

# HDF Product Designer



## Notice of Shutdown

The HDF Product Designer (HPD) desktop app and the accompanying backend web service are not available since July 31, 2023. There are no plans to support them in the future.

Many thanks to all those who tried or used HPD over the years.

- HPD Developers



- [Introduction](#)
- [What's New](#)
- [Download](#)

## Information about working with this wiki:

### Purpose of the Wiki

This wiki is intended strictly for the use of sharing information about NASA Earth Observing Systems Data and Information System (EOSDIS) topics. For more information please click [here](#).

We welcome your participation and comments within Earthdata Wiki.

### Rules of Conduct

Earthdata Wiki is governed by the general rules of respectful civil discussion. EOSDIS may monitor any user-generated content as it chooses and reserves the right to remove content for any reason whatsoever, without consent. The following rules of conduct are to be followed when using the Earthdata Wiki. Breach of these rules will result in users losing privileges or being banned permanently.

Participation requires a valid Earthdata Login. Only approved NASA users and affiliates will be allowed to upload data. If a wiki space becomes dormant for a period of more than 2 years, EOSDIS reserves the right to delete/remove it.

In order to maintain an environment where everyone is welcome and discussion flows freely, certain types of conduct are prohibited on Earthdata Wiki. Specifically restricted conduct includes trolling, flaming, ranting, personal attacks, harassment, threats, doxing, racism, discrimination, hate speech, sexism, spamming, off-topic posting, pyramid quoting, rumor mongering, impersonation, advertising (including HTML links and pictures), and linking to applications or utilities of uncertain intent.

In addition, the Earthdata Wiki is not for discussion of real-life current affairs, news, politics, or religion. Discussion should revolve around EOSDIS topics. Specific content prohibited on Earthdata Wiki includes pornography, profanity, and real money trading (RMT).

**NASA makes no representations or warranties regarding the information posted.**

# Introduction

HDF Product Designer (HPD) helps data producers design conventional HDF5 products easily and generate consistently interoperable data products by utilizing best practices and standards if they exist in their data user communities.

Key goals this application strives to fulfill:

- Facilitate creation of interoperable and standards-compliant data products in HDF5 as early as possible in the project development process.
- Support multiple computing platforms without requiring the full software stack of development tools and libraries installed.
- Easy and intuitive editing (create, update, move, copy, delete) of HDF5 objects.
- Collaborative approach to product design (project/team/organization-wide).
- Incorporation of best practices and standards from targeted data user communities.
- Integration of compliance and interoperability tests into the design workflow.
- Content import from existing files.
- Export of designs as HDF5 files, HDF5/JSON, or as source code in several programming languages.

The Hierarchical Data Format (HDF5) provides a flexible container that supports groups and datasets, each of which can have attributes. In many ways, HDF5 is similar to a directory structure in a file and, like directory structures, the same data can be structured and annotated in many ways. This flexibility empowers HDF5 users to arrange data in ways that make sense to them. However, it can make it difficult to share data as users, and tools, must understand the structure and the properties of data in order to use and understand it.

Many communities have successfully addressed this problem by creating conventional structures and annotations for data in HDF5. This approach depends on data files (e.g., products) that carefully follow these conventions. In some cases, designing and writing those files can be challenging or the user creating the product may be driven by local needs that lead to deviations from the conventions. Unfortunately, even small deviations can cause problems for downstream tools and future users.

What is a *HDF5 product* in the context of this software? HDF5 product is the content that should exist in a single HDF5 file. This content is defined by the HDF5 objects (groups, attributes, datasets), their names, the hierarchies they create (links and references), and attribute values. Dataset values are typically not stored in such files (unless they qualify as *metadata*) thus this software cannot be used as a data server. Once completed, a HDF5 product is replicated in many files (commonly on the order of tens of thousands or more) and filled with real data.

## What's New

**This application is shut down and no longer available. There are currently no plans to run it again.**

## Download



### First time users:

NASA Earthdata account is required to use this application. Please register and then check the user guide on how to allow HDF Product Designer to access your Earthdata user information.

The Windows platform binaries require Microsoft Visual C++ 2008 Redistributable Package (x86) if your system doesn't already have one.

| Platform                               | Binary        | SHA256 Checksum                                                  |
|----------------------------------------|---------------|------------------------------------------------------------------|
| Windows 7/8/10/11 Setup                | HPD_setup.exe | 982d9c340f01c53592e96bdd2c8c0feca08b8e3dc99ec1dfb364b02ed6b55871 |
| Windows 7/8/10/11 (no admin privilege) | HPD.exe       | 5e88ef268eaa978a8f9838c46964afea38844d7d43a9b2270e8968ea6745d2f5 |
| macOS (Mavericks or newer)             | HPD.dmg       | a57c0eaf52ae1089c32341c28a0ab0d7da972ec99f74dbd3a333e1f074ae290d |
| Linux 2.6 (x86_64)                     | HPD           | a02fd9b65d29bc1a1300cf0f59e8f2055b90c618cd61d010a51008ca70594dc4 |