



IBM Software Group

CICS Business Event Publisher for MQSeries V1.2



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Basic Assumptions

- There is still a lot of important data and applications residing on mainframe systems
- Companies want to “extend” legacy apps...
 - quickly
 - without changes to existing applications
 - with minimal changes
 - with existing skills

What is CICS BEP V1.2?

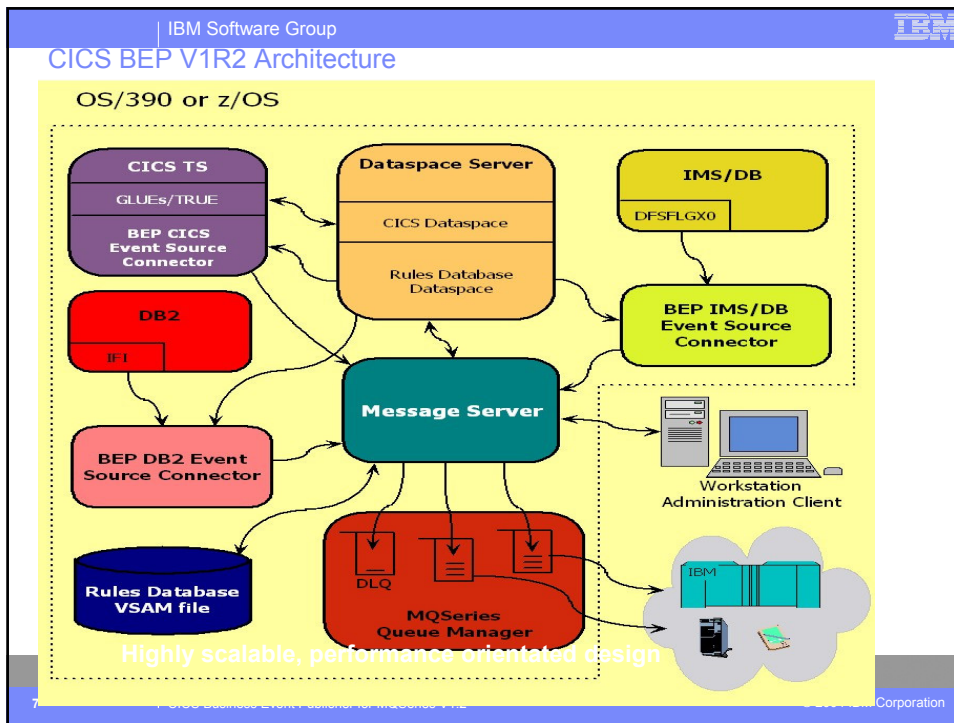
- Tool to easily ‘extend’ legacy applications and data
- Detects CICS, IMS and DB2 events on OS/390 or z/OS
 - Creates messages from events and associated information
 - Based on user-specified message content rules
- Creates MQPUT messages for MQSeries queue
 - Based on user-specified Queue names, MQPUT options

What is CICS BEP V1.2?

- Provides easy to use GUI for selection and rules creation
- No change to existing application programs
- Provides for real time action and results
- Provides for a low cost, low risk integration strategy

CICS Business Event Publisher Events

- **Multiple Events monitored**
- **CICS – V1.1**
 - VSAM File Control
 - Temporary Storage
 - Transient Data
 - Interval Control start
 - Program control (LINK) request
- **IMS – IMS/DB database events – V1.2**
 - Add/update/delete for IMS databases
 - Most database formats supported, including IMS Fastpath from all sources (not just CICS)
- **DB2 – database events - V1.2**
 - Insert/update/delete for DB2 tables
 - from all sources (not just CICS)



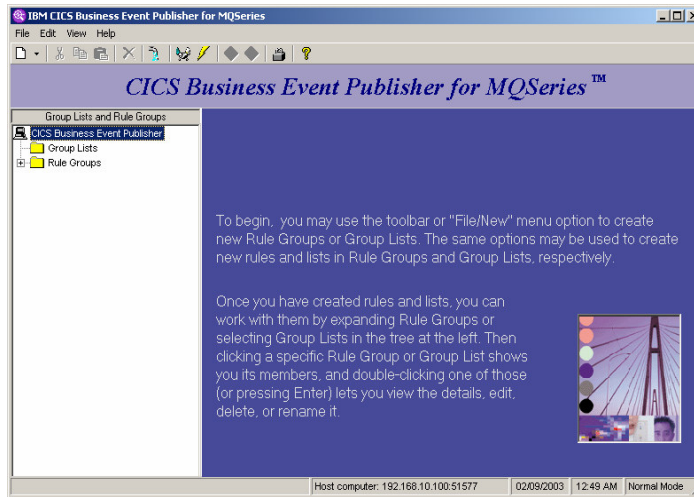
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Workstation Client (GUI) Introduction

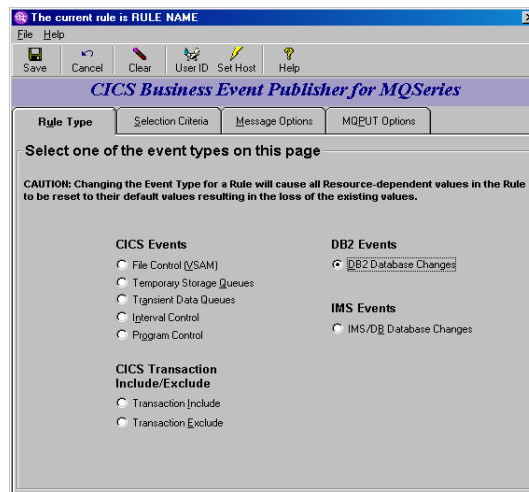
- **How to Create Rules**
- **Rules Selection Criteria**
- **Message Options**

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Workstation Client



Workstation Client



Workstation Client: File control sample

The current rule is NEW ORDER

File Help

Save Cancel Clear UserID Set Host Help

CICS Business Event Publisher for MQSeries™

Rule Type Selection Criteria MQPUT Options Message Options Return Options

File Name: ORDRFILE

Enter Selection Criteria

Selection Criteria Enabled

All fields below are case sensitive

Select by Transaction ID

Include ORDA

Exclude

Select by User ID

Include

Exclude

Select by Terminal ID

Include

Exclude

Select by APPLID

Include

Exclude

Advanced Selection Criteria

Intercept These Request Types

WRITE

REWRITE

READ

READ With Update

STARTBR

RESETBR

READNEXT

READNEXT With Update

READPREV

READPREV With Update

ENDBR

DELETE

UNLOCK

Workstation Client: File control sample

Advanced Selection Criteria for NEW ORDER

Resource Name: ORDRFILE Resource Type: File Control (VSAM)

Current Selection Criteria

And/Or	Field Name/Type	Index	Offset	Length	OP	Compare to
	ITEM-ON-HAND	1		4	Eq	0

Move Up Move Down Remove and Edit Message Field Remove from List

Datamap Fields

Level	Field name	Occu...	Type	Picture	Usage	Length	Datamap Name
02	ORDER-ITEMS	10	Group		Display	54	ORDRFILE
03	ITEM-NUMBER	10	Numeric: zoned	S(8)	Display	8	
03	ITEM-QUANTITY	10	Numeric: binary	S(4)	Binary (CO...	2	
03	ITEM-ON-HAND	10	Numeric: binary	S(8)	Binary (CO...	4	
03	ITEM-PRICE	10	Numeric: zoned	S(6)	Display	8	
03	ITEM-COMMENTS	10	Alphanumeric	V(32)	Display	32	

Download Datamap Remove Datamap from Criteria List

AND Field Name Length Index Operator Compare to Data Type Compare to

OR

Fields by Offset/Length

AND Offset Length Operator Compare to Data Type Compare to

OR

0

Create a message on these conditions: Conditions Selected 1

NORMAL

ERROR

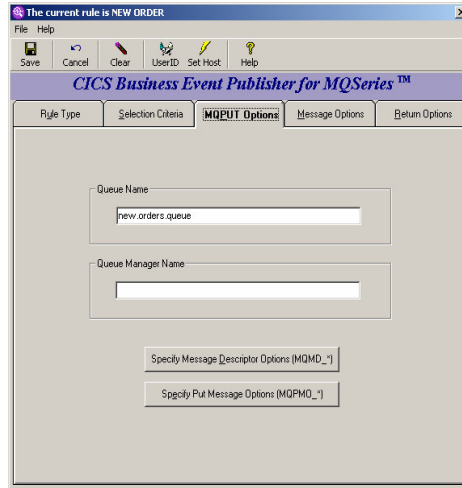
CHANGED

Action: Create Message

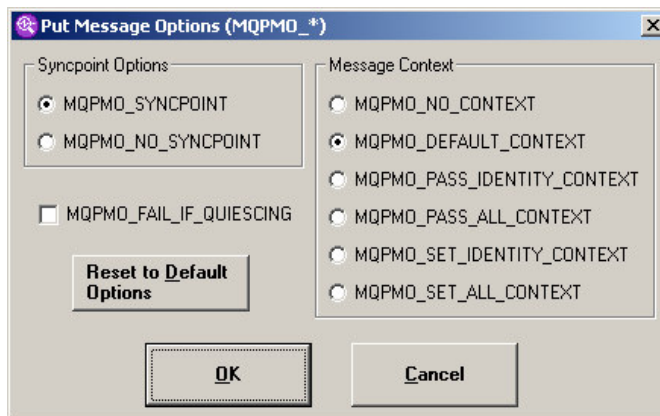
Enable Complex Selection Criteria

OK Cancel

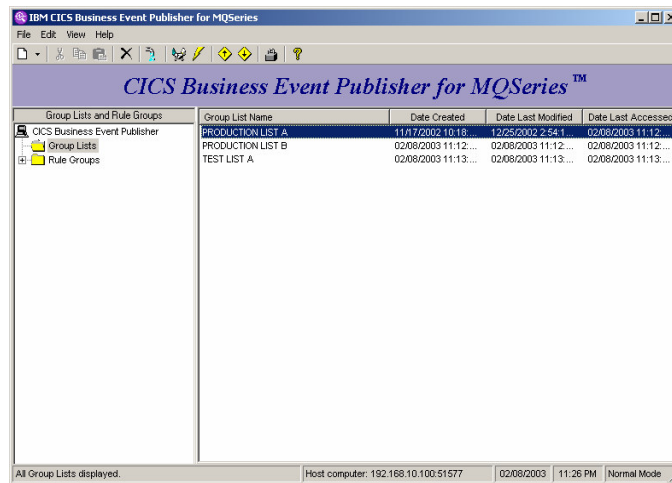
Workstation Client: File control sample



Workstation Client: File control sample



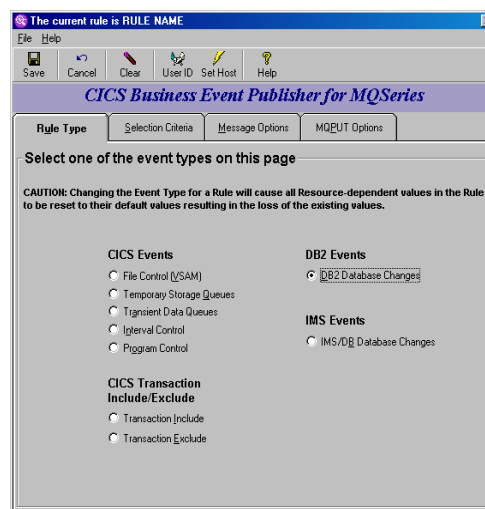
Workstation Client: File control sample



Workstation Client: DB2 Example

Rule Type Tab

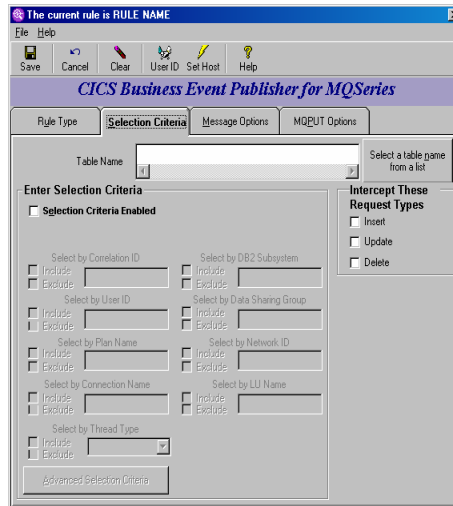
- CICS, DB2 and IMS categories
- For DB2;
User should select DB2 Database Changes
Then click on Selection Criteria tab



Workstation Client: DB2 Example

Selection Criteria Tab

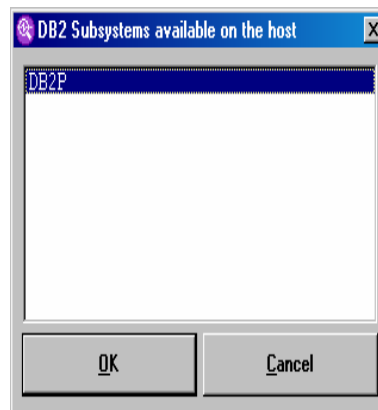
- Selection Criteria is DB2 specific
- Can target INSERT, UPDATE and/or DELETE statements
- User may enter table name or click on Select a table name from a list



Workstation Client: DB2 Example

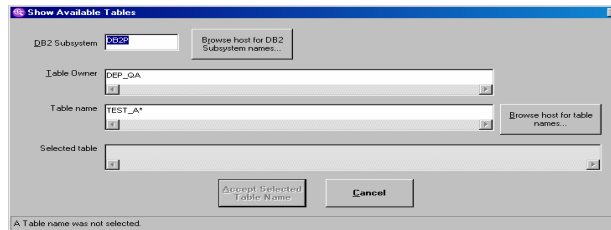
DB2 subsystems available on host

- This presents the available DB2 subsystems which are being monitored by an Event Processor
- Select the desired entry and click OK



Workstation Client: DB2 Example

Show Available Tables (cont.)

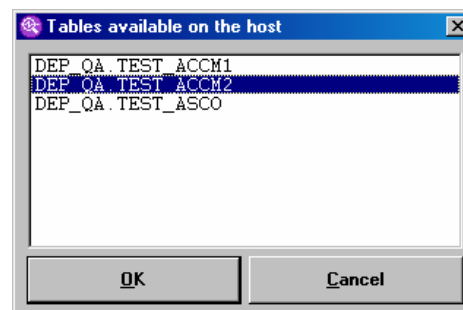


- Owner ID and table name accepts wildcards
 - ? for single character match
 - * for trailing character match
- Click on Browse host for table names

Workstation Client: DB2 Example

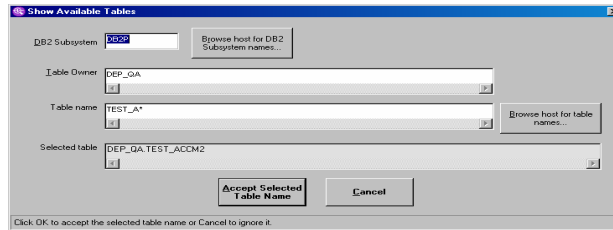
Tables available on the host

- This lists the tables which match the specified pattern
 - Limited to first 200 matches
- Select the desired table name and click OK



Workstation Client: DB2 Example

Show Available Tables (cont.)

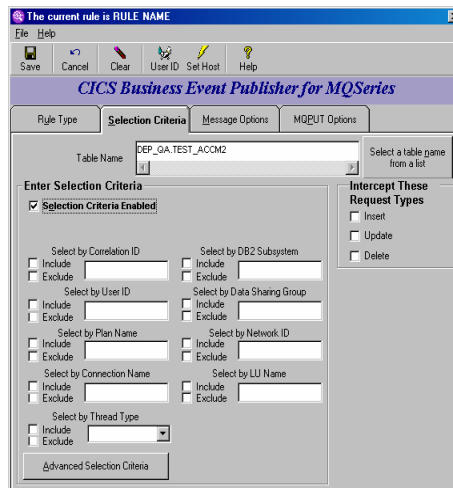


- Pattern process can be repeated until desired table is found
- Once the desired table name has been selected, simply click Accept Selected Table Name

Workstation Client: DB2 Example

Selection Criteria Tab (cont.)

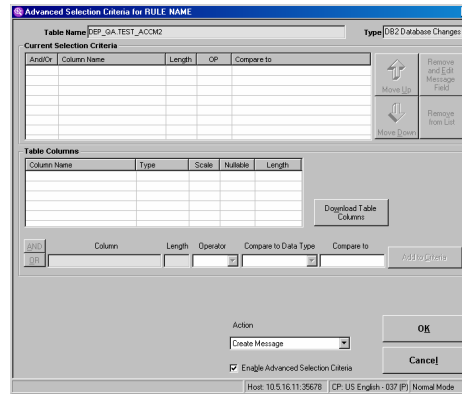
- Selecting Selection Criteria Enabled allows specification of DB2 specific qualifiers
 Include/Exclude is the same as for CICS
 ? and * are valid wildcards
- Click Advanced Selection Criteria to specify column level checks



Workstation Client: DB2 Example

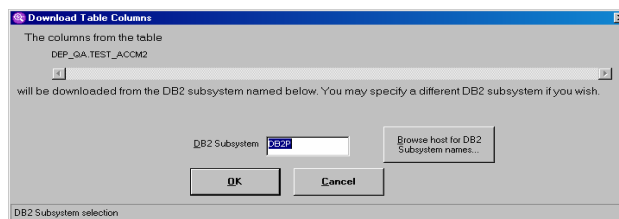
Advanced Selection Criteria

- Looks similar to CICS
- Data maps replaced by columns for selected table
- Click on Download Table Columns to populate the column list



Workstation Client: DB2 Example

Download Table Columns

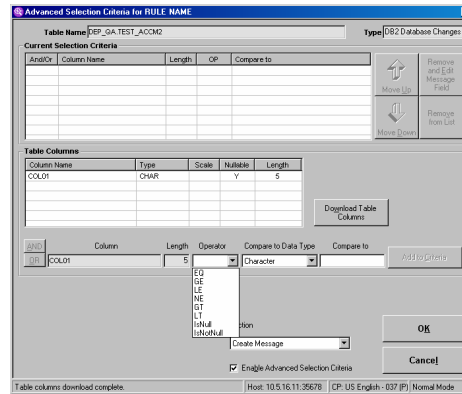


- This allows the selection of the DB2 from which the column list is to be obtained
- The rule is not DB2 specific unless specified as such in the Selection Criteria
- Click OK to use the indicated DB2 subsystem

Workstation Client: DB2 Example

Advanced Selection Criteria (cont.)

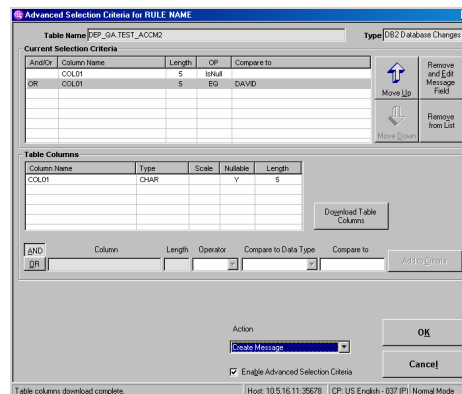
- Selecting a column allows an entry to be built for that column
- Note the additional DB2 specific operators
 - IsNull
 - IsNotNull
 Only allowed if the column has a Y in the Nullable column



Workstation Client: DB2 Example

Advanced Selection Criteria (cont.)

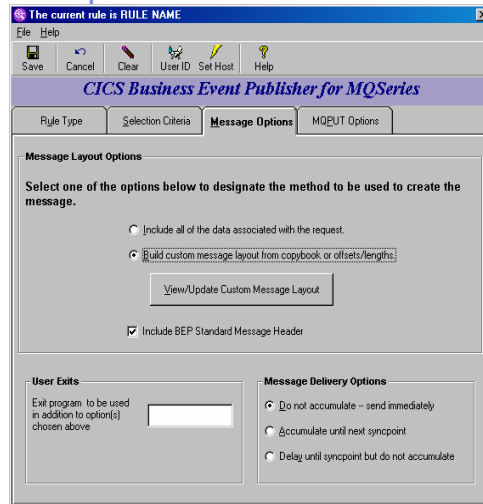
- This definition will create a message when COL01 is NULL or when COL01 is equal to 'DAVID'
- Click OK when finished with Advanced Selection Criteria



Workstation Client: DB2 Example

Message Options Tab

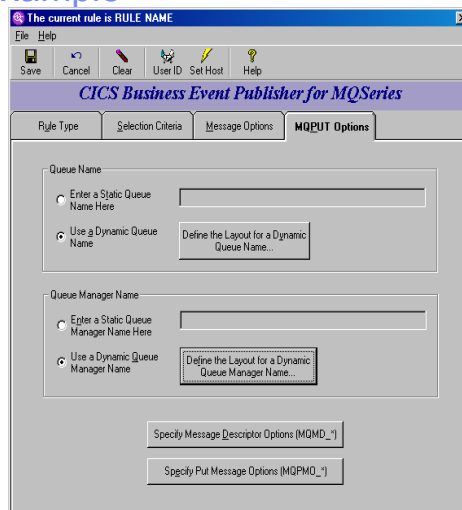
- Custom Message Layout dialogs use DB2 columns like the Advanced Selection Criteria does
 - NULLABLE columns have extra 1 byte prefix
 - VARCHAR columns will effect the length of the output message
- DB2 numeric values are converted to 'normal' numeric forms



Workstation Client: DB2 Example

MQPUT Options Tab

- Both dynamic queue dialogs use DB2 columns like the Advanced Selection Criteria does



Why would customers use CICS BEP?

To re-use legacy applications and data

To drive new business processes or utilize new technology

e.g.

- **WebSphere MQ/BI**
- **Application Integration**
- **Mobile**

All quickly and safely

All without change to existing application code

For inherent cost savings over application changes

CICS BEP – Possible Uses

- Event notification – new customer added, account = zero
- Activity Audits – who, what, when is accessing the file?
- Error notification – create message when error detected
- Threshold notification – stock running low
- Automation – removal of manual or latency in business process
- Data source for Message Brokers
- Data transfer
- External logging or notification

CICS BEP Customer Information

Target Customers

- CICS, IMS or DB2 customers with MQSeries or are planning to install MQSeries
- CICS, IMS or DB2 Customers who want to extend use of existing applications or data

Installation

- SMP/E Install
- Workstation Client download from mainframe

Documentation

- CICS BEP User Guide
- CICS BEP Getting Started Manual
- Online help as part of the product
- Web address: www.ibm.com/cics/bepub

Minimum Software Requirements

- OS/390 V2.1 or z/OS
- CICS TS 1.3
- DB2 V6.1
- IMS V7.1
- MQSeries V2.1 or 5.2
- Win 2000, NT, XP

Summary

- **CICS BEP provides a new approach to allow legacy applications and data to participate in new environments**
 - Allows legacy apps to drive new business processes quickly and without application changes
 - Allows legacy applications to be easily integrated into new application
 - Low risk strategy
- **Makes it easier for customers to extract more value from existing applications and data**
- **Fills the “hole” between legacy apps and message brokers/integrators**
- **Highly scalable, performance oriented design**
- **Provides real time action and results**
- **‘Point and Click’ GUI for rules and message creation**
- **CICS BEP detects the specific event and creates the message**
- **WebSphereMQ provides the link to new business processes and new technology**