

WebSphere Data Interchange V3.3

Common Base Event Handler for Common Event Handling

Version 1.2

Arjan van Vught
Software Services for WebSphere
Software Group, South West IOT
IBM Nederland B.V.

March 10, 2009

© Copyright International Business Machines Corporation 2009. All rights reserved.

Take Note!

Before using this report be sure to read the general information under "Notices".

Third Edition, March, 2009

This edition applies to Version 1.2 of *WebSphere Data Interchange V3.3 - Common Base Event Handler for Common Event Handling* and to all subsequent releases and modifications unless otherwise indicated in new editions.

© Copyright International Business Machines Corporation 2009. All rights reserved. Note to US Government Users – Documentation related to restricted rights – Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule contract with IBM Corp.

Table of Contents

| | |
|--|-----------|
| NOTICES..... | 4 |
| TRADEMARKS AND SERVICE MARKS..... | 4 |
| ACKNOWLEDGMENTS | 6 |
| SUMMARY OF AMENDMENTS..... | 7 |
| PREFACE..... | 8 |
| COMMON BASE EVENT | 9 |
| WEBSPHERE MQ | 9 |
| WEBSPHERE DATA INTERCHANGE..... | 9 |
| TIVOLI MONITORING..... | 9 |
| CONFIGURATIONS OF THE COMMON BASE EVENT HANDLER..... | 10 |
| SUPPORTED SERVER PLATFORMS..... | 10 |
| <i>WebSphere Message Queues</i> | 10 |
| <i>Logging and Tracing</i> | 10 |
| <i>CBE Event Handler Plug-in wdi.properties file</i> | 10 |
| WEBSPHERE DATA INTERCHANGE CLIENT CONFIGURATION | 12 |
| <i>Creating the Queue Profile</i> | 12 |
| <i>Creating the Network Profile</i> | 12 |
| <i>Creating the Mailbox Profile</i> | 12 |
| <i>Creating the Event Destination Profile</i> | 13 |
| WEBSPHERE DATA INTERCHANGE SERVER CONFIGURATION FOR WINDOWS | 14 |
| <i>WebSphere MQ objects</i> | 14 |
| <i>Sample wdirunceh.bat</i> | 15 |
| WEBSPHERE DATA INTERCHANGE SERVER CONFIGURATION FOR AIX..... | 16 |
| <i>WebSphere MQ objects</i> | 16 |
| <i>Sample wdirunceh.sh</i> | 17 |
| CBE EVENT STRUCTURE FOR WEBSPHERE DATA INTERCHANGE MESSAGE EVENTS AND BUSINESS DOCUMENT EVENTS..... | 18 |
| THE COMMONBASEEVENT ELEMENT | 18 |
| THE SOURCECOMPONENTID ELEMENT | 19 |
| THE SITUATION ELEMENT..... | 19 |
| THE EXTENDEDDATAELEMENTS ELEMENT | 19 |
| BUSINESS PROCESS INTEGRATION WITH WEBSPHERE BUSINESS MONITOR V6..... | 22 |
| SYSTEM MANAGEMENT INTEGRATION WITH IBM TIVOLI MONITORING V6..... | 23 |

Notices

The following paragraph does not apply in any country where such provisions are inconsistent with local law.

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore this statement may not apply to you.

References in this publication to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates.

Any reference to an IBM licensed program or other IBM product in this publication is not intended to state or imply that only IBM's program or other product may be used. Any functionally equivalent program that does not infringe any of the intellectual property rights may be used instead of the IBM product.

Evaluation and verification of operation in conjunction with other products, except those expressly designated by IBM, is the user's responsibility.

IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to the IBM Director of Licensing, IBM Corporation, 500 Columbus Avenue, Thornwood, New York 10594, USA.

The information contained in this document has not been submitted to any formal IBM test and is distributed AS-IS. The use of the information or the implementation of any of these techniques is a customer responsibility and depends on the customer's ability to evaluate and integrate them into the customer's operational environment. While IBM has reviewed each item for accuracy in a specific situation, there is no guarantee that the same or similar results will be obtained elsewhere. Customers attempting to adapt these techniques to their own environments do so at their own risk.

Trademarks and service marks

The following terms, used in this publication, are trademarks of the IBM Corporation in the United States or other countries or both:

- IBM
- WebSphere
- WebSphere Data Interchange
- IBM WebSphere
- IBM WebSphere MQ
- Z/OS
- WMQ
- AIX

The following terms are trademarks of other companies:

- Microsoft Microsoft, Windows 2003 Server

Acknowledgments

The author would like to thank David Hixon of the SWG US and Jaco Wisse of the ISSW NL for their assistance.

Summary of Amendments

| Date | Changes |
|---------------|--|
| 18 July 2007 | Initial release |
| 8 May 2008 | Updated for Server Fix Pack 1 |
| 10 March 2009 | Tested with WebSphere MQ V7 Tested with IBM JRE 1.5.0 and IBM JRE 1.6.0 Minor code changes |

Preface

WebSphere Data Interchange generates and stores events as a way of monitoring the activity inside its system. WebSphere Data Interchange events are published to an external queue from which the CBE plug-in handler fetches them. The CBE plug-in handler converts the WebSphere Data Interchange events to CBE messages and sends them to another external queue, where they can be fetched by other processes, such as monitoring applications.

The CBE plug-in handler has two different types of events: document events and message events. Document events are events directly associated with a business document. Message events are not necessarily related to a business document, although one or more message events can be associated with a business document.

Users can simply navigate the events using Common Base Event Browser of WebSphere Process Server or use IBM WebSphere Business Monitor for business activity monitoring (End-to-End with dashboards)

Using the “Common Base Event (CBE) Data Provider (DP) for the ITM V6 Universal Agent” the message events generated by WebSphere Data Interchange can be collected by the Universal Agent. Once the data has been collected by the Universal Agent, it is easy to modify the default queries and Views to create Workspaces that contain information customized to fulfill a particular user need.

Bibliography

Common Base Event

- developerWorks: [Standardize messages with the Common Base Event model](#)
- The specifications on the Common Base Event model are provided in this Eclipse.org whitepaper, "[Canonical Situation Data Format: The Common Base Event V1.0.1](#)" (2004). (PDF format)

WebSphere MQ

- [WebSphere MQ Information Center](#)

WebSphere Data Interchange

- [WebSphere Data Interchange User's Guide, SC34-6215-01](#)
- [WebSphere Data Interchange Messages and Codes, SC34-6216-01](#)
- [WebSphere Data Interchange Programmer's Reference, SC34-6217-01](#)
- developerWorks: [Installation companion for WebSphere Data Interchange V3.3 on AIX](#)
- developerWorks: [Integrating WebSphere Data Interchange V3.3 with WebSphere Partner Gateway V6.1](#)

Tivoli Monitoring

- [Tivoli Monitoring](#)
- OPAL: [Common Base Event \(CBE\) Data Provider \(DP\) for the ITM V6 Universal Agent](#)
- Redbook: [Getting Started with IBM Tivoli Monitoring 6.1 on Distributed Environments](#)

Configurations of the Common Base Event Handler

The following files for Java API to WebSphere Data Interchange Common Event Handling are required:

- edicevh.jar - WebSphere Data Interchange Common Event Handling Java API
- cbehandler.jar - WebSphere Data Interchange CBE handler
- wdi.properties - default WebSphere Data Interchange Common Event Handling Java API properties

The run time configuration of the Java API and CBE Handler is done through `wdi.properties`.

The CBE plug-in handler requires the additional jars from <http://www.eclipse.org/tptp/> and <http://logging.apache.org/log4j/docs/download.html>:

- hlcore.jar - Common Base Event's Hyades Logging Core dependency
- hlcbe101.jar - Common Base Event implementation
- ecore.jar - Common Base Event's Eclipse Modeling Framework (EMF) dependency
- common.jar - Common Base Event's Eclipse Modeling Framework (EMF) dependency
- log4j-1.2.12.tar – Logging Services

Supported server platforms

The handler contained in this SupportPac have been written for and tested in a 32-bit Java environment on Windows 2003 Server and AIX V5 using Server Fix Pack 1 (SFP-1) with APAR IC56434.

WebSphere Message Queues

WebSphere MQ is used as the session source. The `wdi.properties` file must be configured to use the queue `wdiSource`.

```
wdiSource=com.ibm.edi.wdиеvents.WDIQueue2Session
```

and the associated Q and Qmgr properties information for your installation must be set. For example:

```
#WDIQueue2Session properties
queueName=WDIEVENT
qmanagerName=WDI_QM
```

Logging and Tracing

Logging and tracing information for the CBE Handler is done through `log4j.properties`.

CBE Event Handler Plug-in `wdi.properties` file

The CBE Event Handler Plugin class is specified in the `wdi.properties` file by setting

```
wdiHandler=com.ibm.edi.wdиеvents.cbe.CbeHandler
```

Connectivity to the queue manager:

- Binding mode (default)

- **qmgr**= Default value is “” (default queue manager).
- Client mode
 - **qmgr**= Default value is default “” (default queue manager).
 - **hostname**= Default value is “”. Binding mode is used.
 - **port**= Default value is ‘1414’.
 - **channel**= Default value is “”.
- **queue**= Default value is ‘CBE.EVENTS’. Specifies the local queue for putting the CBE messages.

WebSphere Data Interchange Client configuration

Creating the Queue Profile

Create a Queue profile for WebSphere MQ queue WDIEVENT. The actual parameters specified in the Queue profile created are listed in Table 1 below.

Table 1 Queue profile for WDIEVENT

| WDIEVENT | |
|--------------------|----------|
| Queue Profile ID | WDIEVENT |
| Full Queue Name | WDIEVENT |
| Queue Manager Name | |
| Maximum Length | 99999999 |
| Destructive Reads | Checked |
| Syncpoint control | Checked |

Creating the Network Profile

Create a new Network Profile called WDIEVENT. The actual parameters specified for WDIEVENT are listed in Table 2 below:

Table 2 Network profile for WDIEVENT

| WDIEVENT | |
|-----------------------|-----------------|
| Network ID | WDIEVENT |
| Communication Routine | VANIMQ |
| Network Program | EDIMQSR |
| Network Parameters | SENDMQ=WDIEVENT |

Creating the Mailbox Profile

Create a Mailbox Profile for the WebSphere MQ queue used.

Table 3 Mailbox profile for WDIEVENT

| WDIEVENT | |
|-----------------|----------|
| Mailbox ID | WDIEVENT |
| Network ID | WDIEVENT |

Creating the Event Destination Profile

The Event Destination Profile property values can override all values in `wdi.properties` except the `wdiSource`, the source's associated properties, and the plug-in handler. This is because the CEH Java API needs to know how to connect to the source of routed WebSphere Data Interchange XML event files prior to receiving the Destination Profile data that arrives through the connection to the `wdiSource`.

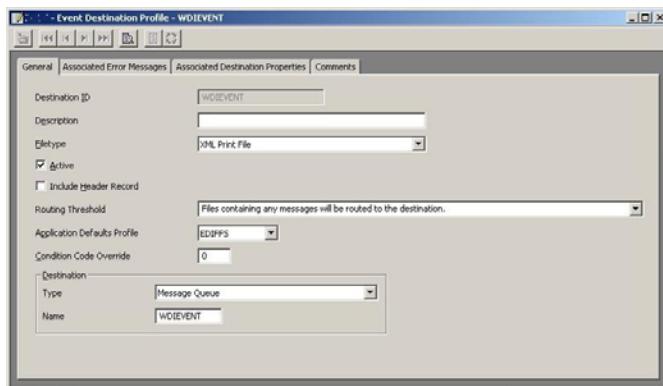


Figure 1 Event Destination Profile

WebSphere Data Interchange Server configuration for Windows

Copy the edicevh.jar file to the advanced adapter directory using the command:

```
copy D:\IBM\WDIServer33\samples\edicevh.jar  
D:\IBM\WDIServer33\runtime\AdvAdapterWMQ
```

Copy or ftp the following jar files into D:\IBM\WDIServer33\runtime\AdvAdapterWMQ:

```
CbeHandler.jar  
common.jar  
ecore.jar  
hlcbe101.jar  
hlcore.jar  
log4j-1.2.12.jar
```

For Windows the CLASSPATH would need the following:

```
@SET INSTALL_DRIVE=D:  
  
@SET WMQ_HOME=%INSTALL_DRIVE%\IBM\WMQ  
  
@SET WDI=%INSTALL_DRIVE%\IBM\WDIServer33\runtime\AdvAdapterWMQ  
  
@SET LOG4J=%INSTALL_DRIVE%\IBM\WDIServer33\runtime\AdvAdapterWMQ  
@SET CBEJ=%INSTALL_DRIVE%\IBM\WDIServer33\runtime\AdvAdapterWMQ  
  
@REM LOG4J jar  
@SET CLASSPATH=%LOG4J%\log4j-1.2.12.jar  
  
@REM CBE jars  
@SET CLASSPATH=%CLASSPATH%;%CBEJ%\hlcore.jar;%CBEJ%\hlcbe101.jar;%CBEJ%\ecore.jar;%CBEJ%\common.jar  
  
@REM WebSphere MQ jar  
@SET CLASSPATH=%CLASSPATH%;%MQ_JAVA_LIB_PATH%\com.ibm.mq.jar;  
  
@REM WDI event & CBE handler jars  
@SET CLASSPATH=.;%WDI%\edicevh.jar;%WDI%\CbeHandler.jar;%WDI%\wdi.properties;%CLASSPATH%
```

WebSphere MQ objects

The following WebSphere MQ objects are needed for Windows:

```
DEFINE QLOCAL('WDIEVENT')      +  
    TRIGGER          +  
    TRIGTYPE(FIRST) +  
    PROCESS('WDI.CBE.PROC') +  
    INITQ('SYSTEM.DEFAULT.INITIATION.QUEUE')  
  
DEFINE PROCESS('WDI.CBE.PROC') +  
    APPLICID('D:\IBM\WDIServer33\runtime\AdvAdapterWMQ\wdirunceh.bat')  
  
DEFINE QLOCAL('CBE.EVENTS')
```

Sample wdirunceh.bat

The following table shows the `wdirunceh.bat` batch script file for starting the CBE plug-in handler from the command line or for starting the CBE plug-in handler from a WebSphere MQ trigger process.

Table 4 Sample wdirunceh.bat

```
@SET INSTALL_DRIVE=D:  
  
@REM SET JAVA_HOME=%INSTALL_DRIVE%\IBM\Java142\jre  
@SET JAVA_HOME=%INSTALL_DRIVE%\IBM\Java50\jre  
@REM SET JAVA_HOME=%INSTALL_DRIVE%\IBM\Java60\jre  
  
@SET WMQ_HOME=%INSTALL_DRIVE%\IBM\WMQ  
  
@SET WDI=%INSTALL_DRIVE%\IBM\WDIServer33\runtime\AdvAdapterWMQ  
  
@SET LOG4J=%INSTALL_DRIVE%\IBM\WDIServer33\runtime\AdvAdapterWMQ  
@SET CBEJ=%INSTALL_DRIVE%\IBM\WDIServer33\runtime\AdvAdapterWMQ  
  
@SET  
PATH=%WMQ_HOME%\bin;%MQ_JAVA_LIB_PATH%;%JAVA_HOME%\bin;%WDI%\edicevh.jar;%WDI%\CbeHandler.jar;%WDI%\wdi.properties  
  
@REM LOG4J jar  
@SET CLASSPATH=%LOG4J%\log4j-1.2.12.jar  
  
@REM CBE jars  
@SET  
CLASSPATH=%CLASSPATH%;%CBEJ%\hlcore.jar;%CBEJ%\hlcbe101.jar;%CBEJ%\ecore.jar;%CBEJ%\common.jar  
  
@REM WebSphere MQ jar  
@SET CLASSPATH=%CLASSPATH%;%MQ_JAVA_LIB_PATH%\com.ibm.mq.jar;  
  
@REM WDI event & CBE handler jars  
@SET CLASSPATH=.\;%WDI%\edicevh.jar;%WDI%\CbeHandler.jar;%WDI%\wdi.properties;%CLASSPATH%  
  
@%INSTALL_DRIVE%  
@CD %WDI%  
  
java com.ibm.edi.wdievents.WDIEventBroker
```

WebSphere Data Interchange Server configuration for AIX

Copy the edicevh.jar file to the advanced adapter directory using the command:

```
cp /opt/IBM/WDIserver/V3.3/samples/edicevh.jar  
/var/wdi/V3.3/AdvAdapterWMQ
```

Copy or ftp the following jar files into /var/wdi/V3.3/AdvAdapterWMQ:

```
CbeHandler.jar  
common.jar  
ecore.jar  
hlcbel01.jar  
hlcore.jar  
log4j-1.2.12.jar
```

The CLASSPATH for the wdirunceh.sh shell script would need the following:

```
export WDI=/var/wdi/V3.3/AdvAdapterWMQ  
  
export LOG4J=/var/wdi/V3.3/AdvAdapterWMQ  
export CBEJ=/var/wdi/V3.3/AdvAdapterWMQ  
  
export MQJ=/usr/lpp/mqm/java  
  
export LIBPATH=$LIBPATH:$MQ_JAVA_LIB_PATH  
  
# LOG4J jar  
export CLASSPATH=$LOG4J/log4j-1.2.12.jar  
  
# CBE jars  
export CLASSPATH=$CLASSPATH:$CBEJ/hlcore.jar:$CBEJ/hlcbe101.jar:$CBEJ/ecore.jar:$CBEJ/common.jar  
  
# WebSphere MQ jars  
export CLASSPATH=$CLASSPATH:$MQJ/lib/com.ibm.mq.jar  
  
# WDI event & CBE handler jars  
export CLASSPATH=.::$WDI/edicevh.jar:$WDI/CbeHandler.jar:$WDI/wdi.properties:$CLASSPATH
```

WebSphere MQ objects

The following WebSphere MQ objects are needed:

```
DEFINE QLOCAL ('WDIEVENT')      +  
    TRIGGER          +  
    TRIGTYPE(FIRST) +  
    PROCESS('WDI.CBE.PROC') +  
    INITQ('SYSTEM.DEFAULT.INITIATION.QUEUE')  
  
DEFINE PROCESS ('WDI.CBE.PROC') +  
    APPLICID('/var/wdi/V3.3/AdvAdapterWMQ/wdirunceh.sh')  
  
DEFINE QLOCAL ('CBE.EVENTS')
```

Create the WMQ objects required using the commands:

```
cd /home/wdiadmin/mqsc  
runmqsc WDI_QM < CbeHandler.mqsc > CbeHandler.out
```

Sample wdirunceh.sh

The following table shows the `wdirunceh.sh` shell script file for starting the CBE plug-in handler from the AIX command line or for starting the CBE plug-in handler from a WebSphere MQ trigger process.

Table 5 Sample wdirunceh.sh

```
export WDI=/var/wdi/V3.3/AdvAdapterWMQ

export LOG4J=/var/wdi/V3.3/AdvAdapterWMQ
export CBEJ=/var/wdi/V3.3/AdvAdapterWMQ

export MQJ=/usr/lpp/mqm/java

export LIBPATH=$LIBPATH:$MQ_JAVA_LIB_PATH

# LOG4J jar
export CLASSPATH=$LOG4J/log4j-1.2.12.jar

# CBE jars
export CLASSPATH=$CLASSPATH:$CBEJ/hlcore.jar:$CBEJ/hlcbe101.jar:$CBEJ.ecore.jar:$CBEJ/common.jar

# WebSphere MQ jars
export CLASSPATH=$CLASSPATH:$MQJ/lib/com.ibm.mq.jar

# WDI event & CBE handler jars
export CLASSPATH=.:$WDI/edicevh.jar:$WDI/CbeHandler.jar:$WDI/wdi.properties:$CLASSPATH

cd $WDI

java com.ibm.edi.wdievents.WDIEventBroker
```

CBE event structure for WebSphere Data Interchange message events and business document events

This section provides an element by element description of the CBE elements supplied in the event documents generated by the CBE plug-in handler. It includes a detailed listing of the main elements' attributes. Some descriptions include a brief example of that element as it would appear in CBE XML for message and business document events, as appropriate.

The CommonBaseEvent element

This is the root element of all CBE event documents. The following table describes this element and its attributes.

Table 6 The CommonBaseEvent element

| Property name | Description |
|-----------------|---|
| Version | 1.0.1 The CBE plug-in handler supports this version of the schema |
| localInstanceId | Unique identifier in the CBE plug-in handler |
| creationTime | Creation time of the WDI event |
| severity | <ul style="list-style-type: none">• Message events:<ul style="list-style-type: none">◦ WDI '00' → INFORMATION; 10◦ WDI '04' → WARNING; 30◦ WDI '08' → CRITICAL; 50◦ WDI '12' → FATAL; 60◦ WDI other → Unknown; 0• Document events: business documents have no severity level, so this is set at 10 (Information) |
| priority | The CBE plug-in handler has no notion of priority. Always set at 50 |
| msg | <ul style="list-style-type: none">• Message event: description of this event• Business document event: not specified |
| extensionName | Used to distinguish message events from business document events v <ul style="list-style-type: none">• Message event: WDI_EVENT• Business document event: WDI_BUSINESSDOCUMENT |

The following sample illustrates the CommonBaseEvent element for a message event:

```
<CommonBaseEvent creationTime="2008-05-07T11:24:31" extensionName="WDI_EVENT"
localInstanceId="20080507132432602" msg="Command: PERFORM RECEIVE AND PROCESS WHERE REQID(XML_IN)
FILEID(XML_IN) CLEARFILE(Y)" priority="50" severity="10" version="1.0.1">
:
</CommonBaseEvent>
```

This is a sample of the CommonBaseEvent element for a business document event:

```
<CommonBaseEvent creationTime="2008-05-07T11:24:31" extensionName="WDI_BUSINESSDOCUMENT"
localInstanceId="20080507132433074" priority="50" severity="10" version="1.0.1">
:
</CommonBaseEvent>
```

The sourceComponentId element

This element specifies the component that generated the event. The CBE plug-in handler fills this in the normal CBE way.

The situation element

This element describes the type of situation that generated the event. The following table describes this element and its attributes.

Table 7 The situation element

| Property name | Description |
|----------------------|--------------------|
| categoryName | OtherSituation |
| reasoningScope | INTERNAL |

This is an example of the situation element for a message event:

```
<situation categoryName="OtherSituation">
    <situationType xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="OtherSituation" reasoningScope="INTERNAL">
        <wdi:faultType
xmlns:wdi="http://www.ibm.com/websphere/wdi/2007/v0.1/publicapi/eventdelivery" />
    </situationType>
</situation>
```

The extendedDataElements element

This element captures information not captured directly by the basic CBE structure. The following three tables describe this element, its attributes, and its specialized child elements, covering message event extended elements and business document event extended elements:

Table 8 The extendedDataElements element

| Property name | Description |
|----------------------|---|
| name | Used to distinguish message events from business document events <ul style="list-style-type: none">• Message event: WDI_EVENT• Business document event: WDI_BUSINESSDOCUMENT |
| type | The CBE plug-in handler sets this to noValue |
| children | One or more elements are created, depending on the type (message or business document) of event. Descriptions are in the tables below. |

Table 9 The business document event extended data elements

| Property name | Description |
|----------------------|-------------------------------------|
| WDI_DOCID | WDIDocInformation.getDocId() |
| WDI_DICTIONARY | WDIDocInformation.getDictionary() |
| WDI_DOCUMENT | WDIDocInformation.getDocument() |
| WDI_SYNTAX | WDIDocInformation.getSyntax() |
| WDI_RECEIVERID | WDIDocInformation.getReceiverId() |
| WDI_RECEIVERQUAL | WDIDocInformation.getReceiverQual() |
| WDI_RECEIVERTPN | WDIDocInformation.getReceiverTPN() |

| | |
|-----------------------|--|
| WDI_SENDERID | WDIDocInformation.getSenderId() |
| WDI_SENDERQUAL | WDIDocInformation.getSenderIdQual() |
| WDI_SENDERTPN | WDIDocInformation.getSenderIdTPN() |
| WDI_GRPCTLNUM | WDIDocInformation.getGrpCtlNum() |
| WDI_INTCTLNUM | WDIDocInformation.getIntCtlNum() |
| WDI_TRXCTLNUM | WDIDocInformation.getTrxCtlNum() |
| WDI_DIRECTION | WDIDocInformation.getDirection() |
| WDI_DOCUMENTID | The Message control number or document id taken from WDIDocInformation.getIntCtlNum() or taken from message FF0007 |

A partial example of an extendedDataElements element in a business document event follows:

```

<extendedDataElements name="WDI_BUSINESSDOCUMENT" type="noValue">
  <children name="WDI_DOCID" type="string">
    <values>20080514134723587195</values>
  </children>
  <children name="WDI_DICTIONARY" type="string">
    <values>X12V4R1</values>
  </children>
  <children name="WDI_DOCUMENT" type="string">
    <values>850</values>
  </children>
  <children name="WDI_SYNTAX" type="string">
    <values>edi</values>
  </children>
  <children name="WDI_RECEIVERID" type="string">
    <values>LEWITT</values>
  </children>
  <children name="WDI_RECEIVERQUAL" type="string">
    <values>BT</values>
  </children>
  :
  <children name="WDI_SENDERID" type="string">
    <values>OFTHEBEAST</values>
  </children>
  <children name="WDI_SENDERQUAL" type="string">
    <values>ST</values>
  </children>
  :
  <children name="WDI_GRPCTLNUM" type="string">
    <values>8</values>
  </children>
  <children name="WDI_INTCTLNUM" type="string">
    <values>00000008</values>
  </children>
  <children name="WDI_TRXCTLNUM" type="string">
    <values>0008</values>
  </children>
  <children name="WDI_DIRECTION" type="string">
    <values>Output</values>
  </children>
  <children name="WDI_DOCUMENTID" type="string">
    <values>00000008</values>
  </children>
  :
  :
</extendedDataElements>

```

Table 10 Message event extended data elements

| Property name | Description |
|----------------------|-----------------------|
| WDI_MESSAGENAME | WDILogEvent.getText() |

| | |
|--------------------------|--|
| WDI_DOCID | WDILogEvent.getDocId() |
| WDI_MSGID | WDILogEvent.getMsgId() |
| WDI_INSERT_DATA_x | Array WDILogEvent.getInsertData(). For every array element there is a WDI_INSERT_DATA_x attribute. Where 'x' is a number starting at '1' |

The following example shows an example of an extendedDataElements element in a message event:

```

<extendedDataElements name="WDI_EVENT" type="noValue">
  <children name="WDI_MESSAGE_NAME" type="string">
    <values>The best rule match for the document was: map name POXML5SR-EDI, sending TP nickname ANY, receiving TP nickname ANY, usage indicator P, document POXML5SR, dictionary name TESTS, syntax xml.</values>
  </children>
  <children name="WDI_DOCID" type="string">
    <values>20080514134723587266</values>
  </children>
  <children name="WDI_MSGID" type="string">
    <values>RU0003</values>
  </children>
  <children name="WDI_INSERT_DATA_1" type="string">
    <values>POXML5SR-EDI</values>
  </children>
  <children name="WDI_INSERT_DATA_2" type="string">
    <values>ANY</values>
  </children>
  <children name="WDI_INSERT_DATA_3" type="string">
    <values>ANY</values>
  </children>
  <children name="WDI_INSERT_DATA_4" type="string">
    <values>P</values>
  </children>
  <children name="WDI_INSERT_DATA_5" type="string">
    <values>POXML5SR</values>
  </children>
  <children name="WDI_INSERT_DATA_6" type="string">
    <values>TESTS</values>
  </children>
  <children name="WDI_INSERT_DATA_7" type="string">
    <values>xml</values>
  </children>
</extendedDataElements>

```

Business Process Integration with WebSphere Business Monitor V6

Integration with WebSphere Business Monitor enables you to monitor B2B processes in real-time, providing a visual display of business process status. WebSphere Business Monitor alerts and notifies key users to facilitate continuous improvement of your B2B processes.

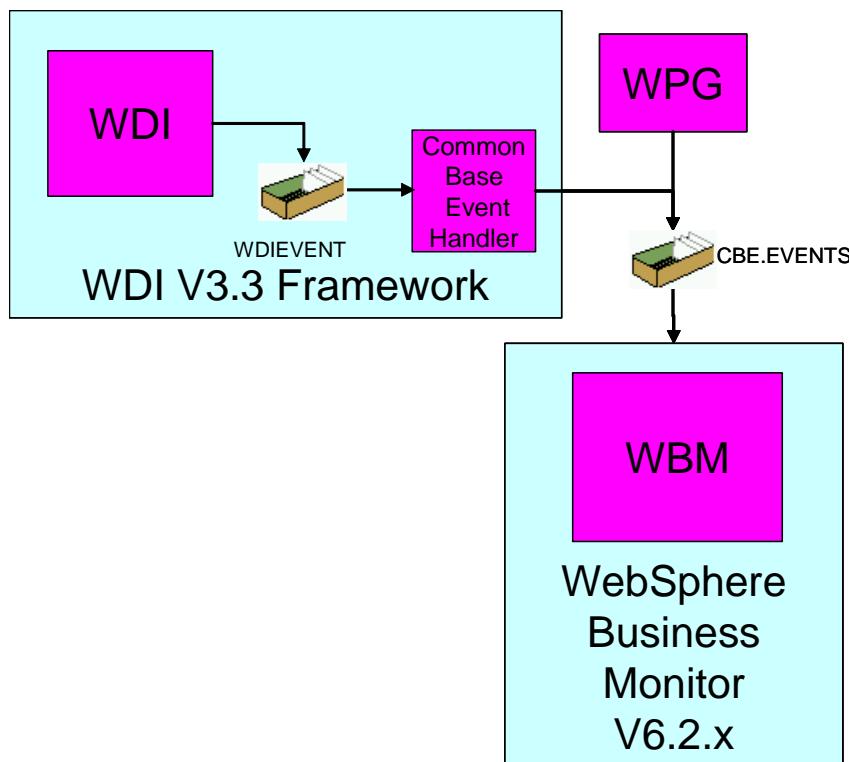


Figure 2 Components for Business Process Integration

System Management Integration with IBM Tivoli Monitoring V6

Using the “Common Base Event (CBE) Data Provider (DP) for the ITM V6 Universal Agent” the events generated by WebSphere Data Interchange can be collected by the Universal Agent. Once the data has been collected by the Universal Agent, it is easy to modify the default queries and Views to create Workspaces that contain information customized to fulfill a particular user need.

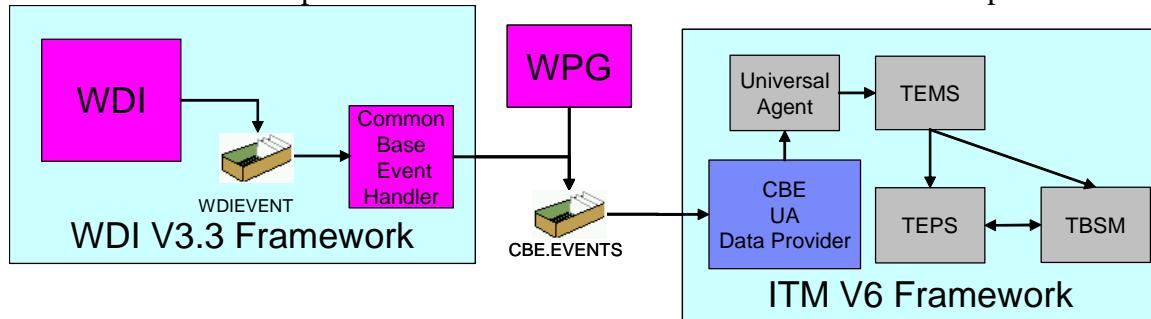


Figure 3 Components for System Management Integration

The “Common Base Event (CBE) Data Provider (DP) for the ITM V6 Universal Agent” can be downloaded from [OPAL](#).

The following figures give an example of WDI transactions monitored in a custom Workspace.

| Event Creation Time | Severity | DOCID | MSGID | MESSAGENAME |
|---------------------|-------------------------|--------|---|-------------|
| 2008-05-19T11:38:12 | 10 n/a | FF598 | The PERFORM TRANSFORM command completed successfully. Number of messages processed:1. | |
| 2008-05-19T11:38:12 | 10 n/a | FF598 | Output MQ Queue ID: EDI_OUT | |
| 2008-05-19T11:38:12 | 10 n/a | FF598 | Data was written to EDI_OUT. Message control number or document id was 000001192 | |
| 2008-05-19T11:38:12 | 10 20080519113808720063 | UT0008 | Map name being processed: POXML5SR-EDI | |
| 2008-05-19T11:38:12 | 10 20080519113808720063 | RU0003 | The best rule match for the document was: map name POXML5SR-EDI, sending TP nickname ANY, receiving TP nickname ANY, usage indicator P, document POXML5SR-EDI | |
| 2008-05-19T11:38:12 | 10 n/a | FF598 | Input File: XML_IN_D:\IBM\WDS\ServerV3\Jms\map\meAdapters\WDTTransCmQ_30735414d512057425245365f4454541554c95931402000e102.rvc | |
| 2008-05-19T11:38:12 | 10 n/a | FF598 | PERFORM TRANSFORM WHERE INFILE(XML_IN) SYNNTAX(XML_OUTFILE(EDI_OUT) OUTTYPE(MQ)) | |
| 2008-05-19T11:38:12 | 10 n/a | FF598 | PERFORM RECEIVE AND PROCESS WHERE RECDOML_IN FILE(DOML_IN) CLEARFILE() | |

| RECEIVERID | RECEIVERQUAL | RECEIVERTPN | SENDERID | SENDERIDQUAL | SENDERIDTPN | INTCTLNUM | GRPCTLNUM | TRCTLNUM | DOCID |
|------------|--------------|-------------|-----------|--------------|-------------|-----------|-----------|----------|----------------------|
| LEWITT | BT | UNKNOWN | OTHEBEAST | ST | UNKNOWN | 000001192 | 1192 | 1192 | 20080519113808727812 |
| LEWITT | BT | UNKNOWN | OTHEBEAST | ST | UNKNOWN | n/a | n/a | n/a | 20080519113808720063 |

Figure 4 The PERFORM TRANSFORM command completed successfully

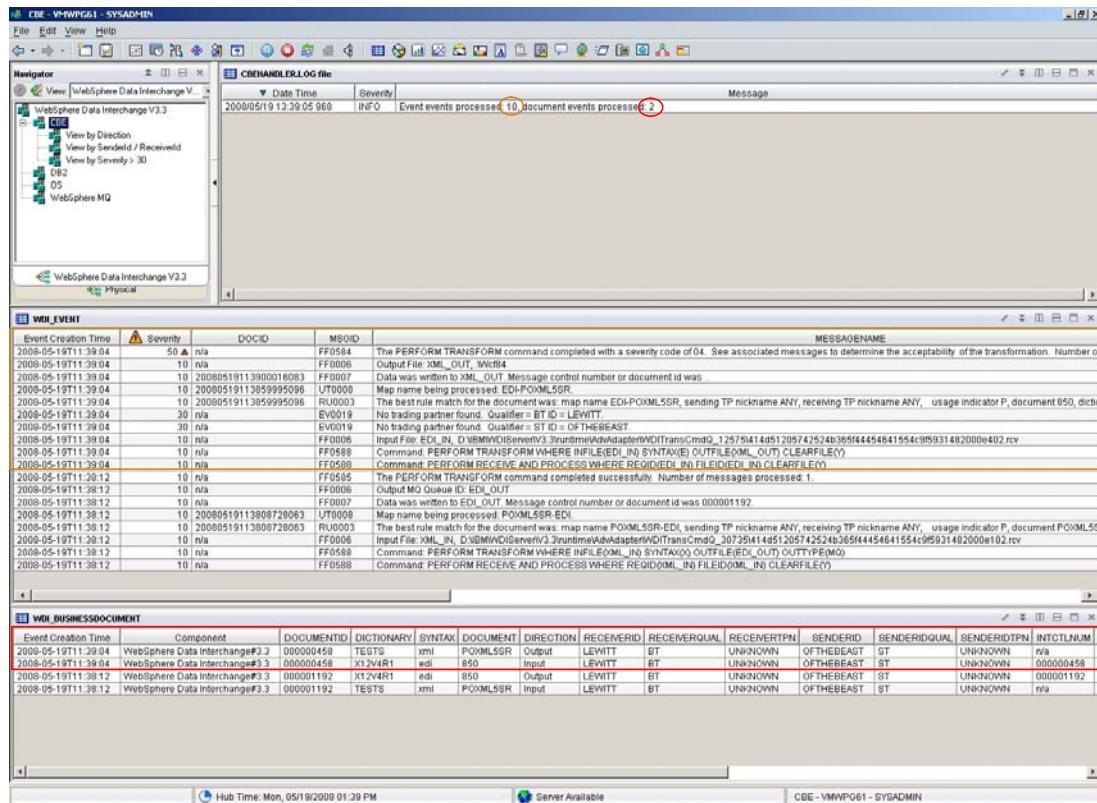


Figure 5 No trading partner found

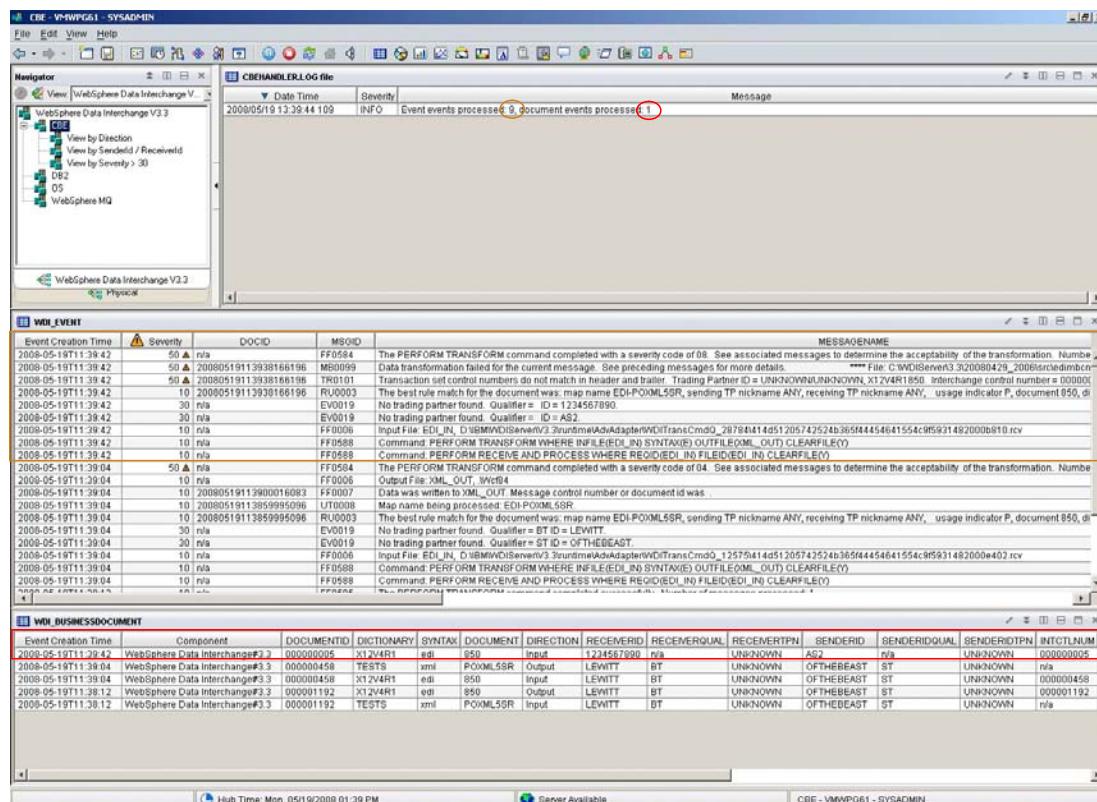


Figure 6 The PERFORM TRANSFORM command completed with a severity code of 08

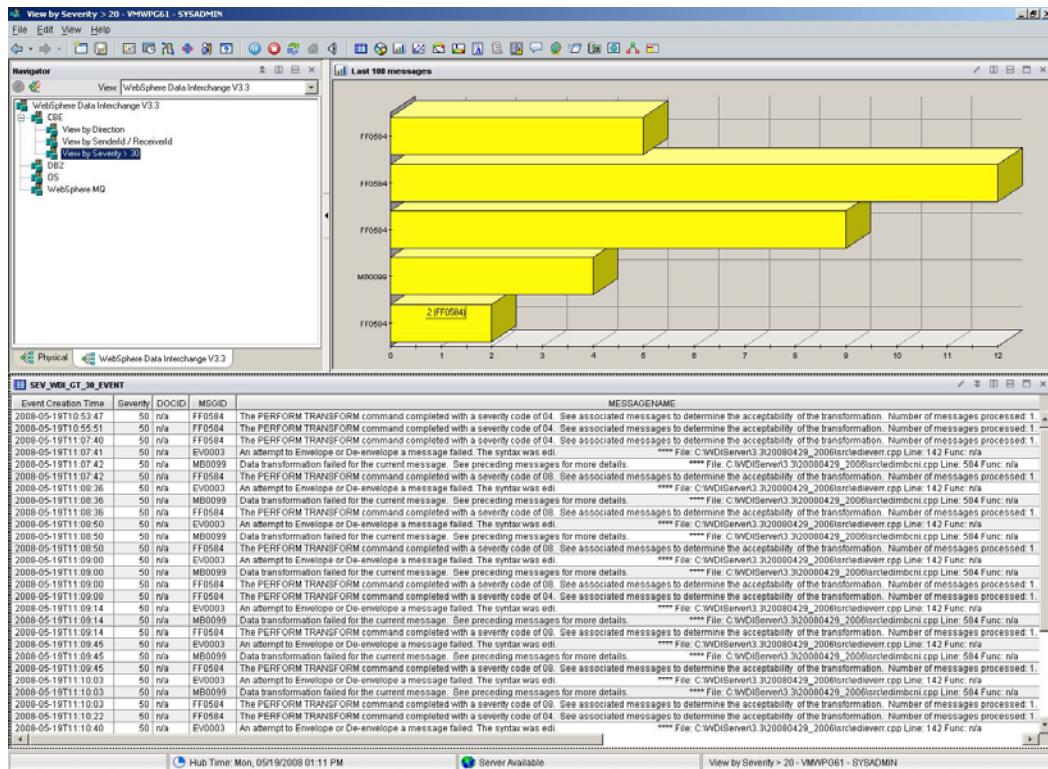


Figure 7 CBE / View by Severity > 30

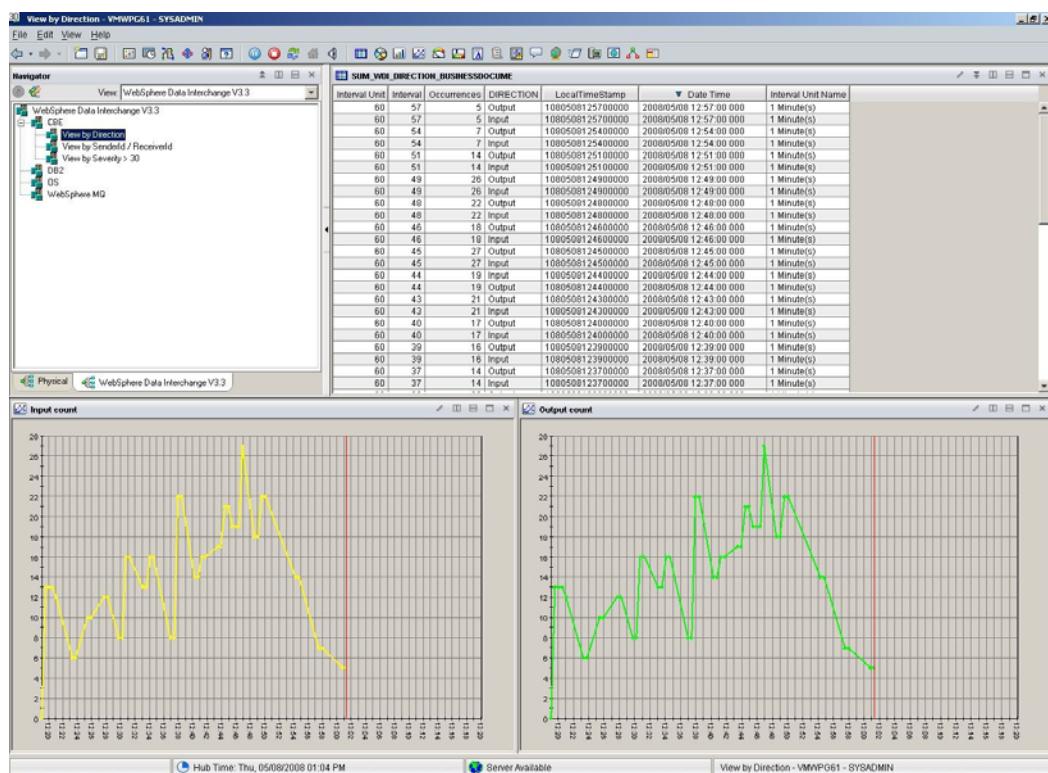


Figure 8 CBE / View by Direction

== END OF DOCUMENT ==