Data Director 3 Changes

Quick Guide

LS Retail NAV 6.4

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1 Introduction

The purpose of this document is to give a quick overview of how the changes between the LS Retail Data Director 2 (DD2) and the LS Retail Data Director 3 (DD3) affect LS Retail NAV and are dealt with in the LS Retail NAV 6.3. This guide is aimed at IT-staff and technical experts that are already familiar with the DD2.

The Scheduler is a service that runs in the NAV environment. The Scheduler generates Data Director Job data that is used to tell Data Director what data to replicate, from where and to where.

1.1 Functional Overview

Several improvements have been made to the functionality of the Data Director in the DD3 version and some of them require changes in the LS Retail NAV to be utilized. They make quite a few of the features of LS Retail NAV simpler, more effective and streamlined.

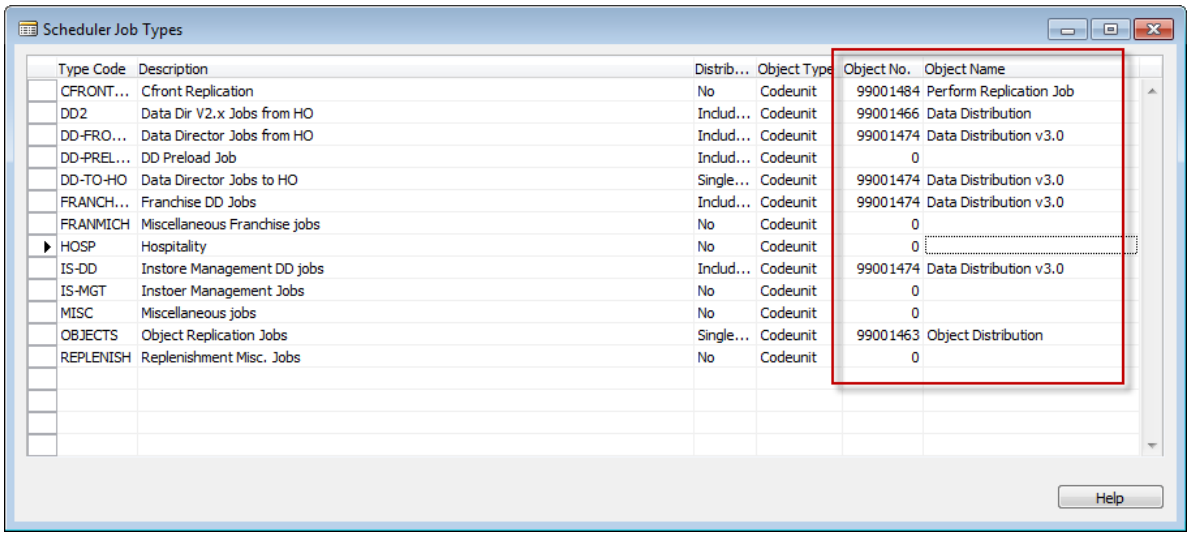
The most important addition in Data Director 3 is a monitoring system. This system gives the user a great advantage in having good overview over all the Data Director operations in one place.

Some of the most important changes made in LS Retail NAV are:

1. New codeunits
2. Connections to more than one port
3. New features described later in this Guide.

Several new checkboxes and settings are available in this new version and new codeunits. Codeunit 99001474 is used instead for codeunit 99001466 when you are using DD3.

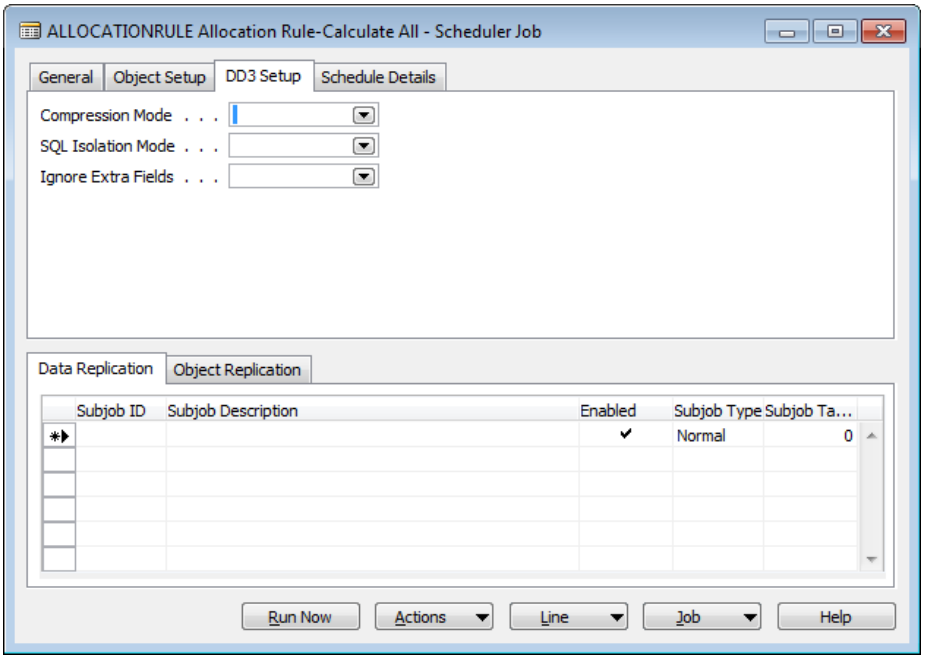
On The **LS Retail – Scheduler, Scheduler Job, Setup, Scheduler Job Types**:

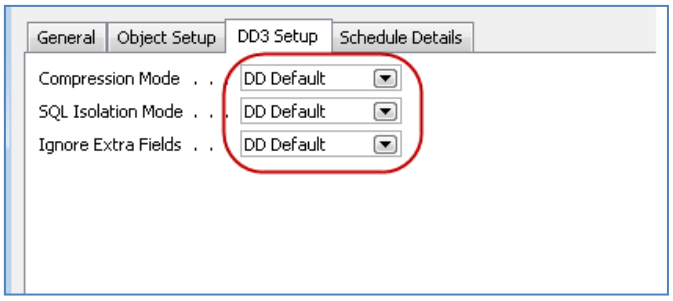


1.2 Setup

The setup for the DD3 is done in the **LS Retail – Scheduler, Scheduler Job** on the tab: **DD3 Setup**.

Default settings for these values are set in DD Configuration tool. To override the settings for a specific job, you can do so in the DD3 Setup tab. If Default value is selected, the value set in DD Configuration will be used, otherwise it is overwritten by the Job settings.

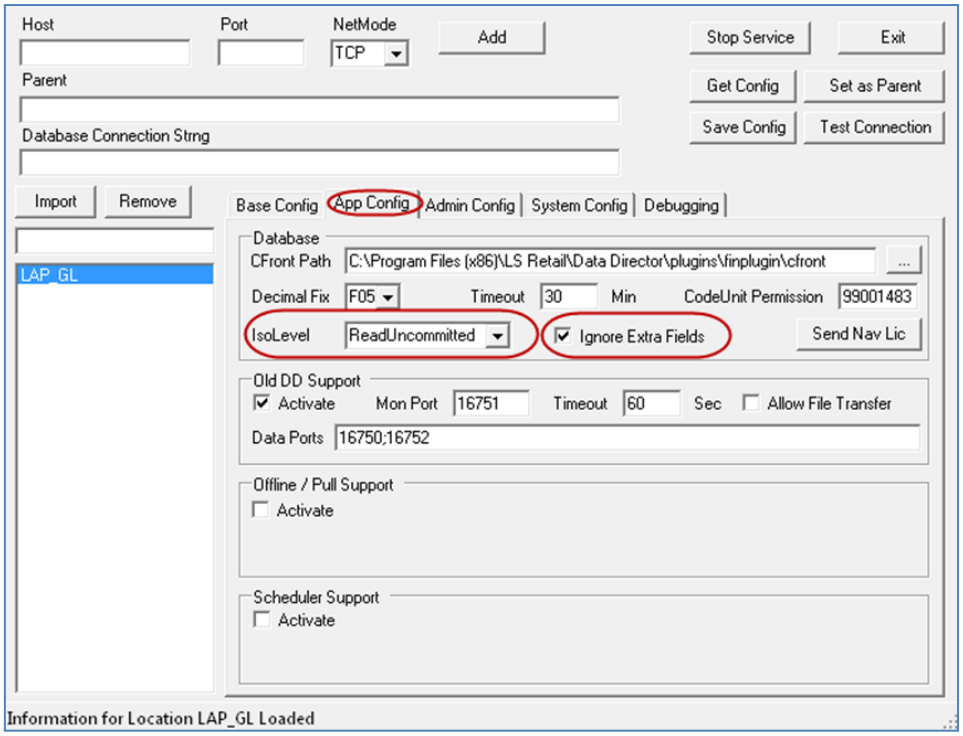


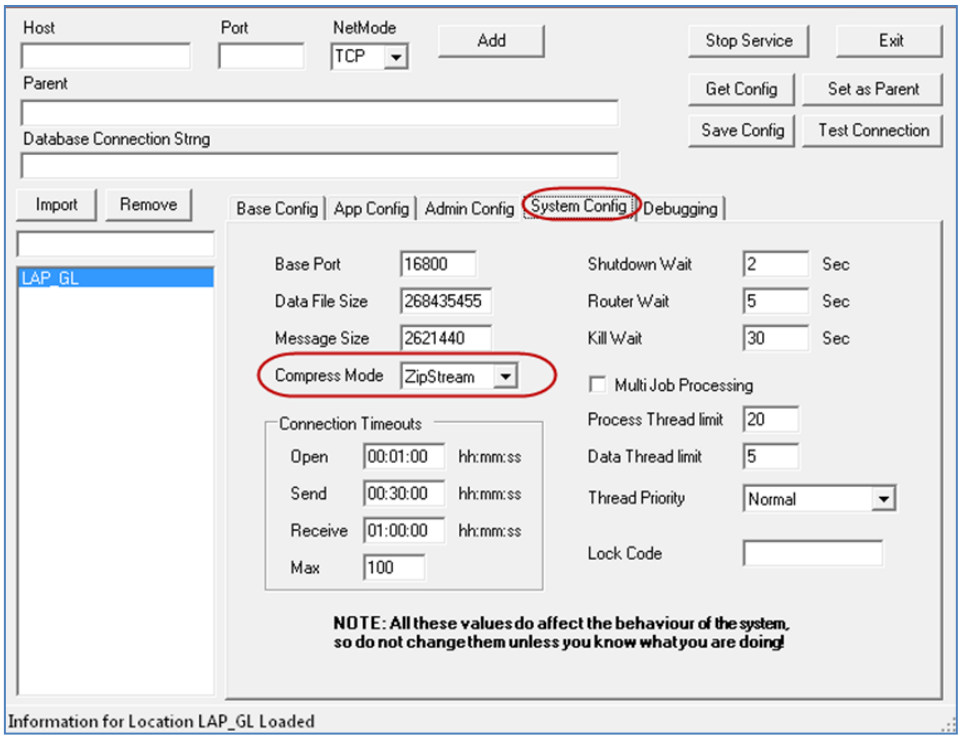


Compression Modes sets the compression method that DD will use when compressing data for transfer.

SQL Isolation mode is used to set the Isolation mode for SQL or OleDB plugins

Ignore Extra Fields set if DD should report error or not when fields are missing in the database that are included in the Job data.


Host
Port
NetMode
TCP
Add
Stop Service
Exit
Parent
Get Config
Set as Parent
Database Connection Strng
Save Config
Test Connection
Import
Remove
Base Config
App Config
Admin Config
System Config
Debugging
LAP_GL
Database
CFront Path
C:\Program Files (x86)\LS Retail\Data Director\plugins\finplugin\cfront
Decimal Fix
F05
Timeout
30
Min
CodeUnit Permission
99001483
IsoLevel
ReadUncommitted
Ignore Extra Fields
Send Nav Lic
Old DD Support
Activate
Mon Port
16751
Timeout
60
Sec
Allow File Transfer
Data Ports
16750;16752
Offline / Pull Support
Activate
Scheduler Support
Activate
Information for Location LAP_GL Loaded


Host
Port
NetMode
TCP
Add
Stop Service
Exit
Parent
Get Config
Set as Parent
Database Connection Strng
Save Config
Test Connection
Import
Remove
Base Config
App Config
Admin Config
System Config
Debugging
LAP_GL
Base Port
16800
Data File Size
268435455
Message Size
2621440
Compress Mode
ZipStream
Connection Timeouts
Open
00:01:00
hh:mm:ss
Send
00:30:00
hh:mm:ss
Receive
01:00:00
hh:mm:ss
Max
100
Shutdown Wait
2
Sec
Router Wait
5
Sec
Kill Wait
30
Sec
Multi Job Processing
Process Thread limit
20
Data Thread limit
5
Thread Priority
Normal
Lock Code
NOTE: All these values do affect the behaviour of the system,
so do not change them unless you know what you are doing!
Information for Location LAP_GL Loaded

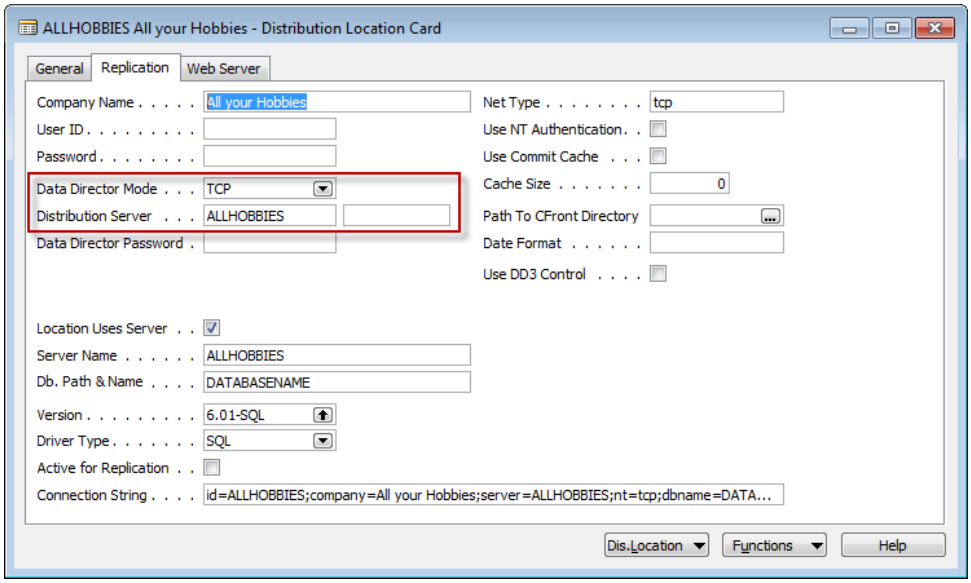
2 Scheduler

2.1 Distribution Location Card

On the **Distribution Location Card** in the **LS Retail – Scheduler** there are now separate fields available where there used to be one for the:

- Distribution Server
- Port and
- Network Mode

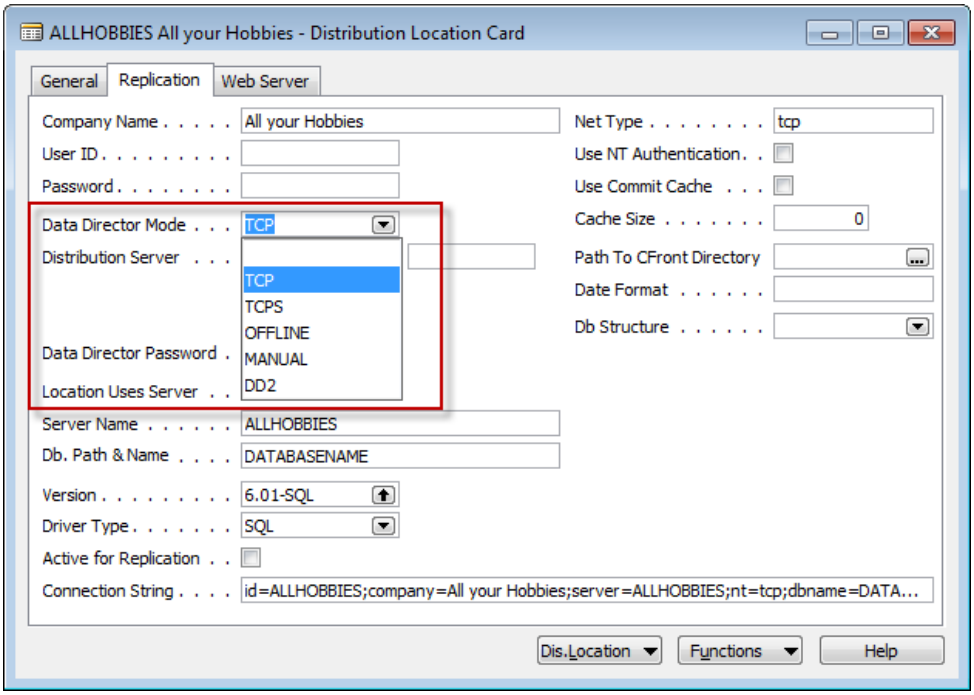
This is shown on the Replication tab. Data Director Mode might for instance be TCP, Distribution Server ALLHOBBIES and you could then insert port, for example: 18999.



The **DB Structure** field has been removed and the **Connection String** is now made from combination of plugin ID and Plugin String from a selected Dist. Location Version in the **Version** field.

There are fixed options for the Data Director Mode and these are shown in a drop down list and these are the modes that can be chosen:

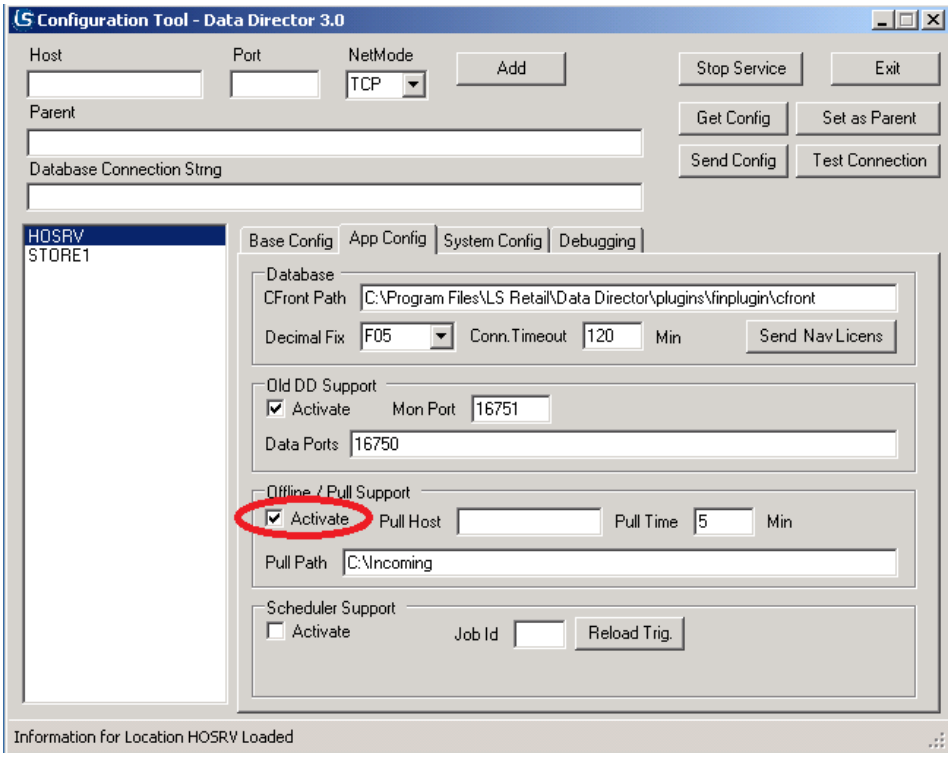
- **TCP** Standard TCP communication (Default)
- **TCPS** Secured TCP communication, needs Windows Authentication
- **MANUAL** Manual mode where job files will be sent manually from one host to another.
- **OFFLINE** Job waits for destination to pull the data from source host
- **DD2** for the older version of the Data Director


ALLHOBBIES All your Hobbies - Distribution Location Card
General
Replication
Web Server
Company Name
All your Hobbies
User ID
Password
Data Director Mode
TCP
Distribution Server
Data Director Password
Location Uses Server
Server Name
ALLHOBBIES
Db. Path & Name
DATABASENAME
Version
6.01-SQL
Driver Type
SQL
Active for Replication
Connection String
id=ALLHOBBIES;company=All your Hobbies;server=ALLHOBBIES;nt=tcp;dbname=DATA...
TCP
TCPS
OFFLINE
MANUAL
DD2
Net Type
tcp
Use NT Authentication
Use Commit Cache
Cache Size
0
Path To CFront Directory
Date Format
Db Structure
Dis.Location
Functions
Help

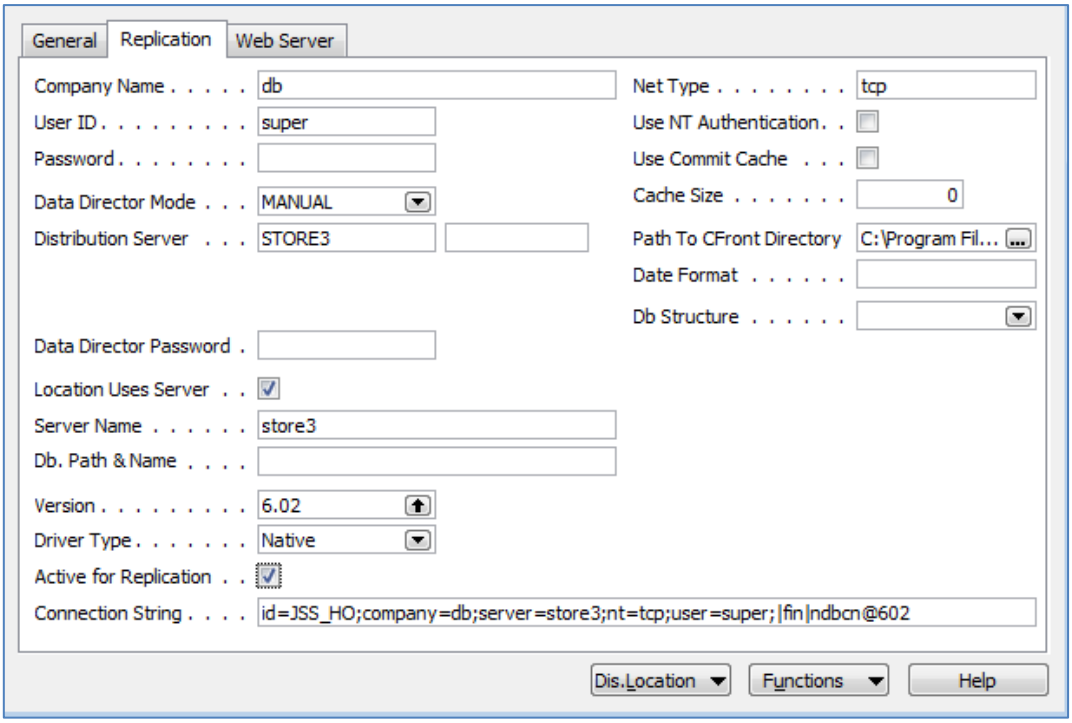
3 How to Set Up Manual Replication

In the Configuration Tool, activate Offline / Pull Support on all locations that will be importing Manual data. In the Pull Path field you enter where incoming data files will be placed.

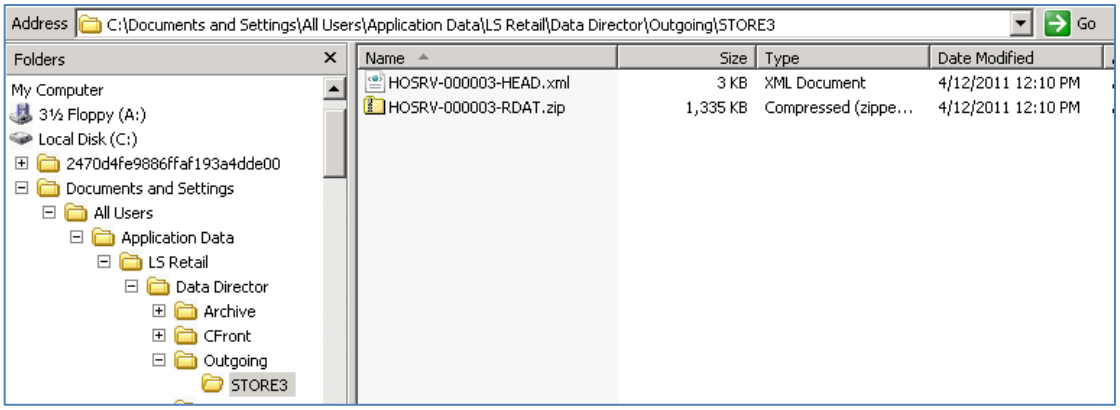
NOTE: Do not use same path as where the Work Data is located. Pull Time is the frequency how often DD will check for new files in the Pull Path folder.



For all locations that will be getting the data manually, change the Data Director Mode to MANUAL, type in the server name, no port number is needed.



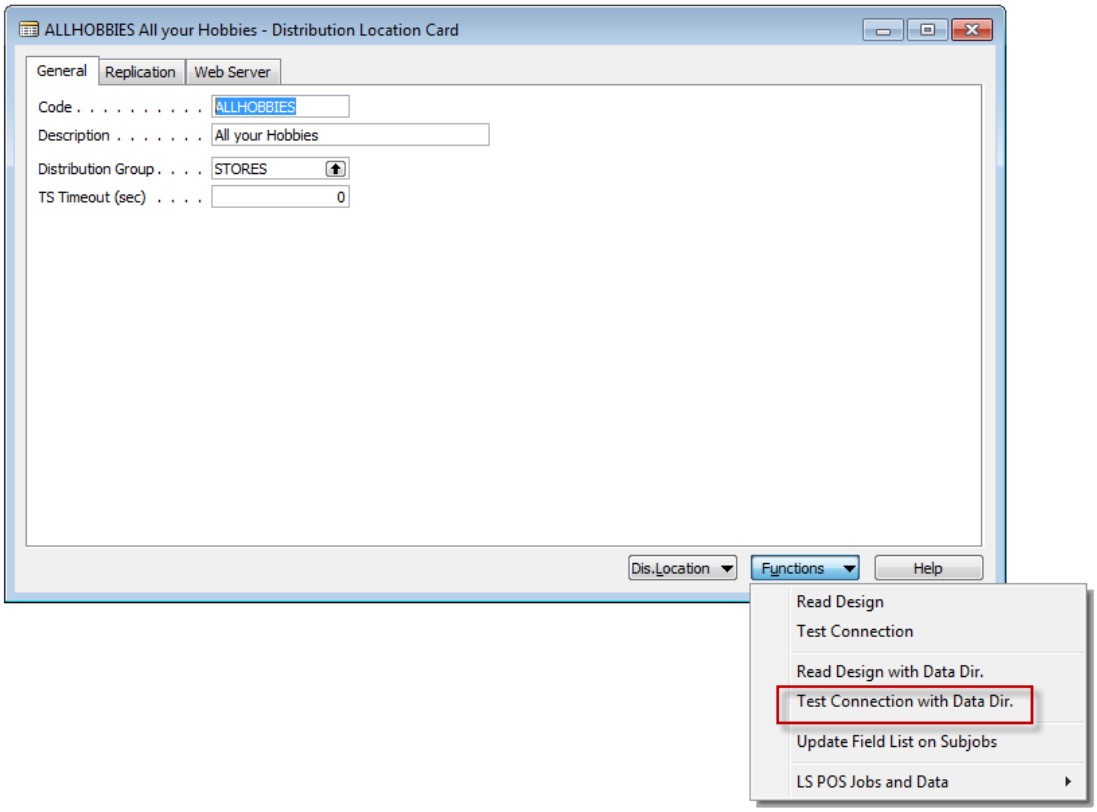
When running the job, the Data to be transferred to this location can be found in the Data Folder (see Configuration Tool) under the folder Output, Host name.



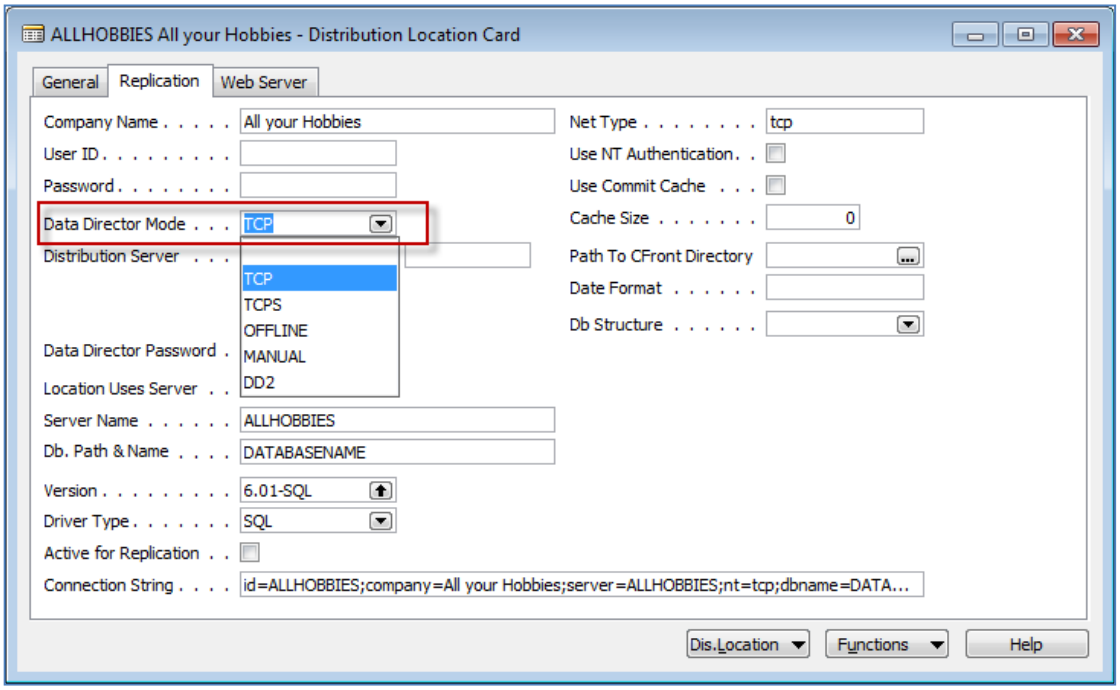
Move these files into the incoming folder (pull path) on the destination host and the job will be picked up according to the Pull Time setup.

Note: In the Monitor on Source host, the destination for the Manual Job will get the status Unknown, as this is manual transfer and no status message will be sent back to the source. On the Destination host, the monitor will show if job was successfully imported or not.

3.1.1 Test Connection to DD



Testing the connection with the Data Director can be done on the **LS Retail – Scheduler, Distribution Location Card, Function** button, select **Test Connection**. A New TransAutomClient is used, unless the Mode is DD2. When running the Test Connection for DD3, if an error is reported an error message comes from the Data Director, instead of an error number in the previous version.



3.1.2 Read Database Design

DD3 sends the index ID of primary key with field data for table which can be used to record the primary key for table in the design.

3.2 Job Run

When sending Job, check Host Mode and use correct TransAutomClient.dll (same as with Test Connection).

DD3 Job Modes are: **Replication, FileTransfer, FinLicense, DDLicense, FOBUpdate**

DD3 supports different Compression Mode; this should be open to set in the JOB Setup.
Modes are: **None, ZipStream, ZipFile, SevenZip (default is ZipStream)**

Option has been added on selecting Isolation mode for SQL Servers
The modes are: **Unspecified, Chaos, ReadUncommitted, ReadCommitted, RepeatableRead, Serializable, Snapshot**

Options have been added to Ignore Extra Fields, this will override the default setting in DD Configuration tool.

4 Administration

4.1 Host monitoring

As stated earlier the most important addition in Data Director 3 is a monitoring system. This system gives the user a great advantage in having good overview over all the Data Director operations in one place.

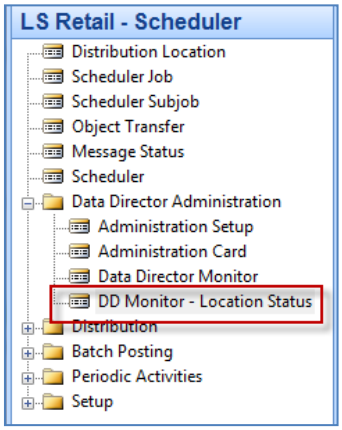
From the administration tool, the user can look at detail data for each host, cancel messages, modify jobs and several other things.

In the Data Director configuration tool the Archive needs to be activated and right information on where to enter transactions need to be defined.

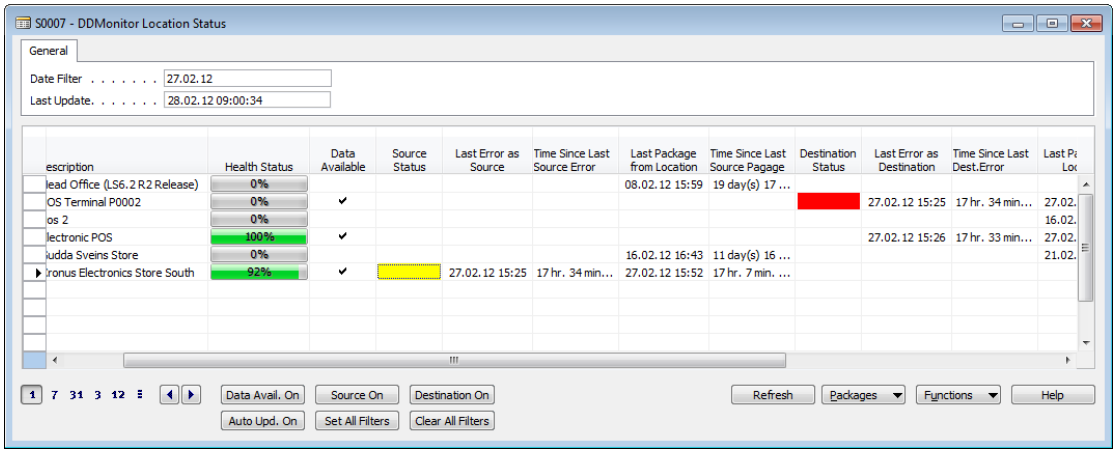
The Monitoring tool works on Archive Tables. No setup is required to pull any data from the DD hosts, as they will push the data to the monitoring database.

One of the available options is to add information to the monitoring, for instance NAV/SQL Version, LS Retail version, database size and available size, OS information and other useful information.

In the **LS Retail – Scheduler** the **DD Monitor – Location Status** can be accessed.



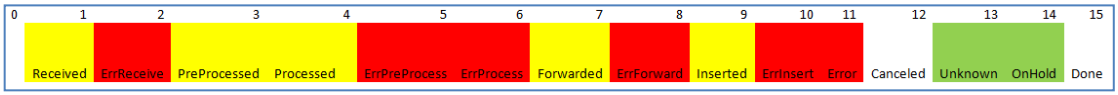
It opens the **DDMonitor Location Status** card where a lot of information from all the Data Directors (DD) that are connected can be found. Each DD provides information from Head Offices, Stores and the corresponding POSs and displays as lines. Each line in the Data Director Monitor represents one Location that either sends or receives data. Data Director 3 provides necessary information.



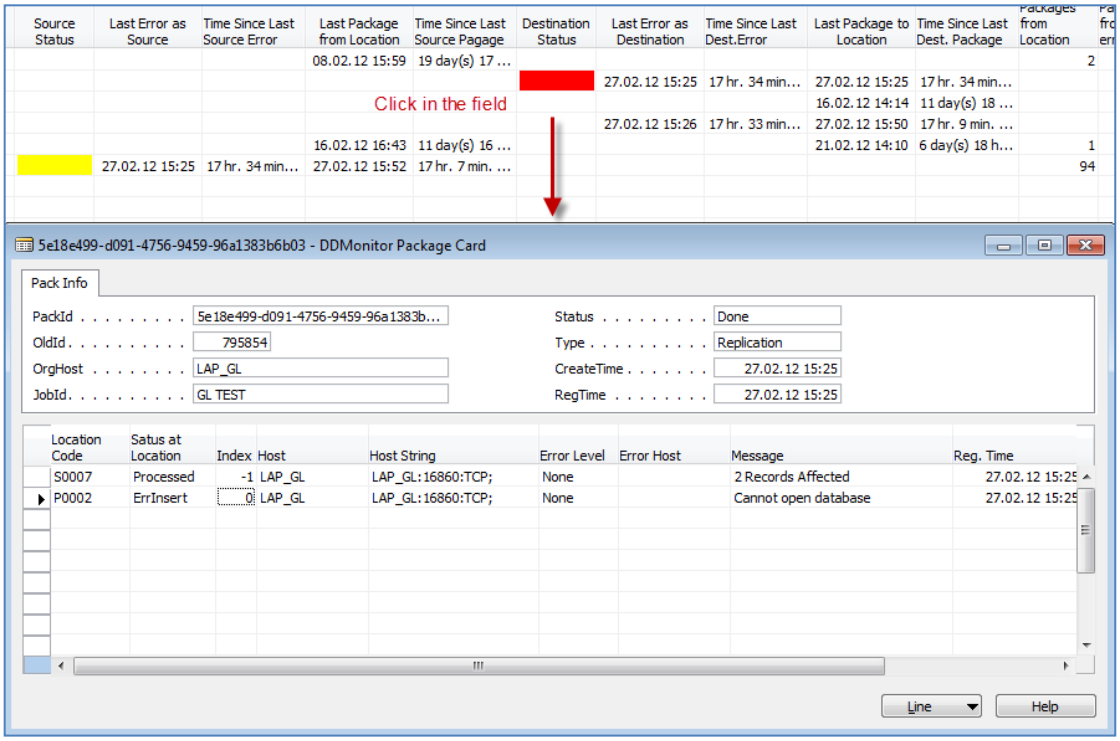
The **Source Status** and the **Destination Status** always show the **worst** outcome during the period, not the **latest** one. This is done in order to make it possible to take proper action. That might be to purge the job or seek for a solution.

The color code for errors displayed in the status columns is as follows:

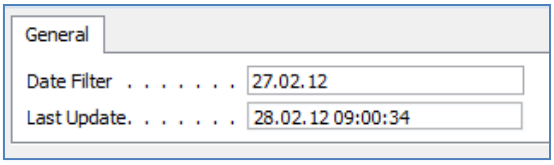
- **Red**: Error
- **Yellow**: In process, an obstacle may be somewhere in the system that needs to be attended
- **Green**: Finished. Seems OK.
- **White**: OK



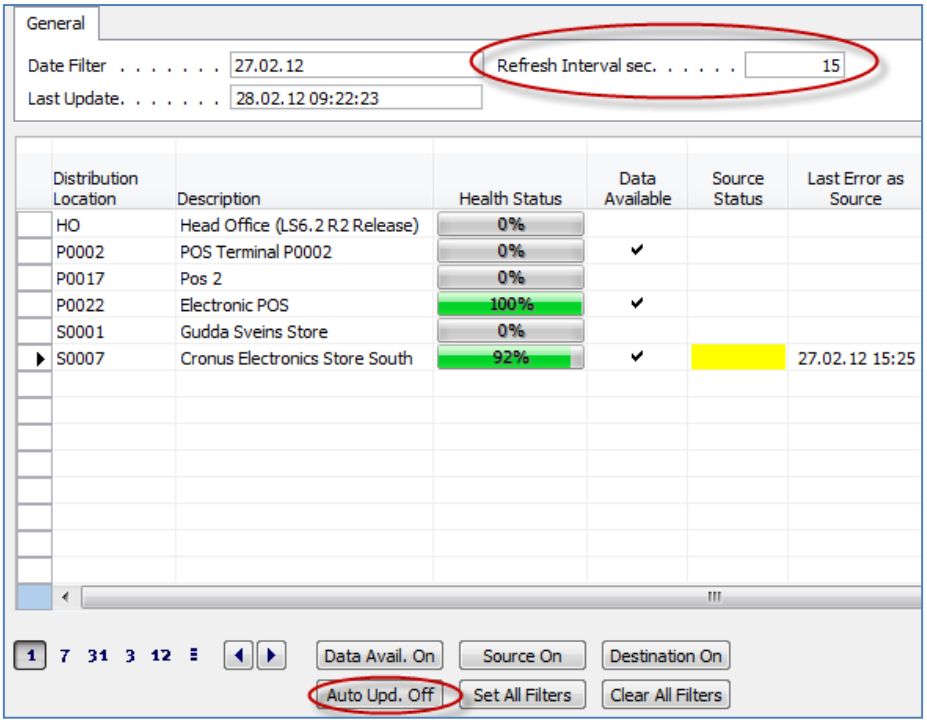
The user can at all times click on the colored field to get further details on the process:



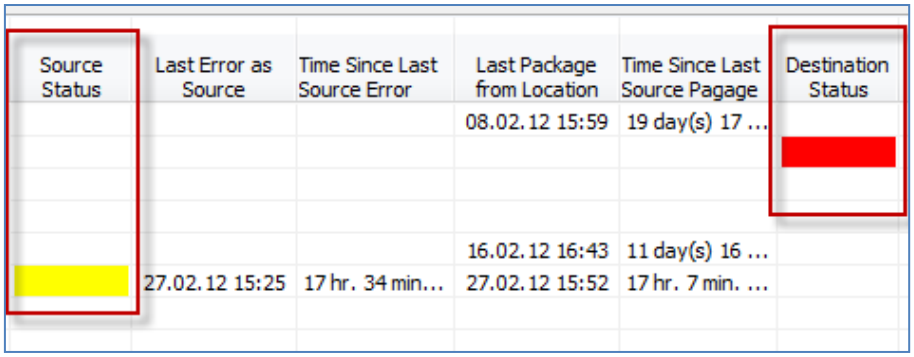
To set the period that the user wants to see data for the **Data Filter** is set and in the field below the **Last Update** is shown. The index in the line will tell whether the location is Source or Destination.



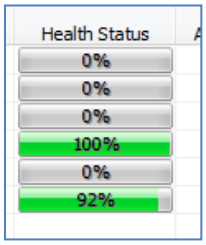
At the bottom of the card there are several buttons that control how the information is displayed. By pressing the **Auto Upd. Off/On** button the user can decide whether the **Refresh Interval sec.** field is used or not.



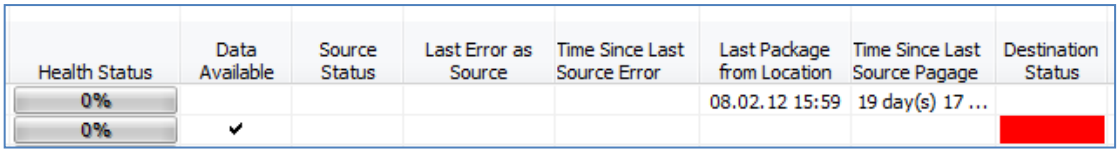
Statuses that can be viewed for each location are the following: Health Status, Source Status (for the source location) and Destination Status (for the destination location). Thus a package sent from Cronus Electronic Store South to the POS Terminal P0002 would show the process **from** the Store in the **Source Status** column and **to** the POS in the **Destination Status** column:



The Health Status bar has two different modes of displaying information as indicator or percentage and shows the process for all the locations. If the **Health Status** shows a 100% result, all the packages from a location or to a location have safely been sent or arrived.



The information displayed in the location lines can be divided in two according to what information they deal with.

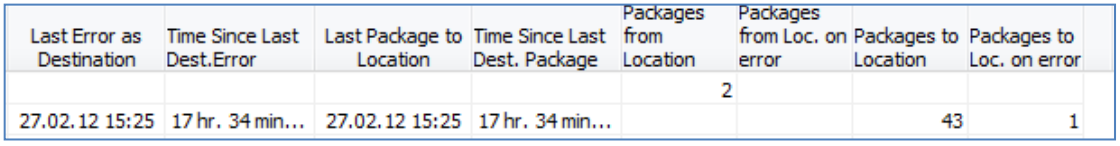


Health Status	Data Available	Source Status	Last Error as Source	Time Since Last Source Error	Last Package from Location	Time Since Last Source Pagage	Destination Status
0%					08.02.12 15:59	19 day(s) 17 ...	
0%	✔						

The fields in the following first columns are based on the period described in the **Data Filter** field header are the following:

- Health Status
- Data Available
- Source Status
- Last Error as Source
- Time Since Last Source Error
- Last Package from Location
- Time Since Last Source Package
- Destination Status

The second part are other statuses that are displayed in the following columns:

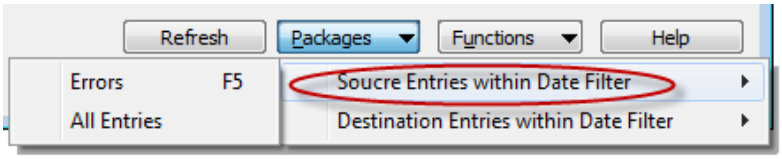


Last Error as Destination	Time Since Last Dest.Error	Last Package to Location	Time Since Last Dest. Package	Packages from Location	Packages from Loc. on error	Packages to Location	Packages to Loc. on error
				2			
27.02.12 15:25	17 hr. 34 min...	27.02.12 15:25	17 hr. 34 min...			43	1

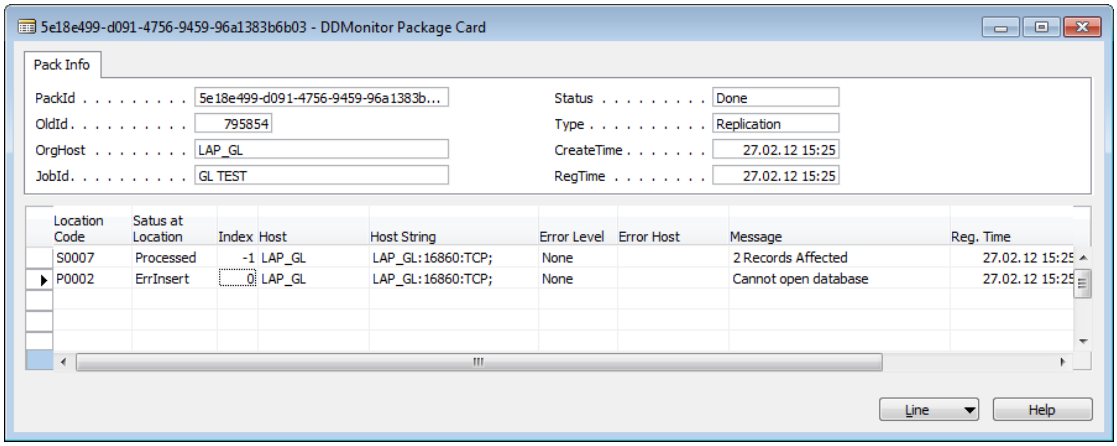
- Last Error as Destination
- Time Since Last Dest. Error
- Last Package to Location
- Time Since Last Dest. Package
- Packages from Location
- Packages from Loc. on Error
- Packages to Location
- Packages to Loc. on error

The Buttons at the right hand bottom of the card that need some explanation are the middle two:

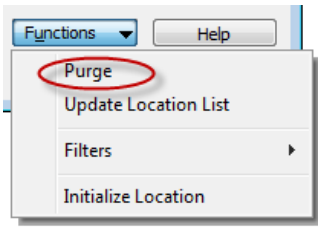
The **Package** button has the following options **Source Entries within Data Filter** and and identical one for **Destination**:



Under these it is possible either to filter for **Errors** in Source or Destination Entries or see **All Entries** for either. A new list opens with information according the filtering chosen:



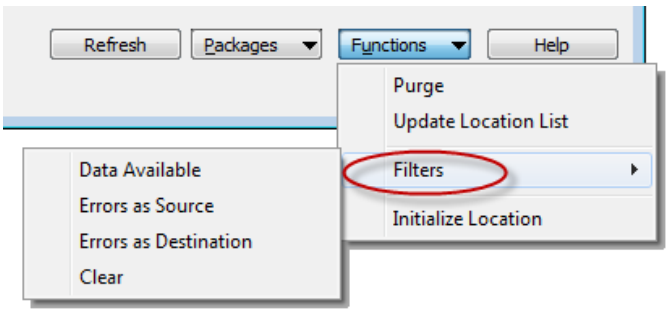
Under the **Functions** button selecting the **Purge** option allows the user to delete the packages that have been concluded and/or an action taken for. To decide the period for this the Data Filter in the header of the card is set to the date from which the user wants to preserve data from. For instance if the user wants to dispose of all packages older than 01.01.2012 this is what the date is set to. This is a necessary option to get rid of all excess data.



Under the **Functions** button it is also possible to **filter** for the following:

- Data Available
- Errors as Source
- Errors as Destination
- Clear

Other options under the **Functions** button are self-explanatory: **Update Location List** and **Initialize Location**.



5 Additions

5.1 Allow Update-Add-Delete on Linked Tables (Replication Counter jobs)

If delete option is include in what to do, DD should delete all linked table lines for the record to be replicated, and then insert all linked records again. Useful to be able to send linked table job again, with deleted linked lines, basically, the main record from main table, should not be deleted, just updated.

Administration for DD3 is going to be based on the Adidas Design for monitoring. DD3 will push jobs status data into an Archive Tables, located where the monitor data is to be stored.

6 Object Replication – Data Director 3.02

There are two basic methods to Replicate Objects between NAV Databases: In both methods an **Object Transfer header** needs to be set up, assigned to a **Scheduler Job** with Job type **Object Replication** and one or more **To-Locations**. **Sublocations** are not supported for object replication.

6.1.1 Replicate objects as .fob files extracted automatically from the source database and imported at destination.

The Replicate fob files field under the Object tab in the Scheduler setup is set TRUE. If DD3 is in use, other fields may be empty since DD3 uses its own methods to name and store the .fob files. Otherwise the rest of the fields needs to be filled out.
Fin plugin is required for this method, **MS** plugin does not support .fob replication.

6.1.2 Replicate objects entries from a system table (2000000001 Object) as a package of Data

The Replicate fob files field under the Object tab in the Scheduler setup is set FALSE. The replication treats the data in the Object table like any other data and replicates it according to Actions created for the specific Object Transfer Specification for all **To-Locations** assigned in the **Scheduler Job**. Both **Fin** and **ms** plugins support this method.

Note *that this method does not support Data Structure changes of any kind in table objects.*

6.1.3 Data Director modes

DD3 at all locations
No subjob needed
Data Director modes supported all except DD2

- .Fob file replication
- Object replication

Non-DD3, DD3 in DD2 mode at any location (Source or destination)
Subjob where **From** and **To table ID** is 2000000001 ,**Replication Method = By Actions**, **Field transfer type = All**.
Data Director modes supported: **DD2**
Only Object replication