

Space Calculation for Mainframe Databases

The space calculation function is a planning tool for adding new components or recalculating existing space requirements. Each calculation provides a block or cylinder estimate according to information you provide. In general, you must provide

- the maximum estimated record count
- average number of DE values
- average descriptor, compressed record, or normal record length
- estimated padding factor
- device type where the Adabas component being estimated resides

In many cases, the results are "best guess" estimates; other than a device type, no defaults are assumed. Because no values are actually changed by the Space Calculation function, unrealistic estimates cause no harm.

To use the space calculation function:

1. Select an Adabas database in tree-view and expand it.
2. Select **Space Calculation** in tree-view.

In detail-view, a dropdown list allows you to choose between the following components:

- ASSO - Address Converter
- ASSO - Normal/Upper Index
- DATA
- DDFILEA
- SORT - ADAINV
- SORT - ADALOD load
- SORT - ADALOD update
- TEMP - ADAINV
- TEMP - ADALOD load/update
- TEMP - ADALOD delete
- WORK

This chapter is organized as follows:

- Estimating Associator Space
 - Estimating Data Storage Space
 - Estimating Space for the DD/FILEA Sequential Dataset
 - Estimating the Sort Dataset
 - Estimating the Temp Dataset
 - Estimating the Work Dataset
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Estimating Associator Space

You can calculate two Associator component values: the address converter (AC) space, or the normal (NI) and upper (UI) index space.

Address Converter Space

Address converter space is based on the device type and the estimated number of records in the related Data Storage file.

To calculate address converter space:

1. In the **Space Calculation** detail-view, select **ASSO - Address Converter** in the dropdown list.
2. Enter your requirements in the table and click **OK** to calculate.

Normal/Upper Index Space

The index values are calculated for a single descriptor, requiring you to estimate such things as the average descriptor length, the number of multiple descriptors you expect to have, the total number of unique descriptor values for that field, an Associator padding factor, and a device type if other than the default.

To calculate normal/upper index space:

1. In the **Space Calculation** detail-view, select **ASSO - Normal/Upper Index** in the dropdown list.
2. Enter your requirements in the table and click **OK** to calculate.

Estimating Data Storage Space

The DATA storage calculation is based on values you provide for estimated maximum record count, the average length of a compressed record, a Data Storage padding factor, and device type. Results are specified in both blocks and cylinders.

To calculate data storage space:

1. In the **Space Calculation** detail-view, select **DATA** in the dropdown list.
2. Enter your requirements in the table and click **OK** to calculate.

Estimating Space for the DD/FILEA Sequential Dataset

The space required for the DD/FILEA sequential dataset is calculated when it is used with the ADAORD utility. (The dataset is also used with the ADALOD utility.)

To calculate space for the DD/FILEA sequential dataset:

1. In the **Space Calculation** detail-view, select **DDFILEA** in the dropdown list.
2. Enter your requirements in the table and click **OK** to calculate.

Estimating the Sort Dataset

The storage needed on SORT for the utility function chosen is calculated.

The topic is organized as follows:

- ADAINV Sort
- ADALOD LOAD Sort
- ADALOD UPDATE Sort

ADAINV Sort

To calculate the space needed on SORT for the ADAINV utility function:

1. In the **Space Calculation** detail-view, select **SORT - ADAINV** in the dropdown list.
2. Enter your requirements in the table and supply the password (if required). Click **OK** to calculate.

ADALOD LOAD Sort

For the ADALOD LOAD calculation, the default number of records is MAXISN rather than TOPISN as it is for the ADAINV function.

To calculate the space needed on SORT for the ADALOD LOAD utility function:

1. In the **Space Calculation** detail-view, select **SORT - ADALOD Load** in the dropdown list.
2. Enter your requirements in the table and supply the password (if required). Click **OK** to calculate.

ADALOD UPDATE Sort

For the ADALOD UPDATE calculation, the default number of records is 0.

▶ **To calculate the space needed on SORT for the ADALOD UPDATE utility function:**

1. In the **Space Calculation** detail-view, select **SORT - ADALOD Update** in the dropdown list.
2. Enter your requirements in the table and supply the password (if required). Click **OK** to calculate.

Estimating the Temp Dataset

The storage needed on TEMP for the utility function chosen is calculated.

The topic is organized as follows:

- ADAINV Temp
- ADALOD LOAD/UPDATE Temp
- ADALOD DELETE Temp

ADAINV Temp

▶ **To calculate the space needed on TEMP storage for the ADAINV utility function:**

1. In the **Space Calculation** detail-view, select **TEMP - ADAINV** in the dropdown list.
2. Enter your requirements in the table and supply the password (if required). Click **OK** to calculate.

ADALOD LOAD/UPDATE Temp

▶ **To calculate the space needed on TEMP storage for the ADALOD LOAD/UPDATE utility function:**

1. In the **Space Calculation** detail-view, select **TEMP - ADALOD Load/Update** in the dropdown list.
2. Enter your requirements in the table and supply the password (if required). Click **OK** to calculate.

ADALOD DELETE Temp

▶ **To calculate the space needed on SORT for the ADALOD DELETE utility function:**

1. In the **Space Calculation** detail-view, select **TEMP - ADALOD Delete** in the dropdown list.
2. Enter your requirements in the table and supply the password (if required). Click **OK** to calculate.

Estimating the Work Dataset

The Work dataset requires the most estimating. Although many initial values may be arbitrary, keep a record of them to ensure that subsequent tuning of the Work parameters has a realistic basis. Results comprise block estimates for the three parts of the Work area. A total of these values in blocks and cylinders is also provided.

 **To calculate work dataset space:**

1. In the **Space Calculation** detail-view, select **WORK** in the dropdown list.
2. Enter your requirements in the table and click **OK** to calculate.