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Product Support

Digitech Systems takes great pride in providing software and services that are extremely simple to use, feature-rich and provide great flexibility both in architecture and in integration capabilities. If, for some reason, you experience any difficulty, please do not hesitate to contact us to experience our legendary customer service toll free at 877.374.3569 (or 402.484.7777) or via email at support@digitechsystems.com. Our technical support staff is available to serve you between the hours of 8:00 AM and 6:00 PM Central Time.

Digitech Systems’ product features and enhancements are driven by you, our customer. If you have an idea for a future product feature or enhancement, please pass it along to us by sending an email to dev@digitechsystems.com.
Chapter 1 – Introduction

Overview

ImageSilo’s Data Delivery service provides clients with the unique ability to maintain an exact duplicate of all data that is placed in their ImageSilo repository. A commonly perceived problem with web-based software services is that the customer is not able to maintain original control of their information. For customers of ImageSilo, Data Delivery eliminates this common perception and gives customers peace of mind by providing an extra layer of control over mission critical information in addition to the cloud system’s current redundant storage model.

With the introduction of Data Delivery, ImageSilo customers are the first cloud ECM customers with the option of receiving a live copy of corporate information delivered electronically or physically to any location in the world. This additional copy of the live corporate information provides the following functionality:

- Maintains access to corporate information when company connectivity to the Internet is down.
- Offers a safety net of control over corporate information – a useable copy of the most recently updated information is in the customer’s possession.
- Facilitates a comprehensive disaster recovery plan as a redundant layer of secure data.
- Provides a secure copy of the customer’s data for offline access, data mining, recovery, backup, regulatory compliance and auditing purposes.
ImageSilo’s Data Delivery service is comprised of three components:

- **Backup Processing Jobs**: Allows customers to specify which data they want delivered, how often the data is delivered, and how to encrypt the data.

- **Delivery Mechanism**: Customers can opt to have their data delivered physically (shipped on CD or DVD media) or electronically via secure FTP. If their data is to be delivered electronically, customers are encouraged to use Digitech Systems’ PaperVision® Data Transfer Manager application as an included benefit of their ImageSilo Data Delivery subscription. PaperVision Data Transfer Manager and its associated service (the PaperVision Data Transfer Service) provide a robust, automated toolset for quickly and securely transmitting enterprise content between sites. The PaperVision Data Transfer Manager application provides the means to configure the operations that are performed by the PaperVision Data Transfer Service. The PaperVision Data Transfer Service can transfer data from ImageSilo by using the FTP protocol (with or without SSL). Backup package files that are placed on a customer’s secure FTP site are automatically removed from the site after 96 hours (four days) if the customer has not configured the PaperVision Data Transfer Service to delete the files after they are successfully transferred.

- **SQL Database Delivery**: Customers that subscribe to the ImageSilo Data Delivery service have their SQL database contents backed up and delivered in a compressed package file, with optional encryption. These packages are created on a nightly basis and placed on the customer’s secure FTP site. Database package files that are placed on a customer’s secure FTP site are automatically removed from the site after 24 hours (one day) if the customer has not configured the PaperVision Data Transfer Service to delete the files after they are successfully transferred. If there is a need to have the SQL backup package placed on external media, the ImageSilo Administration team can be contacted to initiate that process and to obtain pricing details.

This white paper will demonstrate how to configure backup jobs on ImageSilo, configure PaperVision Data Transfer Manager to automatically retrieve the backup contents, restore the ImageSilo database locally, and configure PaperVision Enterprise to use the local data.
Requirements

There are three levels of redundancy that this document will address. Each level provides a higher state of readiness to be able to quickly access the redundant data. All requirements can be combined onto a single computer or spread out across multiple computers. Assuming that access to the local data will be provided via PaperVision Enterprise, it may be necessary to purchase the necessary licenses of PaperVision Enterprise.

Backup

This initial level of redundancy simply stores copies of the compressed, encrypted backup packages. In the event that access to the data is needed, the backup packages can then be extracted. This level requires:

- Computer system to run PaperVision Data Transfer Manager, running Windows XP or higher, or Windows Server 2003 or higher.
- Enough storage space (either locally or on a network share) to store the backup packages. The size of the packages depends on the type of data that is being processed.

Redundant Data

This next level of redundancy maintains an exact copy of all data files that have been stored on ImageSilo. It includes automatically extracting all of the backup packages to maintain a state of readiness to be able to access the data in a reasonable amount of time. This level requires:

- Computer system to run PaperVision Data Transfer Manager, running Windows XP, Windows Server 2003, or higher.
- Enough storage space (either locally or on a network share) to store the extracted contents (all document files) of the backup packages. Since the Data Delivery service delivers data that is added to the system, it is necessary to maintain enough space to hold all data (including deleted documents).
**Fully Redundant System**

This highest level of redundancy not only maintains an exact copy of all data files that have been stored on ImageSilo, but it also maintains a SQL database server to provide access to the data in the shortest amount of time. This level requires:

- Computer system to run PaperVision Data Transfer Manager, running Windows XP, Windows Server 2003, or higher.

- Enough storage space (either locally or on a network share) to store the extracted contents (all document files) of the backup packages. Since the Data Delivery service delivers data that is added to the system, it is necessary to maintain enough space to hold all data (including deleted documents).

- Microsoft SQL Server 2008 R2 Express or higher. SQL databases that exceed 10 GB will require a purchased SQL Server license due to limits imposed on SQL Express versions by Microsoft.
Chapter 2 – Configuring Backup Jobs

Overview

ImageSilo allows administrators to specify that certain information should be periodically backed up. The manner in which the data is backed up is defined through a “backup job.” The backup process consists of creating a package file which contains the information that needs to be backed up. The package file uses compression that is 100% compatible with the existing PKZip 2.04g format and optional WinZip 9.0 AES encryption. Since the contents of the package are stored referentially, extracting their contents to a separate location using an automated tool such as the PaperVision Data Transfer Manager can allow you to maintain a duplicate copy of all of the documents and full text data in a separate location from the original.

ImageSilo supports four types of backup jobs:

- **Backup Data Group – Full**: Administrators can “tag” a data group to be backed up in its entirety. The full contents of the directory where the data group is located are backed up.

- **Backup Project – Incremental**: Allows administrators to specify that certain projects should have their full document contents (including all revisions) backed up. As each project’s backup completes, ImageSilo records the last document object that was backed up so it can start where it left off for the next backup of that project.

- **Backup Project – Full**: A full backup is just like an incremental backup except that every time the backup job starts, it resets the last document object backed up to zero, forcing the entire project to be backed up.

- **Backup Full Text**: Allows administrators to specify that certain projects should have their full text database contents backed up.

Backup package files may also include two additional, unencrypted files:

- PackageCreationFailures.txt – lists any files that were supposed to be backed up but could not be located during the process.

- `<Package File Name>.pvpkginfo` – XML file containing the associated Entity ID and the name (not value) of the encryption key that was used to encrypt the package.
Configuring an Encryption Key on ImageSilo

In order to take advantage of the encryption capabilities, it is necessary to configure a unique encryption key that will be used to encrypt the backup packages. Although encrypting backup packages is not necessary, it is highly recommended.

To configure an encryption key:

1. Logon to ImageSilo as an entity administrator.
2. Select the Administration button in the menu on the left.
3. Within the Administration window that opens, select General Security – Encryption Keys to display the Encryption Keys list.
4. Select the Add button to display the Add New Encryption Key screen.

5. Give the key a unique name (such as “Data Delivery”).

6. Provide a Pass Phrase that will be used to encrypt the backup package files.

Note: It is important to record the exact key name and pass phrase as it will be necessary to enter the identical information into PaperVision Data Transfer Manager in order to extract the encrypted packages. Additionally, if you wish to have your database package files encrypted, this information must be provided to the ImageSilo administration team so that they can configure the database package creation process appropriately.

7. Select the Save button.

The new encryption key is created and displayed in the Encryption Keys list.
Encryption Keys List
Configuring Backup Jobs on ImageSilo

Once a customer has subscribed to the ImageSilo Data Delivery service and setup the encryption key, the next step is to create the new backup job(s) that will instruct ImageSilo to deliver the required data at a user-defined interval.

**Backup Project Documents**

To create a new backup job to backup the project documents:

1. Logon to ImageSilo as an entity administrator.
2. Select the *Administration* button in the menu on the left.
3. Select *Backup Processing – Backup Jobs* to display the *Backup Jobs* list.
Chapter 2 – Configuring Backup Jobs

4. Select the *Add* button to display the *Add New Backup Job* screen.

![Add New Backup Job](image)

5. Enter the *Job Name* that will be used to identify the job.

6. Select *Backup Project(s) – Incremental* for the *Backup Type*.

7. Select the projects that should be backed up.

8. Enter the *Max. Package Contents (MB)*. This specifies the maximum size (in MB) of the content data that is placed into a backup package when performing a project-level backup. Once this size is reached, a new package file will be created. Note that this does not specify the size of the package file itself, but the size of the contents.

9. Select the name of the *Package File Encryption Key* that should be used to encrypt the package. This is the encryption key name that was created earlier.

10. Provide the *Start Time* that the backup job should begin.

11. Select the desired *Schedule* to specify how often the backup job should run.

12. Select *OK* to save the new backup job. The new job is created and displayed in the *Backup Jobs* list.
Backup Project Full Text Databases

It may be desired to maintain a backup copy of the full text databases that are used on ImageSilo. To create a new backup job to backup the full text database:

1. Logon to ImageSilo as an entity administrator.
2. Select the Administration button in the menu on the left.
3. Select Backup Processing – Backup Jobs to display the Backup Jobs list.
4. Select the Add button to display the Add New Backup Job screen.
5. Enter the Job Name that will be used to identify the job.
6. Select Backup Full Text for the Backup Type.
7. Select the projects whose full text databases should be backed up.
8. Enter the Max. Package Contents (MB).
9. Select the name of the Package File Encryption Key that should be used to encrypt the package. This is the encryption key name that was created earlier.
10. Provide the Start Time that the backup job should begin.
11. Select the desired Schedule to specify how often the backup job should run.
12. Select OK to save the new backup job. The new job is created and displayed in the Backup Jobs list.
Chapter 3 – Configuring PaperVision Data Transfer Manager

Overview

If backup packages are going to be delivered electronically, the next step is to configure PaperVision Data Transfer Manager to retrieve the package files from the secure FTP site.

The email capabilities of the PaperVision Data Transfer Manager are particularly useful. It is recommended that the email settings be configured to alert administrators when a failure occurs while transferring data (and optionally to alert administrators when data is successfully transferred).

This chapter will cover the creation of encryption keys and data transfer jobs. It will not cover the initial installation and configuration of PaperVision Data Transfer Manager as this information can be found in the PaperVision Data Transfer Manager User Guide.
Creating a New Encryption Key

Before the data transfer jobs can be created, an encryption key must be defined to allow the Data Transfer Service to extract the package file contents after they have been downloaded. To create a new encryption key:

1. From the PaperVision Data Transfer Manager, select Encryption Keys to display the Encryption Keys list.
2. Select the New button on the toolbar or right click on Encryption Keys and select New Encryption Key from the menu to display the New Encryption Key screen.

3. Enter the Key Name that will be used to identify the key. This must be identical to the name of the encryption key that was defined on ImageSilo previously.

4. Enter the Pass Phrase that will be used to generate the key. This must be identical to the pass phrase of the encryption key that was defined on ImageSilo previously.

5. Select OK to save the new encryption key. The new key is created and displayed in the Encryption Keys list.
Creating a New Data Transfer Job

Now, a data transfer job must be created to download the package files and optionally extract their contents. To create a new data transfer job:

1. From the PaperVision Data Transfer Manager, highlight the Data Transfer Jobs, and select the New Data Transfer Job button on the toolbar (or right click and select the New Data Transfer Job option from the menu) to display the New Data Transfer Job screen..

2. Enter a name for the new job.

3. Select Pull Packages from Remote as the Operation.

4. Provide the ImageSilo Entity ID.

5. Place a check next to Require Submit File to Process, Delete Source after Transfer, and Extract Files from Package File.

6. Select Package File Encryption/Decryption Key that was created earlier in this chapter.

7. Select the Schedule tab to display the New Data Transfer Job Schedule screen.
8. Enter the desired date and time to have the job run next in the *Start Time* field.

9. Select the desired *Schedule* and *Repetition Schedule* settings. Realistically, a repetition schedule more often than each hour is unnecessary.
10. Select the Transfer tab to display the New Data Transfer Job screen.

New Data Transfer Job Transfer

11. Select FTP as the Transfer Type.

12. Enter the FTP server provided by ImageSilo Administration (i.e. download.imagesilo.com) as the Source.

13. Select the path where the package files are to be placed and extracted in the Destination.

14. Enter the FTP User Name and Password as provided by ImageSilo Administration.
15. Select the Test button to test the configuration of the transfer settings. PaperVision Data Transfer Manager will validate that the source and destination are accessible and that data can be written to the destination. After the test is complete the Test Results screen is displayed.

![Test Results](image)

Test Results

16. Select OK to close the Test Results screen and then select OK to create the new data transfer job.
Chapter 4 – Restoring the ImageSilo Database

Overview

All steps necessary to maintain a redundant copy of ImageSilo data have been completed. This chapter will cover one of many methods to restore the ImageSilo database so that its data can be used locally.

Performing the Restore

The first step to being able to use the redundant data is to restore the most recent copy of the ImageSilo database backup. This can be done using the Microsoft SQL Server Management Studio. The restoration of the database backup can be scripted to occur automatically. However, scripting is outside of the scope of this document.

Microsoft SQL Server 2008 R2 or higher must be used to restore the database. Express editions of SQL are supported, however Express editions impose a database size limit of 10GB. If the delivered database exceeds 10GB, a purchased version of SQL will be required to restore the database successfully.

The information below assumes the SQL backup file (.bak) was extracted to the \MSSQL\Backup\ directory where SQL Server is installed.
To restore your SQL database using the Microsoft SQL Server Management Studio:

1. Start the Microsoft SQL Server Management Studio and select the SQL database server where the PaperVision Enterprise database was created during initial installation. The *SQL Server Enterprise Manager* is displayed.
2. Right click on Databases and select All Tasks – Restore Database to display the Restore Database – General screen.

3. Choose From Device.
4. Click the Select Device button to display the Choose Restore Devices screen.

5. Select the Add button, and choose the File name of the ImageSilo database backup file that was extracted by the data transfer job.

6. Click OK.
7. Click OK in the Choose Restore Devices screen. The database file is listed in the Devices section of the Restore Database – General screen.

8. It is VERY IMPORTANT that you enter a NEW database name in the Restore as database field. If you use the name of an existing database, that database will be overwritten.
9. Select the Options tab to display the Restore Database – Options screen.

![ImageSilo Restore Database - Options Screen]

10. The physical file names displayed indicate the file names of the files as they were stored on ImageSilo’s SQL Servers. Change each logical file’s physical file name to use a valid path on the new SQL Server.
11. Click OK to have SQL Server begin restoring the database. This may take several minutes.
Chapter 5 – Configuring PaperVision® Enterprise

Overview
This chapter will cover the method used to configure PaperVision Enterprise to use the redundant data. It will not cover the initial installation and configuration of PaperVision Enterprise as this information can be found in the PaperVision Enterprise Administration and System Architecture Reference Guide.

Configuring PaperVision Enterprise
To configure PaperVision Enterprise to use the redundant data:
1. Start the PaperVision Administration Console and login as a Global Administrator to display the PaperVision Administration Console.
2. Right click on *Entities* and select *New Entity* to display the *New Entity* screen.

3. Enter new *Entity Name* (i.e. the company or department name).
4. Select the *Attach to Existing Database Tables* option, and then click *Configure* to display the *SQL Data Source Information* screen.

![SQL Data Source Information](image)

**SQL Data Source Information**

5. Enter the SQL *Server IP/Name*, the newly restored *Database*, and an appropriate *User Name* and *Password* to connect to the SQL database. Note that leaving the *User Name* and *Password* blank will cause SQL Server to use Windows authentication.

6. Select *OK*.

7. Select the *Data Group Path* where any new data groups should be placed. (This does not have to be the path where package files were extracted to as it applies to new data groups.)

8. Select the desired *Migration/Backup Path*.

9. Select the *Full-Text Path* where the full text package files were extracted.

10. Select the location for the *Batch Path*. This path is used only by PaperVision® Capture but must be set to a location to save the entity.
Chapter 5 – Configuring PaperVision Enterprise

11. Select OK to display the Attach Entity to Existing Database screen is displayed.

```
Attach Entity to Existing Database

You have selected to attach the new entity to an existing database which contains all of the entity's database tables.

Please specify the Entity ID to be used for the new entity. This Entity ID must match the Entity ID in the existing database.

OK
Cancel

Attach Entity to Existing Database
```

12. Enter the ImageSilo Entity ID and select OK. PaperVision will attach to the restored database.
13. Now, the location where all of the restored data exists must be specified. Expand Entities - <New Entity Name> - Data Storage and select Data Groups to display the Data Groups screen.

14. Sort the data groups by their Path column.
15. Highlight all of the data groups for a given share (i.e. \Fileclustera\W), right click, and select Modify Path to display the Search and Replace Path screen.

![Search and Replace Path](image)

16. Enter the Replacement Path where the restored data has been placed and click Replace.

17. Repeat steps 14 and 15 for any remaining unique shares.

PaperVision Enterprise is now ready to be used to access the redundant data.
Chapter 6 – Conclusion

As a market leader in cloud Enterprise Content Management (ECM), Digitech Systems continues to develop innovative systems to address the needs of our customers. Customers of web-based software may feel uncomfortable that they do not maintain original control of their information. With the introduction of Data Delivery, ImageSilo customers are the first cloud ECM customers with the option of receiving a live copy of corporate information delivered electronically or physically to any location in the world. This additional copy of the live corporate information provides the following functionality:

- Maintains access to corporate information when company connectivity to the Internet is down.
- Offers a safety net of control over corporate information – a useable copy of the most recently updated information is in the customer’s possession.
- Facilitates a comprehensive disaster recovery plan as a redundant layer of secure data.
- Provides a secure copy of the customer’s data for offline access, data mining, recovery, backup, regulatory compliance and auditing purposes.
Within minutes, subscribers of ImageSilo can configure their Data Delivery Service to maintain and deliver to any location of their choice a redundant copy of their corporate information. Once the service is configured to your specifications, it runs automatically and you can even setup email alerts to confirm successful operations. With ImageSilo Data Delivery you will enjoy:

- Preserved identical copies of a company’s live information with delivery to any location chosen by the customer.
- Encrypted data provided at intervals determined by the customer, from once every few days or weeks to several times a day.
- One-step process to point ECM software to redundant copy of data.
- Peace of mind knowing that in just a few short minutes you’ve ensured that your corporate information is always in your control.

**ImageSilo Data Delivery – Rest assured!**

“Digitech Systems has achieved a major breakthrough in the cloud ECM industry with the Data Delivery service. End users of cloud ECM express concern over a third party owning the only live copy of enterprise data. Data Delivery alleviates this concern while helping companies leverage cloud ECM and ensuring they have a secure copy of their data for offline access, recovery, backup, regulatory compliance and auditing purposes.”

Rebecca Wettemann

Vice President, Nucleus Research