Introduction

The space taken up by an HDF5 file is called its file space. When a user creates an HDF5 file, the HDF5 library allocates file space to store information called file metadata. File metadata is information that the library uses to describe the HDF5 file and to identify its associated objects. When the user writes data to HDF5 objects, the HDF5 library allocates file space to store the user’s data as well as the necessary file metadata. When the user removes HDF5 objects from the file, the file space associated with those objects becomes free space. The HDF5 library manages this free space.

The HDF5 library employs several strategies when allocating file space and managing free space. Depending on the user’s usage patterns of the HDF5 file, one strategy may be better than the other method. Inappropriate selection may lead to storage and performance issues. This document describes the tools and public routines that the HDF5 library provides in managing the HDF5 file space to meet the user’s specific needs.