Contents

X-Force Enterprise Datalink Server

This application is used for Enterprise Server.

As per the plant & Channel reference configuration in enterprise, this application will fetch alarms plant wise and store into database.

This application must be started to get data stamping into Enterprise Database.

This application must be started to get data stamping into Enterprise Database.

1. Set Registry of the Enterprise Datalink Application (data not fetching from the plants)

1.1. Event / Symptoms

<< What problem has occurred>>

X-Force Enterprise datalink stopped fetching data from the plants.

<< What are the symptoms of problem>>
Alarm summary reports and plants count not match because of the Enterprise datalink stuck when fetching the data from plants.

1.2. Cause Identified

<<Description of Cause>>

This issue may occur because of the previous month data are coming at plant level and by reading old data by the enterprise system. The Enterprise datalink stuck in previous month's current database name. And stopped fetching data.

<<Step-by-Step investigation carried out>>

- Check the latest alarm ID in the current database for each CHID
- Check log file for channel name for which data not coming. Find the data fetching query firing on the plants database. In addition, run this query manually on plant.
- After analyzing the result, you know that the issue is with MAX alarm ID or Curr_dbname.
- If the issue is with MAX alarm ID, need to set MAX alarm ID in the Enterprise Curr_dbname.
- If the issue with Curr_dbname, remove unwanted Curr_dbname entry from the Plants tbl_data_Channel_DBList table.

1.3. Resolution

<<Description of Resolution. Steps carried out to resolve the issue>>

To find all channels and the latest alarm against it.
```sql
select distinct (ChannelName), Plant, Max (Eventstamp) as MaxDate, Min(EventStamp) as
MinDate, count(*) AlarmCount
from [Xforce_21_Oct_04to10].[dbo]. [tbl_Data_Alarm_Field] RP right join
[XForce].[dbo].[tbl_Config_Channel] PR on RP.chid = PR.chid
AND LineType = 'A'
And MsgType = 'ALM'
AND EventStamp >= CONVERT (DATE, GETDATE ())
group by ChannelName, Plant order by Plant
```

If you needed to insert the Alarm Line manually in the database, use the following query

```sql
insert into [Xforce_20_Sep_06to12].[dbo].[tbl_Data_Alarm_Field]
---- Check the last data come in the database ---
select * from Xforce_20_Oct_04to10.[dbo].[tbl_Data_Alarm_Field]
where ChannelName = 'SOE PLC 02'
---- check the Max AlarmID ----
And AlarmID = (select MAX(AlarmID) from
[Xforce_20_Sep_01to05].[dbo].[tbl_Data_Alarm_Field] where ChannelName = 'SOE PLC 03')
```

After inserting the alarm line update alarm ID by Alarm + 1.

```sql
update [Xforce_20_Sep_06to12].[dbo].[tbl_Data_Alarm_Field]
Set AlarmID = AlarmID + 1
where ChannelName = 'SOE PLC 03'
And AlarmID = (select MAX(AlarmID) from
[Xforce_20_Sep_01to05].[dbo].[tbl_Data_Alarm_Field] where ChannelName = 'SOE PLC 03')
```

To check the result after update

```sql
select MAX(AlarmID) from [Xforce_20_Sep_06to12].[dbo].[tbl_Data_Alarm_Field] where
ChannelName = 'SOE PLC 03'
```

If you needed to insert Curr_DBName in tbl_data_Channel_DBList table in Enterprise system.

```sql
insert into [SDHJ-ENTSRV1\SQLDATA].[xforce].[dbo].[tbl_data_Channel_DBList]  values
('E13F81FF-466B-4EA0-BBD9-
B55CD14B3388',GetDate(),3,'Xforce_20_Aug_02to08','False','False',convert(date,getdate
()))
```
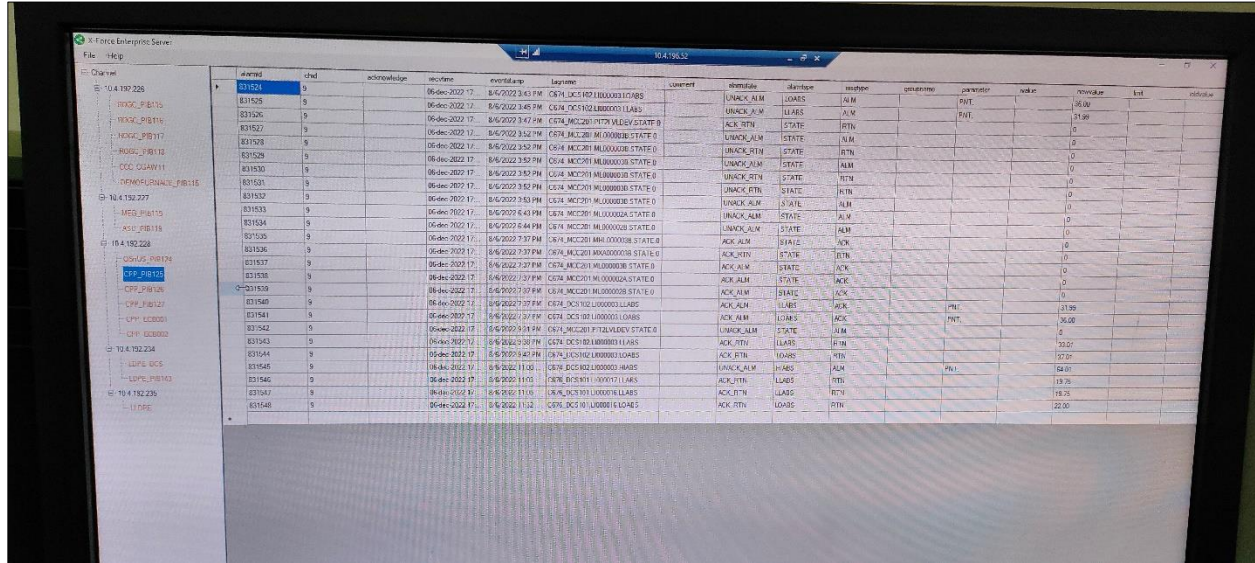
After applying those solutions restart the Enterprise Datalink application. And check again.

1.4.   Measures / Precautions

2. Data not fetching from the plants

2.1.   Event / Symptoms

X-Force Enterprise datalink stopped fetching data from the plants. Or datalink application showing old date data in the X-Force Enterprise datalink application

As shown in the above image we can observe that the application is stuck in the 8/6/2022 on current date of 06/12/2022

2.2.   System Details

	Before Job	After Job
X-Force Enterprise Datalink app RAM Uses		
X-Force Enterprise Datalink app CPU Uses		
SQL Server RAM Uses		
SQL Server CPU Uses		

2.3.   Cause Identified

Find the CHID for which are showing of old date as per above image (Stuck in the previous month).

Find logged query from the log files by CHID or ChannelName "CPP_PIB125 and run it in the SQL server.

Found log query will look like as below

SELECT TOP(2000) AlarmID, 9 as 'chid', acknowledge, '07-dec-2022 15:00:07.992' as 'recvtime', EventStamp, TagName, AlarmState, AlarmType, MsgType, groupname, parameter, ivalue, newvalue, limit, ioldvalue, soldvalue, engunits, 'CPP_PIB125' as 'ChannelName', operator, priority, provider, remark, milisecond, alarmline, alarmcolor, LineType, msgid, supressalarm, unit, changetext, console, AlarmName, letterbug, statetext, blockname, comment, alarmtext, alias1, oprbit, group1, group2, RtnAlarmID, rtneventstamp, ackalarmid, ackeventstamp, msgtype1, seqid, node, isnegativelogic, flgxmlcreated, alias, silentalarmbit,

```
newalarmbit, blockdescription, trigid, execseq, action, flgactiontaken FROM
[Xforce_22_Aug_01to06].[DBO].[tbl_data_alarm_field] TBL WHERE tbl.ChID = 2 AND
(TBL.Alarmid > 36 and RecvTime < '2022-12-07 14:59:08')  ORDER BY TBL.alarmid
```

From the query found from log we can conclude that the data are fetched from the
"[Xforce_22_Aug_01to06].[DBO].[tbl_data_alarm_field]" of the server "10.4.192.228" AIMS
system.

2.4.   Resolution

Take the AIMS system on remote for check the "tbl_data_Channel_DBList" and Delete
all Curr_dbname from the table.

Check the last data available for the channel on the enterprise. Run below query in
every database in dec order to check the last data was received from the Plant AIMS
system to Enterprise.

Table 1 to get the last data received from the plant AIMS system

```
Select MAX(EventStamp) from tbl_Data_Alarm_Field where CHID = 9
```

As per this issue the last data was received in XForce _22_Nov_20to26. So, we
need to delete "Curr_DBName" from the table older then "XForce _22_Nov_20to26"

```
SELECT * FROM [XForce].[dbo].[tbl_data_Channel_DBList] where Curr_DBName not like
'%Xforce_22_Nov%' and Curr_DBName not like '%Xforce_22_Dec%'
```
This query will get the result of all Curr_DBName from the table older then "XForce
_22_Nov_20to26"

To solve the issue and make X-Force Enterprise datalink application to start
fetching data from where it was stuck, we need to delete old Curr_DBName from
the "tbl_data_Channel_DBList"

```
DELETE FROM [XForce].[dbo].[tbl_data_Channel_DBList] where Curr_DBName not like
'%Xforce_22_Nov%' and Curr_DBName not like '%Xforce_22_Dec%'
```

Now restart the X-Force Enterprise Datalink application and it will start reading data
from it stuck

Run the select query found from the log file with server linking.

2.5.   Measures / Precautions