

# H5S\_CREATE

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# H5S\_CREATE

Creates a new dataspace of a specified type

## Procedure:

H5S\_CREATE ( type )

## Signature:

```
hid_t H5Screate(  
    H5S_class_t type  
)
```

Fortran90 Interface: h5screate\_f

```
SUBROUTINE h5screate_f(classtype, space_id, hdferr)  
    IMPLICIT NONE  
    INTEGER, INTENT(IN) :: classtype           ! The type of the dataspace  
                                                ! to be created. Possible values  
                                                ! are:  
                                                !   H5S_SCALAR_F  
                                                !   H5S_SIMPLE_F  
                                                !   H5S_NULL_F  
    INTEGER(HID_T), INTENT(OUT) :: space_id ! Dataspace identifier  
    INTEGER, INTENT(OUT) :: hdferr           ! Error code  
                                                ! 0 on success and -1 on failure  
END SUBROUTINE h5screate_f
```

**Parameters:**

*H5S\_class\_t* type      IN: Type of dataspace to be created

**Description:**

H5S\_CREATE creates a new dataspace of a particular *type*. Currently supported types are as follows:

```
H5S_SCALAR
H5S_SIMPLE
H5S_NULL
```

Further dataspace types may be added later.

A *scalar dataspace*, H5S\_SCALAR, has a single element, though that element may be of a complex datatype, such as a compound or array datatype. By convention, the rank of a scalar dataspace is always 0 (zero); think of it geometrically as a single, dimensionless point, though that point can be complex.

A *simple dataspace*, H5S\_SIMPLE, consists of a regular array of elements.

A *null dataspace*, H5S\_NULL, has no data elements.

The dataspace identifier returned by this function can be released with H5S\_CLOSE so that resource leaks will not occur.

**Returns:**

Returns a dataspace identifier if successful; otherwise returns a negative value.

**Example:**

```
1_10 / C / H5T / h5ex_t_floatatt.c [46:49]      master      H5FFV/hdf5-exa
mples
/*
 * Create dataset with a null dataspace.
 */
space = H5Screate (H5S_NULL);
```

```
1_10 / FORTRAN / H5T / h5ex_t_floatatt_F03.f90 [54:56]      master      H
DFFV/hdf5-examples
! Create dataspace with a null dataspace.
!
CALL H5Screate_f(H5S_NULL_F, space, hdferr)
```

**History:**

None

--- Last Modified: June 05, 2019 | 01:24 PM