

Export module - compacting netcdf data

Depending on the difference between the minimum and maximum and the value resolution of a netcdf variable, a smaller sized integer variable like short or byte can be used to compact the data. A scale factor and offset will be used to fit the data in the smaller sized variable and will be added to the netCDF variable as attributes with names `scale_factor` and `add_offset`. All standard netCDF viewers will take these attributes into account automatically, but other tools and especially scripts might not.

Compacting netCDF variables for different export from FEWS:

- available in archive export (applied whenever possible)
- available in [Time Series Export Module](#) if property `tryCompactingNetCDFData` is set to true (applied when possible)
- NOT available in [General Adapter Export NetCDF](#) and [exportPlaceholderFile](#) option in [importNetcdfActivity](#)

Variable compacted to short data type

```
short waterlevel(time, stations);
  waterlevel:standard_name = "water_surface_height_above_reference_datum detection_minimum";
  waterlevel:long_name = "waterlevel";
  waterlevel:units = "m";
  waterlevel:_FillValue = -32768S;
  waterlevel:scale_factor = 0.01f;
  waterlevel:add_offset = 0.0f;
  waterlevel:coordinates = "lat lon";
  waterlevel:cell_methods = "time: maximum";

waterlevel =
{
  {-32768, 121, 131, 141, 151, 161},
  {-32768, 221, 231, 241, 251, 261},
  {-32768, 321, 331, 341, 351, 361}
}
```

Uncompacted data type

```
float waterlevel(time, stations);
  waterlevel:standard_name = "water_surface_height_above_reference_datum detection_minimum";
  waterlevel:long_name = "waterlevel";
  waterlevel:units = "m";
  waterlevel:_FillValue = -9999.0f;
  waterlevel:coordinates = "lat lon";
  waterlevel:cell_methods = "time: maximum";

waterlevel =
{
  {-9999.0, 1.21, 1.31, 1.41, 1.51, 1.61},
  {-9999.0, 2.21, 2.31, 2.41, 2.51, 2.61},
  {-9999.0, 3.21, 3.31, 3.41, 3.51, 3.61}
}
```