



Genesis Data Migration Services Fact Sheet

Description

The Genesis Data Migration Service non-disruptively migrates data held within IBM's Object Access Method (OAM) from either optical platters or tape media onto more contemporary Tier 2 storage configurations such as the EMC Centera solution. During this service, ICS uses a proprietary tool called Genesis to migrate very large amounts of data, typically hundreds of gigabytes or terabytes, from optical or tape storage media onto newer storage media.

Service Positioning

Electronic data is growing at more than 35% to 40% a year – and managing all of it is not getting easier. Protecting information from security related attacks or service delivery interruptions are the top IT spending priorities, according to the latest IT Spending Survey from Goldman Sachs. Recovery is a close second. According to a recent survey of 300 executives, half of the IT executives said they do not have the level of readiness to recover information quickly enough in the event of a special request, inquiry, or disaster. And on top of all that, IT budgets are flat on average this year, leading the customer to the conclusion that you can no longer afford to treat all information the same.

In the midst of these challenges, customers are looking to improve performance, balance workloads across systems, or even change technology partnerships. As a result they are faced with complex and timely migration scenarios combined with mounting service-level pressures from the business.

ICS data migration methodology delivers predictable results in the most complex environments, minimizing risk and speeding time-to-value. And with the *Genesis Data Migration Service* offering, ICS offers non-disruptive migration options from any z/OS and OS/390-attached storage to any target. Success is measured by the most critical factor: a customer's business continues to run.

The Problems with Optical and Tape Migrations

There are a number of issues with such a migration, with which GENESIS can help:

1. The data that is being converted is generally still 'active' (i.e. being retrieved by existing processes), so the conversion strategy should include steps to model access profiles to understand these so that data contention with existing processes can be avoided as far as possible.
2. The quantities of data involved are typically huge. Optical and tape storage are generally used in the role of 'long term repository' and there may be many years worth of data stored. This means that the conversion process may last weeks or even months. So ideally it should be possible to:
 - Automatically kick off the process every day until the migration is completed
 - Control how much work is done every day to fit around other activity (e.g. perform less or maybe no migration activity during heavy processing periods.)
 - Provide up to date statistics on progress, problems, etc.



3. Any migration strategy must try to limit the number of mount/dismount operations to a minimum; otherwise there is a real danger that the migration could cause media failures. (For example, many Optical storage solutions are nearing the end of their life and media failures tend to be more common as a result.)
4. Any migration process needs to be fault tolerant. There may be integrity issues within the data, such as orphaned catalog entries.

The Solution - GENESIS

Figure 1, below shows a typical implementation of GENESIS. This tool has the following characteristics:

- Database driven design allows for easy querying of parameters, progress and results. (Several standard reports are included with GENESIS)
- A processing calendar table is set up in advance. It tells GENESIS how much work can be done and the available processing window each day.
- Other parameters control all aspects of the migration, providing details of storage groups to use, the speed at which data is physically moved at the site (based on tests), fault tolerance characteristics and the how much detail to put into the logs.
- Entire classes of data can be held (or excluded entirely) until the operator is ready for them to be converted.
- Logic optimizes data access during the migration to reduce platter mounts/dismounts and flips and/or tape mounts.
- GENESIS can run in Simulation Mode – this is used to test basic setup etc.
- Simulation Mode can also be used to produce Forecasts of migration activity.

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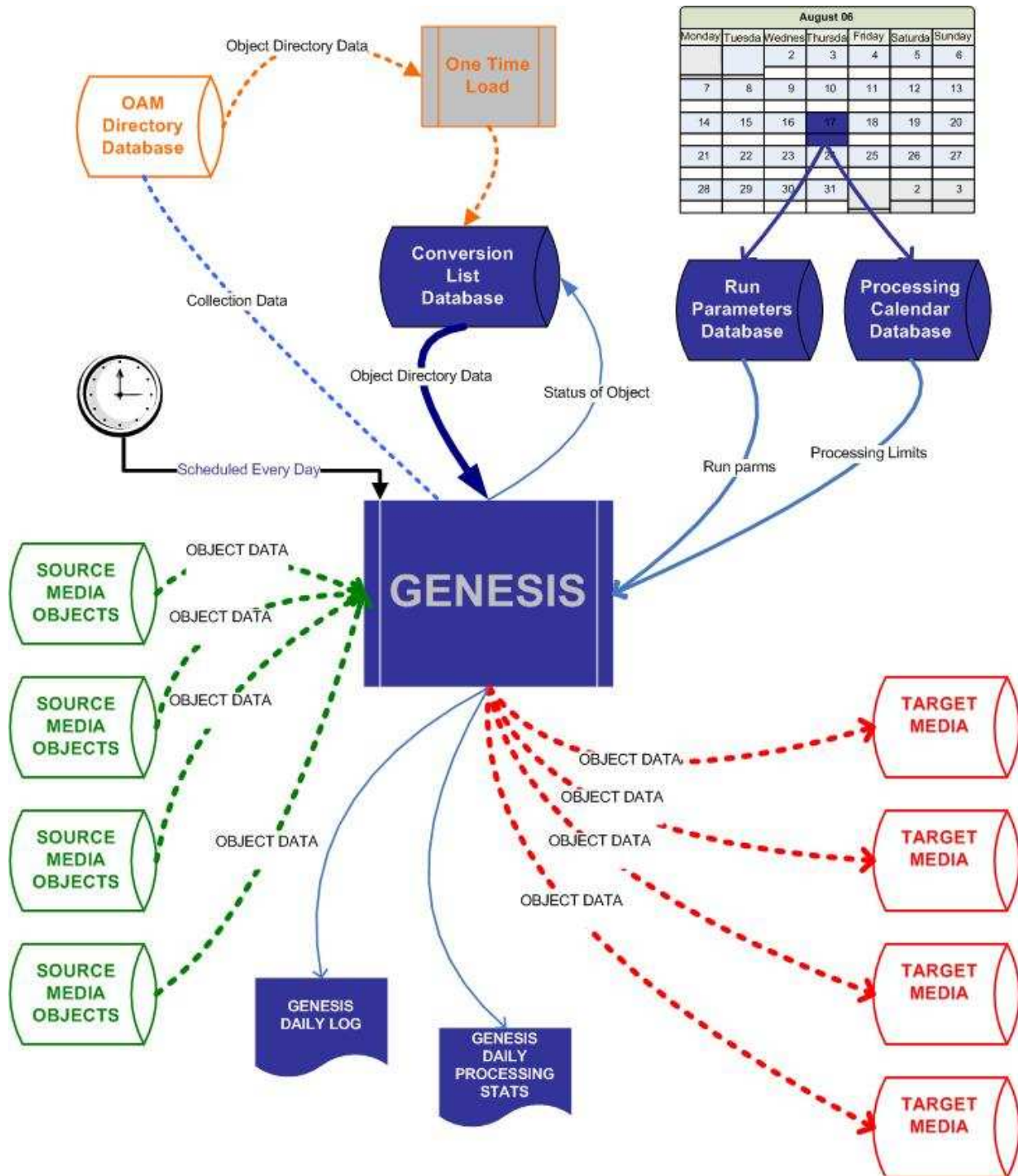


Figure 1



Project Scope

Experienced ICS consultants work closely with the Customer to deliver this service. The ICS *Genesis Data Migration service provides:*

- Project planning, management, and support throughout the implementation.
- Genesis based data migration software installation within the Customer's environment.
- Online migration management of existing data located on one storage device to another, using one of the Genesis tools.

Specifically, ICS will:

- Review details of current OAM storage hierarchy allocation and management rules to understand current objectives.
- Analyze data profile and transition activity for current storage groups to support development of Transition strategy.
- Develop/document target environment storage hierarchy rules and policies based on new configuration.
- Review with client and document the legacy data migration objectives, constraints and priorities.
- Document the technical process (using ICS Genesis tool) to support data migration from tape to Centera.
- Install and customize the ICS Genesis tool and test an automated process to be used to migrate the data from the tape media to the Centera solution.
- Identify a pilot data group and develop detailed I data migration schedule supported by automation process.
- Execute pilot data migration process, validate expected results and adjust process/schedule based on results.
- Document the automation process (Genesis) to be used to complete the data migration from the tape media to the Centera according to the data migration schedule.
- Turn over the documentation and train the client on monitoring migration process and on related adjustment techniques.
- Provide support for client questions or issue resolution on use of automated migration process.

Scope Exclusions

This service does not include:

- Operating system or software customization, maintenance, or upgrades.
- Transformation or conversion of data, data structures, database management systems, applications, or operating systems.
- Hardware installation or de-commissioning.

Service Opportunities, Risks, and Considerations

The following Service Opportunities, Risks, and Considerations are associated with this Service Offering.

Opportunities

This service can also present opportunities to:

- Reduce the Customer's data information Total Cost of Ownership (TCO) through data classification and policy for mapping storage with critical applications.



- Identify new migration or residency solutions.
- Identify and remove data bottlenecks through a performance and tuning as well as load balancing assessments.
- Design enterprise wide storage configuration solution.
- Design a business continuity/disaster recovery solution for the customer's mission-critical environment.
- Design a virtual tape solution that enhances the Customer's tape management.

Risks

During this engagement, ICS ensures that:

- We completely understand the Customer's environment, including hardware, operating system components, management tools, and applications when planning this data migration.
- The Customer fully understands the object types that the migration tools can migrate versus the objects that must be moved after the Genesis tool is run, if any.

Considerations

ICS will document any area of concern on this engagement. We also document any implementation variations that result in Level of Effort (LOE) changes. Customers shall pay additional amounts for Project Scope changes or exceptions; performance outside normal business hours or non-consecutive days and travel-related expenses.

Deliverables

During this engagement, ICS delivers:

- *A Statement of Work (SOW) which details the deliverables and responsibilities of both the customer and ICS.*
- *A detailed OAM Object Migration Project Plan.*
- *An OAM Object Migration Configuration Guide.*
- *An OAM Object Migration Test and Acceptance Plan.*
- A completed migration to the new storage devices without impact to business operations.

Delivery Skill and Recommendations

ICS offers the following skills to perform this service offering:

- z/OS operating systems and mainframe systems administration, SMS administration, and Mainframe Data Management.
- Familiarization with all mainframe database management systems such as DB2, IMS, and IDMS.
- Mainframe Systems Programming and Storage Management expertise in standalone and shared DASD Parallel Sysplex environments.
- Mainframe attached storage hardware, including EMC, IBM, and HDS.
- ESCON and FICON configuration.

Recommended Training

ICS will:

- Document the automation process (Genesis) to be used to complete the data migration from the tape media to the Centera according to the data migration schedule.



Implementation & Consulting Services, Inc.

- Turn over the documentation and train the client on monitoring migration process and on related adjustment techniques.
- Provide support for client questions or issue resolution on use of automated migration process.

Configuration and Quoting Specifications

- The price for this offering is based on specific Customer environment requirements and performance during normal business hours (8:00 AM – 6:00 PM local time, M–F, excluding local holidays).
- Invoices are issued upon ICS receipt and approval of the Customer's purchase order or signed statement of work.
- The Customer authorizes ICS to invoice for additional amounts for Project Scope changes or exceptions, performance outside normal business hours, and travel-related expenses.