Rocket Data Replicate and Sync

Description

PoC at Isreal Tax Authority

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1 Replication Scenario

The Trial should implement the general functionality of Rocket Data Replicate and Sync. The criteria for the installation are defined as setup of a successful, repeatable, automated replication process with documented results from z/OS Adabas to MS SQL-Server. The trail will be held for 30 days.

A few Adabas files will be used for replication. These files will be transferred to the target database using the Rocket Data Replicate and Sync bulk functionality and then replicated to the MS SQL-Server target using the Rocket Data Replicate and Sync real time function.
The throughput and the reliability will be considered in particular. It is assumed that the test environment has the technical capacity to achieve the latency specifications.

2 Environment

Rocket Data Replicate and Sync Mainframe Agent:	z/OS V2.x.0
Rocket Data Replicate and Sync Source Databases:	Adabas 8.5.x on z/OS
Rocket Data Replicate and Sync Server Agent:	Windows
Rocket Data Replicate and Sync Target Database:	MS SQL-Server on premise
Rocket Data Replicate and Sync Design Studio:	Any JAVA capable platform

3 General

Rocket Data Replicate and Sync can synchronize Adabas changes made online or via batch in real time via the PLOG. To keep the impact on the mainframe as low as possible, Rocket Data Replicate and Sync sends the changes directly to the replication server. The whole processing for initial load and real-time capturing can be automated.

4 Rocket Data Replicate and Sync Agent Installation

4.1 Rocket Data Replicate and Sync Agent in z/OS

The Rocket Data Replicate and Sync Agent

- collect the changed data from Adabas via the PLOG files
- control the running transfer scripts

A detailed description of the mainframe installation under z/OS can be found in chapter 2 of the manual "Rocket Data Replicate and Sync Host Installation and Administration". The Adabas access will be described in chapter 4.4. Further information can be found in the manual "Rocket Data Replicate and Sync tcSCRIPT" starting in chapter 8.1 – 8.3. Adabas Parallel Services is described in chapter 8.2.3.

The Rocket Data Replicate and Sync Mainframe Offload Data feature can also be used for the Bulk method, where the bulk is done via ADASAV on the Rocket Data Replicate and Sync Replication Server. This functionality does not consume any resources on the mainframe, because the complete processing is done on the platform of the Rocket Data Replicate and Sync replication server.

4.1.1 Rocket Data Replicate and Sync Agent Installation Requirements

The Rocket Data Replicate and Sync Agent z/OS needs its own region.

The Rocket Data Replicate and Sync modules, job samples, and macros require the Rocket Data Replicate and Sync installation library. All required jobs can be found on the installations library.
The Rocket Data Replicate and Sync Agent requires access to all needed resources on the mainframe.

4.2 Rocket Data Replicate and Sync Server Agent

The Rocket Data Replicate and Sync on the server will receive the changed data from z/OS and apply the data to the target system(s). A standard installation procedure will install the components to the server. The installation requires 40 MB disk space. If data is stored and buffered on the server, more disk space might be needed.

For the PoC we recommend a Windows installation. The procedure of the installation can be found in chapter “2 tcVISION LUW Installation” in the manual “Installation And Startup”

The Rocket Data Replicate and Sync Agent can be installed on premise or in a cloud instance. The communication from Rocket Data Replicate and Sync to the databases is established as follows:

- MS SQL Server Client

The Rocket Data Replicate and Sync Repository can either reside on the server with the target database or on any other server of choice outside the mainframe.

4.2.1 MS SQL-Server connection

Setting up a connection to the target "MS SQL-Server" is described in the chapter "4.3.12 Connection to Microsoft SQL Server" of the manual "Dashboard — Methods and Procedures".

5 TCP/IP

The Rocket Data Replicate and Sync components must be able to connect to each other. Connections must be possible:

- from z/OS Agent and scripts to the server
- from server Agent and scripts to the mainframe
- from Rocket Data Replicate and Sync Design Studio to both the server on which Rocket Data Replicate and Sync is running and to the mainframe

All Rocket Data Replicate and Sync components must be able to connect to each other in both directions. To ensure the connectivity, at least ten ports must be available. The number of ports to reserve depends on the number of parallel tasks desired to run in Rocket Data Replicate and Sync. Please adapt the firewall openings and keep the settings.

6 Rocket Data Replicate and Sync Dashboard

The Rocket Data Replicate and Sync Dashboard will be used to monitor, administer, and control the different Rocket Data Replicate and Sync agent and replication processes.

The Rocket Data Replicate and Sync Dashboard is to be installed can run on any JAVA capable platform. For the installation a directory with free space of 40 MB is required. All writing operations will be placed into the users directory.

The Rocket Data Replicate and Sync Design Studio is not necessary for the transfer itself. It will be used for defining and visually monitoring the transfer process only.

7 Rocket Data Replicate and Sync Repository

The Rocket Data Replicate and Sync Repository is the source for meta information about input and output objects. All replications performed by Rocket Data Replicate and Sync must be defined to the Repository.

The Rocket Data Replicate and Sync Repository consists of tables in a database. Supported databases are:

- MS SQL Server
- PostgreSQL

- MySQL / MariaDB
- Db2
- Oracle
- EXASOL

All Agents in a Rocket Data Replicate and Sync network access the same database. If it is not possible for an Agent to directly access the database, the Repository access can be redirected to another Agent in the network with direct access. This also applies to scripts.

Currently, support is provided for the mainframe, MS-Windows, UNIX, and Linux platforms on which the Rocket Data Replicate and Sync Agent can run. When choosing the database that should be used for the Rocket Data Replicate and Sync Repository, the main focus should be on platforms on which the DML statements reside.

The Rocket Data Replicate and Sync Repository is described in chapter “6 Repository” in the manual “Dashboard — Methods and Procedures”.

8 Staff

For the installation we recommend that the following people are available:

- z/OS system administrator
- MS SQL Server administrator
- Network administrator
- Windows administrator
- Staff who is familiar with the data structure and content of the databases