How to Resolve Problems with Message Correlation
Introduction

In B2B Data Exchange, message correlation is the process of correlating a message with an acknowledgement. For example, you send a message to a partner and you require the partner to send you an acknowledgement that the message was received. When you receive the acknowledgement, you correlate the acknowledgement message with the original message.

B2B Data Exchange tracks messages to ensure that acknowledgement messages are correlated with the original messages. You can set a limit for the length of time within which the acknowledgement must be received. The correlation status of a message indicates whether the Data Exchange Server has processed an acknowledgement for a message within the time allowed.

A message that requires acknowledgement can have one of the following statuses:

- **Pending correlation.** The Data Exchange Server has not processed an acknowledgement for the message.
- **Timed out.** The time limit is reached, and the Data Exchange Server has not processed an acknowledgement for the message. This status indicates a problem in the process flow which may require operator action to resolve.
- **Correlated after timeout.** The Data Exchange Server processed an acknowledgement for the message after the time limit was reached. This status indicates a problem in the process flow which may require operator action to resolve.
- **Correlation complete.** The Data Exchange Server processed an acknowledgement for the message within the time limit.

The following diagram shows the process that B2B Data Exchange follows to determine the correlation status of a message:

![Correlation Status Diagram]

B2B Data Exchange uses an event monitor to track messages and set the correlation status. You can set the scope of the messages to track and the action to take. When the event monitor runs, the Data Exchange Server updates correlation status of the messages within the scope of the monitor. You can configure the event monitor to notify you of the event. If you do not create event monitors to track correlations, the Data Exchange Server does not update the correlation status of any message.
A message correlation status of *Timed out* or *Correlated after time out* indicates a problem in the process flow. Determine and resolve the problem to ensure that B2B Data Exchange can process messages and acknowledgements in a timely manner.

**Monitoring and Resolving Timed Out Correlations**

When you have messages without acknowledgements, you need to review the acknowledgement process with the partner to determine the problem. You may need to modify the process to ensure that you receive the acknowledgements you require. If correlations time out because the partner sends acknowledgements too late, you may need to modify your agreement with the partner and adjust the time limit.

To monitor and resolve messages without an acknowledgement:

1. Create an event monitor and set Event reconciliation status to monitor to Timed out.

   B2B Data Exchange uses the monitor to track and set the status of messages for which the correlation time limit is reached and the Data Exchange Server has not processed an acknowledgement.

   You can also configure the event monitor to notify you when the monitor finds messages where the correlations have timed out.

2. Use the advanced search to find all events with the reconciliation status Timed out.

   If the monitor is configured to send notification, you can view the events indicated in the email notification you receive.

3. For each event with a reconciliation status of Timed out, analyze and resolve the problem.

   Determine why an acknowledgement was not processed within the time limit. Call the partner to verify the process or check any automated systems that are set to provide acknowledgements.

4. If an acknowledgement will be sent at a later date, update the time limit for the acknowledgement.

   View the event details and change the time out for the correlation to allow for additional time for the acknowledgement. You can change the time out for one event or all related events.

5. If you resolve the problem manually and an acknowledgement will not be sent at a later date, set the correlation status to Correlation complete.

   For example, the partner sends the acknowledgement by fax. There is no need to process an acknowledgement message in B2B Data Exchange. You can manually set the correlation status to Correlation complete.

   View the event details and change the status of the correlation. You can change the status for one event or all related events.

**Monitoring and Resolving Correlations Completed After Timeout**

When you have messages with late acknowledgements, you may need to review the acknowledgement process with the partner to determine why the acknowledgement did not arrive on time. You may need to modify the process to ensure that you receive future acknowledgements within the time limit.

To monitor and resolve messages with late acknowledgements:

1. Create an event monitor and set Event reconciliation status to monitor to Correlated after timeout.

   B2B Data Exchange uses the monitor to track and set the status of messages for which the Data Exchange Server has processed an acknowledgement after the correlation time limit is reached.
You can also configure the event monitor with the following options:

- To notify you when the monitor finds messages where the correlations completed after timeout.
- To set the correlation status to Correlation complete for messages where the correlations completed after timeout.

2. Use the advanced search to find all events with the reconciliation status Correlated after timeout.
   If the monitor is configured to send notification, you can view the events indicated in the email notification you receive.

3. For each event where the correlation completed after timeout, analyze the process flow and determine the problem.
   Determine why the acknowledgement was not processed within the time limit. Call the partner or check any automated systems to verify why the time limit was not met. For example, the partner may not realize the acknowledgement was sent too late. Or the set time limit may be too short to allow acknowledgement within the process.

4. If the time limit is too short, update the time limit for the acknowledgement.
   In your workflow, you can set a new correlation time limit for messages you receive in the future, based on your agreement with the partner. Set up a new acknowledgement process to avoid the problem in the future.

5. Set the correlation status to Correlation complete.
   View the event details and change the status of the correlation. You can change the status for one event or all related events.
   If the monitor is configured to set the correlation status to Correlation complete, you do not need to perform this step. Review the list of events to verify that they have the correct correlation status.

Authors

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