Examples in the Source Code

The HDF5 source code provides many example programs:

C	FORTRAN	Java	C++	High Level

C

Feature	Example
Introductory examples	Examples from Learning the Basics
Creates / Reads / Writes Attributes	h5_attribute.c
Reads / Writes from a Chunked Dataset (reads file created by h5_extend_write.c)	h5_chunk_read.c
Creates a compound datatype, writes array of compound and reads back fields' subsets	h5_compound.c
Shows how to use virtual file drivers	h5_drivers.c
Demonstrates how the data transform features in HDF5 work	h5_dtransform.c
Windows to Unix traversal function for external links	h5_elink_unix2win.c
Create and appends to an extendible dataset	h5_extend_write.c
Create and uses *external links* in HDF5	h5_extlink.c
Creates a group with two datasets, creates hard link to group and uses iterator functions	h5_group.c
Checks if group exists and creates intermediate groups	h5_interm_group.c
Shows concept of *mounting files*	h5_mount.c
Reads hyperslabs from file created with h5_write.c	h5_read.c
Creates, stores, and dereferences references to dataset regions	h5_ref2reg.c
Creates and reads object references	h5_reference.c
Selects hyperslabs and elements to write selected data from memory to file	h5_select.c
Creates a file using property lists to control which messages are shared (to save space)	h5_shared_mesg.c
Creates a dataset using default properties	h5_write.c
VDS example that illustrates the Eiger use case (see VDS Example Description)	h5_vds-eiger.c
	h5_vds-exc.c
VDS Example illustrating Excalibur use case (see VDS Example Description)	h5_vds-exclim.c
	h5_vds-percival-unlim-maxmin.c
	h5_vds-percival-unlim.c
VDS Example that illustrates Percival use case (see VDS Example Description)	h5_vds-percival.c
	h5_vds-simpleIO.c
VDS Example that illustrates usage of H5Pset(get)_virtual_* functions (see VDS Example Description)	h5_vds.c
Example of using parallel HDF5	ph5example.c

FORTRAN

Feature	Example
Introductory examples	Examples from Learning the Basics
More advanced example of using hyperslabs	hyperslab.f90
Shows concept of *mounting* files	mountexample.f90
Shows nested derived type	nested_derived_type.f90
Creates and reads a dataset with a compound datatype	compound.f90
Creates and reads a dataset with a complex compound datatype (F2003)	compound_complex_fortran2003.f90
Creates and reads a dataset with a compound datatype (F2003)	compound_fortran2003.f90
Shows how to use Parallel HDF5	ph5example.f90
Creates, stores, and dereferences object references	refobjexample.f90
Creates, stores, and dereferences references to dataset regions	refregexample.f90
Reads, writes a dataset with F2003 features	rwdset_fortran2003.f90
Shows how to select elements in a dataset	selectele.f90

Java

Feature	Example
Introductory Examples	Examples from Learning the Basics
	Examples by API

C++

Feature	Example
Reads / Writes from a Chunked Dataset (from file created by extend_ds.cpp)	chunks.cpp
Creates a compound datatype, writes array of compound and reads back fields' subsets	compound.cpp
Writes a dataset to a new HDF5 file	create.cpp
Shows how to work with extendible dataset	extend_ds.cpp
Creates a group with two datasets, creates hard link to group and uses iterator functions	h5group.cpp
Reads hyperslabs from file created with create.cpp	readdata.cpp
Creates a file and dataset and shows how to use hyperslab and element selection	writedata.cpp

High Level

Feature	Example	Additional Files
H5DS: HDF5 Dimension Scale		
Attach a dimension scale	ex_ds1.c	
Attach a dimension scale and add a label	ex_ds1.f90	

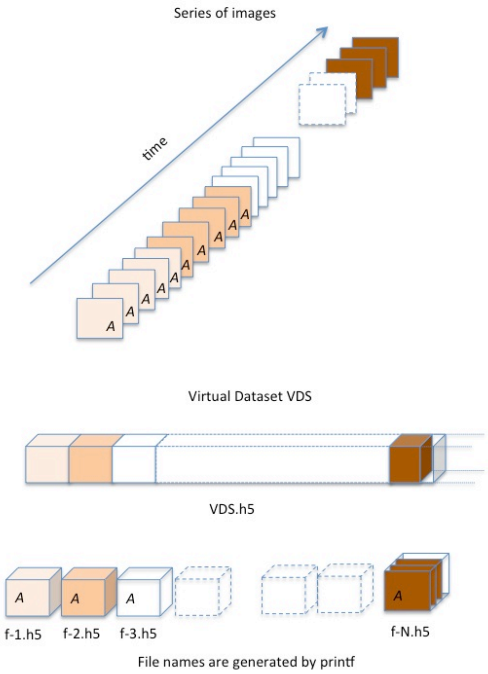
H5IM: HDF5 Image		
Create 8-bit image and attach a palette	ex_image1.c	
Create 8-bit and 24-bit image, attach palette and read back	ex_image2.c	image24pixel.txt image8.txt
H5LT: HDF5 Lite		
Write a dataset	ex_lite1.c	
Read a dataset	ex_lite2.c	
Write an attribute	ex_lite3.c	
Create and read a dataset	exlite.f90	
H5TB: HDF5 Table		
Creating and reading a table	ex_table_01.c	
Appending and reading records	ex_table_02.c	
Overwriting records	ex_table_03.c	
Writing and reading fields by name	ex_table_04.c	
Writing and reading fields by index	ex_table_05.c	
Querying	ex_table_06.c	
Deleting records	ex_table_07.c	
Inserting records	ex_table_08.c	
Adding records from one table to another	ex_table_09.c	
Combining tables	ex_table_10.c	
Inserting a new field into a table	ex_table_11.c	
Deleting a field from a table	ex_table_12.c	
H5PT: HDF5 Packet Table		
Create, write, and read a packet table	ptExampleFL.c	
Create, write and read a packet table	ptExampleFL.cpp	

VDS Example Description

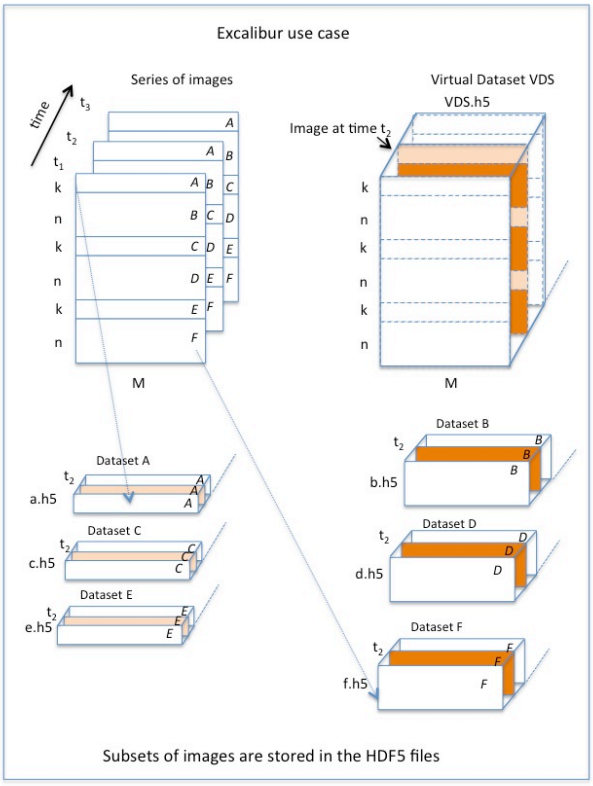
A description of what some of the VDS examples in the source code do is included below. For information on using the VDS feature see Virtual Dataset in the New Features in HDF5 Release 1.10. Also see the tutorial Introduction to the Virtual Dataset - VDS which uses the h5_vds.c example described below.

Example	Description
h5_vds.c	C example that illustrates usage of H5Pset(get)_virtual_* functions (also see Introduction to the Virtual Dataset - VDS)

h5_vds-eiger.c	C example that illustrates Eiger use case (fixed size VDS)



h5_vds-exclim.c	C example that illustrates Excalibur use case (fixed size VDS)



h5_vds-percival.c	C example that illustrates Percival use case (fixed size VDS)