X-Force Data Collector

Overview

Whenever we have the situation that we want to fetch data from Wonder ware in that case we have to use X-Force Data Collector Application from AIMS package.

Wonder ware itself creates SQL database Named "WWALMDB". X-Force Data Collector application will fetch data from one the view "v_AlarmEventHistoryInternal2" of WWALMDB database.

X-Force Data Collector Application can fetch data from mainly two type of source.

1. **ODBC:** For ODBC connection, Firstly we have to configure ODBC from windows ODBC configuration.
2. **OPC:** For OPC, Firstly user have to do DCOM configuration.

X-Force Data Collector Application should fetch data from ODBC/OPC Channel. Application should read data from destination as per configuration. User is able to configure read/print data which is coming from ODBC/OPC source.

- As per license ODBC Channel Count feature, User should be able to configure number of channels from mentioned in license.

```
FEATURE AMS-CHANNEL-ODBC 15.25.04.0000 31-Dec-2019 2 \
        HOSTID=94-18-82-08-9C-26 MAC ISSUER=""SSM InfoTech Solutions""
        NOTICE="" |  | ""| SIGN="VCNMHEVTUY0BW/P7TDXHU/ZBWYQRYDRRPRK2C
```

- Application should fetch data from ODBC/OPC as per configuration
- If data reading is enabled than application should read data from the source.
- If data printing is enabled than application should send data to the configured destination.

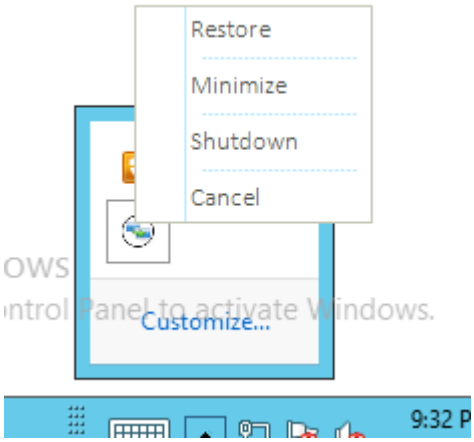
Pre-requisite

Before starting configuration of X-Force Data Collector, firstly we need to do two major configuration.
1) ODBC DSN Creation (if want to configure ODBC channel)
2) OPC DCOM Configuration (if want to configure OPC Channel)
3) Give Every One Rights to the folder where X-Force Data Collector application is installed. if user does not give sufficient privilege to the directory then application will exit automatically.
4) User have to Keep License file Named "ssmxforce.lic" in the root folder where application is installed. if there is not license file in the root folder or license file is not valid or expired application should exit automatically.

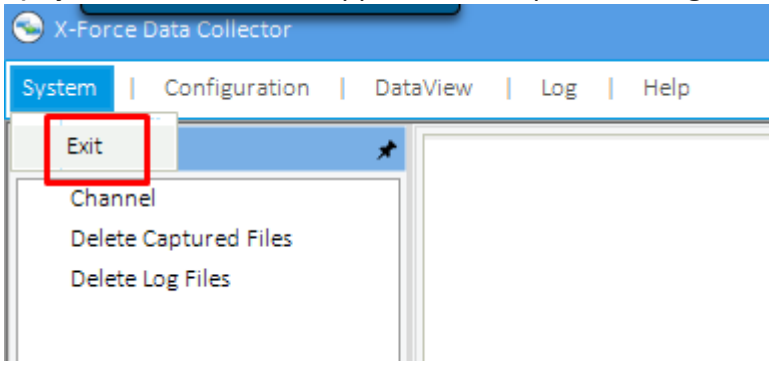
5) Licensce file should have feature named "AMS-CHANNEL-ODBC"
6) If any configuration is saved previously then application should load that configuration

Configuration and Menus

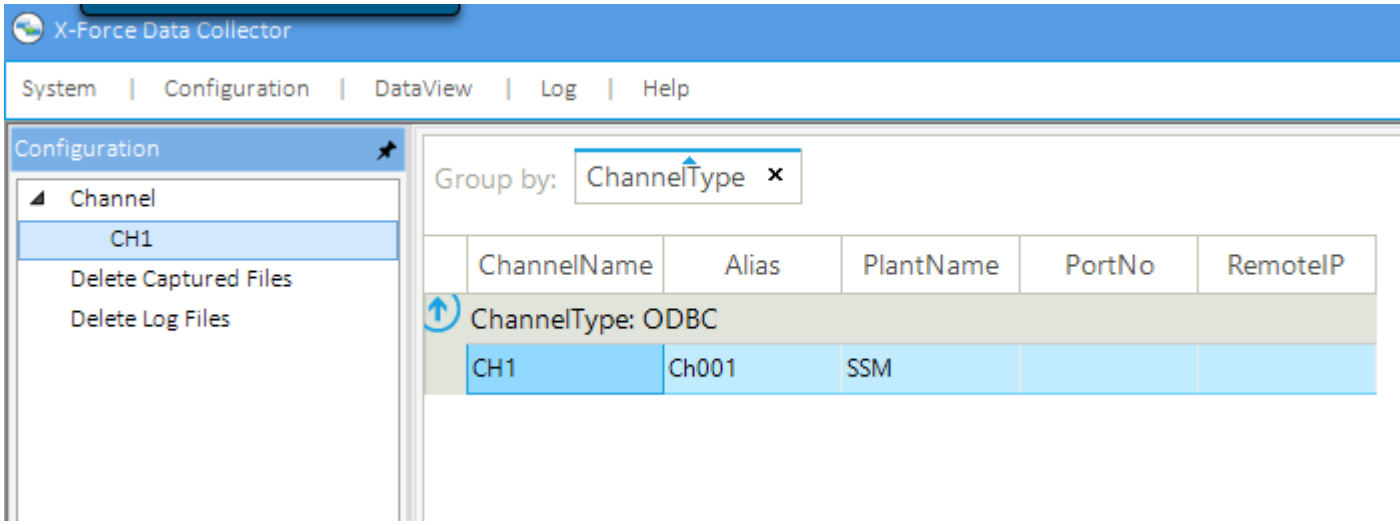
- On startup of the X-Force Data Collector, Application should start in minimised mode in notification area. User can right click on the Application icon to get access to menus like Restore, Shutdown, Minimise and Cancel.



- After storing application, User can access the menus as below.
1) System: in this menu, application exit provision is given.



2) Configuration: After clicking on this menu, User can do necessary configurations.

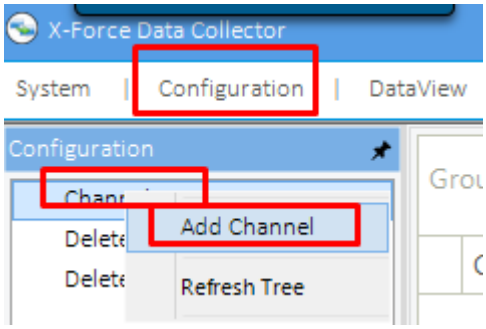


3) **DataView:** On click of this menu, User can see the overview of current fetching data from the source.
ADD SS HERE

4) Log: Here user can view log written by the application

Channel Configuration
In order to fetch data from the Source, User can do channel configuration. In X-Force Data Collector Application, user can configure two types of Channel one is ODBC and OPC.

For channel Configuration user have to click on configuration then right click on channel and then click on Add Channel.



- On Click of Add Channel, Channel Configuration window should be open. In this window we can configure ODBC or OPC Channel.

Fetch Data From ODBC and Print

As per Configuration application will fetch data from the source using ODBC.

-Before Fetching data application will check in registry to fetch data from the date and time where left when last time application was closed.
-At time application will fetch only particular time interval data. This time interval is configured in ReadDuration during channel configuration.

-Applicaion should display proper information in UI so that user should know that currently application is reading data from the source
-Application should fetch data from Database View named "v_AlarmEventHistoryInternal2"
-After fetching data from Database view, Application should write capture file into "<RootFolder>/CapturedAlarm/"
-This Capture File Name should be as per standard of AIMS
-Applicaion should display proper information in UI so that user should know that currently application is writing data into Capture file
-After Completing one reading cycle, Application should store DataReadPointer in registry.
-Applicaion should display proper information in UI so that user should know that Writing data into file is completed
-While fetching data from source, if data is not found then application should display information like "No record found"

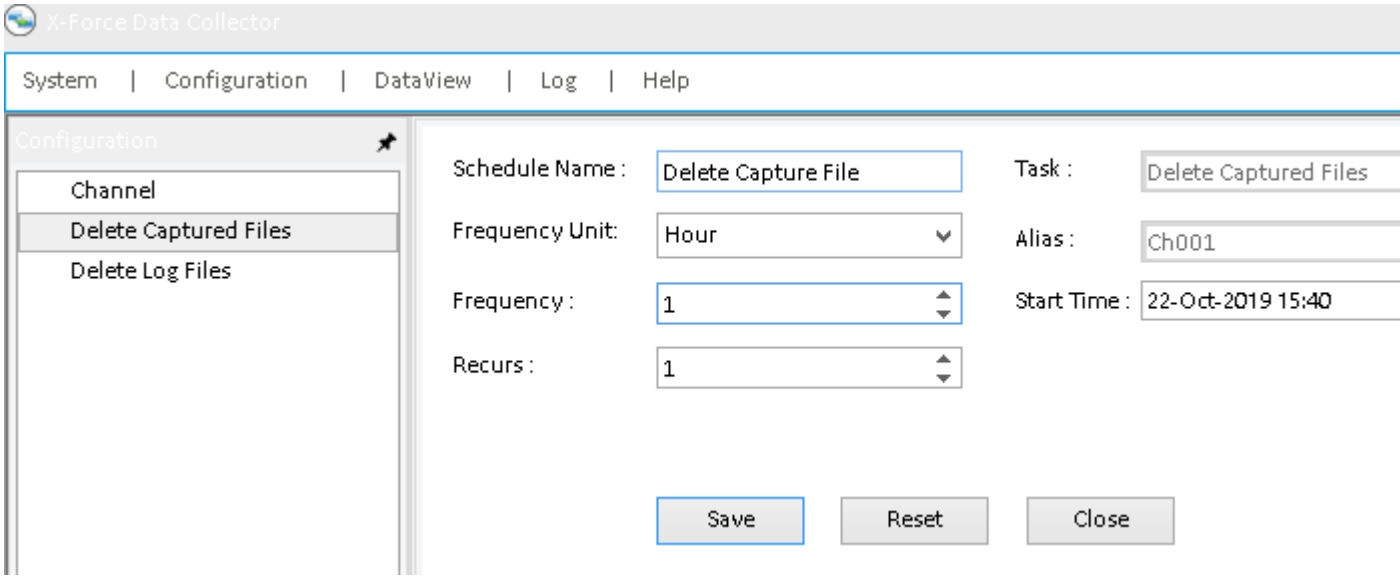
After Reading Data, Application should Print data as per configuration.

-Before printing data application will check in registry to fetch data from the date and time where left when last time application was closed.
-Application will throw 10,000 bytes at a time to the configured IP and Port
-While printing data to the printer application should display proper message about printing process in UI
-After printing of one chunk of data application should update values of LastPrintedFile, LastPrintedFileLine, LastPrintedFileTime in registry
-While printing data to the printer application should display proper message about printing process in UI

Delete Capture and Log Files

Data Collector application is able to delete Capture files and Log files.

Delete Capture Files
1) Schedule Name: Name of the Schedule. User can give any desired name.
2) Frequency Unit: It can be Hour, Day, Week, Month.
3) Recurs: Number occurence of Schedule. E.g. Frequency unit is hour and Recurs 1 then applicatio will execute Schedule at every hour.
4) Start Time: Time for Starting this schedule
5) Save: Application will save this Configuration in XML file
6) Reset: Application will reset all the configuration and will set default values.
7) Close: Application should close the Delete Capture Configuration window



Delete Log Files

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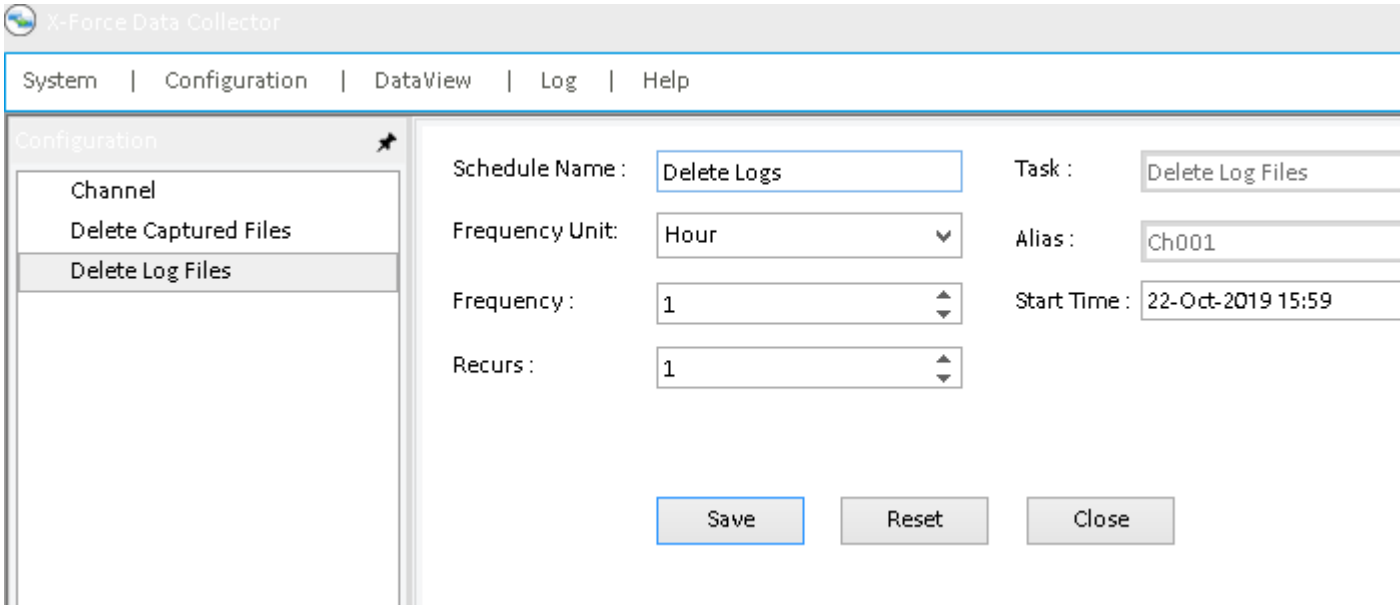
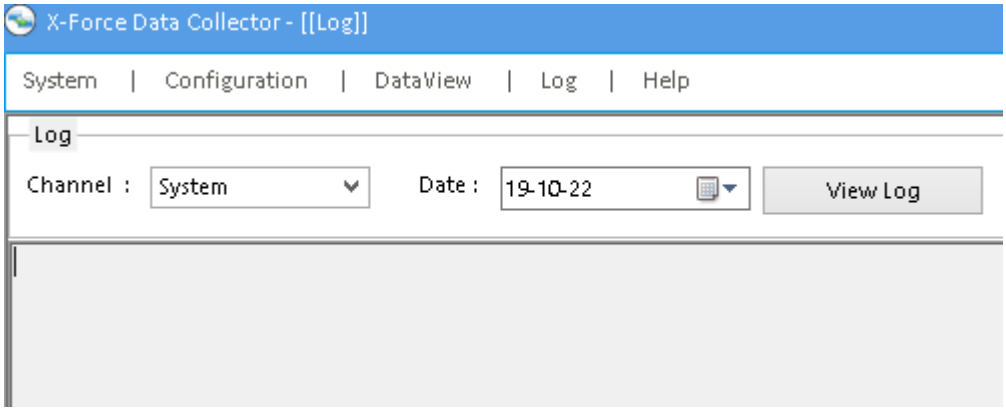
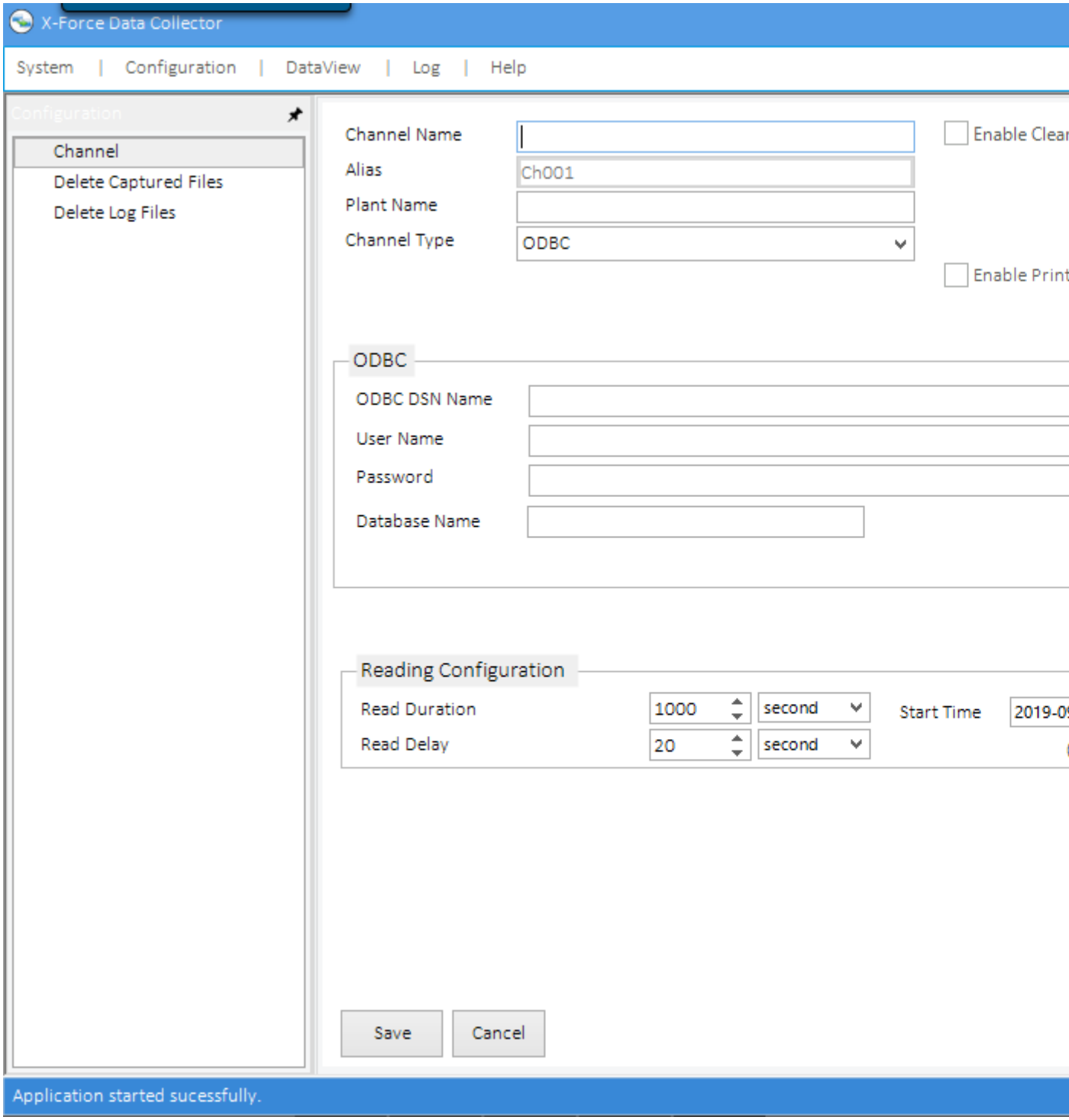


Log Viewer

Data Collector application provides provision that user can view System wide or channel wise Logs.



-In channel Drop Down if user selects System, than application should show all logs.
-In channel Drop Down if user selects name of any channel than application should display logs of selected channel only
-user can view log of particular date using date selector



Here are Parameters used to configure ODBC/OPC channel.

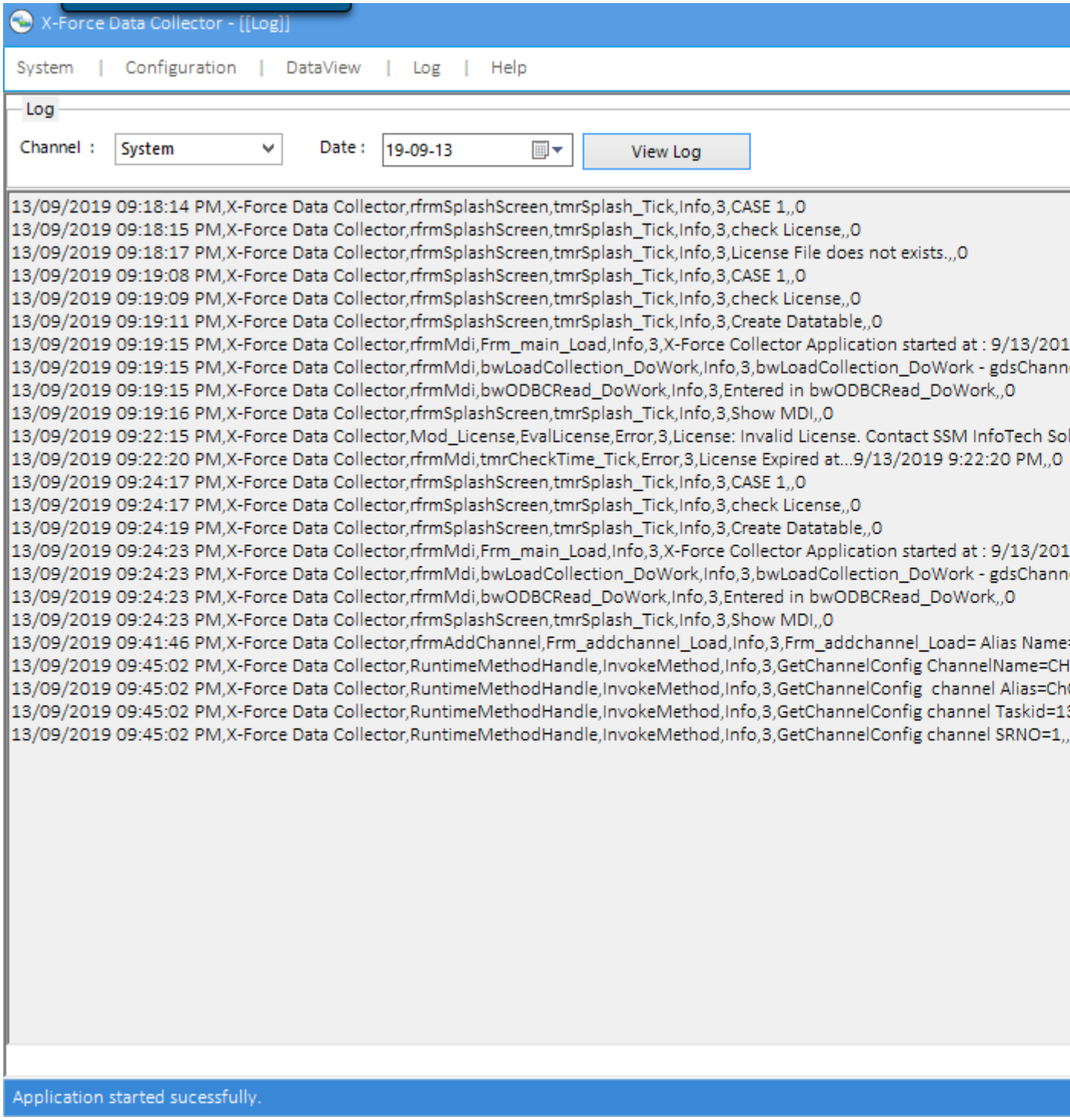
Channel Configuration for ODBC: To Retrive Data from ODBC data source, User must have to do some configuration for ODBC.

ChannelName: Name of the channel. All the configuration will be saved with this configured Channel Name.
Alias: This is a unique ID of Channel, which will be generated by application.
Plant Name: Name of the plant from which we have to fetch data from ODBC.

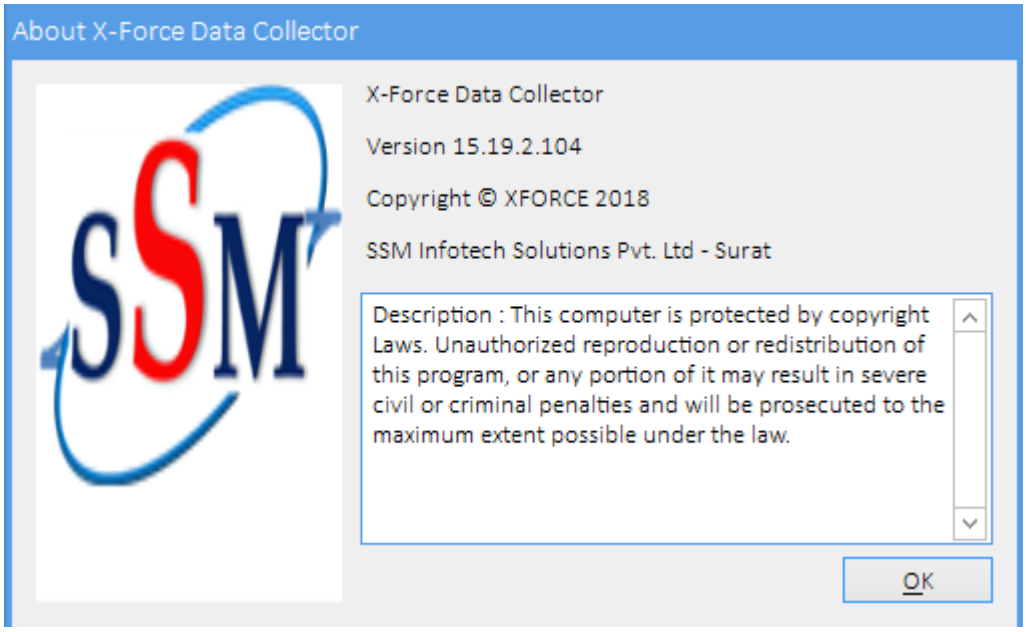
Channel Type: Type of the Channel. Here for ODBC must have to select ODBC from the List.
Enable Clear Pointer: If user wants to clear registry entry on start up then user have to enable this option.
Enable Historian: If we want fetch data from historan, need to enable this option.
Enable Redundant: If user wants to configure redundant ODBC then user can use this option to configure Redundant ODBC.
Enable Read: If user wants application to read data from data source, then User have to enable read option.
Enable Print: If user wants to send data on network using TCP/IP, then user can enable this option.
IPaddress and Port No: Network address and port number to send data on ethernet.
ODBC DSN Name: Name of the DSN.
User Name: User name of SQL, where WWALMDB Database is located.
Password: Password of SQL, Where WWALMDB is located.
DatabaseName: Name of the database from where application have to fetch data. Ideally it will be WWALMDB.
Reading Duration: This parameter is used to set duration of reading. If will set it 10 Second then application will only 10 seconds data at a time.
Read Delay: When user wants to fetch data from the source will delay. E.G. Wonderware is inserting real time data, but user wants to read data 1 min after data insertion by Wonderware to avoid Data loosing possiblity.
Start Time: Application will fetch data from this configured date and time.

Here are some channel confgiruation parameter which are used only for OPC channel

Host Name: Name of machine or IP of OPC Server.
User Name: User name of OPC Server machine.
Password: Password of OPC Server machine.
Domain: Domain of OPC Server machine.
Reconnect Time: Reconnect time for OPC server connection in seconds.
OPC Server: Name of the OPC Server.
Browse OPC AE Servers: for browse all the OPC Server for configure host name.
Connect: for connect OPC AE Server.
Set Attribute: For Set OPC AE Server attributes. In simple term, User have to configure list of column names to be fetched from OPC server.



5) Help: On click of this menu user can access about us


About X-Force Data Collector
X-Force Data Collector
Version 15.19.2.104
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Description : This computer is protected by copyright Laws. Unauthorized reproduction or redistribution of this program, or any portion of it may result in severe civil or criminal penalties and will be prosecuted to the maximum extent possible under the law.
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