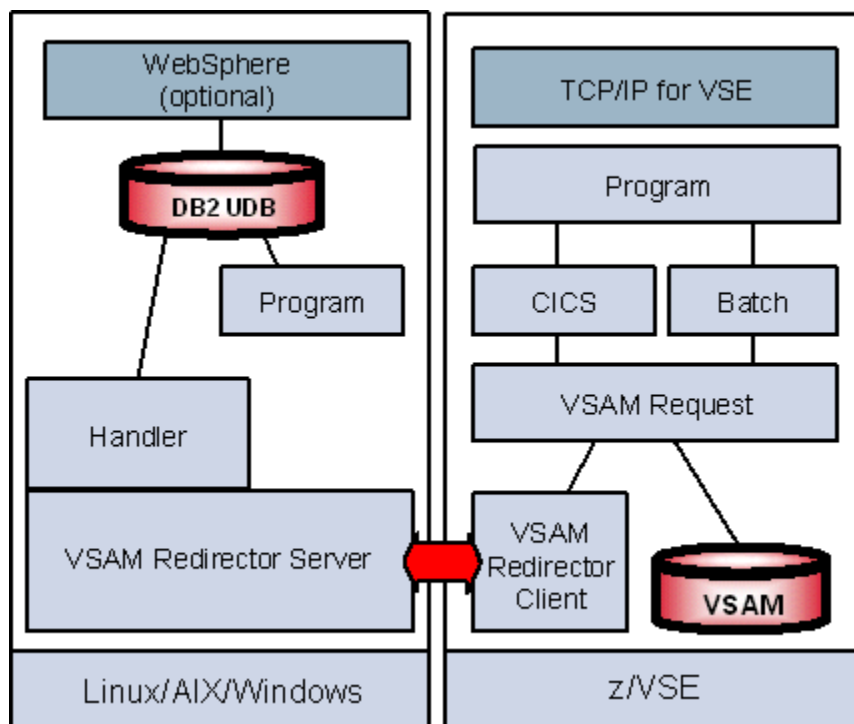


Access remote data via VSAM Redirector

The VSAM Redirector is a new z/VSE function in the category z/VSE as client. It enables a VSE/VSAM application to access data on a remote system. The z/VSE program doesn't need any change. Working with a remote relational database (i.e. IBM DB2 UDB), a real time synchronization between VSAM data and the database can be done. The same function can be used on z/VSE locally, as exit for data collection (e.g. incremental FTP), or as an exit for Journaling. The function is transparent for batch or CICS programs

Overview



The VSAM Redirector function is based on the VDA Exit ([VSAM Data Access Exit](#)) in VSAM. The VSAM Redirector function intercepts VSAM requests and forwards them for further processing. On z/VSE, a configuration table needs to be set up to define which VSAM files are being redirected.

VSAM requests can be redirected to:

- **a local exit** in z/VSE (EXIT=EXITNAME) for further additional processing of a request. This function can be used for example to collect all changes of a file in a separate VSAM cluster for incremental work.
- **a remote system** (EXIT=IESREDIR). On the remote system the VSAM request is then translated into i.e. database commands.

The VSAM Redirector function consists of two components:

- **The VSAM Redirector Server:** it is a Java component running on a Java enabled platform. This component is responsible for connection and session handling with the Redirector client. The VSAM Redirector Server has an open handler interface. The handler is responsible for executing the VSAM request on the remote system, e.g. translating it into database commands. Multiple handlers can be active for parallel requests and different handlers can be active at the same time for access to different kind of data. With the VSAM Redirector function you get a simple handler which can generate a HTML site for insert requests in a VSAM file, and you get a handler for relational databases (i.e. [DB2 UDB](#)) that is able to intercept VSAM requests and route them to a database
- **The Redirector Client:** it is a z/VSE component which is part of z/VSE. It is a program in the SVA and is called concurrently from multiple CICS and/or batch programs. For this client a configuration phase must be processed with the definitions and parameters which VSAM cluster should be redirected where and with what kind of file access on the remote site.

With the option called OWNER, the decision can be made whether:

- **OWNER=VSAM:** VSAM data should be synchronized with the database. That means every write request will be executed for VSAM and the database with two phase commit. Read requests are done from VSAM only.
- **OWNER=REDIRECTOR:** The program should work with the remote database only. That means no VSAM data is processed anymore - it is a transparent work of a VSAM program with a remote database.

Benefits

This functionality opens new dimensions of integration of VSE/VSAM programs with remote data especially with remote relational databases.

- z/VSE programs can work without any change with remote data.
- Real time synchronization between VSAM and a relational database with two phase commit.
- For FTP modernization, the cumulative changes during a certain period can be collected and transferred instead of transferring whole files.

Once the data resides in a database, the data can be accessed by many kinds of applications:

- Web applications
- Data warehousing
- Reporting tools

Software prerequisites

The following software requirements must be met to implement this solution:

- VSE/ESA 2.6 or later
- [TCP/IP for VSE/ESA](#)
- VSAM Redirector configured on z/VSE
- Linux, Windows, AIX, Unix on remote system
- [Java runtime \(JRE\) or Java developer kit \(JDK\) 1.3 or later](#)
- [VSAM Redirector Server](#) installed on remote system

How to get started

To redirect VSAM requests (from batch or CICS applications) the following steps must be done:

For the z/VSE side:

- Decide upon the VSAM files to be redirected and the remote system where they should be redirected to.
- Decide upon the record structure (i.e. COBOL or PL/I copy book) that defines the destination structure of the data in the database.
- Corresponding entries in the configuration phase (skeleton SKRD CFG in ICCF Lib 59) must be defined. The configuration can be changed multiple times, it becomes active at OPEN time of a VSAM file. Changing the configuration for an OPENED VSAM file, requires a CLOSE/OPEN to that file to activate the new configuration.

On the remote platform:

- Define the database that will host the VSAM data.
- The information about the mapping structure of VSAM records to a relational table will be stored in a second table separate from the data.
- Use the create tool delivered in VSAM Redirector server to create the tables for the data and the mapping definitions of the VSAM file.

To migrate an entire VSAM file to the database, an additional VSAM file has to be defined with the same structure as the original one (clone). The second file will be set up to be redirected in the configuration phase. Now a simple IDCAMS REPRO can copy the original file to the redirected one. That means all data will be copied to the destination database table. Once that's done, the original file will be set up to be redirected and up to that time all requests will be redirected to the database - for synchronization or redirected access.

Additional information

Additional information for this solution scenario can be found:

- [z/VSE e-business connectors User's Guide](#)
- Redbooks:
 - [WebSphere V5 for Linux on zSeries Connectivity Handbook \(SG24-7042\)](#)
- [Connectors Workshop Documentation](#)

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.shtml.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Comments and Questions

Comments or questions on this documentation are welcome. Please send your comments to:

zvse@de.ibm.com