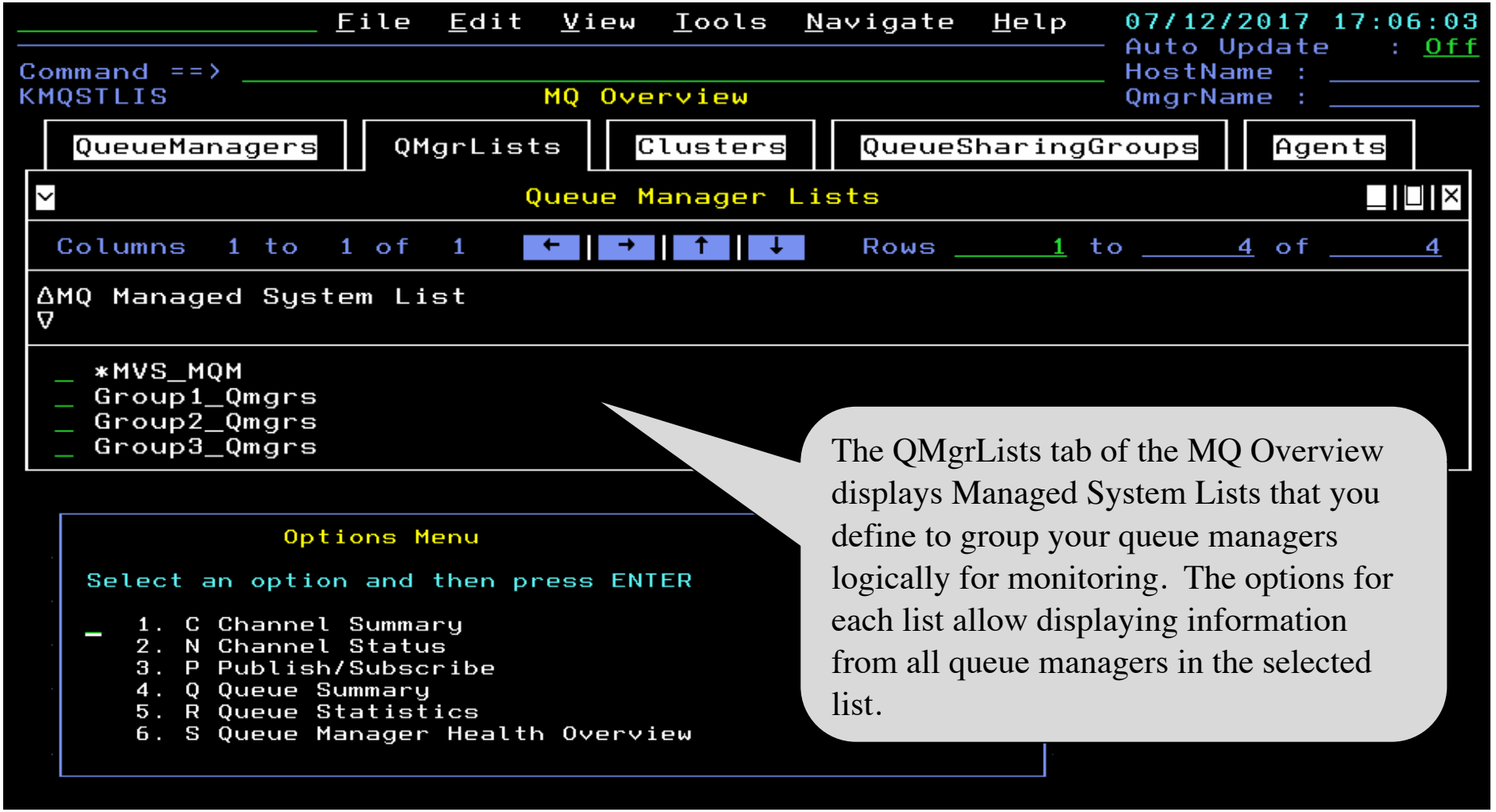

File Edit View Tools Navigate Help 07/12/2017 17:47:57
Command ==>
KMQSTCL2
Cluster Queue Managers
Cluster CLUV8
Columns 2 to 7 of 11
ΔCluster ∇QMgr
ΔCluster ∇QMgr Type
ΔSuspended ∇
ΔQMgr ∇Reporting
ΔCluster Channel ∇Definition Type
ΔChannel ∇Name
ΔXmitQ ∇Name
Q8G1 Repository No Q8G1 Explicit Cluster-Receiver CLUV8.Q8G1
Q8G1 Repository No Q821 Explicit/Auto Cluster-Sender CLUV8.Q8G1 SYSTEM.CLUSTER.TRANSM
Q821 Repository No Q821 Explicit Cluster-Receiver CLUV8.Q821
SYSTEM.TEM Repository Yes Q8G1 Explicit Cluster-Sender CLUV8.Q821 SYSTEM.CLUSTER.TRANSM
Cluster queue manager data now includes the transmission queue name when applicable, with an option to get to its status.
Command ==>
KMQCLPTD
Cluster Topic Definitions
Cluster CLUV8
Columns 2 to 4 of 28
Rows 1 to 2 of 2
ΔTopic ∇Name
ΔCluster ∇QMgr
ΔQMgr ∇Reporting
ΔTopic ∇String
K.TEST.TOPIC Q821 Q821 K.TEST
SYSTEM.TEST.CLUSTER.TOPIC Q821 Q821 MYTEST
An extension of pub/sub data support includes cluster topics. definitions list.

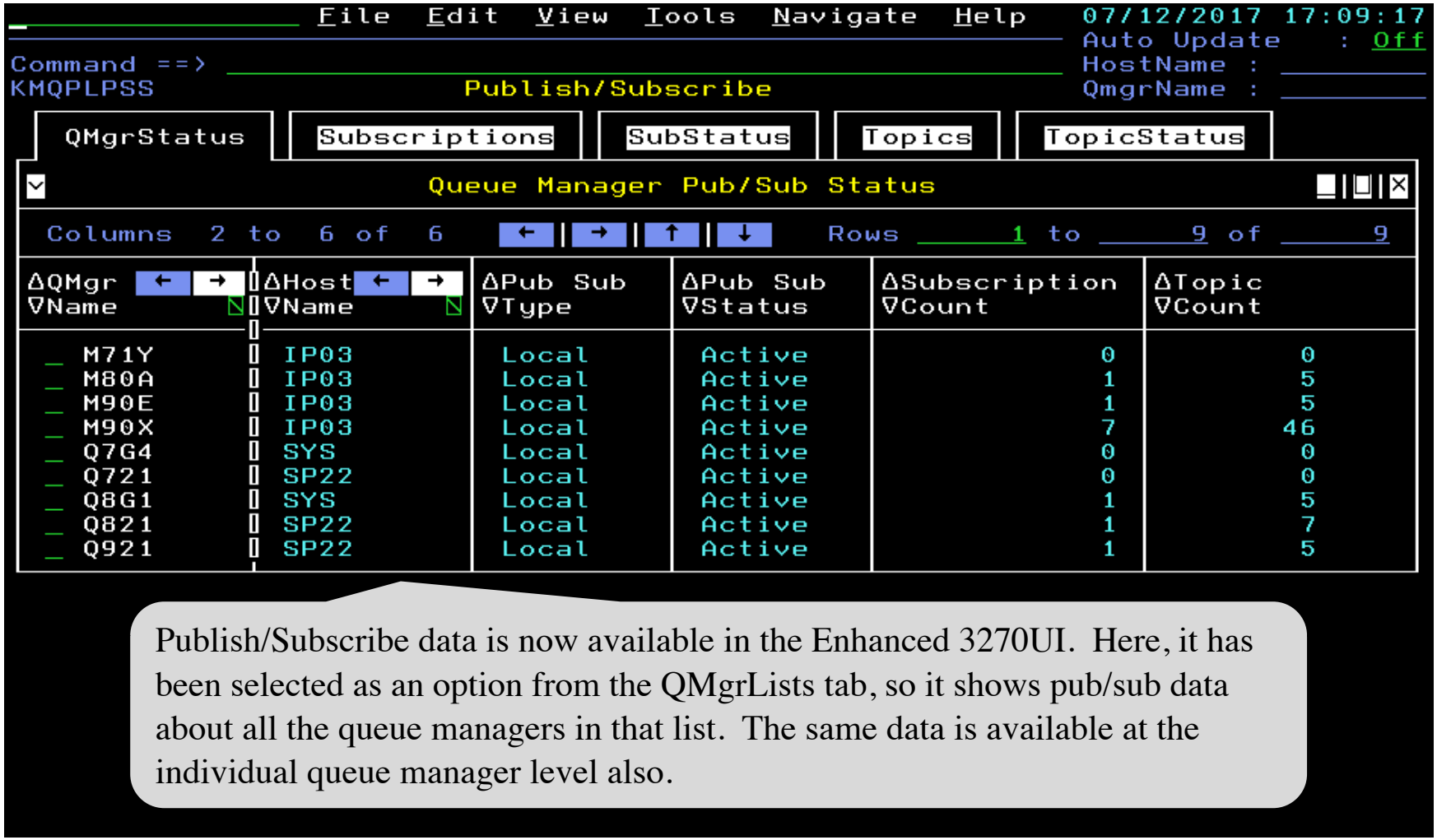

File Edit View Tools Navigate Help
07/12/2017 17:12:50
Auto Update : Off
HostName :
QmgrName :
Command ==>
KMQSTQSG
MQ Overview
QueueManagers
QMgrLists
Clusters
QueueSharingGroups
Agents
Queue-Sharing Groups
Columns 2 to 5 of 5
Rows 1 to 3 of 3
ΔQSG ∇Name
ΔTotal ∇QMgr Count
ΔActive ∇QMgr Count
ΔInactive ∇QMgr Count
ΔFailed ∇QMgr Count
MQ9G 2 2 0 0
Q8GG 3 2 0 1
Q94G 3 2 0 1
Options Menu
Select an option and then press ENTER
1. C QSG Channels
2. F QSG Coupling Facility Structures
3. Q QSG Queues
4. S QSG Queue Managers
The QueueSharingGroups tab of the MQ Overview discovers all QSGs in the enterprise with queue manager counts. The options for each QSG allow displaying various data like before.



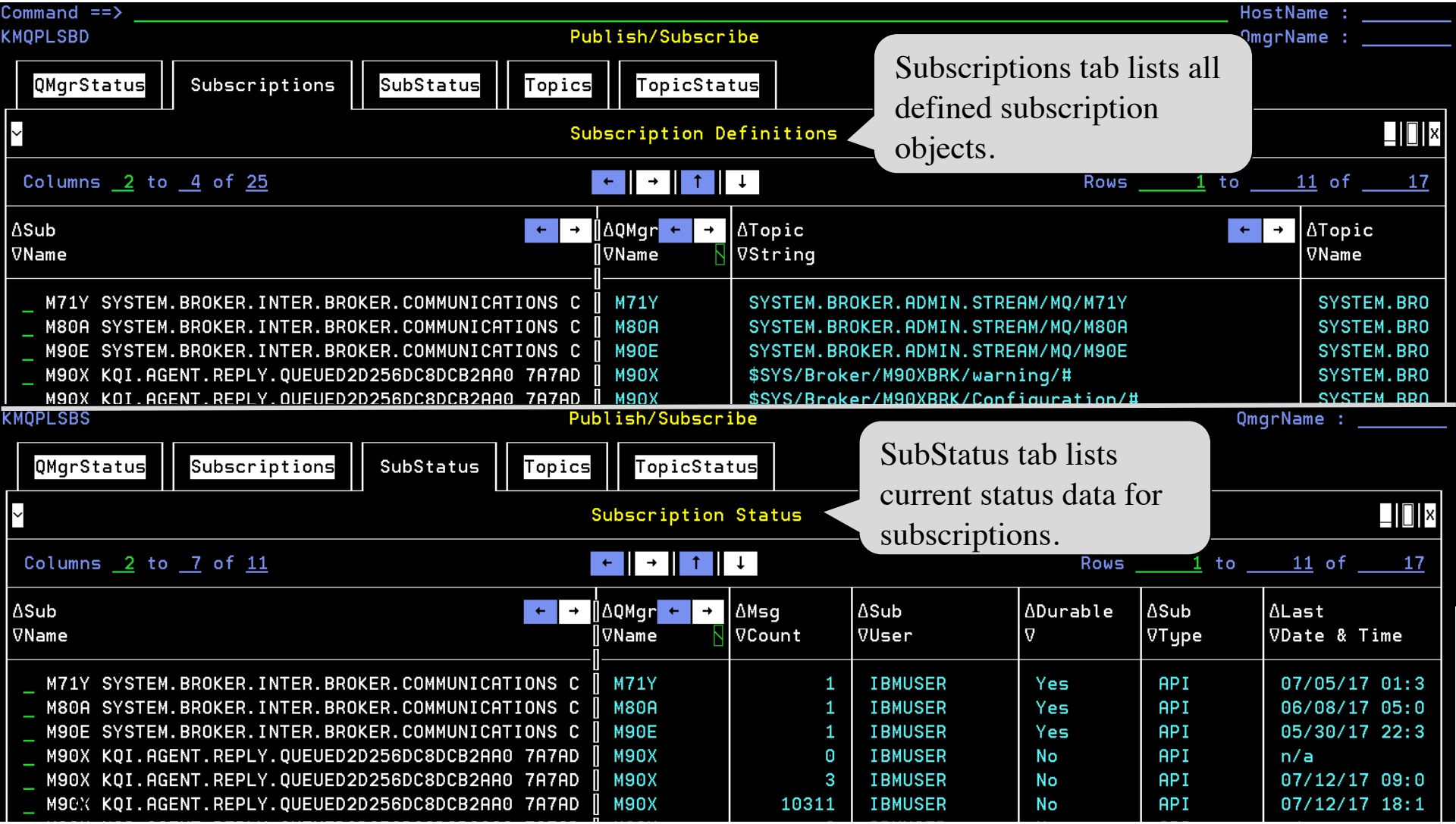
QSG Coupling Facility Structures attributes have been added giving offload information. Note that the SMDS tab was added previously in v7.3.0 Fix Pack 2.

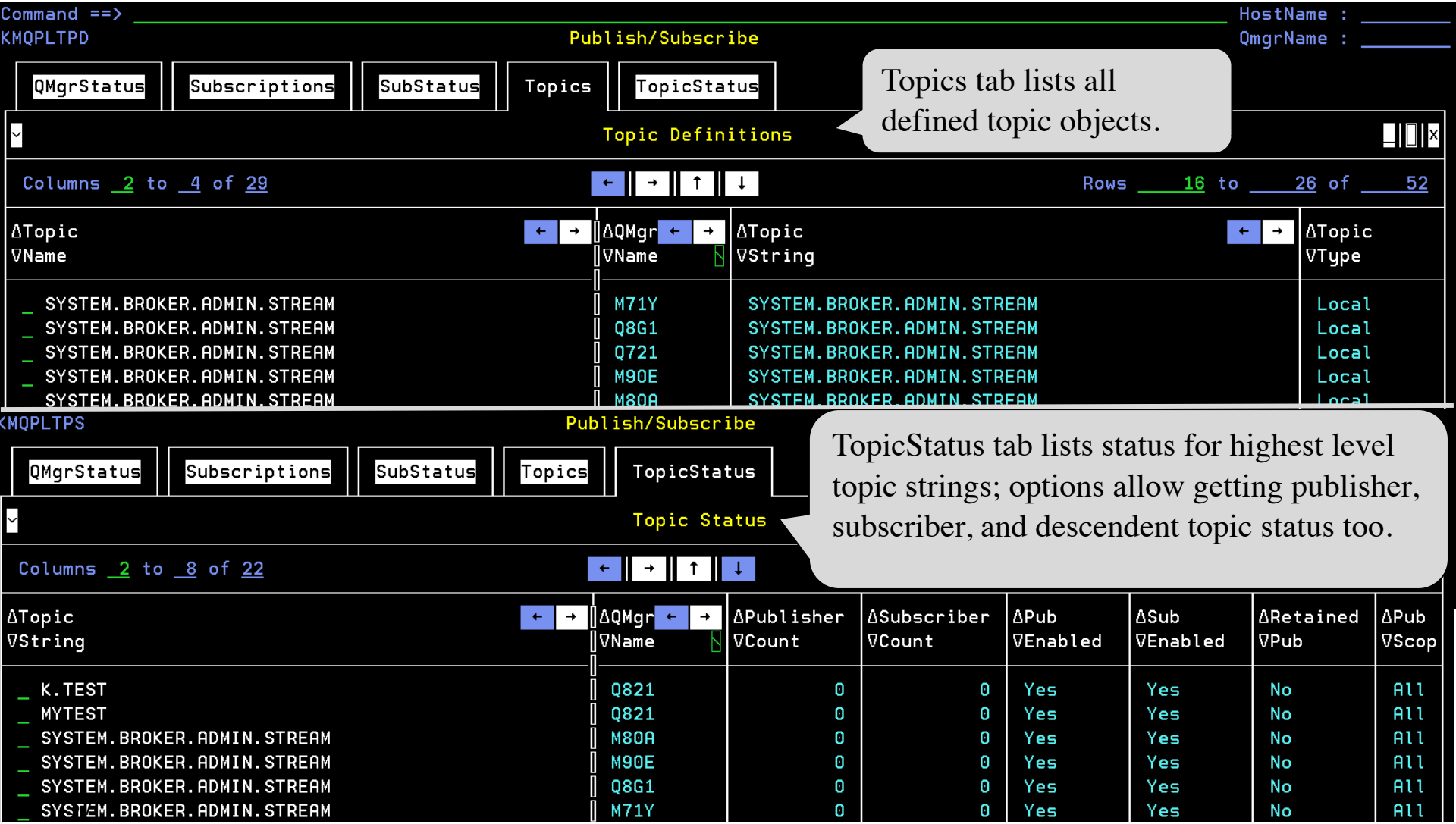

File Edit View Tools Navigate Help
07/12/2017 17:15:47
Auto Update : Off
HostName :
QmgrName :
Command ==>
KMQSTAGS
MQ Overview
QueueManagers
QMgrLists
Clusters
QueueSharingGroups
Agents
Monitoring Agent Status
Columns 2 to 5 of 6
Rows 1 to 3 of 3
ΔAgent ∇Name
ΔStatus ∇
ΔVersion ∇
ΔThru ∇Node
ΔHost Address ∇
IP03:MQIRA *ONLINE 07.50.00 RTE1:CMS ip.pipe:#9.30.242.162Ý
SYS:MQIRA *ONLINE 07.50.00 RTE1:CMS ip.pipe:#9.30.238.55Ý1
SP22:MQIRA *ONLINE 07.50.00 RTE1:CMS ip.pipe:#9.30.238.66Ý1
Options Menu
Select an option and then press ENTER
1. M Active Queue Managers at Agent
2. S Agent Status
The Agents tab of the MQ Overview lists all of the MQ monitoring agents with online/offline status. Note that the Agent Status option will show embedded data from OMEGAMON z/OS about the agent address space.


File Edit View Tools Navigate Help
07/12/2017 17:06:03
Auto Update : Off
Command ==>
KMQSTLIS
MQ Overview
HostName :
QmgrName :
QueueManagers
QMgrLists
Clusters
QueueSharingGroups
Agents
Queue Manager Lists
Columns 1 to 1 of 1
Rows 1 to 4 of 4
MQ Managed System List
*MVS_MQM
Group1_Qmgrs
Group2_Qmgrs
Group3_Qmgrs
Options Menu
Select an option and then press ENTER
1. C Channel Summary
2. N Channel Status
3. P Publish/Subscribe
4. Q Queue Summary
5. R Queue Statistics
6. S Queue Manager Health Overview
The QMgrLists tab of the MQ Overview displays Managed System Lists that you define to group your queue managers logically for monitoring. The options for each list allow displaying information from all queue managers in the selected list.



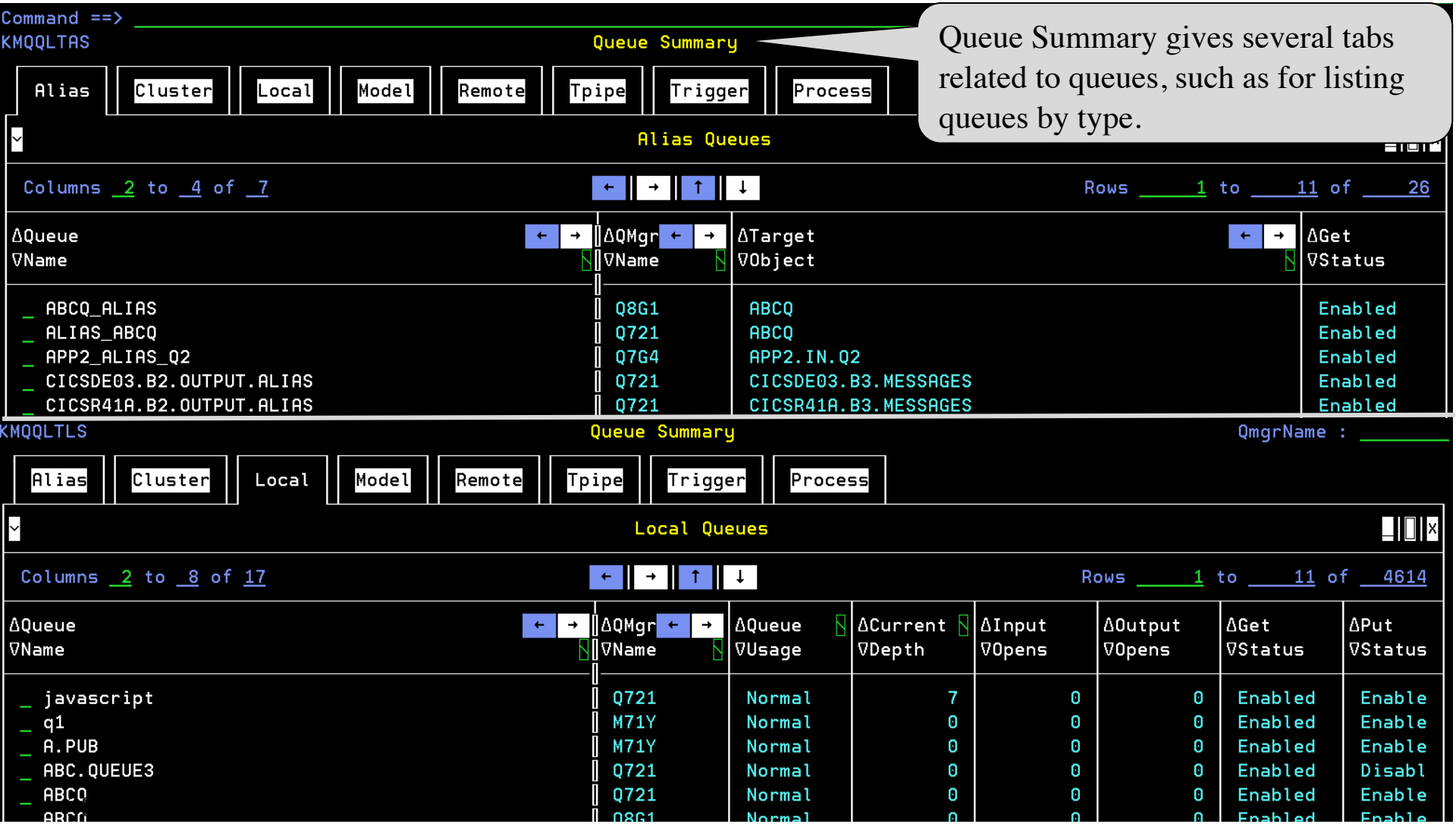
Publish/Subscribe data is now available in the Enhanced 3270UI. Here, it has been selected as an option from the QMgrLists tab, so it shows pub/sub data about all the queue managers in that list. The same data is available at the individual queue manager level also.


Command ==>
HostName :
KMQPLSBD
Publish/Subscribe
QmgrName :
QMgrStatus
Subscriptions
SubStatus
Topics
TopicStatus
Subscription Definitions
Subscriptions tab lists all defined subscription objects.
Columns 2 to 4 of 25
Rows 1 to 11 of 17
ΔSub ∇Name
ΔQMgr ∇Name
ΔTopic ∇String
ΔTopic ∇Name
M71Y SYSTEM.BROKER.INTER.BROKER.COMMUNICATIONS C
M80A SYSTEM.BROKER.INTER.BROKER.COMMUNICATIONS C
M90E SYSTEM.BROKER.INTER.BROKER.COMMUNICATIONS C
M90X KQI.AGENT.REPLY.QUEUED2D256DC8DCB2AA0 7A7AD
M90X KQI.AGENT.REPLY.QUEUED2D256DC8DCB2AA0 7A7AD
M71Y
M80A
M90E
M90X
M90X
SYSTEM.BROKER.ADMIN.STREAM/MQ/M71Y
SYSTEM.BROKER.ADMIN.STREAM/MQ/M80A
SYSTEM.BROKER.ADMIN.STREAM/MQ/M90E
$SYS/Broker/M90XBRK/warning/#
$SYS/Broker/M90XBRK/Configuration/#
SYSTEM.BRO
SYSTEM.BRO
SYSTEM.BRO
SYSTEM.BRO
SYSTEM.BRO
KMQPLSBS
Publish/Subscribe
QmgrName :
QMgrStatus
Subscriptions
SubStatus
Topics
TopicStatus
Subscription Status
SubStatus tab lists current status data for subscriptions.
Columns 2 to 7 of 11
Rows 1 to 11 of 17
ΔSub ∇Name
ΔQMgr ∇Name
ΔMsg ∇Count
ΔSub ∇User
ΔDurable ∇
ΔSub ∇Type
ΔLast ∇Date & Time
M71Y SYSTEM.BROKER.INTER.BROKER.COMMUNICATIONS C
M80A SYSTEM.BROKER.INTER.BROKER.COMMUNICATIONS C
M90E SYSTEM.BROKER.INTER.BROKER.COMMUNICATIONS C
M90X KQI.AGENT.REPLY.QUEUED2D256DC8DCB2AA0 7A7AD
M90X KQI.AGENT.REPLY.QUEUED2D256DC8DCB2AA0 7A7AD
M90X KQI.AGENT.REPLY.QUEUED2D256DC8DCB2AA0 7A7AD
M71Y
M80A
M90E
M90X
M90X
M90X
1
1
1
0
3
10311
IBMUSER
IBMUSER
IBMUSER
IBMUSER
IBMUSER
IBMUSER
Yes
Yes
Yes
No
No
No
API
API
API
API
API
API
07/05/17 01:3
06/08/17 05:0
05/30/17 22:3
n/a
07/12/17 09:0
07/12/17 18:1



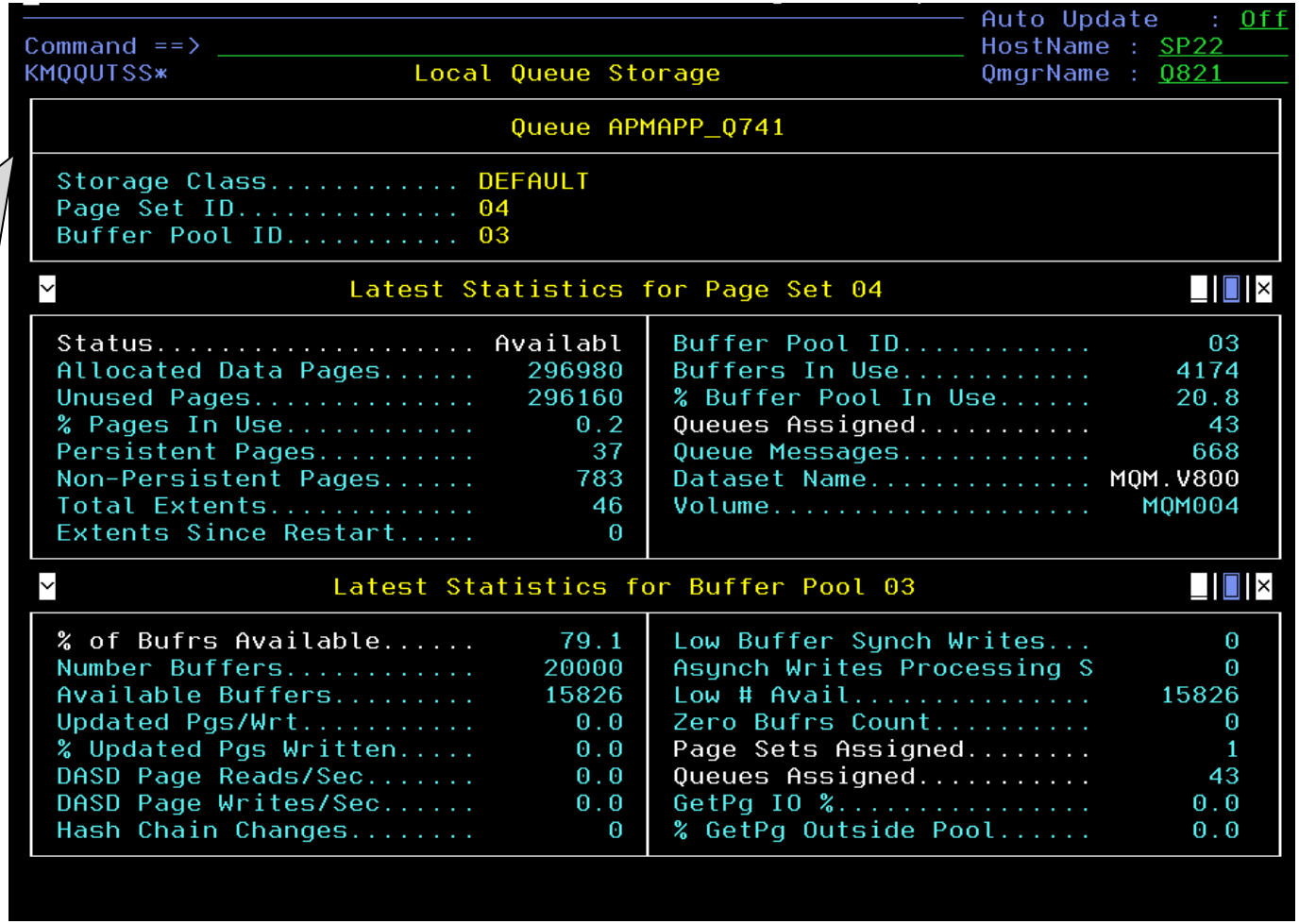
Topics tab lists all defined topic objects.

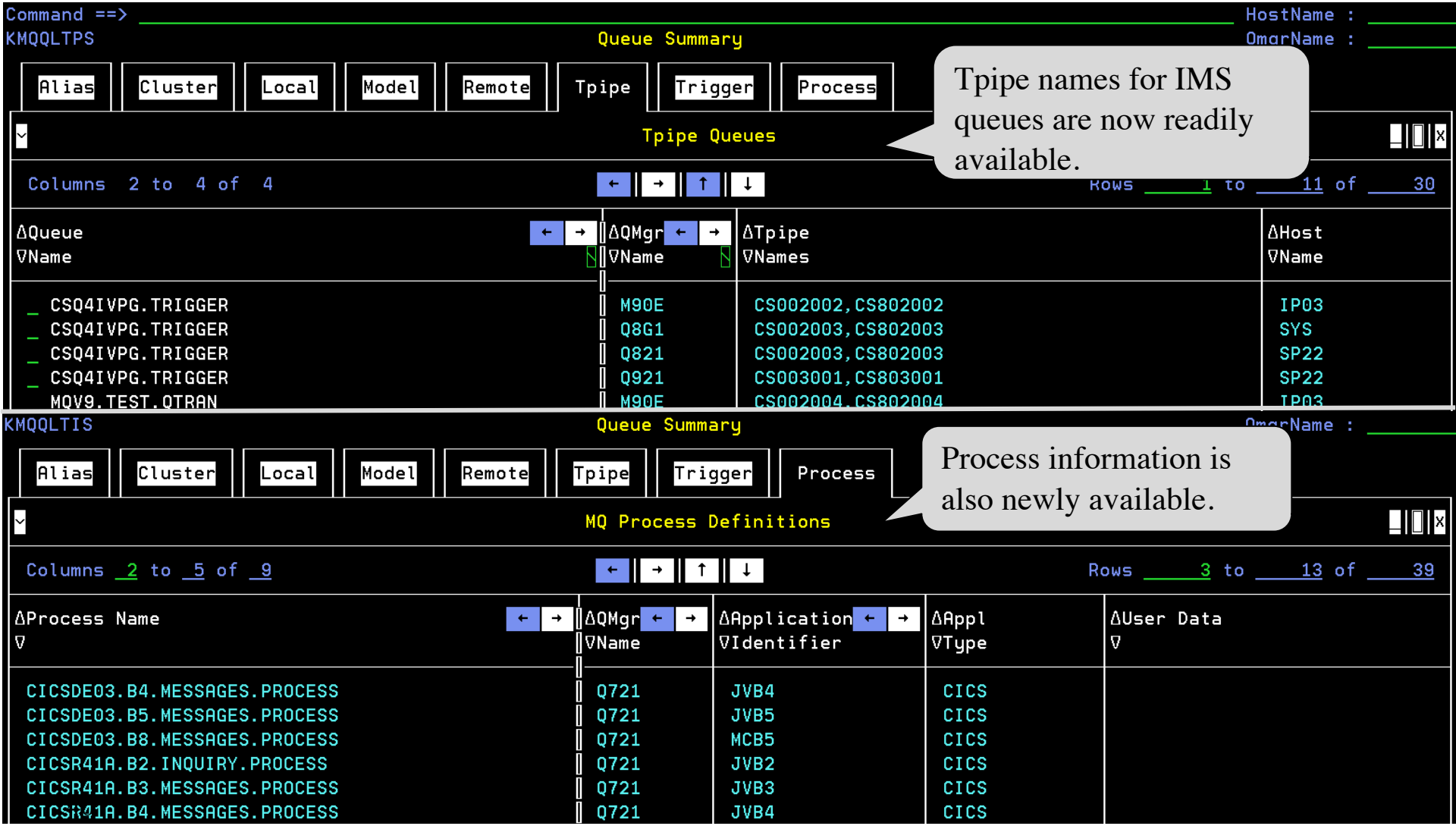
TopicStatus tab lists status for highest level topic strings; options allow getting publisher, subscriber, and descendent topic status too.

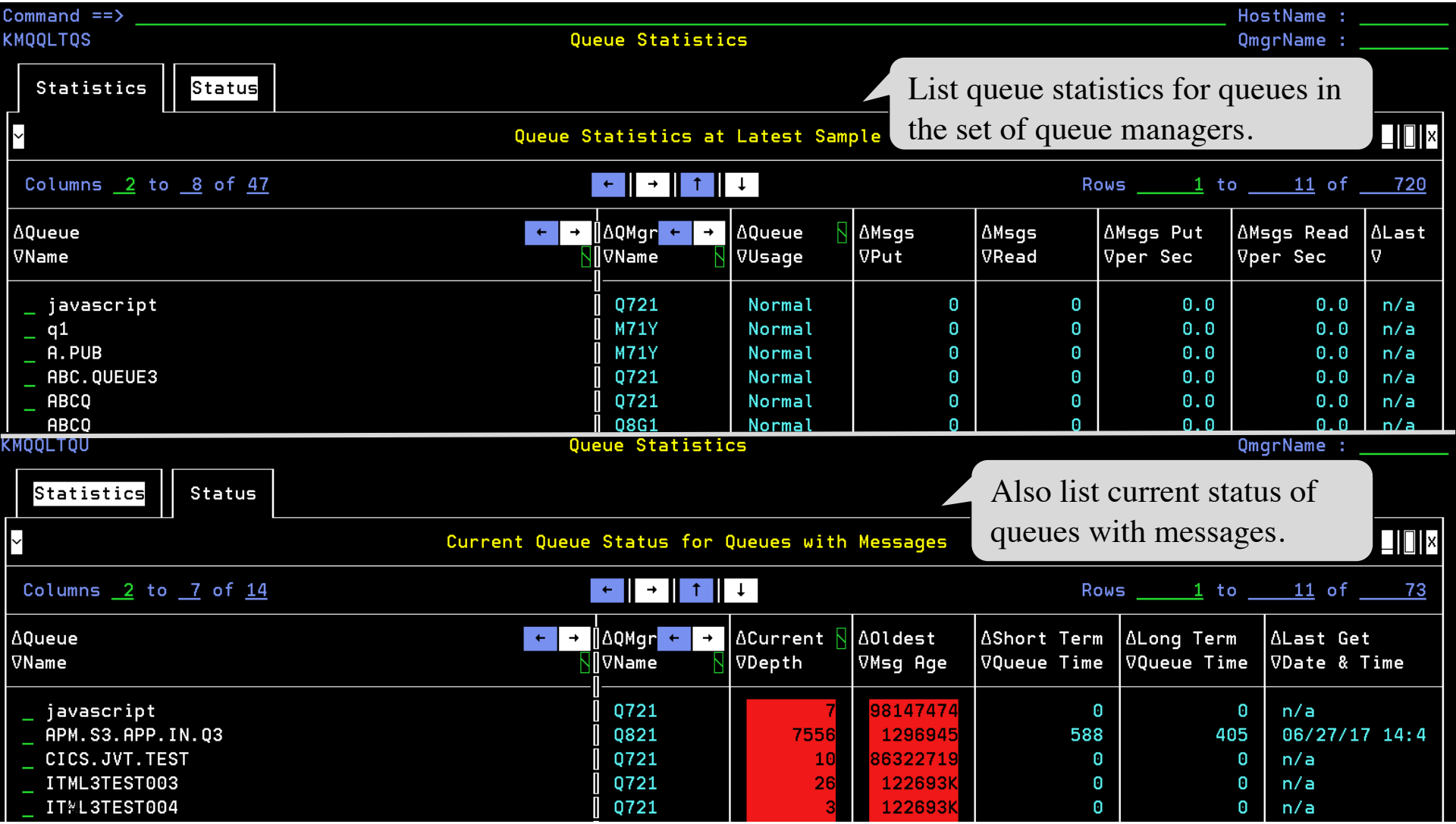


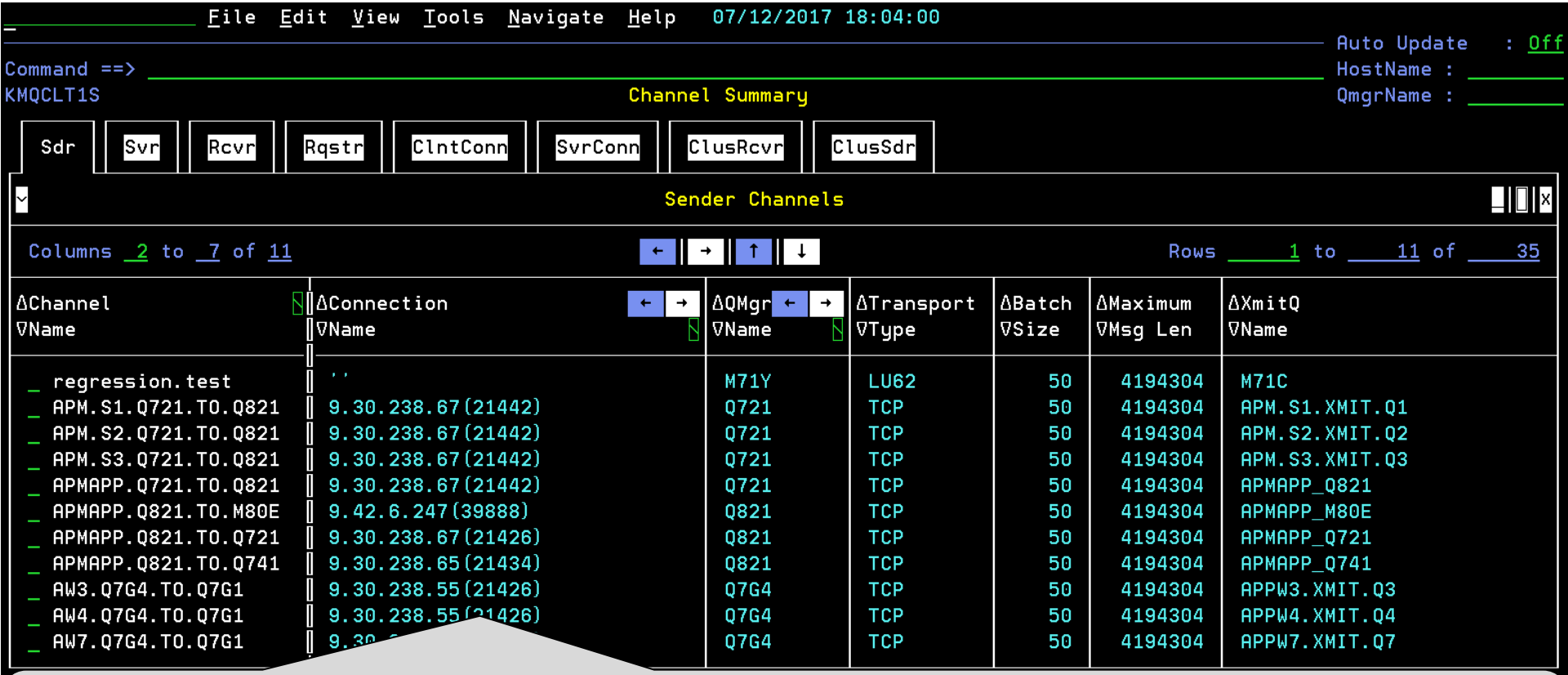
Queue Summary gives several tabs related to queues, such as for listing queues by type.

Typical options are available for queues, depending on type; a new option L has been added for useful MQ z/OS data for a queue.

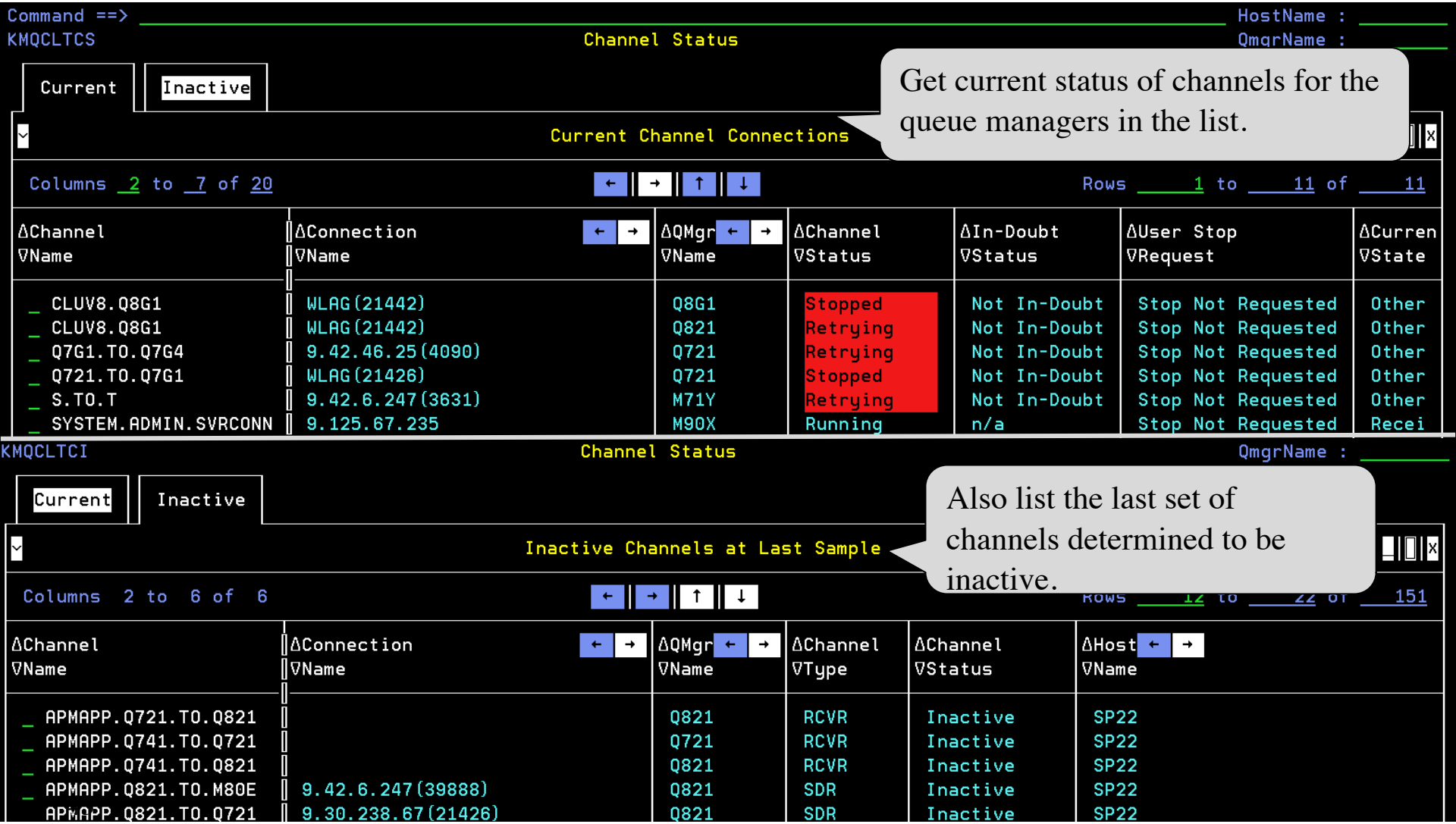


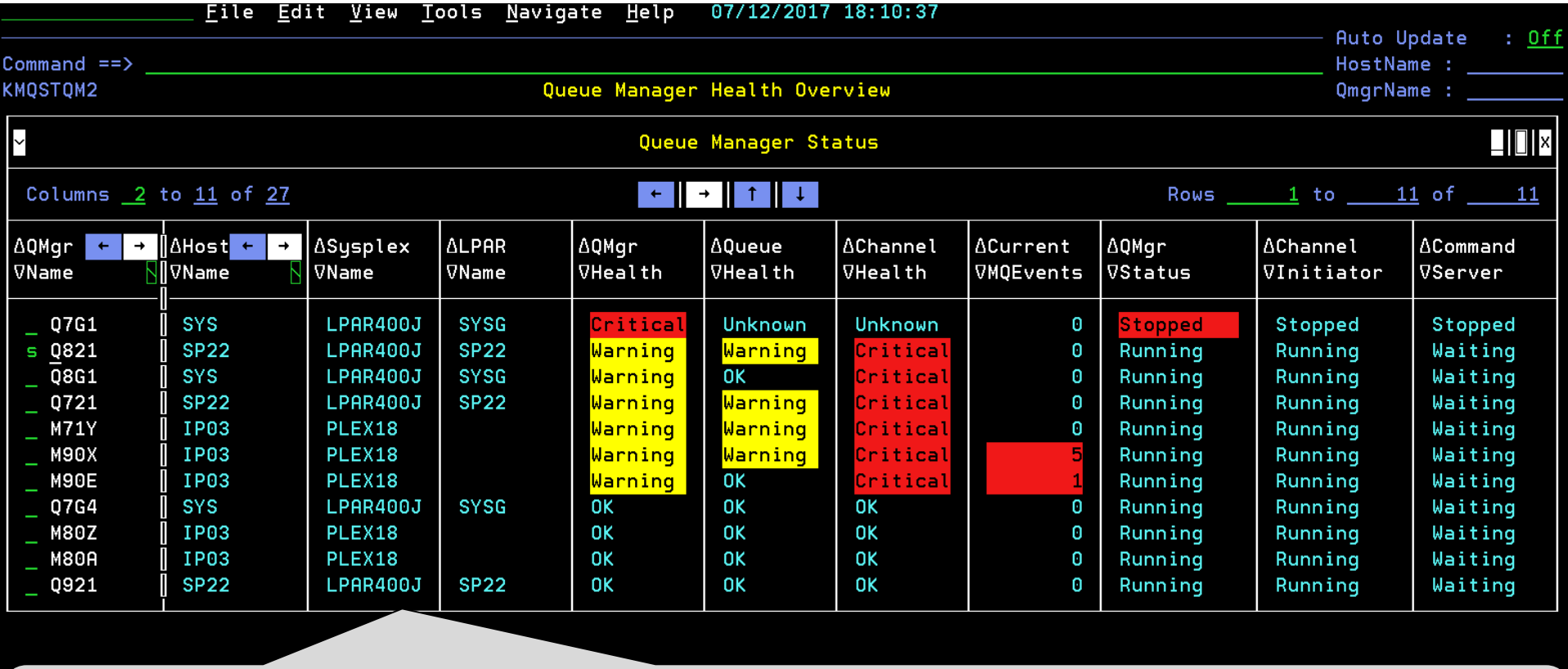

Command ==>
HostName :
KMQQLTPS
Queue Summary
OmgrName :
Alias
Cluster
Local
Model
Remote
Tpipe
Trigger
Process
Tpipe Queues
Tpipe names for IMS queues are now readily available.
Columns 2 to 4 of 4
Rows 1 to 11 of 30
ΔQueue
∇Name
ΔQMgr
∇Name
ΔTpipe
∇Names
ΔHost
∇Name
CSQ4IVPG.TRIGGER
M90E
CS002002,CS802002
IP03
CSQ4IVPG.TRIGGER
Q8G1
CS002003,CS802003
SYS
CSQ4IVPG.TRIGGER
Q821
CS002003,CS802003
SP22
CSQ4IVPG.TRIGGER
Q921
CS003001,CS803001
SP22
MQV9.TEST.QTRAN
M90E
CS002004,CS802004
IP03
KMQQLTIS
Queue Summary
OmgrName :
Alias
Cluster
Local
Model
Remote
Tpipe
Trigger
Process
MQ Process Definitions
Process information is also newly available.
Columns 2 to 5 of 9
Rows 3 to 13 of 39
ΔProcess Name
∇
ΔQMgr
∇Name
ΔApplication
∇Identifier
ΔAppl
∇Type
ΔUser Data
∇
CICSDE03.B4.MESSAGES.PROCESS
Q721
JVB4
CICS
CICSDE03.B5.MESSAGES.PROCESS
Q721
JVB5
CICS
CICSDE03.B8.MESSAGES.PROCESS
Q721
MCB5
CICS
CICSR41A.B2.INQUIRY.PROCESS
Q721
JVB2
CICS
CICSR41A.B3.MESSAGES.PROCESS
Q721
JVB3
CICS
CICSR41A.B4.MESSAGES.PROCESS
Q721
JVB4
CICS


Command ==>
HostName :
KMQQLTQS
Queue Statistics
QmgrName :
Statistics
Status
List queue statistics for queues in the set of queue managers.
Queue Statistics at Latest Sample
Columns 2 to 8 of 47
Rows 1 to 11 of 720
ΔQueue ∇Name
ΔQMgr ∇Name
ΔQueue ∇Usage
ΔMsgs ∇Put
ΔMsgs ∇Read
ΔMsgs Put ∇per Sec
ΔMsgs Read ∇per Sec
ΔLast ∇
javascript Q721 Normal 0 0 0.0 0.0 n/a
q1 M71Y Normal 0 0 0.0 0.0 n/a
A.PUB M71Y Normal 0 0 0.0 0.0 n/a
ABC.QUEUE3 Q721 Normal 0 0 0.0 0.0 n/a
ABCQ Q721 Normal 0 0 0.0 0.0 n/a
ABCQ Q8G1 Normal 0 0 0.0 0.0 n/a
KMQQLTQU
Queue Statistics
QmgrName :
Statistics
Status
Also list current status of queues with messages.
Current Queue Status for Queues with Messages
Columns 2 to 7 of 14
Rows 1 to 11 of 73
ΔQueue ∇Name
ΔQMgr ∇Name
ΔCurrent ∇Depth
ΔOldest ∇Msg Age
ΔShort Term ∇Queue Time
ΔLong Term ∇Queue Time
ΔLast Get ∇Date & Time
javascript Q721 7 98147474 0 0 n/a
APM.S3.APP.IN.Q3 Q821 7556 1296945 588 405 06/27/17 14:4
CICS.JVT.TEST Q721 10 86322719 0 0 n/a
ITML3TEST003 Q721 26 122693K 0 0 n/a
ITML3TEST004 Q721 3 122693K 0 0 n/a



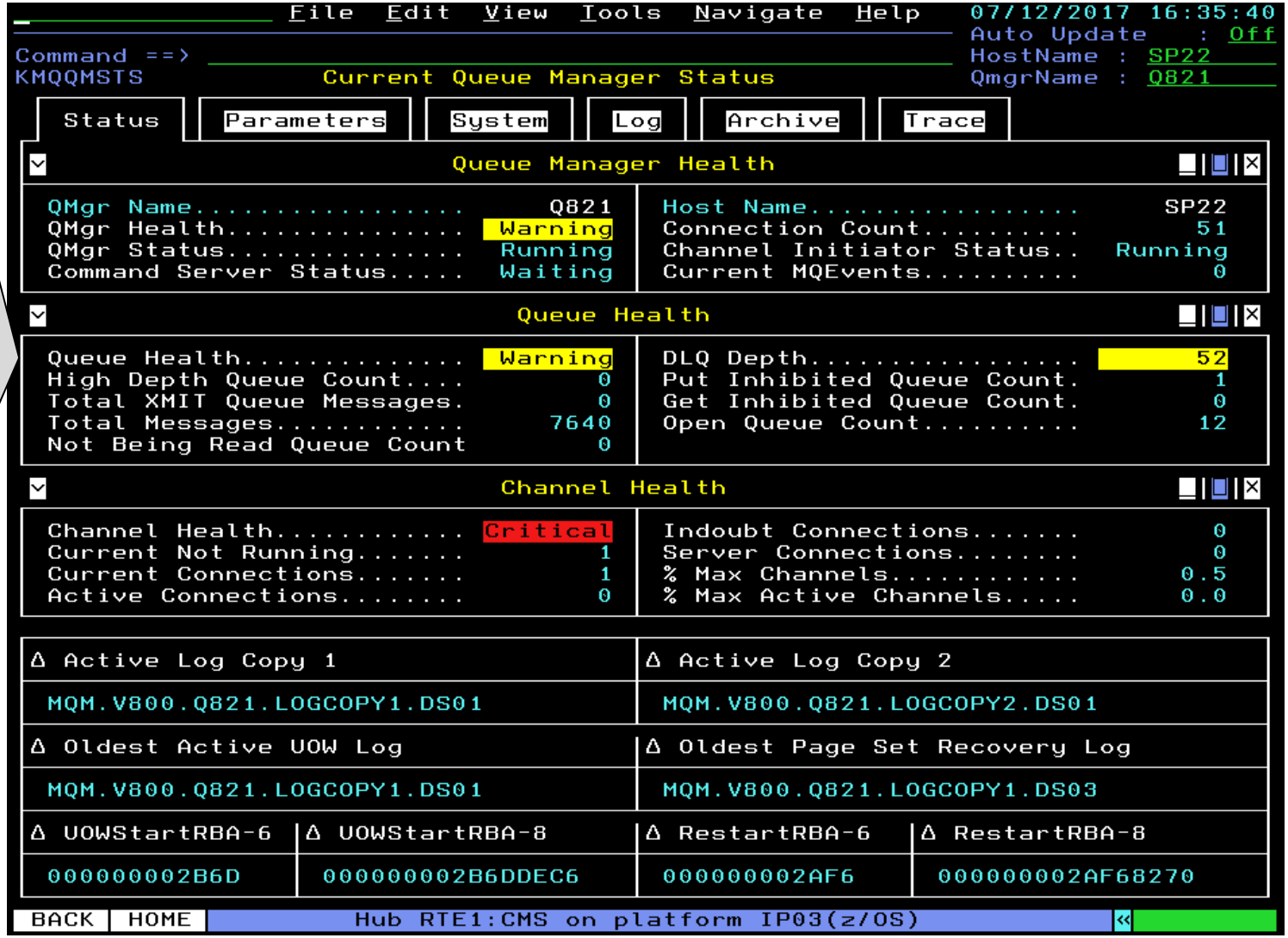
Channel Summary has a tab for each type of channel. The usual options are available for channels to get to more data. An option to get to transmission queue status is now available where applicable.


Command ==>
HostName :
KMQCLTCS
Channel Status
QmgrName :
Current
Inactive
Current Channel Connections
Get current status of channels for the queue managers in the list.
Columns 2 to 7 of 20
Rows 1 to 11 of 11
ΔChannel ∇Name
ΔConnection ∇Name
ΔQMgr ∇Name
ΔChannel ∇Status
ΔIn-Doubt ∇Status
ΔUser Stop ∇Request
ΔCurren ∇State
CLUV8.Q8G1 WLAG(21442) Q8G1 Stopped Not In-Doubt Stop Not Requested Other
CLUV8.Q8G1 WLAG(21442) Q821 Retrying Not In-Doubt Stop Not Requested Other
Q7G1.TO.Q7G4 9.42.46.25(4090) Q721 Retrying Not In-Doubt Stop Not Requested Other
Q721.TO.Q7G1 WLAG(21426) Q721 Stopped Not In-Doubt Stop Not Requested Other
S.TO.T 9.42.6.247(3631) M71Y Retrying Not In-Doubt Stop Not Requested Other
SYSTEM.ADMIN.SVRCONN 9.125.67.235 M90X Running n/a Stop Not Requested Recei
KMQCLTCI
Channel Status
QmgrName :
Current
Inactive
Inactive Channels at Last Sample
Also list the last set of channels determined to be inactive.
Columns 2 to 6 of 6
Rows 12 to 22 of 151
ΔChannel ∇Name
ΔConnection ∇Name
ΔQMgr ∇Name
ΔChannel ∇Type
ΔChannel ∇Status
ΔHost ∇Name
APMAPP.Q721.TO.Q821 Q821 RCVR Inactive SP22
APMAPP.Q741.TO.Q721 Q721 RCVR Inactive SP22
APMAPP.Q741.TO.Q821 Q821 RCVR Inactive SP22
APMAPP.Q821.TO.M80E 9.42.6.247(39888) Q821 SDR Inactive SP22
APMAPP.Q821.TO.Q721 9.30.238.67(21426) Q821 SDR Inactive SP22



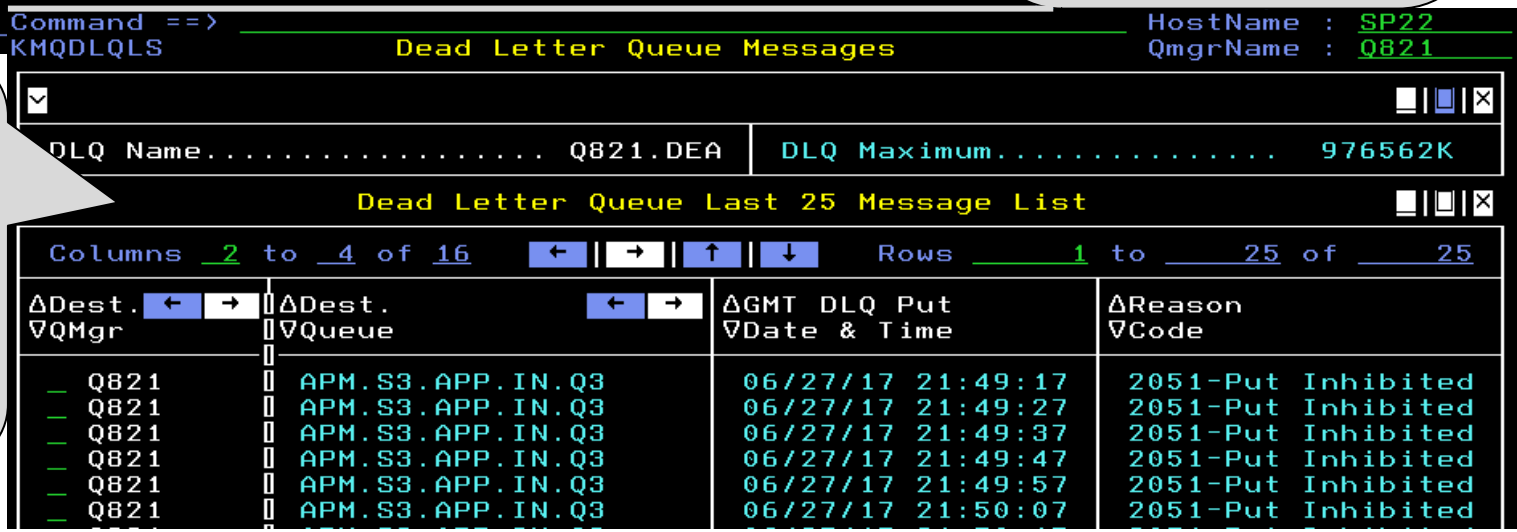
The default select option is to see the health overview, but just for the queue managers in the list. Note that a given queue manager name is shown only once, with the running queue manager instance preferred. The typical list of options per queue manager is available.

Current Queue Manager Status is updated with tabs, more zoom fields, and log names are more clear with related 6/8 byte RBAs.

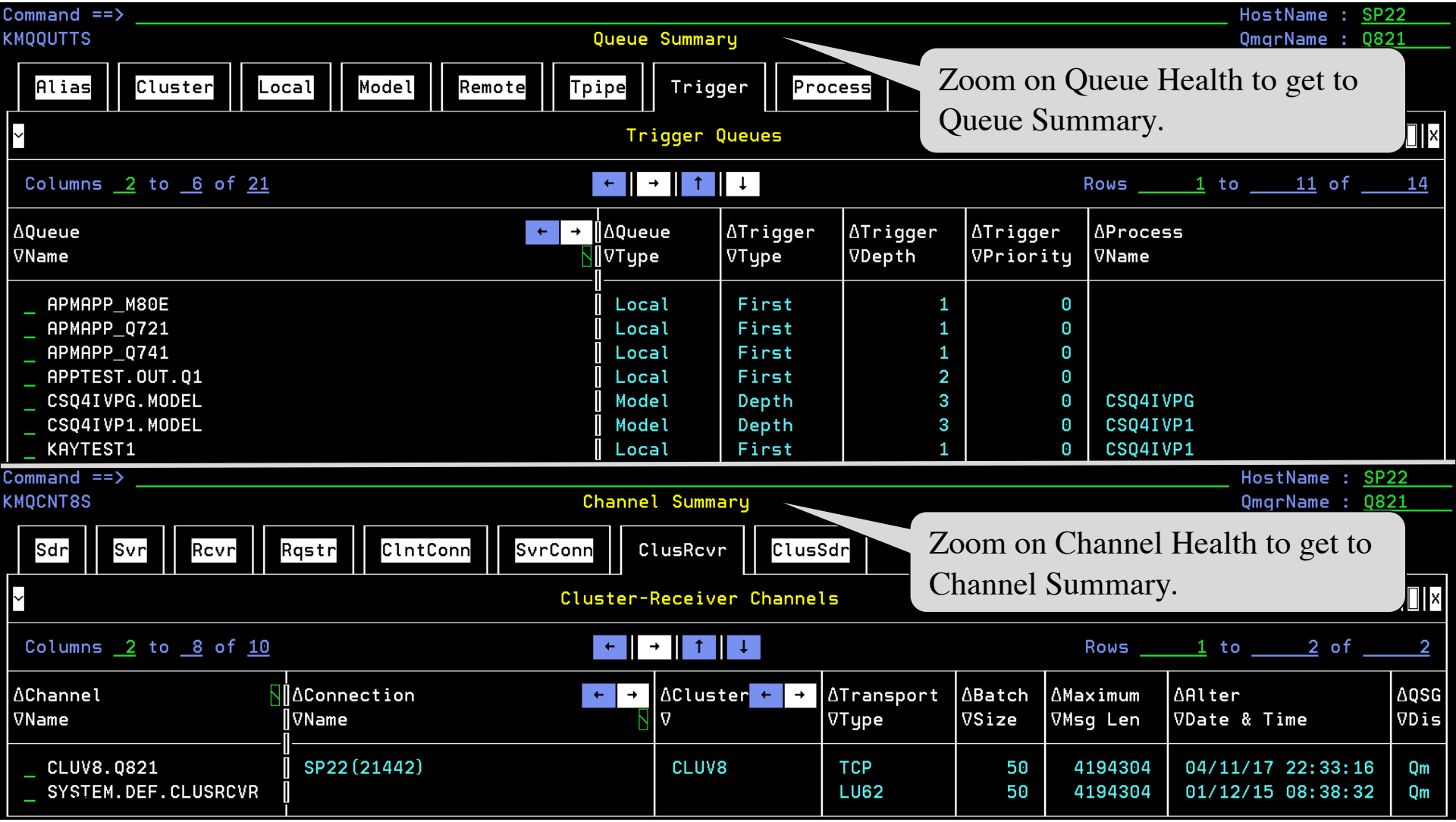


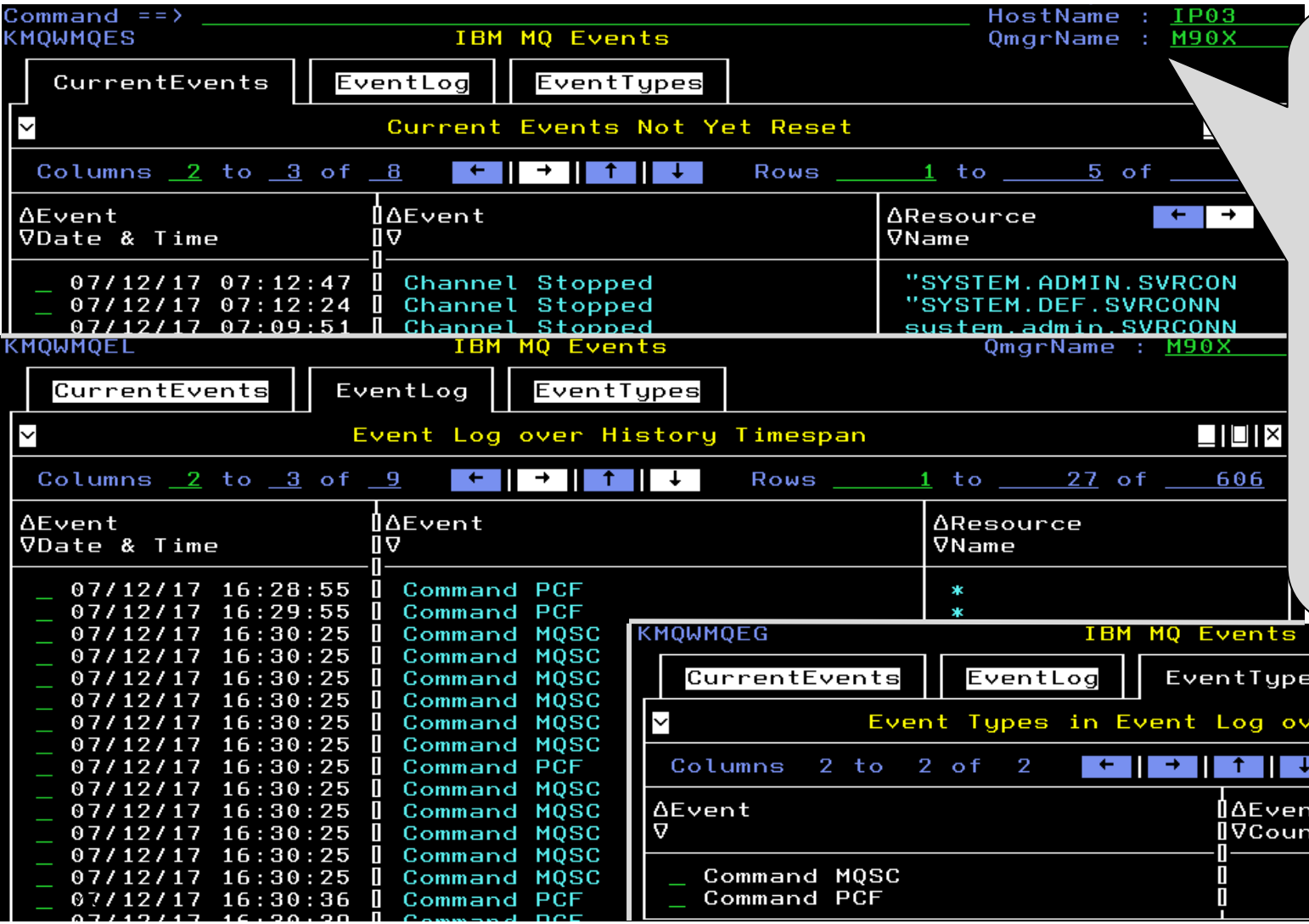
Tabs added to more easily display many MQ parameter settings for your z/OS queue manager

The Dead Letter Queue Messages option now prompts for which messages to display. Note that the Message Descriptor List option also has the same prompt.

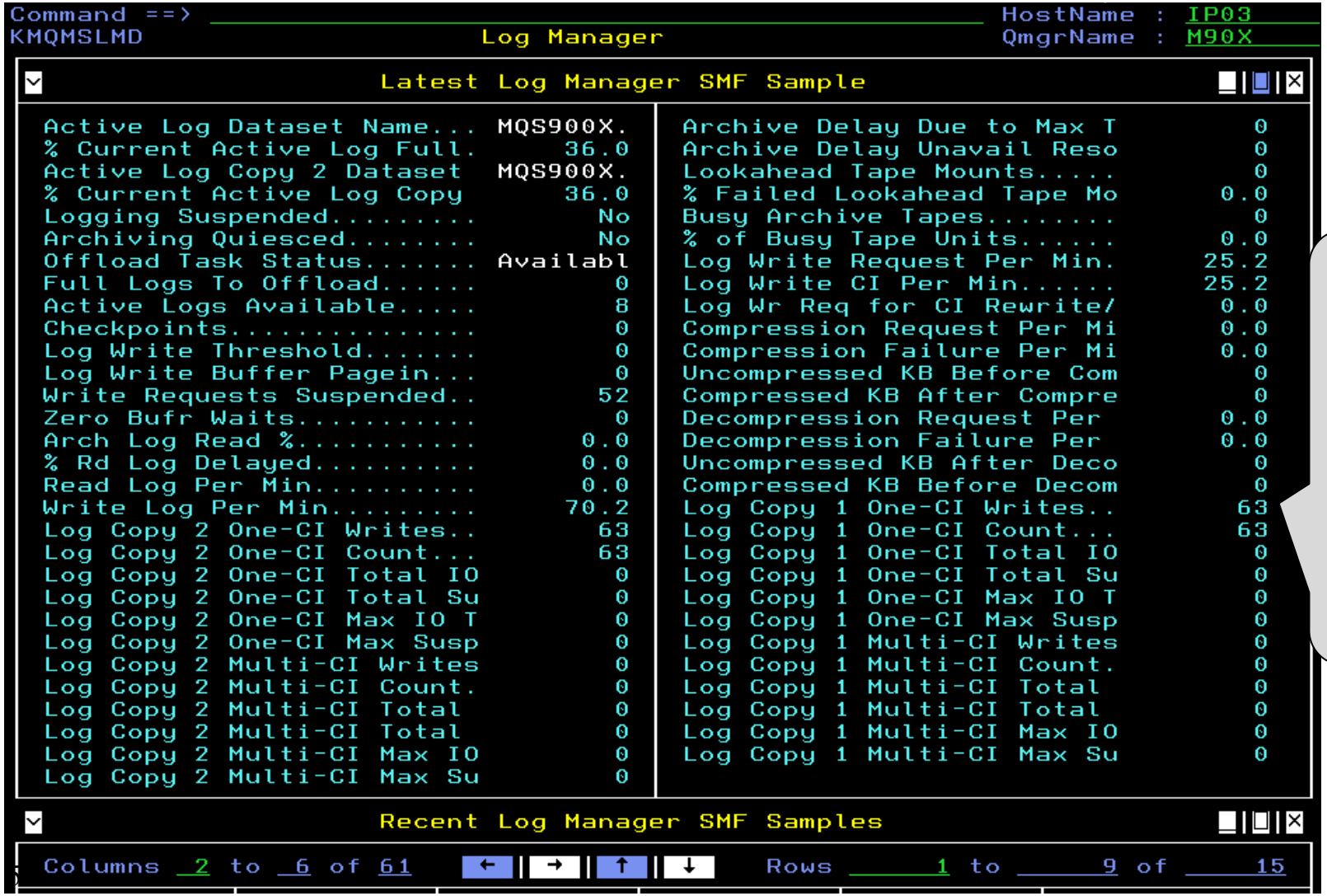


The header clarifies which option was used. Note the DLQ reason code is easier to read now.


Command ==>
HostName : SP22
KMQQUTTS
Queue Summary
QmgrName : Q821
Alias
Cluster
Local
Model
Remote
Tpipe
Trigger
Process
Zoom on Queue Health to get to Queue Summary.
Trigger Queues
Columns 2 to 6 of 21
Rows 1 to 11 of 14
ΔQueue ∇Name
ΔQueue ∇Type
ΔTrigger ∇Type
ΔTrigger ∇Depth
ΔTrigger ∇Priority
ΔProcess ∇Name
APMAPP_M80E Local First 1 0
APMAPP_Q721 Local First 1 0
APMAPP_Q741 Local First 1 0
APPTEST.OUT.Q1 Local First 2 0
CSQ4IVPG.MODEL Model Depth 3 0 CSQ4IVPG
CSQ4IVP1.MODEL Model Depth 3 0 CSQ4IVP1
KAYTEST1 Local First 1 0 CSQ4IVP1
Command ==>
HostName : SP22
KMQCNT8S
Channel Summary
QmgrName : Q821
Sdr
Svr
Rcvr
Rqstr
ClntConn
SvrConn
ClusRcvr
ClusSdr
Zoom on Channel Health to get to Channel Summary.
Cluster-Receiver Channels
Columns 2 to 8 of 10
Rows 1 to 2 of 2
ΔChannel ∇Name
ΔConnection ∇Name
ΔCluster ∇
ΔTransport ∇Type
ΔBatch ∇Size
ΔMaximum ∇Msg Len
ΔAlter ∇Date & Time
ΔQSG ∇Dis
CLUV8.Q821 SP22(21442) CLUV8 TCP 50 4194304 04/11/17 22:33:16 Qm
SYSTEM.DEF.CLUSRCVR LU62 50 4194304 01/12/15 08:38:32 Qm

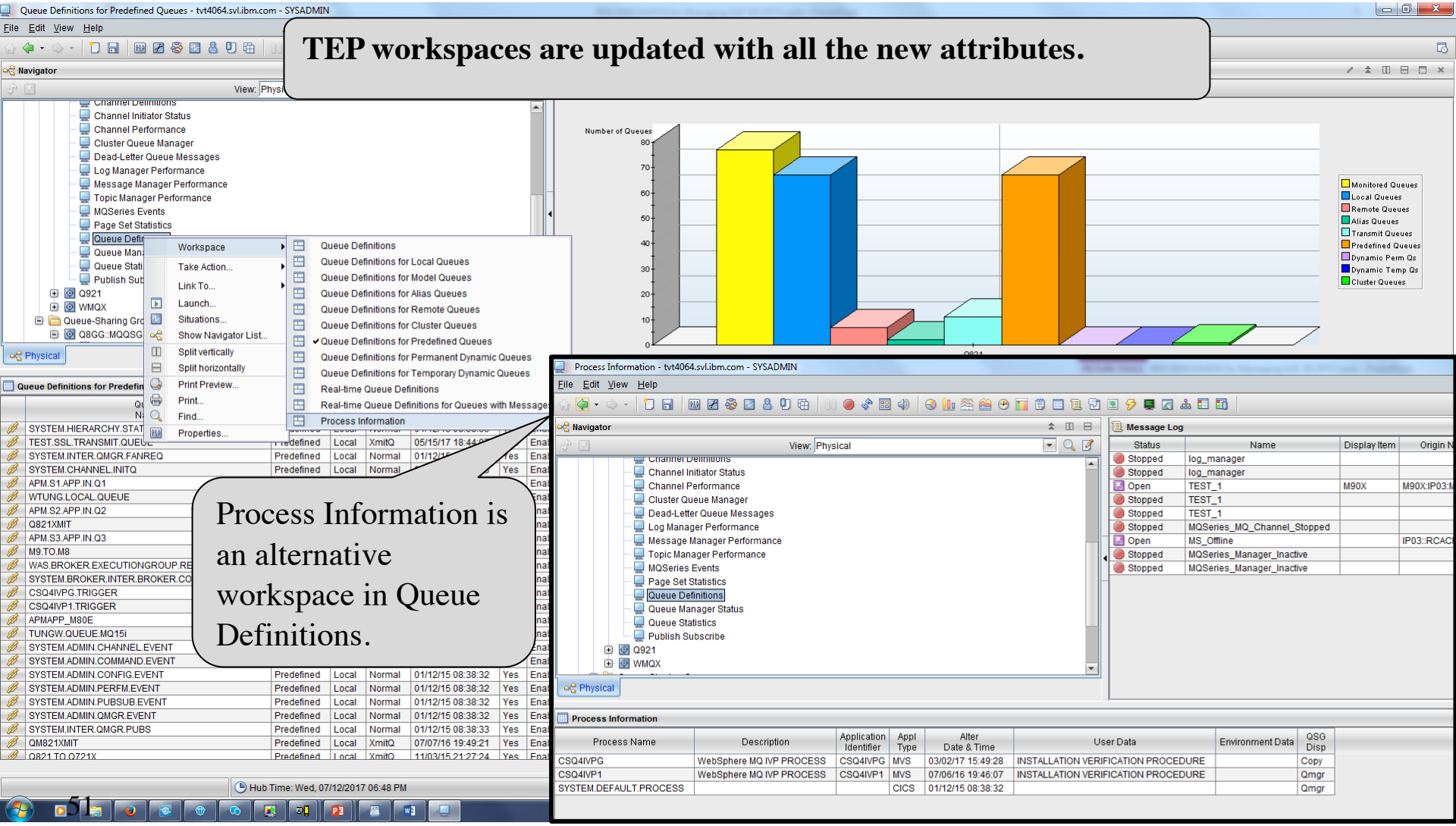


MQ Events workspace is improved with tabs. EventLog tab uses history timespan setting to determine which events to display, and EventTypes tab lists the number of events per event type in log.

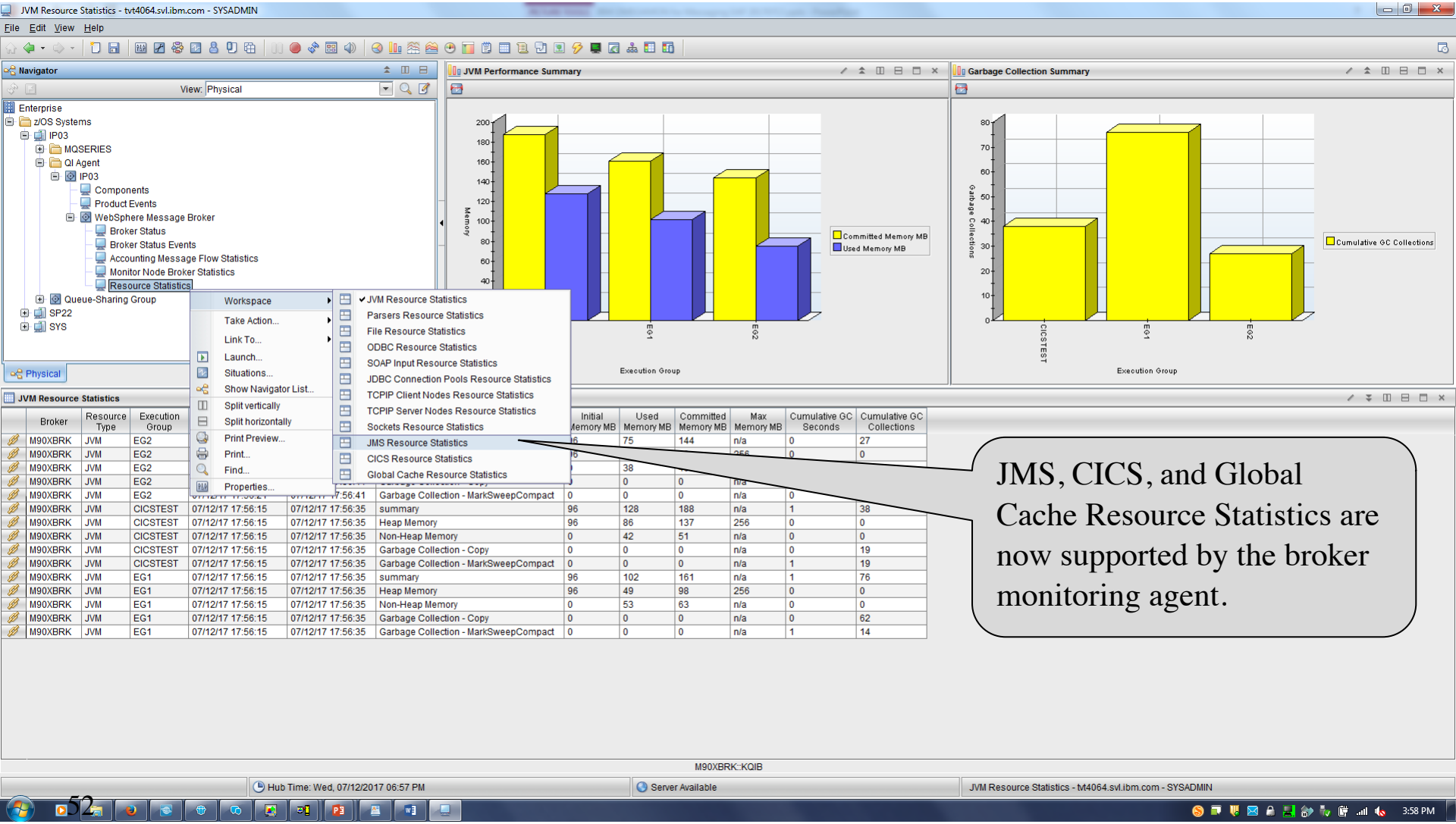


Several more statistics attributes are available for the Log Manager.

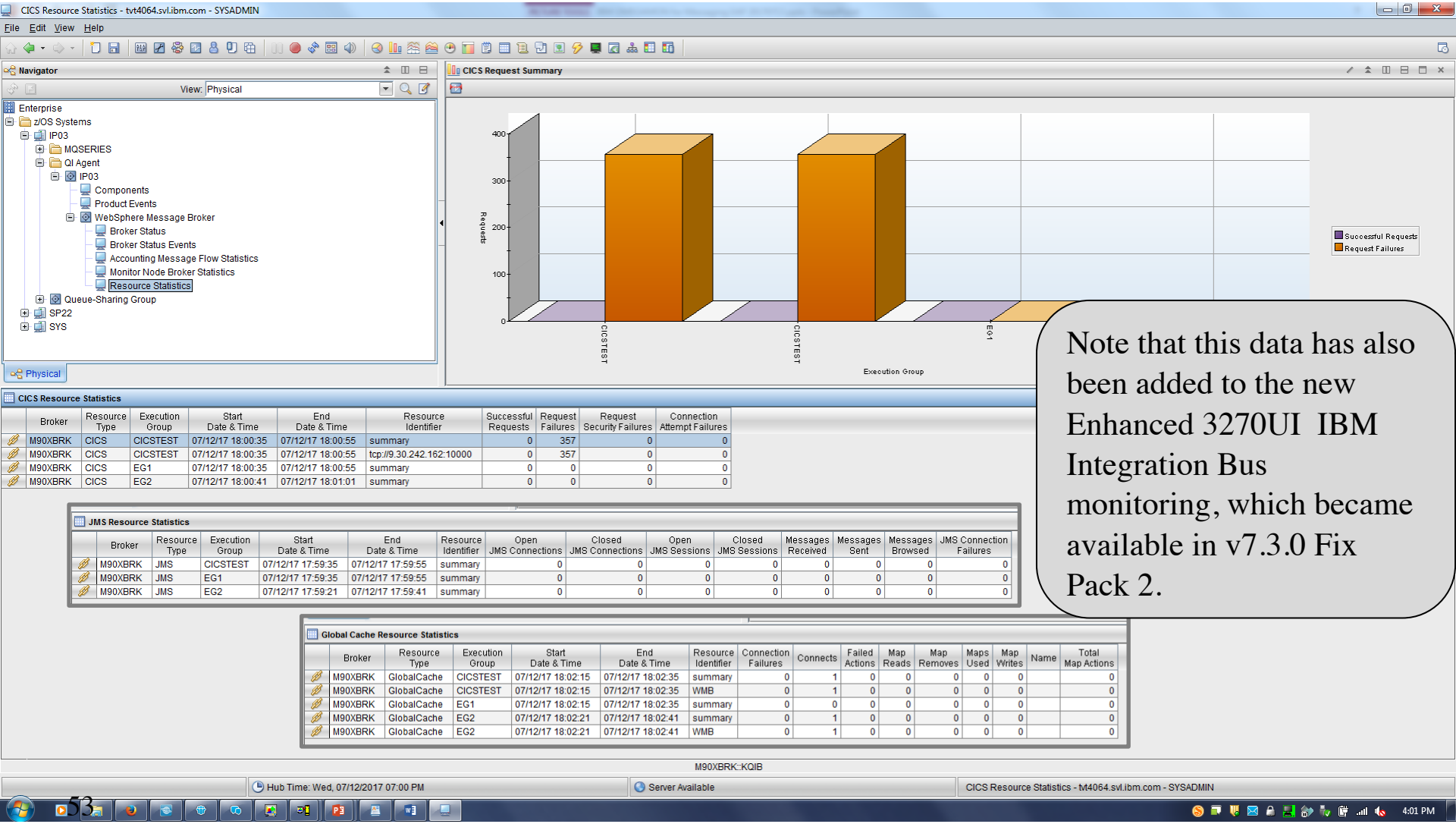
TEP workspaces are updated with all the new attributes.



Process Information is an alternative workspace in Queue Definitions.



JMS, CICS, and Global Cache Resource Statistics are now supported by the broker monitoring agent.



Note that this data has also been added to the new Enhanced 3270UI IBM Integration Bus monitoring, which became available in v7.3.0 Fix Pack 2.

Questions & Answers