

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

## FORTRAN

Feature	Example
Introductory examples	Examples from Learning the Basics
More advanced example of using hyperslabs	hyperslab.f90
Shows concept of <i>mounting</i> 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 <a href="#">extend_ds.cpp</a> )	<a href="#">chunks.cpp</a>
Creates a compound datatype, writes array of compound and reads back fields' subsets	<a href="#">compound.cpp</a>
Writes a dataset to a new HDF5 file	<a href="#">create.cpp</a>
Shows how to work with extendible dataset	<a href="#">extend_ds.cpp</a>
Creates a group with two datasets, creates hard link to group and uses iterator functions	<a href="#">h5group.cpp</a>
Reads hyperslabs from file created with <a href="#">create.cpp</a>	<a href="#">readdata.cpp</a>
Creates a file and dataset and shows how to use hyperslab and element selection	<a href="#">writedata.cpp</a>

## High Level

Feature	Example	Additional Files
<b>H5DS: HDF5 Dimension Scale</b>		
Attach a dimension scale	<a href="#">ex_ds1.c</a>	
Attach a dimension scale and add a label	<a href="#">ex_ds1.f90</a>	

<b>H5IM: HDF5 Image</b>		
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
<b>H5LT: HDF5 Lite</b>		
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	
<b>H5TB: HDF5 Table</b>		
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	
<b>H5PT: HDF5 Packet Table</b>		
Create, write, and read a packet table	ptExampleFL.c	
Create, write and read a packet table	ptExampleFL.cpp	

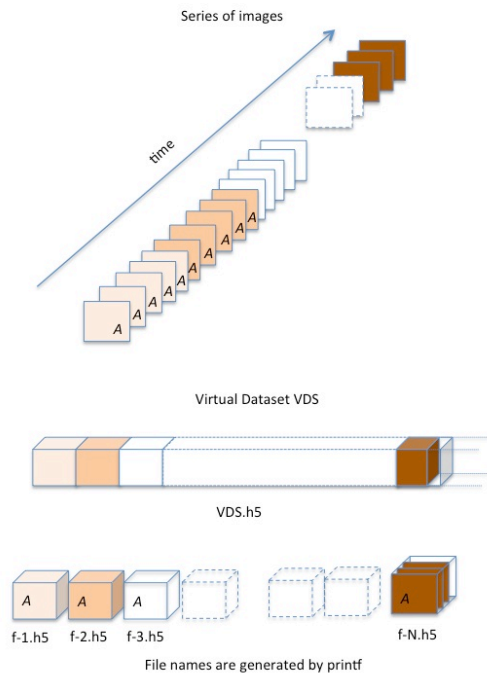
## VDS Example Description

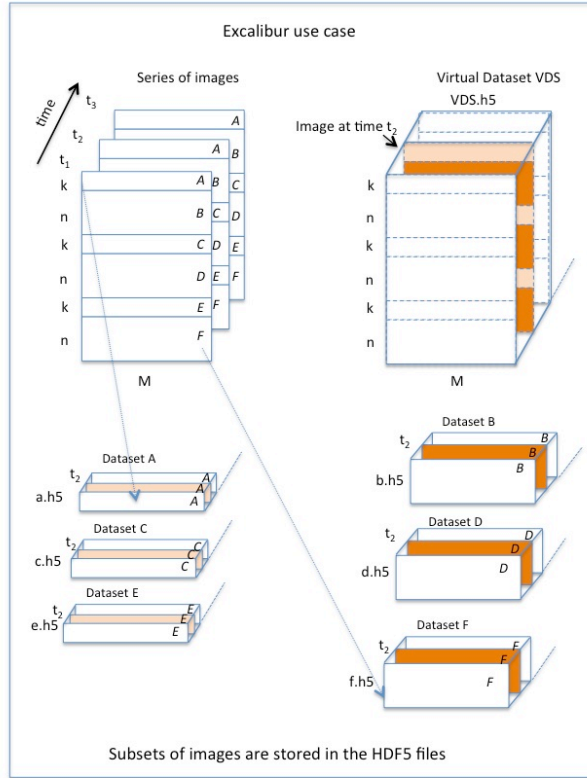
A description of what some of the VDS examples in the source code do is included below. For information on using the VDS feature see [Virtual Dataset](#) in the [New Features in HDF5 Release 1.10](#). Also see the tutorial [Introduction to the Virtual Dataset - VDS](#) which uses the `h5_vds.c` example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

Example	Description
h5_vds.c	C example that illustrates usage of <code>H5Pset(get)_virtual_*</code> functions (also see <a href="#">Introduction to the Virtual Dataset - VDS</a> )

h5\_vds-eiger.c

C example that illustrates Eiger use case (fixed size VDS)





h5\_vds-percival.c C example that illustrates Percival use case (fixed size VDS)

