

CDO Reference Card

Climate Data Operators
Version 1.4.1
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<http://www.mpimet.mpg.de/cdo>

Syntax

cdo [Options] Operator1 [-Operator2 [-OperatorN]]
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Options

-a	Generate an absolute time axis
-b < nbits >	Set the number of bits for the output precision (32/64 for nc,nc2,nc4,srv,ext,ieg; 1 - 32 for grb) Add L or B for Little or Big endian byteorder
-f < format >	Output file format (grb,nc,nc2,nc4,srv,ext,ieg)
-g < grid >	Grid name or file Available grids: t<RES>grid, r<NX>x<NY>
-h	Help information for the operators
-m < missval >	Set the default missing value (default: -9e+33)
-R	Convert GRIB data from reduced to regular grid
-r	Generate a relative time axis
-s	Silent mode
-t < table >	Set the parameter table name or file Predefined tables: eham4 eham5 mpiom1
-V	Print the version number
-v	Print extra details for some operators
-z szip	Compress GRIB records with szip

Operators

Information

info infov map	Dataset information listed by code number Dataset information listed by variable name Dataset information and simple map
Syntax	< operator > ifiles

sinfo sinfov	Short dataset information listed by code number Short dataset information listed by variable name
Syntax	< operator > ifiles

diff diffv	Compare two datasets listed by code number Compare two datasets listed by variable name
Syntax	< operator > ifile1 ifile2

npar nlevel nyear nmon ndate ntime	Number of parameters Number of levels Number of years Number of months Number of dates Number of time steps
Syntax	< operator > ifile

showformat showcode showname showstdname showlevel showltype showyear showmon showdate showtime showtimestamp	Show file format Show code numbers Show variable names Show standard names Show levels Show GRIB level types Show years Show months Show date information Show time information Show timestamp
Syntax	< operator > ifile

pardes griddes zaxisdes vct	Parameter description Grid description Z-axis description Vertical coordinate table
Syntax	< operator > ifile

File operations

copy cat	Copy datasets Concatenate datasets
Syntax	< operator > ifiles ofile

replace	Replace variables
Syntax	replace ifile1 ifile2 ofile

merge mergetime	Merge datasets with different fields Merge datasets sorted by date and time
Syntax	< operator > ifiles ofile

splitcode splitname splitlevel splitgrid splitzaxis splittabnum	Split code numbers Split variable names Split levels Split grids Split z-axes Split parameter table numbers
Syntax	< operator > ifile oprefix

splithour splitday splitmon splitseas splityear	Split hours Split days Split months Split seasons Split years
Syntax	< operator > ifile oprefix

splitsel	Split time selection
Syntax	splitsel ,nsets[,nofset[,nskip]] ifile oprefix

Selection

selcode delcode	Select variables by code number Delete variables by code number
Syntax	< operator > ,codes ifile ofile

selname delname	Select variables by name Delete variables by name
Syntax	< operator > ,varnames ifile ofile

selstdname	Select variables by standard name
Syntax	selstdname ,stdnames ifile ofile

sellevel	Select levels
Syntax	sellevel ,levels ifile ofile

sellevidx	Select levels by index
Syntax	sellevidx ,levidx ifile ofile

selgrid	Select grids
Syntax	selgrid ,grids ifile ofile

selzaxis	Select z-axes
Syntax	selzaxis ,zaxes ifile ofile

selltype	Select GRIB level types
Syntax	selltype ,ltypes ifile ofile

seltabnum	Select parameter table numbers
Syntax	seltabnum ,tabnums ifile ofile

selimestep	Select time steps
Syntax	selimestep ,timesteps ifile ofile

seltime	Select times
Syntax	seltime ,times ifile ofile

selhour	Select hours
Syntax	selhour ,hours ifile ofile

selday	Select days
Syntax	selday ,days ifile ofile

selmon	Select months
Syntax	selmon ,months ifile ofile

selyear	Select years
Syntax	selyear ,years ifile ofile

selseas	Select seasons
Syntax	selseas ,seasons ifile ofile

seldate	Select dates
Syntax	seldate ,date1[,date2] ifile ofile

selmon	Select single month
Syntax	selmon ,month[,nts1[,nts2]] ifile ofile

sellonlatbox	Select a longitude/latitude box
Syntax	sellonlatbox ,lon1,lon2,lat1,lat2 ifile ofile

selindexbox	Select an index box
Syntax	selindexbox ,idx1,idx2,idy1,idy2 ifile ofile

Conditional selection

ifthen ifnotthen	If then If not then
Syntax	< operator > ifile1 ifile2 ofile

ifthenelse	If then else
Syntax	ifthenelse ifile1 ifile2 ifile3 ofile

ifthenc ifnotthenc	If then constant If not then constant
Syntax	< operator > ,c ifile ofile

Comparison

eq ne le lt ge gt	Equal Not equal Less equal Less than Greater equal Greater than
Syntax	< operator > ifile1 ifile2 ofile

eqc nec lec ltc gec gtc	Equal constant Not equal constant Less equal constant Less than constant Greater equal constant Greater than constant
Syntax	< operator > ,c ifile ofile

Modification

setpartab	Set parameter table
Syntax	setpartab ,table ifile ofile

setcode	Set code number
Syntax	setcode ,code ifile ofile

setname	Set variable name
Syntax	setname ,name ifile ofile

setlevel	Set level
Syntax	setlevel ,level ifile ofile

setltype	Set GRIB level type
Syntax	setltype ,ltype ifile ofile

setdate	Set date
Syntax	setdate ,date ifile ofile

settime	Set time of the day
Syntax	settime ,time ifile ofile

setday	Set day
Syntax	setday ,day ifile ofile

setmon	Set month
Syntax	setmon ,month ifile ofile

setyear	Set year
Syntax	setyear ,year ifile ofile

setunits	Set time units
Syntax	setunits ,units ifile ofile

settaxis	Set time axis
Syntax	settaxis ,date,time[,inc] ifile ofile

setreftime	Set reference time
Syntax	setreftime ,date,time[,units] ifile ofile

setcalendar	Set calendar
Syntax	setcalendar ,calendar ifile ofile

shifttime	Shift time steps
Syntax	shifttime ,sval ifile ofile

chcode	Change code number
Syntax	chcode ,oldcode,newcode[,...] ifile ofile

chname	Change variable name
Syntax	chname ,oldname,newname,... ifile ofile

chlevel	Change level
Syntax	chlevel ,oldlev,newlev,... ifile ofile

chlevelc	Change level of one code
Syntax	chlevelc ,code,oldlev,newlev ifile ofile

chlevelv	Change level of one variable
Syntax	chlevelv ,name,oldlev,newlev ifile ofile

setgrid	Set grid
Syntax	setgrid ,grid ifile ofile

setgridtype	Set grid type
Syntax	setgridtype ,gridtype ifile ofile

setzaxis	Set z-axis
Syntax	setzaxis ,zaxis ifile ofile

setgatt	Set global attribute
Syntax	setgatt ,attname,attstring ifile ofile

setgatts	Set global attributes
Syntax	setgatts ,attfile ifile ofile

invertlat	Invert latitudes
Syntax	invertlat ifile ofile

invertlev	Invert levels
Syntax	invertlev ifile ofile

maskregion	Mask regions
Syntax	maskregion ,regions ifile ofile

masklonlatbox	Mask a longitude/latitude box
Syntax	masklonlatbox ,lon1,lon2,lat1,lat2 ifile ofile

maskindexbox	Mask an index box
Syntax	maskindexbox ,idx1,idx2,idy1,idy2 ifile ofile

setclonlatbox	Set a longitude/latitude box to constant
Syntax	setclonlatbox ,c,lon1,lon2,lat1,lat2 ifile ofile

setcindexbox	Set an index box to constant
Syntax	setcindexbox ,c,idx1,idx2,idy1,idy2 ifile ofile

enlarge	Enlarge fields
Syntax	enlarge ,grid ifile ofile

setmissval	Set a new missing value
Syntax	setmissval ,newmiss ifile ofile

setctomiss setmisstoc	Set constant to missing value Set missing value to constant
Syntax	< operator > ,c ifile ofile

setrtomiss setvrang	Set range to missing value Set valid range
Syntax	< operator > ,rmin,rmax ifile ofile

