

From: John A Reeve <JREEVE@uk.ibm.com>

Sent: 01 February 2021 17:43

To: Reddy, Siva (EXTERN) <siva.reddy@vwg.co.uk>

Cc: Behara, Anil (EXTERN) <anil.behara@vwg.co.uk>; Martin Howson <martin_howson@uk.ibm.com>; Mayers, Sean (EXTERN) <Sean.Mayers@vwg.co.uk>; UKIASupport <UKIASupport@vwg.co.uk>; Oliver Winslade <WINSLAO@uk.ibm.com>

Subject: RE: ACE Connectivity POC - Replay Id

Hi Siva,

Thanks for the summary of the meeting. Comments below on your key points from the meeting:

- Both the replay scenarios 1 & 2 mentioned in the attached document are possible to handle by IBM App connect Salesforce connector

Comment by John Reeve: For scenario 1: the salesforce connector is designed to cope with failed connections but we have not explicitly tested the frozen use case. We have asked for details via your support ticket how you freeze your account so we can test it out.

Comment by John Reeve: For scenario 2: currently there is no way to update the credentials without stopping the flow. I have doubled checked and this is a current limitation.

- Further John/Martin would discuss these scenarios with IBM Salesforce expects team and test these scenarios and publish the results.

Comment by John Reeve: Covered in above comments.

- Scenario 3 would not be possible as multiple copies of same event driven flow will subscribe duplicate copies of platform events from salesforce and multiple copies of same flow would not help as all the App connect instances are in Same region (UK).

Comment by John Reeve: Correct.

- Currently we are storing the Last Replay ID and John/martin would check the feasibility to update the current Salesforce connector which can accepts last Replay ID as an input to the Salesforce connector in the Event Driven flow. So that even we stop the Event driven flow we can input the Last Replay ID as an input before starting the service which retrieves all the backlog events from Salesforce event bus.

Comment by John Reeve: This is not currently an enhancement we have in plan but we do have an RFE process where you could request this as an enhancement.

- Also for Scenario 2, It has been discussed that John/martin would try to find out a way to update the Salesforce Authentication details (OAUTH 2 – username, password, security token, consumer key, consumer secret, Keystore Password, Login Endpoint) without stopping the event driven flow.

Comment by John Reeve: As mentioned above, there is no way I have found to allow you to update credentials without stopping the flow. Again, this is an enhancement you could request through the RFE process.

We also discussed on the call that you can have a very small flow that takes the events and places them directly onto an MQ queue. Then have a second flow that processes the messages off the queue. This has the advantage that the second flow could be stopped and updated without missing any events as they would build up on the queue. The thought here is that the first flow would be so simple it would rarely need to be changed. This would solve the scenario 3 issue but not the scenario 2 issue.

To open "Request For Enhancements" on the product you can go to: https://www.ibm.com/developerworks/rfe/?PROD_ID=532

Regards, John.

John Reeve
IBM Integration Developer and IBM Master Inventor
MP 211, IBM Hursley Park, Winchester, SO21 2JN

e-mail: jreeve@uk.ibm.com

----- Original message -----

From: "Reddy, Siva (EXTERN)" <siva.reddy@vwg.co.uk>
To: 'John A Reeve' <JREEVE@uk.ibm.com>, Martin Howson <martin_howson@uk.ibm.com>
Cc: "Behara, Anil (EXTERN)" <anil.behara@vwg.co.uk>, "Mayers, Sean (EXTERN)" <Sean.Mayers@vwg.co.uk>, UKIASupport <UKIASupport@vwg.co.uk>, Oliver Winslade <WINSLAO@uk.ibm.com>
Subject: [EXTERNAL] RE: ACE Connectivity POC - Replay Id
Date: Sun, Jan 31, 2021 7:13 PM

Hi All,

Thank you very much for joining the meeting and below are the MOM for the same.

Attendees: John Reeve, Martin Howson, Siva Reddy

- Both the replay scenarios 1 & 2 mentioned in the attached document are possible to handle by IBM App connect Salesforce connector
- Further John/Martin would discuss these scenarios with IBM Salesforce experts team and test these scenarios and publish the results.
- Scenario 3 would not be possible as multiple copies of same event driven flow will subscribe duplicate copies of platform events from salesforce and multiple copies of same flow would not help as all the App connect instances are in Same region (UK).
- Currently we are storing the Last Replay ID and John/martin would check the feasibility to update the current Salesforce connector which can accept last Replay ID as an input to the Salesforce connector in the Event Driven flow. So that even we stop the Event driven flow we can input the Last Replay ID as an input before starting the service which retrieves all the backlog events from Salesforce event bus.
- Also for Scenario 2, It has been discussed that John/martin would try to find out a way to update the Salesforce Authentication details (OAUTH 2 – username, password, security

token, consumer key, consumer secret, Keystore Password, Login Endpoint) without stopping the event driven flow.

Please add/correct if I missed any.

Thanks in advance.

Regards,
Siva Reddy
UKIA Platform Support
IT Operations
Mobile: +44 7404472562 / +44 7823822586



Volkswagen Group UK
Yeomans Drive, Blakelands, Milton Keynes, MK14 5AN

-----Original Appointment-----

From: Reddy, Siva (EXTERN)

Sent: 28 January 2021 17:09

To: Reddy, Siva (EXTERN); 'John A Reeve'

Cc: Behara, Anil (EXTERN); Martin Howson; Mayers, Sean (EXTERN); UKIASupport; Oliver Winslade

Subject: ACE Connectivity POC - Replay Id

When: 29 January 2021 16:15-17:00 (UTC+00:00) Dublin, Edinburgh, Lisbon, London.

Where: WebEx Meeting

Hi John,

Thank you very much for your response and meeting acceptance in short notice.

Please join below WebEx meeting to discuss the attached scenarios for which the project is expecting IBM ACE product to support replay functionality.

WebEx details:

https://infosys.webex.com/meet/Sathinagasiva_r

Audio Bridge details:

Access Code: 572 281 677 #

UK: +44 2034090950

India:

+91 4064800111 -----(India Hyderabad Toll)

+91 8064800111 -----(India Bangalore Toll)

+91 2064800111 -----(India Pune Toll)
+91 8216480011 -----(India Mysore Toll)
18002669144 -----(India Toll Free)

Regards,
Siva Reddy
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Yeomans Drive, Blakelands, Milton Keynes, MK14 5AN

From: John A Reeve <JREEVE@uk.ibm.com>
Sent: 28 January 2021 16:54
To: Reddy, Siva (EXTERN) <siva.reddy@vwg.co.uk>
Cc: Behara, Anil (EXTERN) <anil.behara@vwg.co.uk>; Martin Howson <martin_howson@uk.ibm.com>; Mayers, Sean (EXTERN) <Sean.Mayers@vwg.co.uk>; UKIASupport <UKIASupport@vwg.co.uk>; Oliver Winslade <WINSLAO@uk.ibm.com>
Subject: RE: ACE Connectivity POC - Replay Id

Hi Siva,

I think it would be best to have both myself and Martin on the call. I have checked with him and we are both free between 4-15 and 5 on Friday. I am also free most of Monday if that time is not good for you.

I was also trying to arrange one of our salesforce experts to be available for a call but we can have this call first to discuss your general questions and I can follow up with them if there are any questions I can not answer.

Regards, John.

John Reeve
IBM Integration Developer and IBM Master Inventor
MP 211, IBM Hursley Park, Winchester, SO21 2JN

e-mail: jreeve@uk.ibm.com

----- Original message -----

From: "Reddy, Siva (EXTERN)" <siva.reddy@vwg.co.uk>
To: John A Reeve <JREEVE@uk.ibm.com>, Martin Howson <martin_howson@uk.ibm.com>, Oliver Winslade <WINSLAO@uk.ibm.com>
Cc: "Behara, Anil (EXTERN)" <anil.behara@vwg.co.uk>, "Mayers, Sean (EXTERN)" <Sean.Mayers@vwg.co.uk>, UKIASupport <UKIASupport@vwg.co.uk>
Subject: [EXTERNAL] RE: ACE Connectivity POC - Replay Id

Date: Thu, Jan 28, 2021 2:36 PM

Hi John/Team,

Hope your safe and doing good.

I hope you got a chance to have a look at below request.

It would be helpful if we all can connect over a skype meeting tomorrow to discuss the project requirements expected from IBM ACE product.

Could you please let us know your availability, so that I can send out the meeting invite for the same.

Thanks in advance.

Regards,
Siva Reddy
UKIA Platform Support
IT Operations
Mobile: +44 7404472562 / +44 7823822586



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Yeomans Drive, Blakelands, Milton Keynes, MK14 5AN

From: Reddy, Siva (EXTERN)

Sent: 27 January 2021 00:21

To: 'John A Reeve' <JREEVE@uk.ibm.com>; Martin Howson <martin_howson@uk.ibm.com>;
Oliver Winslade <WINSLAO@uk.ibm.com>

Cc: Behara, Anil (EXTERN) <anil.behara@vwg.co.uk>; Mayers, Sean (EXTERN)
<Sean.Mayers@vwg.co.uk>; UKIASupport <UKIASupport@vwg.co.uk>

Subject: RE: ACE Connectivity POC - Replay Id

Hi John,

Hope your safe and doing good.

We have raised a PMR CS2097875 with IBM Support team on the attached list of queries and the suggestion is to check with you directly.

Comments from the PMR CS2097875:

“A support ticket is probably **not the best** to continue these discussion as they work best when there is a finite issue to address. VW do have an IBM lab advocate (John Reeve) and a IBM tech sale representative (Martin Howson). They would be happy to have follow on meetings or email exchanges if you would like to discuss this in more detail. How would you like to proceed?

Regards,
Mike”

Could you please have a look on the attached scenarios for which the project is expecting IBM ACE to support replay functionality..

It would be helpful if we can connect on a meeting to discuss attached requested replay functionalities.

Thanks in advance.

Regards,
Siva Reddy
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From: John A Reeve <JREEVE@uk.ibm.com>
Sent: 18 December 2020 13:24
To: Reddy, Siva (EXTERN) <siva.reddy@vwg.co.uk>
Cc: Behara, Anil (EXTERN) <anil.behara@vwg.co.uk>; Martin Howson <martin_howson@uk.ibm.com>; Mayers, Sean (EXTERN) <Sean.Mayers@vwg.co.uk>; Oliver Winslade <WINSLAO@uk.ibm.com>
Subject: RE: ACE Connectivity POC - Replay Id

Hi,

I have been talking to the developers about the details below and I believe you also have a support ticket open for the same things. They are actively working on that so I will let them answer the questions directly there.

Regards, John.

John Reeve
IBM Integration Developer and IBM Master Inventor
MP 211, IBM Hursley Park, Winchester, SO21 2JN

e-mail: jreeve@uk.ibm.com

----- Original message -----

From: "Reddy, Siva (EXTERN)" <siva.reddy@vwg.co.uk>
To: John A Reeve <JREEVE@uk.ibm.com>
Cc: "Behara, Anil (EXTERN)" <anil.behara@vwg.co.uk>, Martin Howson <martin_howson@uk.ibm.com>, "Mayers, Sean (EXTERN)" <Sean.Mayers@vwg.co.uk>, Oliver Winslade <WINSLAO@uk.ibm.com>
Subject: [EXTERNAL] RE: ACE Connectivity POC - Replay Id

Date: Thu, Dec 17, 2020 5:12 PM

Hi John,

Thank you very much for your quick acknowledgement.. will wait for further suggestions from you..

Regards,
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Volkswagen Group UK
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From: John A Reeve <JREEVE@uk.ibm.com>
Sent: 17 December 2020 16:43
To: Reddy, Siva (EXTERN) <siva.reddy@vwg.co.uk>
Cc: Behara, Anil (EXTERN) <anil.behara@vwg.co.uk>; Martin Howson <martin_howson@uk.ibm.com>; Mayers, Sean (EXTERN) <Sean.Mayers@vwg.co.uk>; Oliver Winslade <WINSLAO@uk.ibm.com>
Subject: RE: ACE Connectivity POC - Replay Id

I will ask our salesforce experts for some advice on this and get back to you.

Regards, John.

John Reeve
IBM Integration Developer and IBM Master Inventor
MP 211, IBM Hursley Park, Winchester, SO21 2JN

e-mail: jreeve@uk.ibm.com

----- Original message -----

From: "Reddy, Siva (EXTERN)" <siva.reddy@vwg.co.uk>
To: Martin Howson <martin_howson@uk.ibm.com>, "WINSLAO@uk.ibm.com" <WINSLAO@uk.ibm.com>, John A Reeve <JREEVE@uk.ibm.com>
Cc: "Mayers, Sean (EXTERN)" <Sean.Mayers@vwg.co.uk>, "Behara, Anil (EXTERN)" <anil.behara@vwg.co.uk>
Subject: [EXTERNAL] RE: ACE Connectivity POC - Replay Id
Date: Thu, Dec 17, 2020 3:51 PM

Hi John/Martin/Team,

Hope your safe and doing good.

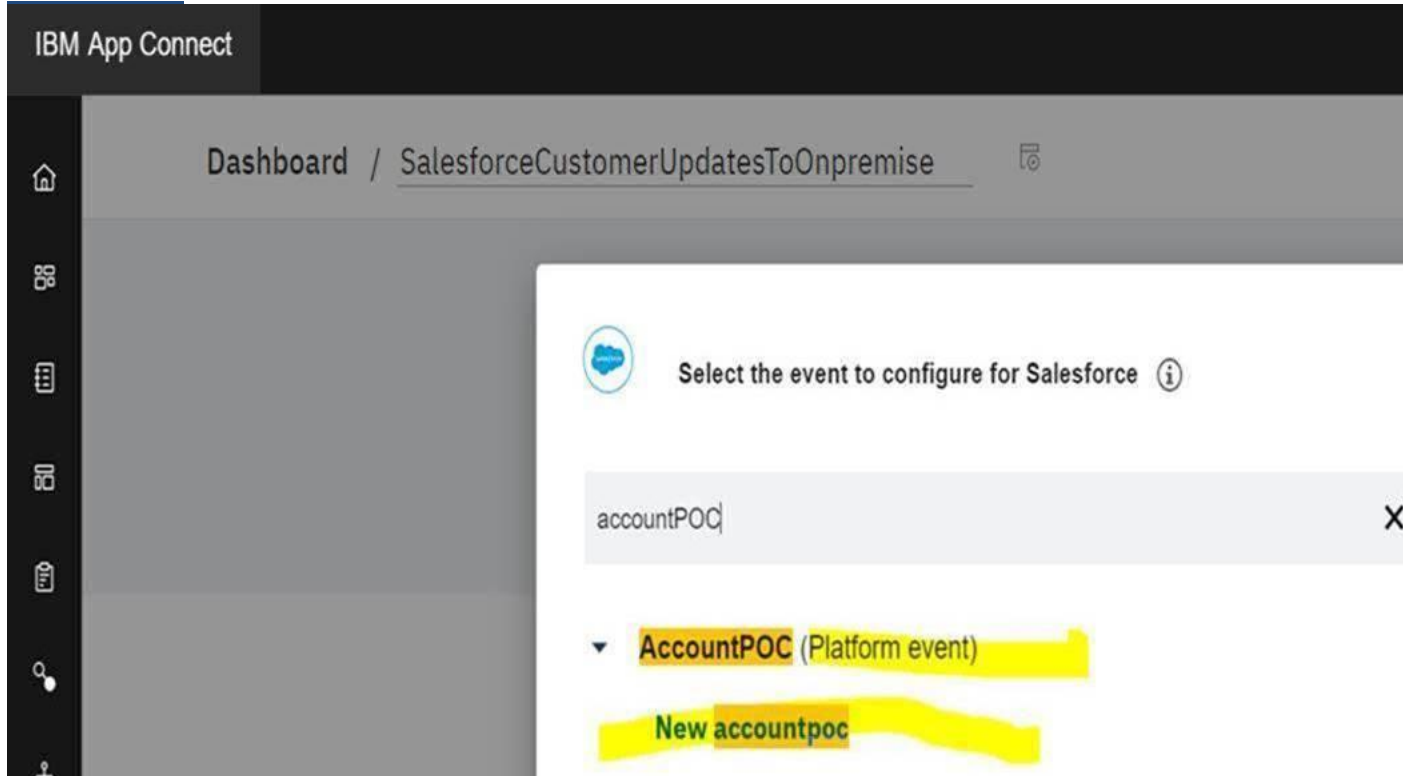
We would need your suggestions on the below query.

Currently we are planning to subscribe Salesforce Platform events using IBM App Connect on IBM Cloud SAAS platform.

We have followed below steps to achieve this.

Step 1: Subscribe to Salesforce platform event “New accountpoc” as shown in the Screenshot 1.

Screenshot 1:



Step 2: We have observed that Replay ID(Highlighted in yellow in screenshot 2) coming under root tag “AccountPOC__e”

Screenshot 2:



Context and sample data

| | | |
|----------------------|-----|-------------------------|
| Salesforce undefined | | |
| AccountPOC__e | { } | Regenerate sample data |
| Replay ID | abc | SampleReplayID |
| Created Date | | 1985-04-12T23:20:50.52Z |
| Created By ID | abc | SampleCreatedByID |
| Account Id | abc | SampleAccountId |
| Account Name | abc | SampleAccountName |
| | | SampleSource |

https://0omeiagf-bluemix.eu-gb.appconnect.ibm.com

Step 3: But Salesforce team is mentioning that they would send the Replay ID separately under the Xpath **Data/event** (highlighted in yellow in screenshot3) based on the documentation on the page https://developer.salesforce.com/docs/atlas.en-us.api_streaming.meta/api_streaming/using_streaming_api_durability.htm,

ScreenShot3:

Platform event messages contain a replay ID when delivered to a Comet message shows the `replayId` field in the event object for the `Low_Ink_e`

```
1  {
2    "data": {
3      "schema": "dffQ2QLzDNHqwB8_sHMxdA",
4      "payload": {
5        "CreateDate": "2017-04-09T18:31:40.517Z",
6        "CreatedById": "005D0000001cSZs",
7        "Printer_Model__c": "XZO-5",
8        "Serial_Number__c": "12345",
9        "Ink_Percentage__c": 0.2
10     },
11     "event": {
12       "replayId": 2
13     }
14   },
15   "channel": "/event/Low_Ink__e"
16 }
```

Is this a bug in IBM App connect in subscribing to only Payload part which is coming from Salesforce platform events?

Also if IBM cloud is down for 1 hour, will this ReplayID would be used by IBM App Connect to retrieve the last 1 hour backlogs of Salesforce Platform events..

Could you please provide your thoughts/suggestions on this.

Thanks in advance.

Regards,
Siva Reddy
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From: Daniel Trusler <d.trusler@forcology.com>
Sent: 17 December 2020 11:22
To: Reddy, Siva (EXTERN) <siva.reddy@vwg.co.uk>

Cc: Mayers, Sean (EXTERN) <Sean.Mayers@vwg.co.uk>; Nick Gachowicz <n.gachowicz@forcology.com>; Behara, Anil (EXTERN) <anil.behara@vwg.co.uk>; Jonathan Marson <j.marson@forcology.com>
Subject: ACE Connectivity POC - Replay Id

Hi Siva,

Thank you for your time on the call this morning. To confirm what we discussed:

ReplayID is a feature provided by the Salesforce Streaming API. It provides a numeric ID for each event, which can be used to retrieve events that were missed during downtime. This is achieved by sending the replayID of the last received event, to which salesforce will respond with all events created since.

We tested this functionality by stopping the connector, making 3 accounts within Salesforce, and then turning on the connector again. Unfortunately the 3 accounts made during the downtime were then not retrieved by IBM ACE.

Having reviewed the payloads, it was clear that there was a mismatch between what Salesforce produce and what IBM ACE are expecting.

IBM ACE are expecting the response in the following JSON format:

```
{"ReplayId":"SampleReplayID","CreatedDate":"1985-04-12T23:20:50.52Z","CreatedById":"SampleCreatedByID","Account_Id__c":"SampleAccountId","Account_Name__c":"SampleAccountName","Source__c":"SampleSource","Email__c":"SampleEmail","Phone__c":"SamplePhone"}
```

I ran a scan using a debugging tool within Salesforce, and the response is as follows:

```
{ "schema": "pds_wiQWNKhJ1MTPEmniNw", "payload": { "CreatedById": "0051i000002aGBpAAM", "CreatedDate": "2020-12-17T10:47:04Z", "Account_Name__c": "vf listener POC", "Phone__c": null, "Account_Id__c": "0011i00000liYfHAAU", "Source__c": "Salesforce", "Email__c": null }, "event": { "replayId": 3282109 } }
```

As per the documentation on this page, https://developer.salesforce.com/docs/atlas.en-us.api_streaming.meta/api_streaming/using_streaming_api_durability.htm, this is the expected format for the “data” tag within platform event messages. The third piece of sample JSON pertains to platform event messages, and as we can see the response we can see within Salesforce matches the “data” tag shown in this example.

The Streaming API is standard Salesforce functionality, and whilst we can customise the contents of the payload the response format is fixed for all Salesforce orgs. It appears IBM may have a bug in their connector where it is expecting the replayId to be contained within the payload tag rather than the event tag, and thus is unable to properly track the replayId.

Kind Regards,
Daniel

Daniel Trusler
Salesforce Senior Developer
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