Natural Swap Pool Initialization

This document describes how to control the initialization of a Natural swap pool and contains an overview of the keyword parameters available for initialization in the macro `NTSWPRM`.

The following topics are covered:

- Swap Pool Initialization Control

- Swap Pool Initialization Parameters

Swap Pool Initialization Control

The parameter `SWPINIT` in the macro `NTSWPRM` controls the initialization of the swap pool.

If You Set SWPINIT=AUTO

- The swap pool manager tries to read the swap pool initialization data with the swap pool name as key from the Natural system file `FNAT` or `FUSER` (see keyword parameters `SWPFILE` of macro `NTSWPRM`). If it finds data, they are used and the corresponding parameters in the macro `NTSWPRM` are ignored. If it does not find data, the operand(s) of the keyword parameter `SWPSLSZ` in the macro `NTSWPRM` will be used for initializing the swap pool.

- If the parameter `SWPSLSZ` contains only one slot size definition, the swap pool is initialized with one logical swap pool. In the specified time interval (see parameter `SWPTIM1` in the macro `NTSWPRM`), the swap pool manager controls whether the swap pool needs to be reorganized or optimized (see also the section *Dynamic Swap-Pool Reorganization*). If the swap pool was reorganized, the newly calculated initialization data for the swap pool are stored in the Natural system file for the next initialization. If the swap pool's reorganization has resulted in more than one logical swap pool, there will be no further dynamic swap pool reorganization.

- Dynamic swap pool reorganization is not possible when the swap pool contains more than one logical swap pool.

- Further swap pool optimizations can be explicitly initialized with the following Natural `SYSTP` utility functions:

    - Slot Size Calculation,

    - Swap Pool Parameter Service (modification of the swap pool initialization data in the Natural system file),

    - Deactivate the Swap Pool and Activate the Swap Pool.

- The maximum number of logical swap pools for dynamically reorganizing or optimizing the swap pool can be defined in the operand of the keyword parameter `SWPLSWP` in macro `NTSWPRM`.

If You Set SWPINIT=

- No swap pool initialization data in the Natural system file will be read or stored. The operand(s) of the keyword parameter SWPSLSZ in the macro NTSWPRM will be used for initializing the swap pool.

- The rules for dynamically reorganizing or optimizing the swap pool are the same as described under SWPINIT=AUTO above, except that no initialization data will be stored in the Natural system file.

Swap Pool Initialization Parameters

The following is an overview of the keyword parameters that are available for initialization in the macro NTSWPRM.

Parameter	Explanation
SWPSLSZ	Defines the number of logical swap pools, their slot sizes and the numerical relation between slot number and logical swap pools.
SWPINIT	Defines the access to the swap pool initialization data through the Natural system file.
SWPLSWP	Defines the maximum number of logical swap pools for reorganizing swap pools dynamically.
SWPSDIF	Defines the even-numbered minimum difference between the slot sizes of the different logical swap pools. This value will be controlled during slot-size calculation and dynamic swap-pool reorganization.

The following TP-monitor-specific requirements apply:

- **Under UTM:**
  The size of the swap pool must be specified in the operand of keyword parameter SIZE for macro ADDON or program CMPSTART.

- **Under CICS:**
  The size, name and cache size of the swap pool are specified using profile parameter BPI or the corresponding macro NTBPI in the Natural parameter module NATPARM, that is, the (NT)BPI settings in effect for the Natural session initializing the Natural CICS environment are taken.