

H5P_SET_LIBVER_BOUNDS

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H5P_SET_LIBVER_BOUNDS

Controls the range of library release versions used when creating objects in a file

Procedure:

H5P_SET_LIBVER_BOUNDS (fapl_id, low, high)

Signature:

```
herr_t H5Pset_libver_bounds(  
    hid_t fapl_id,  
    H5F_libver_t low,  
    H5F_libver_t high  
)
```

Fortran90 Interface: h5pset_libver_bounds_f

```
SUBROUTINE h5pset_libver_bounds_f(fapl_id, low, high, hdferr)
  IMPLICIT NONE
  INTEGER(HID_T), INTENT(IN) :: fapl_id
  ! File access property list identifier
  INTEGER, INTENT(IN) :: low ! The earliest version of the library that
  ! will be used for writing objects.
  ! Currently, low must be either:
  !       H5F_LIBVER_EARLIEST_F
  !       H5F_LIBVER_LATEST_F
  INTEGER, INTENT(IN) :: high
  ! The latest version of the library that will be
  ! used for writing objects.
  ! Currently, high must set to:
  !       H5F_LIBVER_LATEST_F
  INTEGER, INTENT(OUT) :: hdferr
  ! Error code
  ! 0 on success and -1 on failure
END SUBROUTINE h5pset_libver_bounds_f
```

Parameters:

<i>hid_t</i> fapl_id	IN: File access property list identifier
<i>H5F_libver_t</i> low	IN: The earliest version of the library that will be used for writing objects
<i>H5F_libver_t</i> high	IN: The latest version of the library that will be used for writing objects

Description:

H5P_SET_LIBVER_BOUNDS controls the range of library release versions that will be used when creating objects in a file. The object format versions are determined indirectly from the library release versions specified in the call.

This property is set in the file access property list specified by the parameter *fapl_id*.

The parameter *low* sets the earliest possible format versions that the library will use when creating objects in the file. Note that *earliest possible* is different from *earliest*, as some features introduced in library versions later than 1.0.0 resulted in updates to object formats. The parameter *high* sets the latest format versions that the library will be allowed to use when creating objects in the file.

The parameters *low* and *high* must be one of the enumerated values in the *H5F_libver_t struct*, which is defined in *H5Fpublic.h*:

```
typedef enum H5F_libver_t {
    H5F_LIBVER_EARLIEST,
    H5F_LIBVER_V18 = 1,
    H5F_LIBVER_V110 = 2,
    H5F_LIBVER_NBOUNDS
```

```
} H5F_libver_t;
```

```
#define H5F_LIBVER_LATEST H5F_LIBVER_V110
```

The macro *H5F_LIBVER_LATEST* is aliased to the highest enumerated value in *H5F_libver_t*, indicating that this is currently the latest format available.

The library supports the following five pairs of (*low*, *high*) combinations as derived from the above values in *H5F_libver_t*.

Value of <i>low</i> and <i>high</i>	Result
-------------------------------------	--------

<p>low=<i>H5F_LIBVER_EARLIEST</i></p> <p>high=<i>H5F_LIBVER_V18</i></p>	<ul style="list-style-type: none"> • The library will create objects with the earliest possible format versions. • The library will allow objects to be created with the latest format versions available to library release 1.8.x. • API calls that create objects or features that are available to versions of the library greater than 1.8.x release will fail.
<p>low=<i>H5F_LIBVER_EARLIEST</i></p> <p>high=<i>H5F_LIBVER_V110</i></p>	<ul style="list-style-type: none"> • The library will create objects with the earliest possible format versions. • The library will allow objects to be created with the latest format versions available to library release 1.10.x. Since 1.10.x is also <i>H5F_LIBVER_LATEST</i>, there is no upper limit on the format versions to use. For example, if a newer format version is required to support a feature e.g. virtual dataset, this setting will allow the object to be created. • This is the library default setting and provides the greatest format compatibility.
<p>low=<i>H5F_LIBVER_V18</i></p> <p>high=<i>H5F_LIBVER_V18</i></p>	<ul style="list-style-type: none"> • The library will create objects with the latest format versions available to library release 1.8.x. • API calls that create objects or features that are available to versions of the library greater than 1.8.x release will fail. • Earlier versions of the library may not be able to access objects created with this setting.
<p>low=<i>H5F_LIBVER_V18</i></p> <p>high=<i>H5F_LIBVER_V110</i></p>	<ul style="list-style-type: none"> • The library will create objects with the latest format versions available to library release 1.8.x. • The library will allow objects to be created with the latest format versions available to library release 1.10.x. Since 1.10.x is also <i>H5F_LIBVER_LATEST</i>, there is no upper limit on the format versions to use. For example, if a newer format version is required to support a feature e.g. virtual dataset, this setting will allow the object to be created. • Earlier versions of the library may not be able to access objects created with this setting.
<p>low=<i>H5F_LIBVER_V110</i></p> <p>high=<i>H5F_LIBVER_V110</i></p>	<ul style="list-style-type: none"> • The library will create objects with the latest format versions available to library release 1.10.x. • The library will allow objects to be created with the latest format versions available to library release 1.10.x. Since 1.10.x is also <i>H5F_LIBVER_LATEST</i>, there is no upper limit on the format versions to use. For example, if a newer format version is required to support a feature e.g. virtual dataset, this setting will allow the object to be created. • This setting allows users to take advantage of the latest features and performance enhancements in the library. However, objects written with this setting may be accessible to a smaller range of library versions than would be the case if low is set to <i>H5F_LIBVER_EARLIEST</i>. • Earlier versions of the library may not be able to access objects created with this setting.

Returns:

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

Example:

```
/*
 * Create a file with fapl setting (H5F_LIBVER_V18, H5F_LIBVER_LATEST).
 * Create a chunked dataset in the file with "no filter edge chunks", which
 * is introduced in library release 1.10.
 */
/* Create a file access property list */
```

```

fapl = H5Pcreate(H5P_FILE_ACCESS);
/* Set the fapl */
H5Pset_libver_bounds(fapl, H5F_LIBVER_V18, H5F_LIBVER_LATEST);
/* Create a file with this fapl */
fid = H5Fcreate(FILE8, H5F_ACC_TRUNC, H5P_DEFAULT, fapl);
/* Set up to create a chunked dataset with "no filter edge chunks" enabled */
sid = H5Screate_simple(2, fix_dims2, NULL);
dcpl = H5Pcreate(H5P_DATASET_CREATE);
H5Pset_chunk(dcpl, 2, fix_chunks2);
H5Pset_chunk_opts(dcpl, H5D_CHUNK_DONT_FILTER_PARTIAL_CHUNKS);
/* Should succeed in creating this dataset */
did = H5Dcreate2(fid, "DSETA", H5T_NATIVE_INT, sid, H5P_DEFAULT, dcpl, H5P_DEFAULT);
/*
* If you create the file with fapl setting (H5F_LIBVER_EARLIEST, H5F_LIBVER_V18),
* the creation of the same dataset will fail.
*/
:
:
:

```

History:

Release	Change
1.10.2	Add H5F_LIBVER_V18 to the enumerated defines in <i>H5F_libver_t</i> .
1.8.0	Function introduced in this release.

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