

# Swap Pool Data Space

This document describes how to extend the Natural Swap Pool capacity by generating ESA Data Space.

The following topics are covered:

- Using ESA Data Space in Addition
  - ESA Data Space Slot Size Adjustment
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## Using ESA Data Space in Addition

To achieve a further reduction of the swap I/O operations, you can use the keyword parameters `DATA` and `DESA` of the `CMPSTART` program to extend the Natural Swap Pool capacity by generating ESA Data Space. This Data Space will be available to store compressed Natural user threads whenever the Swap Pool runs out of space.

When this Data Space has been also consumed, a check occurs whether it is necessary to write user threads from the Data Space to the roll file, because their life time has ended (see the keyword parameters `DSPCONT` and `DSPLIFE` of macro `NTSWPRM`).

If there is no free storage space in the Data Space, the swap pool logic will cause the oldest inactive user thread to be written from the swap pool to the roll file.

## ESA Data Space Slot Size Adjustment

The generated ESA Data Space is divided into slots of equal size.

- If you are using the TP monitor `UTM`, you can define the slot size by setting the `NATUTM` macro keyword parameter `ROLLTSZ` adequately.
- If you are using the TP monitor `CICS`, the Data Space slot size will automatically take the size of the longest thread.

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.