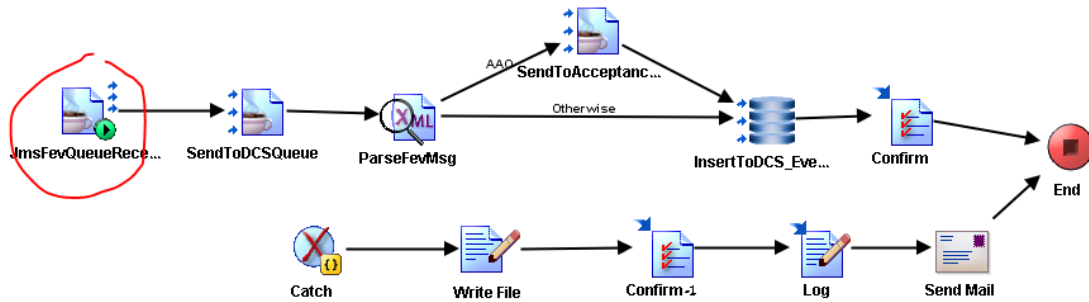


בס"ד

מהות התהליך:

קבלת ה-trigger ואכסון הנתונים ב-database ובנוסף, שכפול ההודעות לתור נוסף לצורך המשך הטיפול בהודעה.

JmsFevQueueReceiver Activity



מאזין לתור EMS שאליו ההודעות נכנסות.

נתיב התחברות לשרת

JmsFevQueueReceiver (JMS Queue Receiver)					
Configuration	Advanced	Misc	Output Editor	Output	Error Output
Name:	JmsFevQueueReceiver				
Description:					
<u>JMS Connection:</u>	/Connections/EMS Connection.sharedjmscon				
Destination Queue:	%%EMS/FevQ%%				
Message Type:	Text				
Acknowledge Mode:	Client				
Max Sessions:	1				

יצירת התחברות (Connection) עבור EMS

EMS Connection (JMS Connection)

Configuration
Advanced

Name:
Description:
User Name:
Password:
Auto-generate Client ID:
Client ID:
SSL:
Use JNDI for Connection Factory:
Use Shared JNDI Configuration:
JNDI Context Factory:
JNDI Context URL:
JNDI User Name:
JNDI Password:

EMS Connection

%%EMS/Username%%
%%EMS/Password%%
☒

☐ Use SSL:
☒
☐
com.tibco.tibjms.naming.TibjmsInitialContextFactory
%%EMS/JNDIurl%%
%%EMS/Username%%
%%EMS/Password%%

Test Connection

פרטי התחברות ממשתני ה-Globals: username, password, שם התור שאליו מאזינים

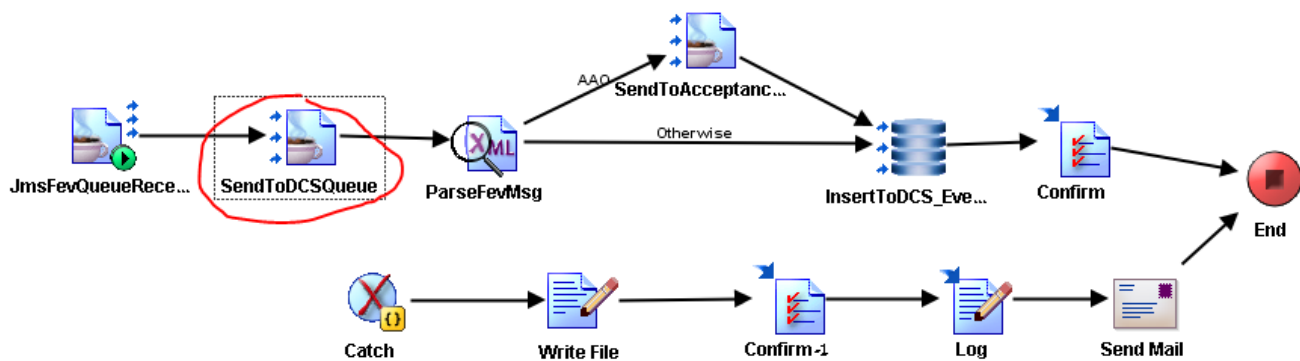
Global Variables
Tester

```

JmsSslProviderUrl = "ssl://localhost:7243"
RemoteRvDaemon = ""
RvDaemon = "tcp:7500"
RvNetwork = ""
RvService = "7500"
RvaHost = "localhost"
RvaPort = "7600"
TIBHawkDaemon = "tcp:7474"
TIBHawkNetwork = ""
TIBHawkService = "7474"
EMS
AcceptanceOpenedQ2 = "AcceptanceOpened_Q2"
DCSQueue = "DCSQueue"
Factory = "com.tibco.tibjms.naming.TibjmsInitialContextFactory"
FevQ = "BRIDGE.LY.FEV.OUT"
JNDIurl = "tibjmsnaming://tibco-t:7222"
Password = "*****"
QCF = "QueueConnectionFactory"
TCF = "TopicConnectionFactory"
Username = "admin"

```

Send To DCS Queue Activity



משכפל את ההודעות שמגיעות מהתור ע"י שליחתן לתור נוסף עבור התהליך הבא.

SendToDCSQueue (JMS Queue Sender)

Configuration | **Advanced** | Input Editor | Input | Output | Error Output

Name: SendToDCSQueue

Description:

JMS Connection: /Connections/EMS Connection.sharedjmscon

Destination Queue: %EMS/DCSQueue%

Message Type: Text

שם התור שאליו משוכפלות ההודעות

SendToDCSQueue (JMS Queue Sender)

Configuration | Advanced | **Input Editor** | Input | Output | Error Output

Process Data:

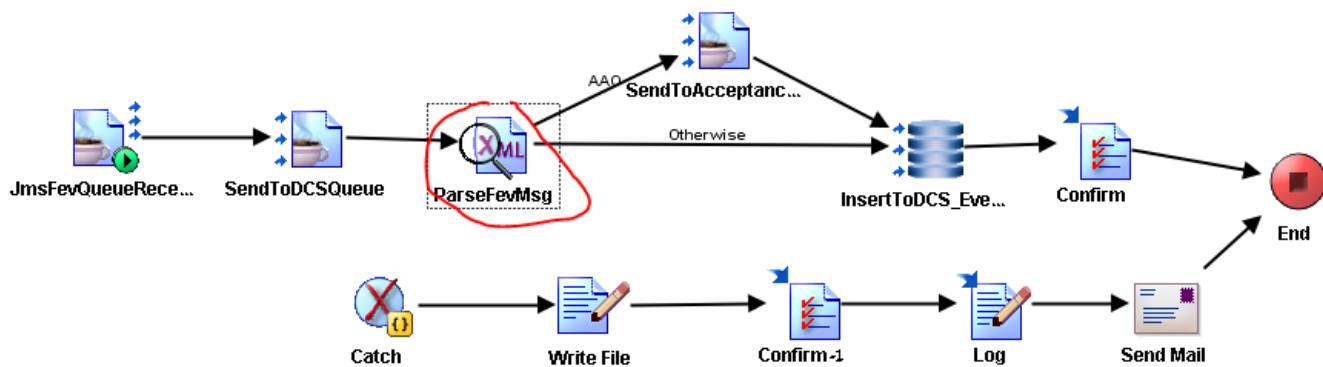
- \$_globalVariables
- \$_processContext
- \$JmsFevQueueReceiver
 - ActivityOutput
 - JMSHeaders
 - JMSProperties
 - Body
 - DynamicProperties

Activity Input:

Activity Input	Value
destinationQueue	
replyToQueue	
JMSExpiration	
JMSPriority	
JMSDeliveryMode	
JMSCorrelationID	
JMSType	
JMSProperties	
Body	\$JmsFevQueueReceiver/ns1:ActivityOutput/Body
DynamicProperties	

ההודעה שנכנסת לתור היא ה-output מ-EMS

Parse xml Activity



מעביר את ההודעה לפורמט XML.

ParseFevMsg (Parse XML)

Configuration | **Input** | Output Editor | Output | Error Output

Process Data:

- \$_globalVariables
- \$_processContext
- \$JmsFevQueueReceiver
 - ActivityOutput**
 - JMSHeaders
 - JMSProperties
 - Body**
 - DynamicProperties
- \$SendToDCSQueue

Activity Input:

- (ParseFevMsg)
 - xmlString $\$JmsFevQueueReceiver/ns1:ActivityOutput/Body$

input- ההודעה שמגיעה מהתור.

ParseFevMsg (Parse XML)

Configuration | Input | **Output Editor** | Output | Error Output

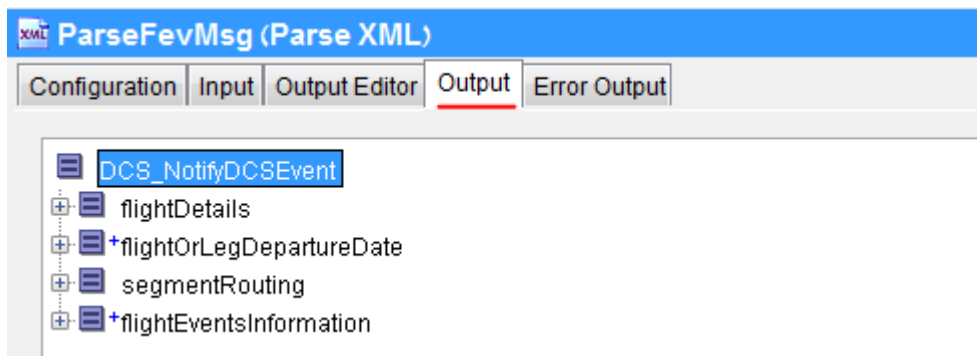
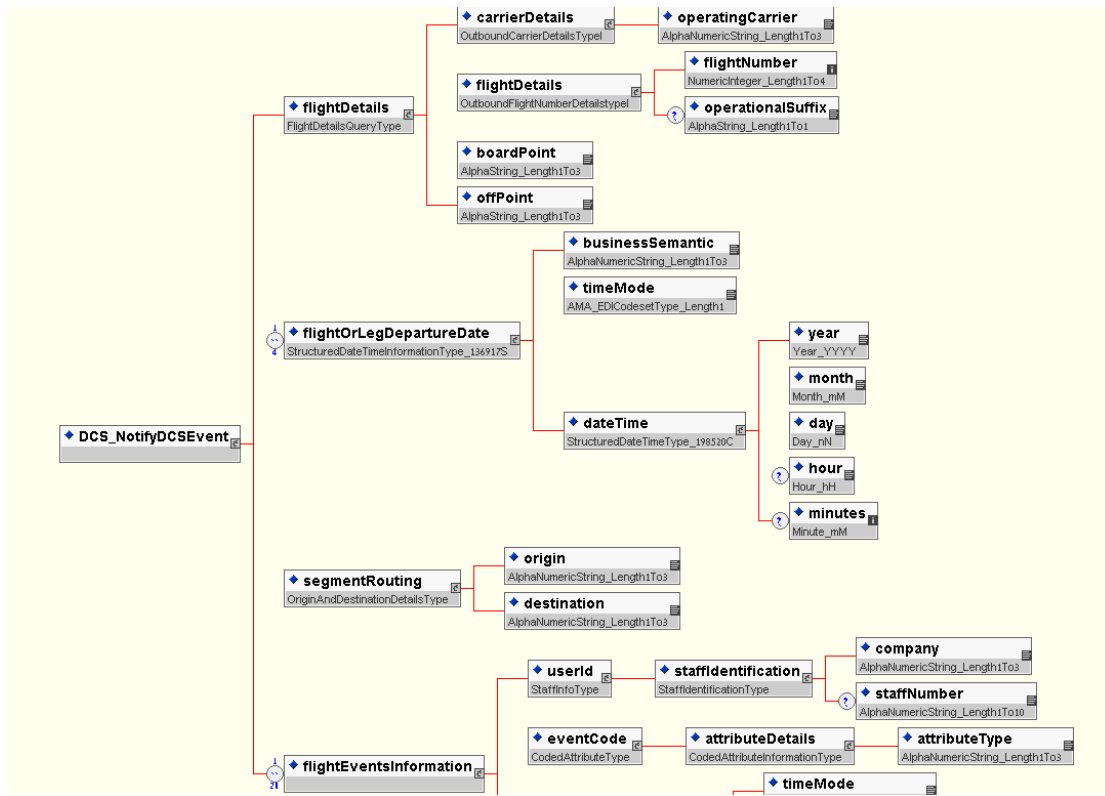
Content: XML Element Reference

Cardinality: Required

Schema: http://xml.amadeus.com/FEVTPQ_12_2_1A

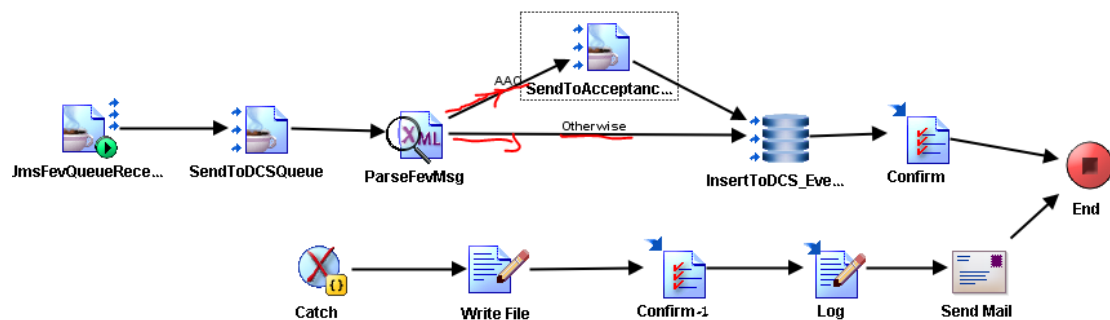
Element: DCS_NotifyDCSEvent

סכמה עבור פורמט ה-XML (קובץ xsd. מצורף)



Output- לפי מבנה הסכמה.

Send To AcceptanceOpenedQ Activity



התפצלות למקרים: **מקרה ראשון**: סוג ההודעה הוא 'AAO'

ParseFevMsg2transition2SendToAcceptanceOpenedQ (Transition)

Configuration

Label: AAO

Description:

Condition Type: Success with condition

XPath: \$ParseFevMsg/pfx: DCS_NotifyDCSEvent/pfx: flightEventsInformation/pfx: eventCode/pfx: attributeDetails/pfx: attributeType = 'AAO'

Line Type: Default

Background Color: Choose Color...

- שליחת ההודעות לתור AcceptanceOpenedQ2

SendToAcceptanceOpenedQ (JMS Queue Sender)

Configuration Advanced Input Editor Input Output Error Output

Process Data: ? ?

- \$_globalVariables
- \$_processContext
- \$JmsFevQueueReceiver
 - ActivityOutput
 - JMSHeaders
 - JMSProperties
 - Body
 - DynamicProperties
- \$SendToDCSQueue
- \$ParseFevMsg

Activity Input:

Property	Value
destinationQueue	
replyToQueue	
<u>JMSExpiration</u>	
JMSPriority	
JMSDeliveryMode	
JMSCorrelationID	
JMSType	
JMSProperties	
<u>Body</u>	\$JmsFevQueueReceiver/ns1: ActivityOutput/Body
DynamicProperties	

Input-ה output מ Activity JmsFevQueueReceiver.

מקרה שני: אחרת, otherwise

ParseFevMsg2transition2InsertToDCS_EventTBL (Transition)

Configuration

Label:

Description:

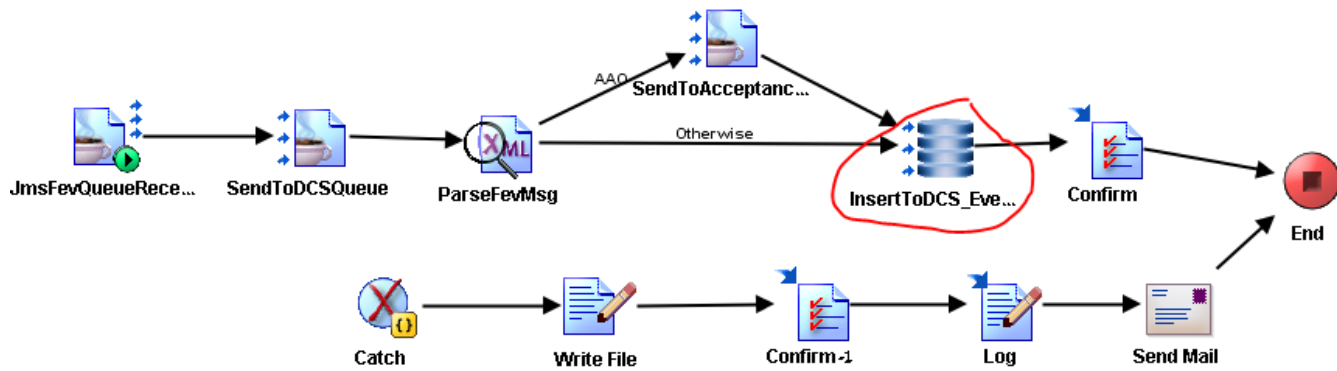
Condition Type: Success with no matching condition

Line Type: Default

Background Color: Choose Color...

הערה: בשני המקרים הנתונים יעברו ל-DB (ראה מבנה תהליך)

JDBC UPDATE -Insert To DCS_Event TBL Activity



הכנסת ההודעה לטבלה ב-database

התחברות לשרת

InsertToDCS_EventTBL (JDBC Update)															
Configuration	Advanced Input Output Error Output														
Name:	InsertToDCS_EventTBL														
Description:															
JDBC Connection:	/Connections/TibcoControl.sharedjdbc														
SQL Statement:	<pre> insert into DCS_Event ([Carrier_Code] ,[Flight_Num] ,[Boardpoint]) </pre>														
Timeout(sec):	10														
Prepared Parameters:	<table border="1"> <thead> <tr> <th>Parameter Name</th> <th>Data Type</th> </tr> </thead> <tbody> <tr> <td>Carrier_Code</td> <td>VARCHAR</td> </tr> <tr> <td>Flight_Num</td> <td>VARCHAR</td> </tr> <tr> <td>Boardpoint</td> <td>VARCHAR</td> </tr> <tr> <td>Offpoint</td> <td>VARCHAR</td> </tr> <tr> <td>FlightDateTime_Local</td> <td>TIMESTAMP</td> </tr> <tr> <td>FlightDateTime_UTC</td> <td>TIMESTAMP</td> </tr> </tbody> </table>	Parameter Name	Data Type	Carrier_Code	VARCHAR	Flight_Num	VARCHAR	Boardpoint	VARCHAR	Offpoint	VARCHAR	FlightDateTime_Local	TIMESTAMP	FlightDateTime_UTC	TIMESTAMP
Parameter Name	Data Type														
Carrier_Code	VARCHAR														
Flight_Num	VARCHAR														
Boardpoint	VARCHAR														
Offpoint	VARCHAR														
FlightDateTime_Local	TIMESTAMP														
FlightDateTime_UTC	TIMESTAMP														

ה-values של השדות בטבלה אינם ידועים מראש ולכן הערך הוא '?' – פרמטר

InsertToDCS_EventTBL (JDBC Update)				
Configuration	Advanced	Input	Output	Error Output
Name:	InsertToDCS_EventTBL			
Description:				
JDBC Connection:	/Connections/TibcoControl.sharedjdbc			
SQL Statement:	<pre>[Event_TimeMode] [Event_DateTime] [Record_DateTime] values{?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?}</pre>			

הכנסת ערכים לטבלה- משתנים מסוג מסויים

SQL Statement:

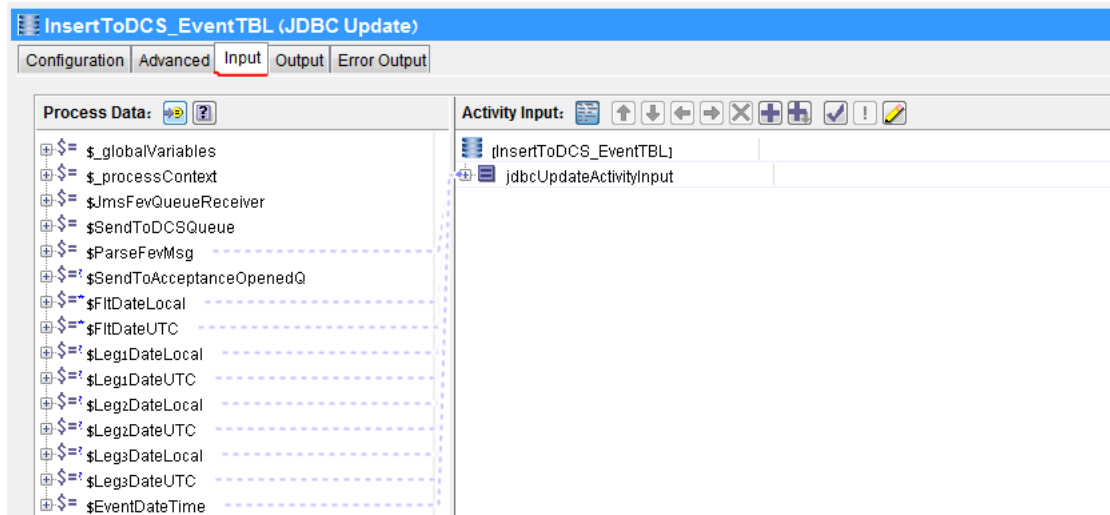
insert into DCS_Event
([Carrier_Code]
[Flight_Num]
[Boardpoint]
[Offpoint]
[FlightDateTime_Local]
[FlightDateTime_UTC]
[Leg1_DateTime_Local]
[Leg1_DateTime_UTC]
[Leg2_DateTime_Local]
[Leg2_DateTime_UTC]
[Leg3_DateTime_Local]
[Leg3_DateTime_UTC]
[Segment_Routing]
[User_ID_Company]
[User_ID_Staff_Number])

Timeout(sec):

10

Prepared Parameters:

Parameter Name	Data Type
Carrier_Code	VARCHAR
Flight_Num	VARCHAR
Boardpoint	VARCHAR
Offpoint	VARCHAR
FlightDateTime_Local	TIMESTAMP
FlightDateTime_UTC	TIMESTAMP
Leg1_DateTime_Local	TIMESTAMP
Leg1_DateTime_UTC	TIMESTAMP
Leg2_DateTime_Local	TIMESTAMP
Leg2_DateTime_UTC	TIMESTAMP
Leg3_DateTime_Local	TIMESTAMP
Leg3_DateTime_UTC	TIMESTAMP
Segment_Routing	VARCHAR
User_ID_Company	VARCHAR
User_ID_Staff_Number	VARCHAR
Event_Code	VARCHAR
Event_TimeMode	VARCHAR
Event_DateTime	TIMESTAMP

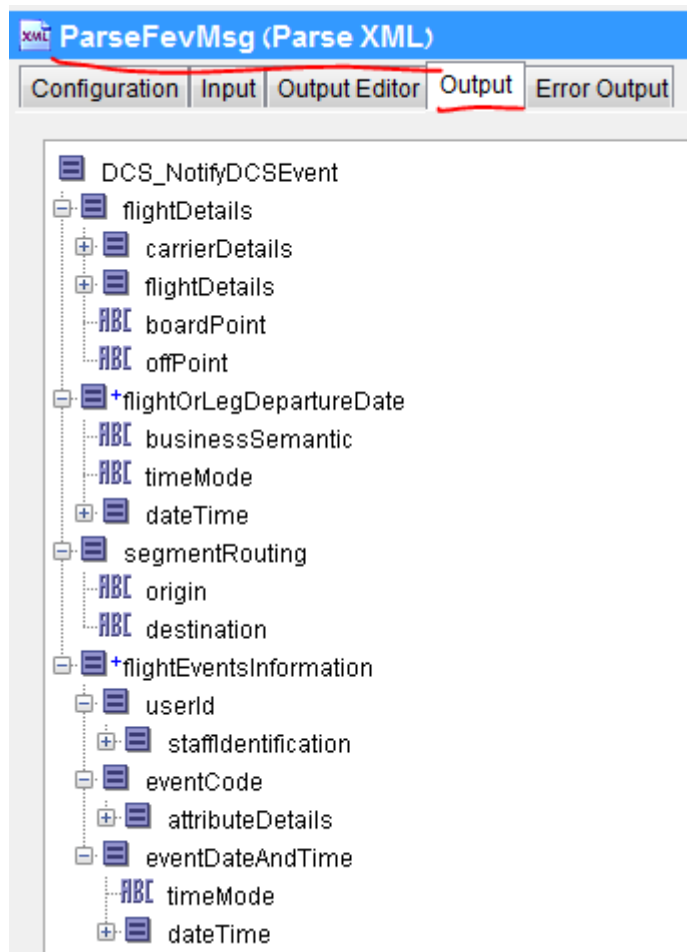


בצד שמאל מופיעים משתנים מקומיים המוגדרים עם ערכים

משתנים עם סימון '\$' הם מקומיים כמו משתנים המוגדרים בתוך פונקציה – אינם מוכרים בחוץ.

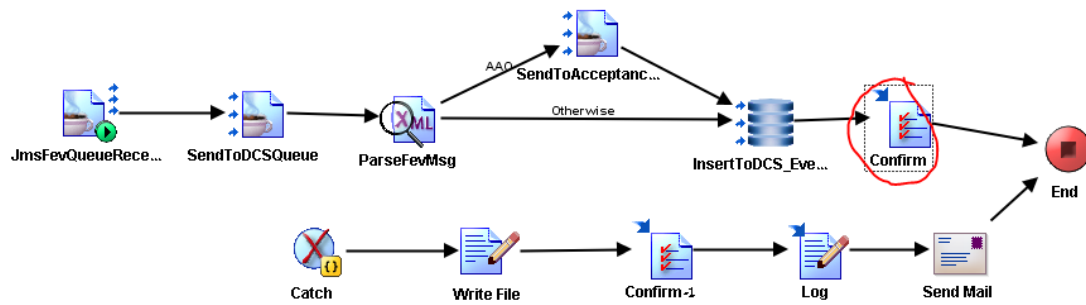
\$=	{FitDateLocal= }	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=FLT and pfx: timeMode=ל1
\$=	{FitDateUTC= }	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=FLT and pfx: timeMode=ל1
\$=	{Leg1DateLocal= }	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=LEG and pfx: timeMode=ל1
\$=	{Leg1DateUTC= }	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=LEG and pfx: timeMode=ל1
\$=	{Leg2DateLocal= }	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=LEG and pfx: timeMode=ל2
\$=	{Leg2DateUTC= }	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=LEG and pfx: timeMode=ל2
\$=	{Leg3DateLocal= }	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=LEG and pfx: timeMode=ל3
\$=	{Leg3DateUTC= }	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=LEG and pfx: timeMode=ל3

הערכים לטבלה נמצאים ב-output של פורמט ה-XML של ההודעה



(InsertToDCS_EventTBL)	
jdbcUpdateActivityInput	
Carrier_Code	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightDetails.pfx: carrierDetails.pfx: operatingCarrier
Flight_Num	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightDetails.pfx: flightDetails.pfx: flightNumber
Boardpoint	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightDetails.pfx: boardPoint
Offpoint	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightDetails.pfx: offPoint
\$(FlightDateLocal=)	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=<FLT> and pfx: timeMode=<L>
\$(FlightDateUTC=)	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=<FLT> and pfx: timeMode=<U>
\$(Leg1DateLocal=)	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=<LEG> and pfx: timeMode=<L>
\$(Leg1DateUTC=)	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=<LEG> and pfx: timeMode=<U>
\$(Leg2DateLocal=)	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=<LEG> and pfx: timeMode=<L>
\$(Leg2DateUTC=)	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=<LEG> and pfx: timeMode=<U>
\$(Leg3DateLocal=)	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=<LEG> and pfx: timeMode=<L>
\$(Leg3DateUTC=)	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightOrLegDepartureDate.pfx: businessSemantic=<LEG> and pfx: timeMode=<U>
FlightDateTime_Local	tib:create-dateTime\$FlightDateLocal.pfx: dateTime.pfx: year, \$FlightDateLocal.pfx: dateTime.pfx: month, \$FlightDateLocal.pfx: dateTime.pfx: day, \$FlightDateLocal.pfx: dateTime.pfx: hour
FlightDateTime_UTC	tib:create-dateTime\$FlightDateUTC.pfx: dateTime.pfx: year, \$FlightDateUTC.pfx: dateTime.pfx: month, \$FlightDateUTC.pfx: dateTime.pfx: day, \$FlightDateUTC.pfx: dateTime.pfx: hour
Leg1_DateTime_Local	tib:create-dateTime\$Leg1DateLocal.pfx: dateTime.pfx: year, \$Leg1DateLocal.pfx: dateTime.pfx: month, \$Leg1DateLocal.pfx: dateTime.pfx: day, \$Leg1DateLocal.pfx: dateTime.pfx: hour
Leg1_DateTime_UTC	tib:create-dateTime\$Leg1DateUTC.pfx: dateTime.pfx: year, \$Leg1DateUTC.pfx: dateTime.pfx: month, \$Leg1DateUTC.pfx: dateTime.pfx: day, \$Leg1DateUTC.pfx: dateTime.pfx: hour
Leg2_DateTime_Local - {Choose}	
Leg2_DateTime_UTC - {Choose}	
Leg3_DateTime_Local - {Choose}	
Leg3_DateTime_UTC - {Choose}	
Segment_Routing	concat\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: segmentRouting.pfx: origin,\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: segmentRouting.pfx: destination
User_ID_Company	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightEventsInformation.pfx: userId.pfx: staffIdentification.pfx: company
User_ID_Staff_Number	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightEventsInformation.pfx: userId.pfx: staffIdentification.pfx: staffNumber
Event_Code	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightEventsInformation.pfx: eventCode.pfx: attributeDetails.pfx: attributeType
Event_TimeMode	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightEventsInformation.pfx: eventDateAndTime.pfx: timeMode
\$(EventDateTime=)	\$ParseFevMsg.pfx: DCS_NotifyDCSEvent.pfx: flightEventsInformation.pfx: eventDateAndTime.pfx: dateTime
Event_DateTime	tib:create-dateTime\$EventDateTime.pfx: year, \$EventDateTime.pfx: month, \$EventDateTime.pfx: day, \$EventDateTime.pfx: hour, \$EventDateTime.pfx: minutes, \$EventDateTime.pfx: seconds
Record_DateTime	current-dateTime
ServerTimeZone	
timeout	

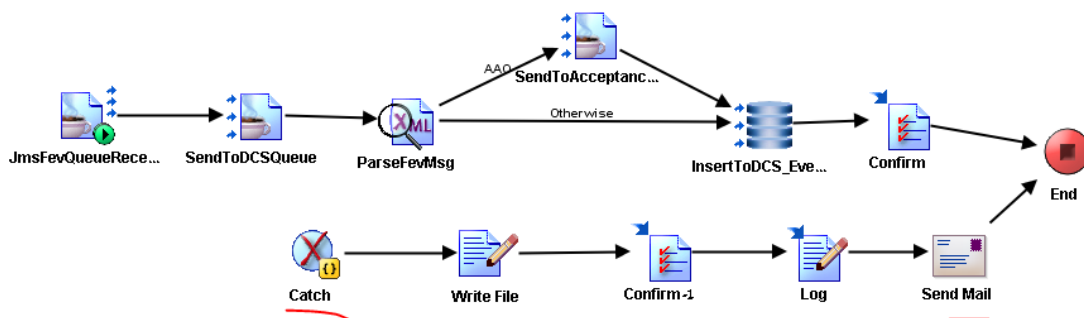
Confirm Activity



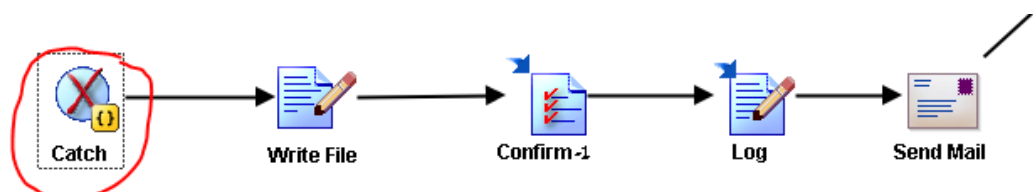
מאפשר לעבור להודעה הבאה בתור(התור משתמש במנגנון FIFO)

הערה: התהליך מתחיל לרוץ בכל פעם שנכנסת הודעה לתור, זה מה שמפעיל אותו

טיפול בשגיאות:



Catch Activity



תפיסת כל השגיאות

Catch (Catch)

Configuration Output Error Output

Name: Catch

Description:

Catch All: ☒

Exception to catch:

Wright File Activity



Write File (Write File)

Configuration Input Output Error Output

Process Data:

- \$globalVariables
- \$processContext
- \$error
- \$msFevQueueReceiver
- \$SendToDCSQueue
- \$error_SendToDCSQueue
- \$ParseFevMsg
- \$error_ParseFevMsg
- \$SendToAcceptanceOpenedQ
- \$error_SendToAcceptanceOpenedQ
- \$insertToDCS_EventITBL
- \$error_insertToDCS_EventITBL
- \$catch

Activity Input:

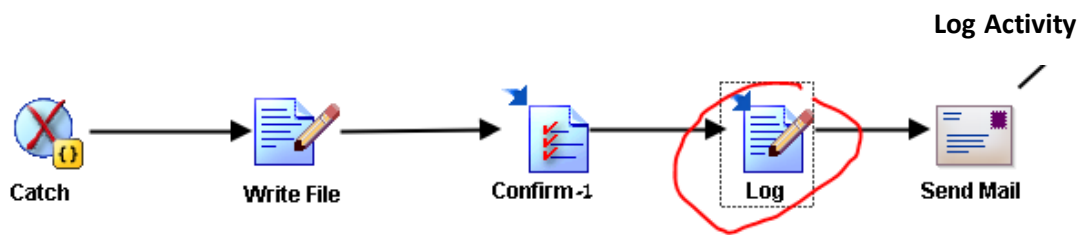
- Write File
 - WriteActivityInputTextClass
 - fileName: `concat($globalVariables.mse.GlobalVariables.FilesLoc.ErrorDir,lib-format-dateTime{ddMMyyyyhhmm},current-dateTime@שעה-י.י.י.י)`
 - textContent: `$msFevQueueReceiver.msi:ActivityOutput:Body`
 - addLineSeparator: `%n`
 - encoding

שם הקובץ מורכב משרשור(concat()) תאריך ושעה, מס' טיסה, שם הטריגר וסיומת.xml.
תוכן הקובץ הוא תוכן ההודעה שהגיעה לתור.

Confirm Activity



מאפשר לעבור להודעה הבאה בתור ולא להתקע על ההודעה שנכשלה.



תיעוד השגיאה ב-log

Log (Write To Log)

Configuration | Input | Error Output

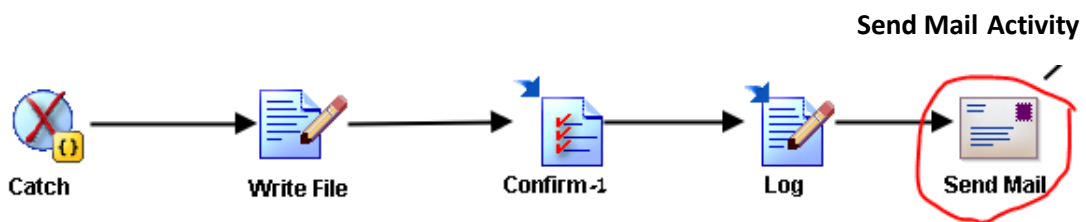
Process Data:

- \$ = \$globalVariables
- \$ = \$processContext
- \$ = \$error
- \$ = \$JmsFevQueueReceiver
- \$ = \$SendToDCSQueue
- \$ = \$error_SendToDCSQueue
- \$ = \$ParseFevMsg
- \$ = \$error_ParseFevMsg
- \$ = \$SendToAcceptanceOpenedQ
- \$ = \$error_SendToAcceptanceOpenedQ
- \$ = \$InsertToDCS_EventTBL
- \$ = \$error_InsertToDCS_EventTBL
- \$ = \$Catch
- \$ = \$Write-File

Activity Input:

- (Log)
- ActivityInput
- message
- msgCode

concat(\$Error in DcsTriggerFev, FlightNum: , \$ParseFevMsg.ptc: DCS_NotifyDCSEvent.ptc: flightDetails.ptc: flightNumber, , EventCode: ,)



שליחת מייל על אירוע שגיאה לגורמים האחראים

Send Mail (Send Mail)

Configuration | Advanced | Input Headers | Input | Error Output

Process Data:

- \$ = \$globalVariables
- \$ = \$processContext
- \$ = \$error
- \$ = \$JmsFevQueueReceiver
- \$ = \$SendToDCSQueue
- \$ = \$error_SendToDCSQueue
- \$ = \$ParseFevMsg
- \$ = \$error_ParseFevMsg
- \$ = \$SendToAcceptanceOpenedQ
- \$ = \$error_SendToAcceptanceOpenedQ
- \$ = \$InsertToDCS_EventTBL
- \$ = \$error_InsertToDCS_EventTBL
- \$ = \$Catch
- \$ = \$Write-File

Activity Input:

- Send Mail
- mailActivityInput
- from
- to
- cc
- bcc
- replyTo
- subject
- sendDate
- bodyElement
- bodyText
- headers
- Content-Type
- mimeEnvelopeElement
- mimePart
- mimeHeaders
- content-disposition
- content-type
- content-transfer-encoding
- content-id
- any element
- binaryContent
- textContent
- fileName

\$globalVariables.ms4: GlobalVariables/Mail/Sender

\$globalVariables.ms4: GlobalVariables/Mail/MailList

subject: \$Error in DcsTriggerFev (-TEST-)

bodyText: concat(\$Error in DcsTriggerFev, FlightNum: , \$ParseFevMsg.ptc: DCS_NotifyDCSEvent.ptc: flightDetails.ptc: flightNumber, , EventCode: ,)