

# Documentation of "create\_missing.py"

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This is the documentation about the script that creates the file for missing values. This is needed once per variable, since every variable needs an other kind of missing value, has a different datastructure and the variable name is different. This script can be executed on files that are preprocessed by "02-split.py"

name: create\_missing.py

location: /mnt/rasdaman/DeepRain/playground

format: python 3

execution: create\_missing.py *datafile variable missing\_value*

e.g.: create\_missing.py *time:20140901-00.00.m01.nc t -9999*

## Functionality

```
1 if len(sys.argv) == 4:
2     dat_file = sys.argv[1]
3     var_name = sys.argv[2]
4     miss_val = sys.argv[3]
5     if os.path.isfile(dat_file) == False:
6         print(dat_file+": This needs to be the datafile which is used to
7             create the missing file")
8         sys.exit()
9     dest_dir=os.getcwd()+"/preproc/"+var_name
10    if os.path.isdir(dest_dir) == False:
11        dest = "missing.nc"
12    else:
13        dest = dest_dir+"/missing.nc"
14else:
15    print("Usage: ./create_missing.py <DAT> <VAR> <MISS>")
16    print("DAT= datafile which is used to create the missing file")
17    print("VAR= variable for which the missing file is created (must fit
18        to datafile of course)")
19    print("MISS= definition of missing value. Should be meaningful in
20        sense of missing values of that variable")
21    sys.exit()
22args="ncap2 -s 'where("+var_name+">0) "+var_name+"="+miss_val+";
23    elsewhere "+var_name+"="+miss_val+";' "+dat_file+" "+dest
24return_code = subprocess.call(args, shell=True)
25if return_code != 0:
26    print("Could not create file - something went wrong")
```

At the beginning the used input parameters will be extracted. We check if "dat\_file" is a file, otherwise it would not be possible to create a file of missing values out of this. Afterwards we check if the sourcedirectory of the variable already exists. (This should be true since it is created with "01-preproc.py" and the datafile we use was created by "02-split.py".) If it is not possible to store the resulting missing-value file in the sourcedirectory it will be stored in the actual directory. Afterwards this the given datafile

is modified, such that only the predefined missing value exists in this file. If something went wrong an error message is created.

If the script is not started with the three input parameters the script will tell the user how to work with this script.