

H5P_SET_LAYOUT

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H5P_SET_LAYOUT

Sets the type of storage used to store the raw data for a dataset

Procedure:

H5P_SET_LAYOUT (plist, layout)

Signature:

```
herr_t H5Pset_layout(  
    hid_t plist,  
    H5D_layout_t layout  
)
```

Fortran90 Interface: h5pset_layout_f

```
SUBROUTINE h5pset_layout_f (prp_id, layout, hdferr)  
  IMPLICIT NONE  
  INTEGER(HID_T), INTENT(IN) :: prp_id ! Property list identifier  
  INTEGER, INTENT(IN) :: layout      ! Type of storage layout for raw data  
                                     ! Possible values are:  
                                     !   H5D_COMPACT_F  
                                     !   H5D_CONTIGUOUS_F  
                                     !   H5D_CHUNKED_F  
                                     !   H5D_VIRTUAL_F  
  INTEGER, INTENT(OUT) :: hdferr     ! Error code  
                                     ! 0 on success and -1 on failure  
END SUBROUTINE h5pset_layout_f
```

Parameters:

<i>hid_tplist</i>	IN: Identifier of property list to query
<i>H5D_layout_t</i> layout	IN: Type of storage layout for raw data

Description:

H5P_SET_LAYOUT sets the type of storage used to store the raw data for a dataset. This function is only valid for dataset creation property lists.

Valid values for `layout` are:

H5D_COMPACT: Store raw data in the dataset object header in file. This should only be used for datasets with small amounts of raw data. The raw data size limit is 64K (65520 bytes). Attempting to create a dataset with raw data larger than this limit will cause the H5D_CREATE call to fail.

H5D_CONTIGUOUS: Store raw data separately from the object header in one large chunk in the file.

H5D_CHUNKED: Store raw data separately from the object header as chunks of data in separate locations in the file.

H5D_VIRTUAL: Draw raw data from multiple datasets in different files.

Note that a compact storage layout may affect writing data to the dataset with parallel applications. See note in H5D_WRITE documentation for details.

Returns:

Returns a non-negative value if successful; otherwise returns a negative value.

Example:

```
1_10 / C / H5D / h5ex_d_compact.c [51:63]          master   HDFFV/hdf5-e
examples
/*
 * Create the dataset creation property list, set the layout to
 * compact.
 */
dcpl = H5Pcreate (H5P_DATASET_CREATE);
status = H5Pset_layout (dcpl, H5D_COMPACT);

/*
 * Create the dataset. We will use all default properties for this
 * example.
 */
dset = H5Dcreate (file, DATASET, H5T_STD_I32LE, space, H5P_DEFAULT, dcpl,
                 H5P_DEFAULT);
```

FFV/hdf5-examples

```
! Create the dataset creation property list, set the layout to
! compact.
!
CALL h5pcreate_f(H5P_DATASET_CREATE_F, dcpl, hdferr)
CALL h5pset_layout_f(dcpl, H5D_COMPACT_F, hdferr)
!
! Create the dataset. We will use all default properties for this
! example.
!
CALL h5dcreate_f(file, dataset, H5T_STD_I32LE, space, dset, hdferr, dcpl)
```

History:

Release	Change
1.10.0	H5D_VIRTUAL added in this release.

--- Last Modified: August 07, 2019 | 02:34 PM