Subject: Re: NetCDF and empty variables
Posted by Mark[1] on Thu, 23 Apr 2009 00:29:38 GMT
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On Apr 22, 4:03 pm, David Fanning <n...@dfanning.com> wrote:
> Yeah, so what does that mean that it has an unlimited
> dimension. Why would someone do that? :-)

Say you have an ocean model with a rectangular grid. For your output netCDF files you would probably have fixed dimensions (x, y and z) for the three spatial dimensions of the model and you would have an unlimited dimension (t) correspond to simulated time. Your model grid variables would depend on the fixed dimensions in various combinations and you would write this info at the beginning of the model run. Your model state variables (temperature, salinity, velocity components) would depend on x, y, z AND t, and you would write snapshots of these as the model runs, stepping along the t dimension each time. By making the t dimension unlimited you don't have to know how many snapshots you're going to write in advance. If the model hasn't written any snapshots yet--perhaps it crashed before it could--then the size of the time dimension is 0.