# Managed File Transfer

In many organizations a large part of the exchange and distribution of information is realized by the copy and transfer of data files. As the number of files is ever increasing, the results are serious management and security issues. These issues are predominantly operational, so awareness at management level is typically low.

Consider the following use cases.

For years, corporations have been moving from bespoke to standard software: traditional locally installed packages or cloud delivered SAAS packages. Generally, standard software does not allow access to data directly but instead provides an application layer interface. For bulk transfers, the service / message style interfaces perform poorly, so file-based interfaces are common for these kinds of transfers. Files often contain the right information in the wrong format. Rather than script file changes and build an unmanageable library of scripts there is a need for a Managed File Transfer (MFT) product.

Recent trends lead to more data being stored in files:

- Hadoop's HDFS provides scalable, sheer unlimited capacity to store any files. Partly due to the limitations to update files history is often stored in completely separate files.
- More and more applications generate or use rich content like media (photos, videos) which is also commonly stored.

Corporations often use workplace software like SharePoint to formalize desktop processes and information. To link these processes to transactional systems there is a requirement to integrate these systems with workplace & office files, and with that the need for MFT. A SharePoint frontend on a transactional system also eliminates all kinds of unwanted direct access to business applications.

## Challenges

FTP is a commonly used file transfer protocol but it offers no guarantees in delivery of files. To ensure delivery additional scripting is needed. As a result, every file transfer needs its own script, the number of scripts explodes and the environment becomes unmanageable. Creating a script is easy, maintaining and operating it is not.

To address those issues, organizations sometimes deploy a "file exchange platform" to manage these scripts. Due to the nature of scripting, this platform (often not more than a server with storage and lots of scripting) soon becomes a management nightmare itself. Most of the scripting is not documented, it is often unknown what exactly is happening and no real management is possible. Whenever there is an interruption, fixing scripts involves reverse engineering, long downtimes and even "hacking".

When file transfer to customers or partners and with that external transfers become necessary, the file exchange platform is often duplicated to the DMZ. Now there is not only a management problem, but also a security risk.

The end result is a deadly combination of high costs and high risks.

## HVR for MFT

HVR provides Managed File Transfer functionality. This can be used as a tool in its own right, but also as part of the integrated HVR suite for enterprise data integration. Complex file transfer chains can be configured, scheduled and controlled from a central point on an enterprise-wide level. HVR supports 3 types of file transfer: file-to-file, database-to-file and file-to-database.

### *File-to-file transfer*

An HVR file-to-file transfer will copy the files from one file location (the source location) to one or more other file locations (the target locations). A file location is a directory or a tree of directories, which can either be accessed through the local file system (Unix, Linux or Windows) or through a network file protocol (FTP, FTPs, sFTP or WebDAV). Files can be copied or moved. In the latter case, the files on the source location are deleted after they have been copied to the target locations. The file contents are normally preserved, but it is possible to include file transformations in the copy process using external commands or definitions defined in an XSLT file.

To distribute sets of files HVR provides the possibility to copy files selectively from the source location by matching their names to a predefined pattern. This feature also enables the routing of files within the same source location to different target locations on the basis of their file names to enable selective file distribution scenarios.

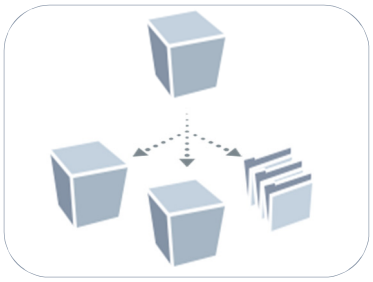
### *File-to-database transfer*

In a file-to-database transfer data will be read from files in the source file location and replicated into one or more target databases. The source files are by default expected to be in a specific HVR XML format, which contains the table information required to determine to which tables and rows the changes should be written in the target database. It is also possible to use other input file formats by including an additional transformation step in the file capture. Support for CSV is available out-of-the-box, but any format can be handled by providing an external command or an XSLT definition.

### *Database-to-file transfer*

In a database-to-file transfer the data is read from a source database and copied into one or more files on the source file location. By default the resulting files are in the HVR XML format preserving the table information. However, CSV is also supported out-of-the-box and other file formats can be created by including an additional transformation command or XSLT definition in the file output. As in the Continuous Database Replication between databases, it is possible to select specific tables and rows form the source database and convert names and column values.

## *Advanced scenarios*



HVR's flexible architecture and seamless file integration make a combination of various scenarios also possible. For example combining distribution and conversion into a database distribution & file conversion channel. HVR's flexible architecture enables interchanging all kinds of scenarios easily!

HVR Managed File Transfer shares underlying data transport architecture with database refresh and replication, taking advantage of common features such as continuous data streaming, data compression and network encryption. As a result HVR MFT is optimized for maximum performance, efficiency and scalability making very effective use of network resources. It can easily handle multi-gigabyte files sent in a single task to or from 100 or more locations.

| **Supported sources** | **Supported targets** |
|---|---|
| Oracle, all editions, including Amazon RDS | All supported sources |
| SQL Server, all editions, including Azure | Teradata |
| DB2 on Linux, Unix and Windows | Actian Vector (Vectorwise) |
| Ingres | Actian Matrix (ParAccel) |
| Flat files | Pivotal Greenplum |
| SharePoint | Pivotal Hawq |
| ftp locations | Amazon Redshift |
| Hadoop (hdfs) | |