

Call the Doctor - HDF(5) Clinic

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THIS MEETING IS BEING RECORDED and the recording will be available on The HDF Group's [YouTube channel](#). Remember to subscribe!

Goal(s)

This is a meeting dedicated to *your* questions.

In the unlikely event there aren't any

We have a few prepared topics (forum posts, announcements, etc.)

Sometimes life deals you an HDF5 file

No question is too small. We are here to learn. All of us.

Meeting Etiquette

Be social, turn on your camera (if you've got one)

Talking to black boxes isn't fun.

Raise your hand to signal a contribution (question, comment)

Mute yourself while others are speaking, be ready to participate.

Be mindful of your "airtime"

We want to cover as many of your topics as possible. Be fair to others.

Introduce yourself

1. Your Name
2. Your affiliation/organization/group
3. One reason why you are here today

Use the shared Google doc for questions and code snippets

The [link](#) can be found in the chat window.

When the 30 min. timer runs out, this meeting is over.

Continue the discussion on the [HDF Forum](#) or come back next week!

Notes

Don't miss our next webinar about data virtualization with HDF5-UDF and how it can streamline your work

- Presented by Lucas Villa Real (IBM Research)
- Feb 12, 2021 11:00 AM in Central Time (US and Canada)
- [Sign-up link](#)

Bug-of-the-Week Award (my candidate)

- [Write data to variable length string attribute](#) by Kerim Khemraev
- [Jira issue HDFV-11215](#)

- Quick demonstration

```
#include "hdf5.h"

#include <filesystem>
#include <iostream>
#include <string>

#define H5FILE_NAME "Attributes.h5"
#define ATTR_NAME   "VarLenAttr"

namespace fs = std::filesystem;

int main(int argc, char *argv[])
{
    hid_t file, attr;

    auto attr_type = H5Tcopy(H5T_C_S1);
    H5Tset_size(attr_type, H5T_VARIABLE);
    H5Tset_cset(attr_type, H5T_CSET_UTF8);

    auto make_scalar_attr = [](auto& file, auto& attr_type)
        -> hid_t
    {
        auto attr_space = H5Screate(H5S_SCALAR);
        auto result = H5Acreate(file, ATTR_NAME,
                               attr_type, attr_space,
                               H5P_DEFAULT, H5P_DEFAULT);

        H5Sclose(attr_space);
        return result;
    };

    if( !fs::exists(H5FILE_NAME) )
    { // If the file doesn't exist we create it &
      // add a root group attribute
      std::cout << "Creating file...\n";
      file = H5Fcreate(H5FILE_NAME, H5F_ACC_TRUNC,
                      H5P_DEFAULT, H5P_DEFAULT);
      attr = make_scalar_attr(file, attr_type);
    }
    else
    { // File exists: we either delete the attribute and
      // re-create it, or we just re-write it.
      std::cout << "Opening file...\n";
      file = H5Fopen(H5FILE_NAME, H5F_ACC_RDWR, H5P_DEFAULT);

#ifdef REWRITE_ONLY
```

```
    H5Adelete(file, ATTR_NAME);
    attr = make_scalar_attr(file, attr_type);
#else
    attr = H5Aopen(file, ATTR_NAME, H5P_DEFAULT);
#endif
}

// Write or re-write the attribute
const char* data[1] = { "Let it be λ!" };
H5Awrite(attr, attr_type, data);

hsize_t size;
H5Fget_filesize(file, &size);
std::cout << "File size: " << size << " bytes\n";

H5Tclose(attr_type);
H5Aclose(attr);
H5Fclose(file);
}
```

Documentation update

- Doxygen-based RM
- Remaining: a few H5P calls and H5E
- Current version: <https://hdf5.io/develop/modules.html>