General Information

This section covers the following topics:

- Purpose

- Environment-Specific Considerations

- Natural for VSAM with Natural Security

- Integration with Predict

- Terms Used in this Documentation

- Messages Related to VSAM

Purpose

With the Natural interface to VSAM, a Natural user can access data stored in VSAM files. As a prerequisite, the current version of Natural for Mainframes must be installed.

In general, there is no difference between using Natural with VSAM and using it with Adabas or any other supported database management system. The Natural interface to VSAM allows Natural programs to access VSAM data, using the same Natural DML statements that are available for Adabas. Therefore, programs written for VSAM can also be used to access, for example, Adabas databases.

All operations requiring interaction with VSAM are performed by the Natural interface to VSAM.

Environment-Specific Considerations

Natural for VSAM is fully ESA- and z/OS Parallel Sysplex-compliant. It runs in batch mode or under the online environments CICS, Com-plete and TSO. Under CICS, it also runs in conversational or pseudo-conversational mode.

Natural for VSAM supports the following types of VSAM file:

- KSDS,

- ESDS,

- RRDS,

- VRDS.

Under z/OS, Natural for VSAM supports the dataset access modes record-level sharing (RLS) and DFSMS Transactional VSAM Services (DFSMStvs).

The Natural system files `FNAT`, `FUSER`, `FDIC`, `FSPOOL` and `FSEC` can also be located on VSAM system files. For VSAM system files, Natural for VSAM uses the multi-fetch option to speed up the process of loading objects into the buffer pool.

For information on how to use and install Natural using VSAM files as system files, refer to the section *Using Natural with VSAM System Files*.

Natural for VSAM supports local shared resources (LSR) under TSO and in z/OS and z/VSE batch modes. For CICS and Com-plete, the appropriate file definition tools must be used. The LSR option for VSAM files improves the performance of random access.

Natural for VSAM supports Create/Loading Mode for empty files under TSO as well as in batch mode.

Natural for VSAM supports the following types of Data Table under CICS z/OS:

- User-Maintained Data Tables (UMT),

- CICS-Maintained Data Tables (CMT),

- Coupling Facility Data Tables (CFDT).

It also supports dataset name sharing (DSN) under TSO, and batch-mode processing in z/OS and z/VSE, in particular to access datasets using a defined path.

Natural for VSAM supports extended-format datasets for all types of VSAM dataset organization. There are, however, restrictions for ESDS, RRDS and VRDS which result from the use of the Natural system variable `*ISN` (see *Database-Specific Information*) and its internal size limit of 4 bytes.

Natural for VSAM with Natural Security

Since Natural Security supports the `FSEC` system file as VSAM system file, the following restrictions must be considered:

- Generation of ETIDs is disabled.

- Logging of maintenance actions is disabled.

- Password history is disabled.

- Definition of utility profiles is disabled.

Integration with Predict

Predict, Software AG's open, operational data dictionary for fourth-generation-language development with Natural, is a central repository of application metadata and provides documentation and cross-reference features. Predict lets you automatically generate code from definitions, enhancing development and maintenance productivity.

Since Predict supports VSAM, direct access to VSAM files is possible via Predict and information from VSAM can be transferred to the Predict dictionary to be integrated with data definitions for other environments.

VSAM physical and logical views can be incorporated and compared, new VSAM views can be generated, and Natural views can be generated and compared. All VSAM-specific data types and the referential integrity of VSAM are supported. See the *Predict* documentation for details.

Terms Used in this Documentation

Term	Explanation
CFDT	Coupling Facility Data Tables
CMT	CICS-Maintained Data Tables
DDM	Natural data definition module
DFSM	Data Facility Storage Management Subsystem
DFSMStvs	DFSMS Transactional VSAM Services
Front-end	The NATPARM parameter module is called front-end in this documentation.
LSR	Local Shared Resources
NVS	This is the product code of Natural for VSAM. In this documentation the product code is often used as prefix in the names of datasets, modules, etc.
UMT	User-Maintained Data Tables

Messages Related to VSAM

The message number ranges of Natural system messages related to VSAM are 3500-3599.

For a list of the abend codes that may be issued by the Natural interface to VSAM, see *Natural for VSAM Interface Abend Codes* in the Natural *Messages and Codes* documentation.