

# RFC: h5dump add option for vds output

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VDS has two dataset access properties that control how missing data and files are handled. H5dump requires two new options.

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## 1 Introduction

H5dump enables the user to examine the contents of an HDF5 file and dump those contents, in human readable form. It can display the contents of the entire HDF5 file or selected objects, which can be groups, datasets, a subset of a dataset, links, attributes, or datatypes. The ***h5dump*** output is described in detail in the [DDL for HDF5](#), the *Data Description Language* document. The display of VDS files may contain gaps of data or files. H5dump needs two new options to control the handling of a VDS dataset.

## 2 Proposal

H5dump will display a VDS file with all available mapped data. Missing mapped data is filled with the fill value set by default in the VDS creation property list. An option, `--vds-view-first`, is proposed to allow this behavior be changed to display all data before the first missing mapped data. This will display only the continuous data starting with the dataset's first data element and any break in continuity terminates the display of data.

H5dump will display a VDS file with printf-style source file names until h5dump encounters a non-existent or missing source file. An option, `--vds-gap-size=N`, is proposed to set the maximum number of missing source files that the library will stop looking for mapped data. Where N is a positive number to indicate the maximum number of files to skip. The found source files and datasets will determine the extent of the unlimited virtual dataset with the printf-style mappings.

## 3 Technical Issue

H5dump code will need to add two variables to store the required information. A dataset access property list will be added to the dataset open calls where the dataset data is to be displayed.

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## 4 Reference Manual Changes

### Changes to h5dump reference manual

...  
**Options and Parameters:**

-h or --help        Print a usage message and exit.  
...  
--vds-view-first Set the VDS bounds to first missing mapped elements.  
--vds-gap-size=N Set the missing file gap size, N=non-negative integers.

...  
**Examples:**

11. Dump the dataset */GroupFoo/GroupBar/Fnord* in the file *quux.h5* and restrict the display to the available mapped data

***h5dump -d /GroupFoo/GroupBar/Fnord -vds-view-first quux.h5***

**Current Status:**

...  
**History**

...  
1.8.17 The following options added in this release:  
--vds-view-first Set the VDS bounds to first missing mapped elements.  
--vds-gap-size=N Set the missing file gap size, N=non-negative integers.  
...

## Revision History

January 21, 2016:        Version 1 circulated for comment within The HDF Group.

## Appendix: Working comments