Table of Contents

Raster Commands

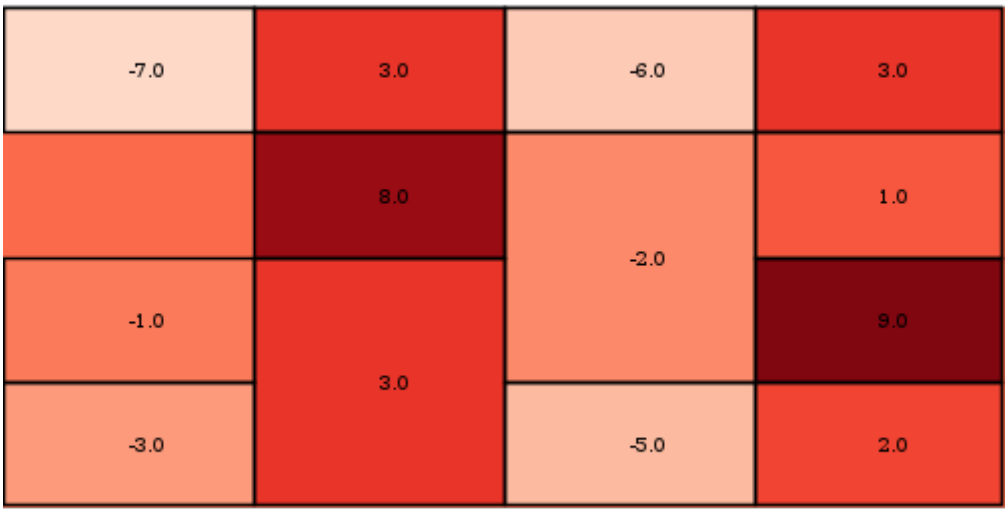
Absolute

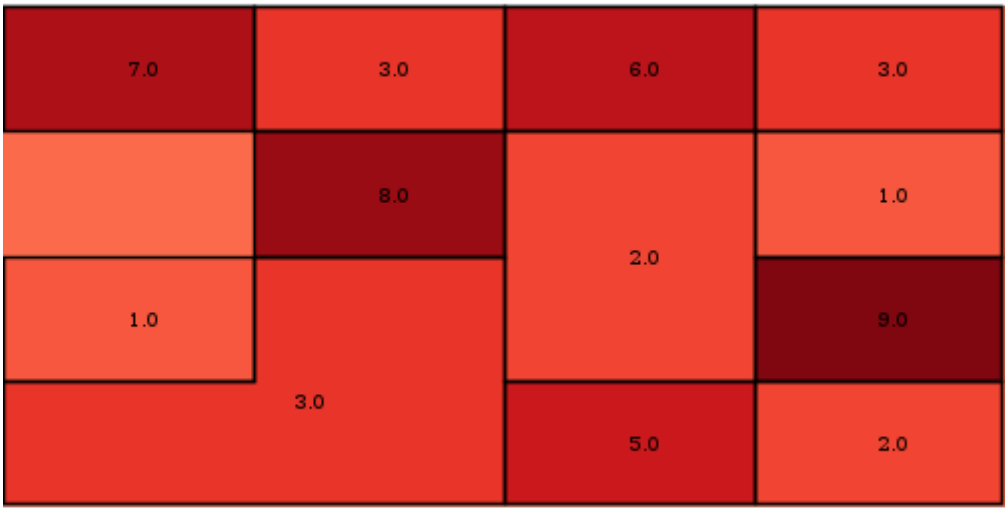
Calculate the absolute value of the values of a Raster.

Short Name	Long Name	Description
-o	--output-raster	The output raster
-f	--output-raster-format	The output raster format
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message

Short Name	Long Name	Description
	--web-help	Open help in a browser

```
geoc raster abs -i src/test/resources/absolute.tif -o target/absolute_abs.tif
```





Add Constant

Add a constant value to a Raster.

Short Name	Long Name	Description
-v	--value	The value
-o	--output-raster	The output raster
-f	--output-raster-format	The output raster format
-i	--input-raster	The input raster

Short Name	Long Name	Description
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

Get original value

```
geoc raster get value -i src/test/resources/pc.tif -x -121.799927 -y 46.867703
```

```
3069.0
```

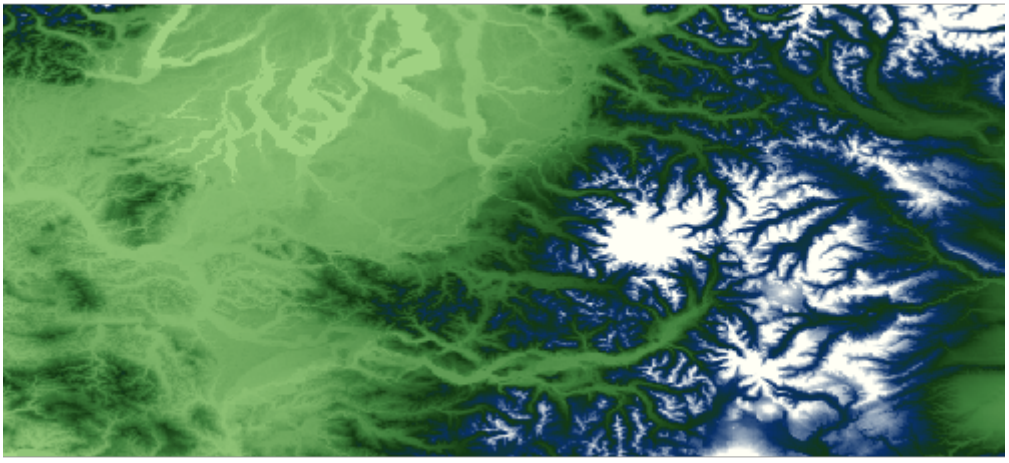
Add 100 to all cells

```
geoc raster add constant -i src/test/resources/pc.tif -v 100 -o target/pc_add.tif
```

Get new value

```
geoc raster get value -i target/pc_add.tif -x -121.799927 -y 46.867703
```

```
3169.0
```



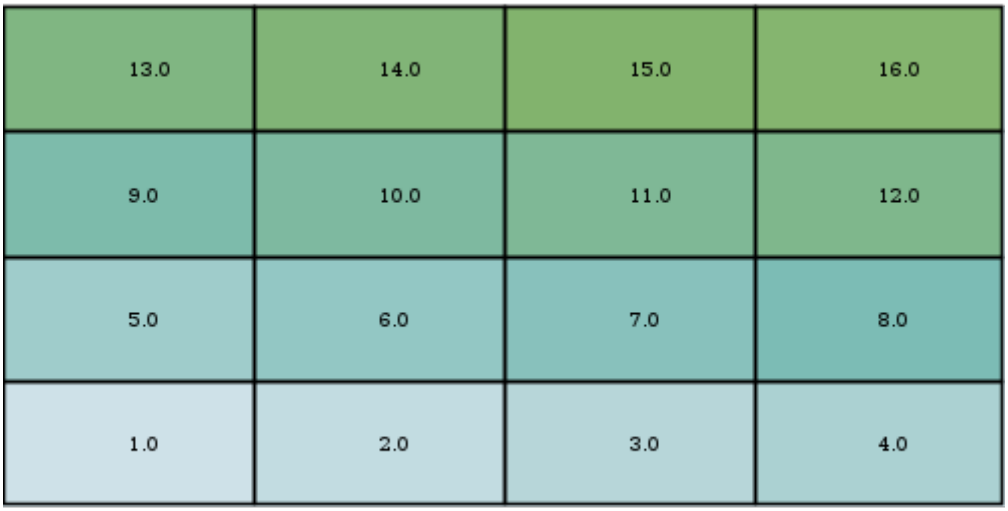
Add

Add two Raster together.

Short Name	Long Name	Description
-k	--other-raster	The other raster
-y	--other-raster-name	The other raster name
-j	--other-projection	The other projection
-o	--output-raster	The output raster
-f	--output-raster-format	The output raster format
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster add -i src/test/resources/low.tif -k src/test/resources/high.tif -o
target/lowPlusHigh.tif
```

Low



High

17.0	18.0	19.0	20.0
13.0	14.0	15.0	16.0
9.0	10.0	11.0	12.0
5.0	6.0	7.0	8.0

Low + High

30.0	32.0	34.0	36.0
22.0	24.0	26.0	28.0
14.0	16.0	18.0	20.0
6.0	8.0	10.0	12.0

Animated GIF

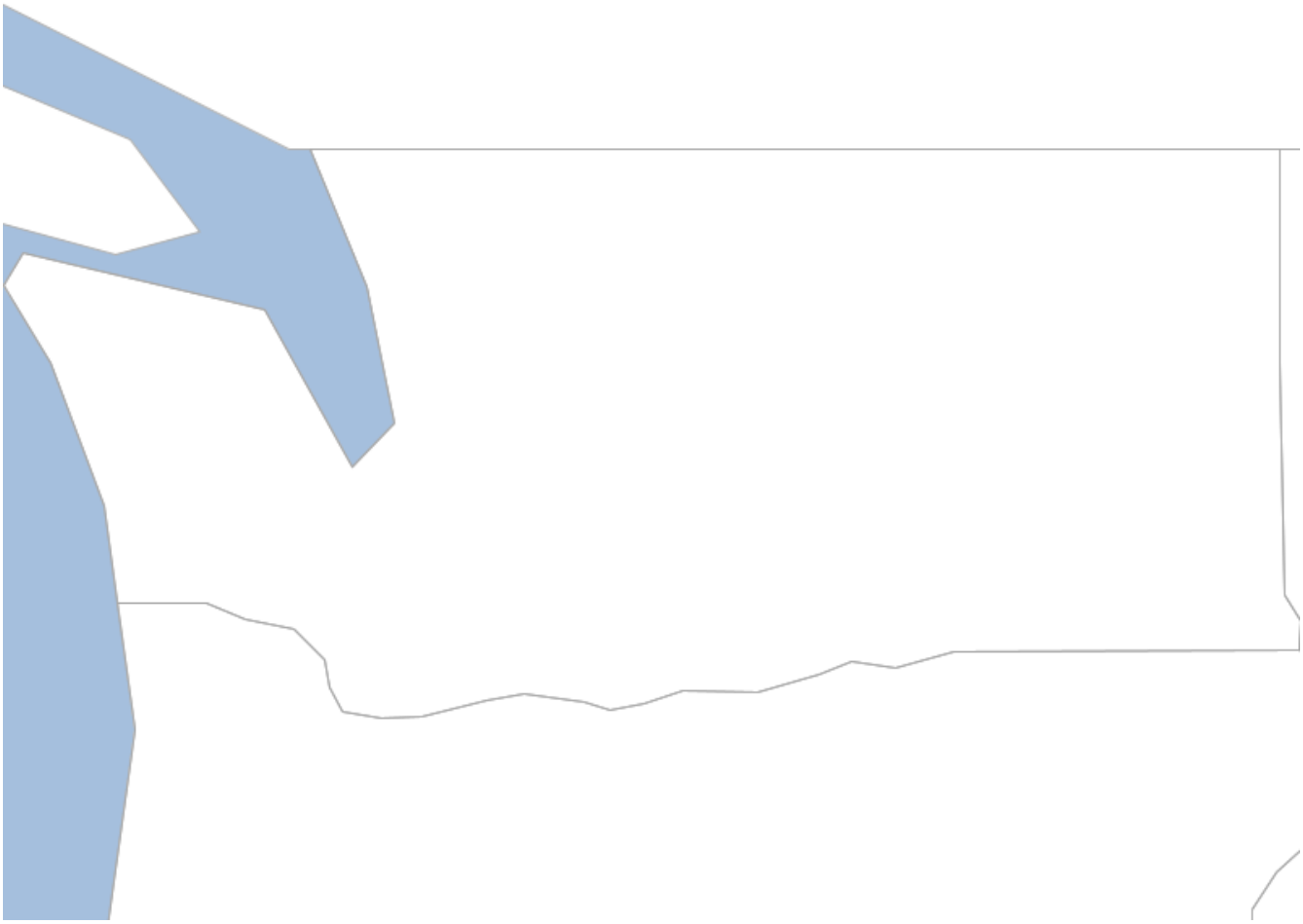
Create an animated GIF from a list of GIFs.

Short Name	Long Name	Description
-f	--file	The GIF file
-o	--output-file	The output animated GIF file
-d	--delay	The delay between images
-r	--repeat	Whether to repeat the animation or not
	--help	Print the help message
	--web-help	Open help in a browser

First, lets create individual maps of 3 states.

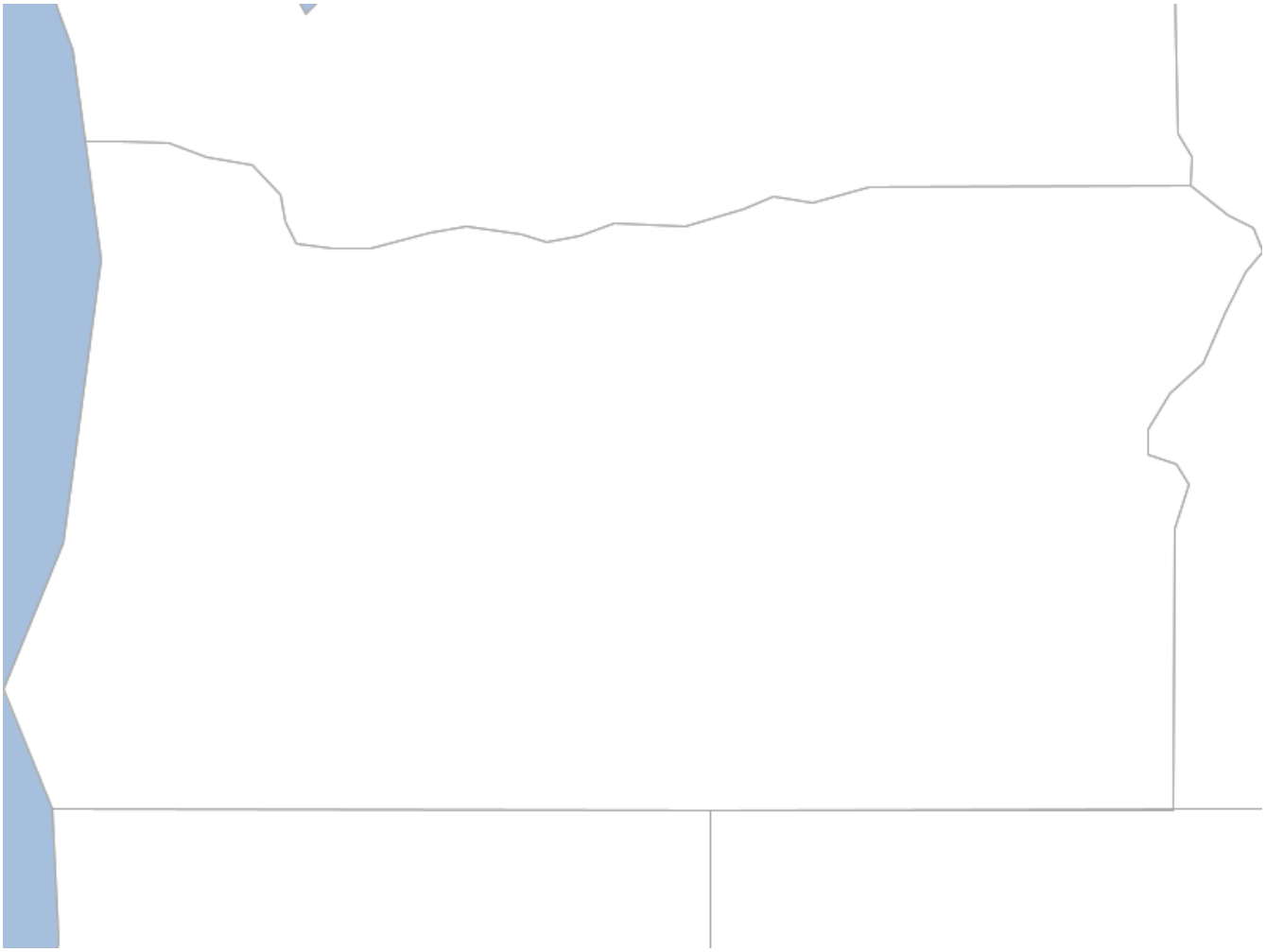
Washington

```
geoc map draw -l "layertype=layer file=src/test/resources/data.gpkg layername=ocean
style=src/test/resources/ocean.sld" -l "layertype=layer
file=src/test/resources/data.gpkg layername=countries
style=src/test/resources/countries.sld" -l "layertype=layer
file=src/test/resources/data.gpkg layername=states
style=src/test/resources/states.sld" -b -124.68721008300781,45.59199778907822,
-116.90652787968992,49.000885321643864 -f target/state_washington.png
```



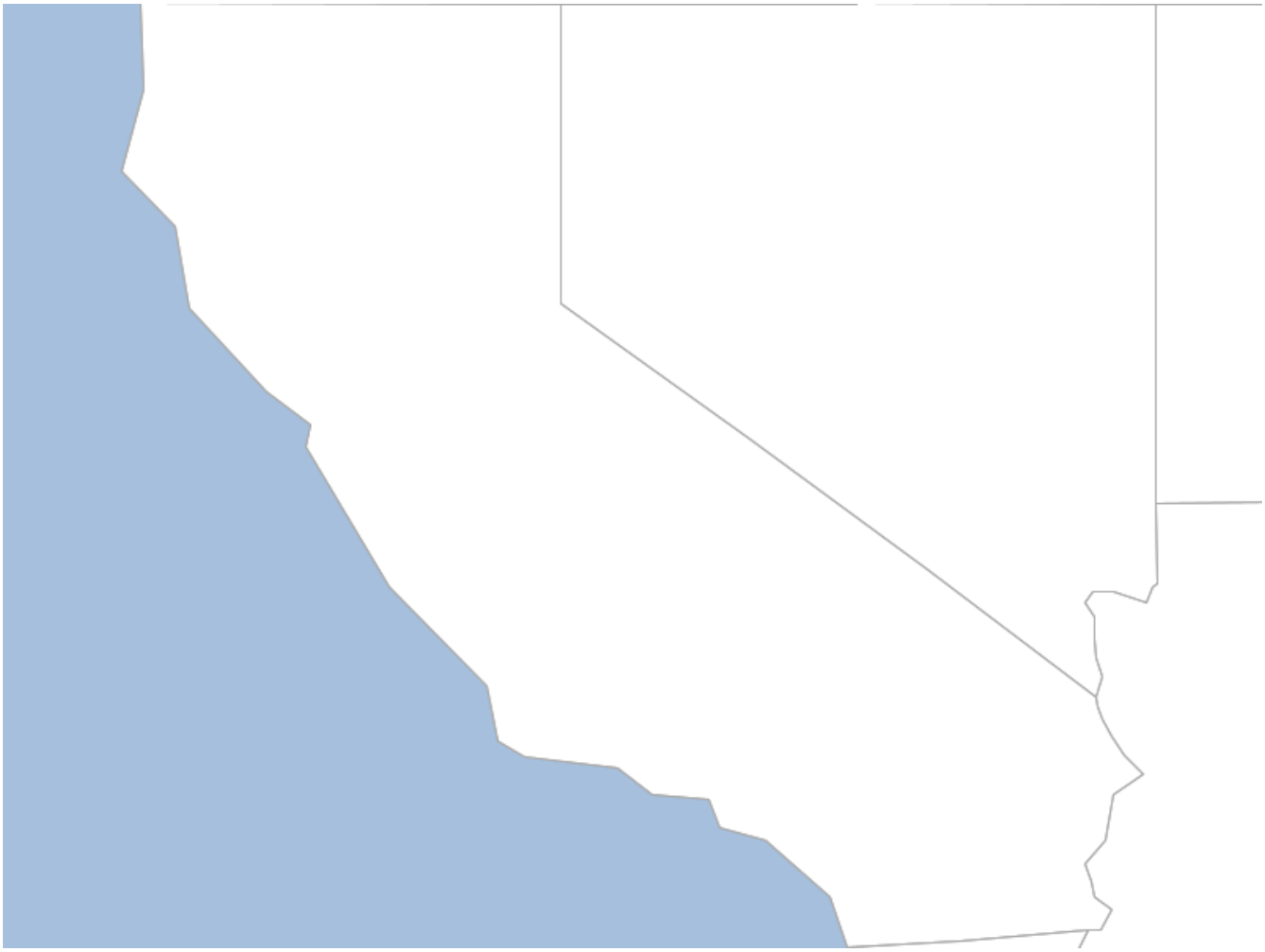
Oregon

```
geoc map draw -l "layertype=layer file=src/test/resources/data.gpkg layername=ocean
style=src/test/resources/ocean.sld" -l "layertype=layer
file=src/test/resources/data.gpkg layername=countries
style=src/test/resources/countries.sld" -l "layertype=layer
file=src/test/resources/data.gpkg layername=states
style=src/test/resources/states.sld" -b -124.53283999999996,41.99260508886846,
-116.45779557988342,46.2830694871044 -f target/state_oregon.png
```



California

```
geoc map draw -l "layertype=layer file=src/test/resources/data.gpkg layername=ocean
style=src/test/resources/ocean.sld" -l "layertype=layer
file=src/test/resources/data.gpkg layername=countries
style=src/test/resources/countries.sld" -l "layertype=layer
file=src/test/resources/data.gpkg layername=states
style=src/test/resources/states.sld" -b -124.39795772362243,32.535327053348965,
-114.16597164595498,41.99947805436335 -f target/state_california.png
```



Now lets stitch them together into an animated GIF.

```
geoc raster animatedgif -f target/state_washington.png -f target/state_oregon.png -f
target/state_california.png -o target/states.gif
```

[geoc animatedgif] | *geoc_animatedgif.gif*

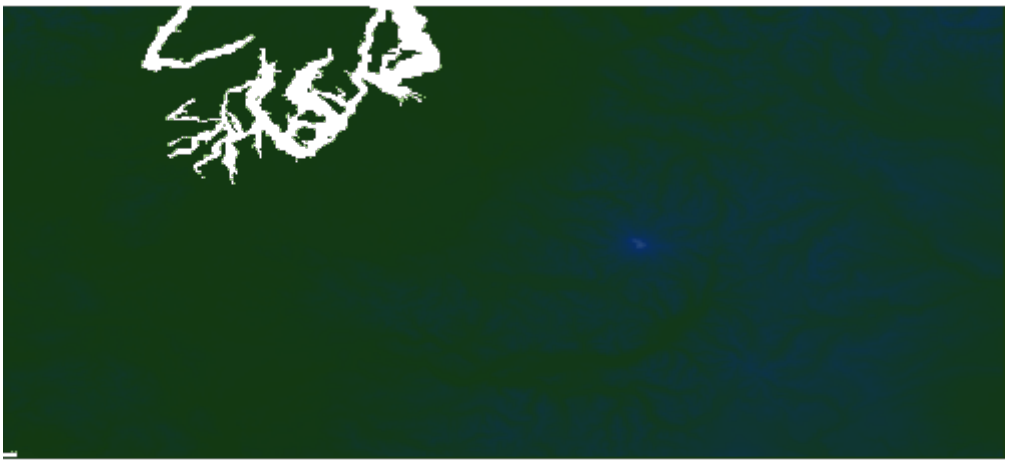
Convolve

Convolve the values of a Raster.

Short Name	Long Name	Description
-w	--width	The kernel width
-h	--height	The kernel height
-o	--output-raster	The output raster
-f	--output-raster-format	The output raster format
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection

Short Name	Long Name	Description
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster convolve -i src/test/resources/pc.tif -o target/pc_convolve.tif -w 2 -h 2
```



Original

```
geoc raster info -i src/test/resources/pc.tif
```

```
Format: GeoTIFF
Size: 800, 400
Projection ID: EPSG:4326
Projection WKT: GEOGCS["WGS 84",
  DATUM["World Geodetic System 1984",
    SPHEROID["WGS 84", 6378137.0, 298.257223563, AUTHORITY["EPSG","7030"]],
    AUTHORITY["EPSG","6326"]],
  PRIMEM["Greenwich", 0.0, AUTHORITY["EPSG","8901"]],
  UNIT["degree", 0.017453292519943295],
  AXIS["Geodetic longitude", EAST],
  AXIS["Geodetic latitude", NORTH],
  AUTHORITY["EPSG","4326"]]
Extent: -123.55291606131708, 46.25375026634816, -120.73958272798374,
47.522916933014834
Pixel Size: 0.0035166666666666658, 0.0031729166666666763
Block Size: 800, 5
Bands:
   GRAY_INDEX
      Min Value: -23.0 Max Value: 4370.0
```

Convolved

```
geoc raster info -i target/pc_convolve.tif
```

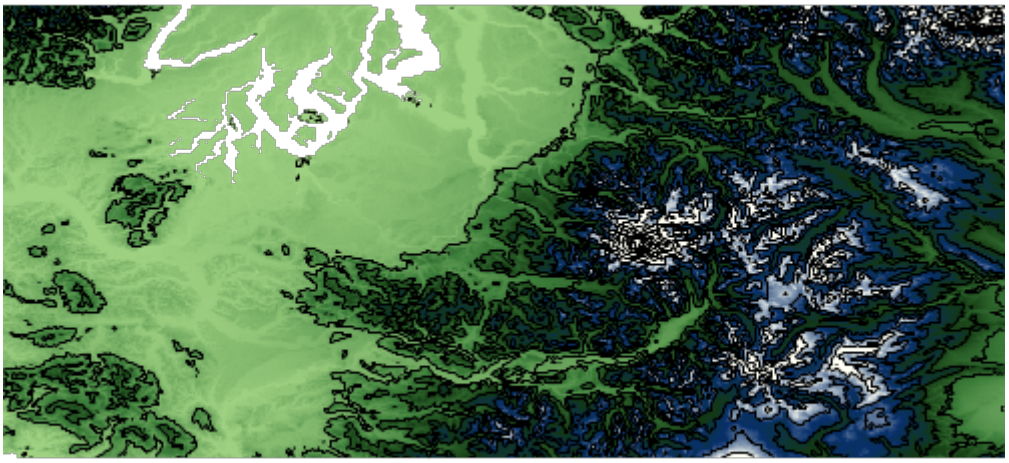
```
Format: GeoTIFF
Size: 800, 400
Projection ID: EPSG:4326
Projection WKT: GEOGCS["WGS 84",
  DATUM["World Geodetic System 1984",
    SPHEROID["WGS 84", 6378137.0, 298.257223563, AUTHORITY["EPSG","7030"]],
    AUTHORITY["EPSG","6326"]],
  PRIMEM["Greenwich", 0.0, AUTHORITY["EPSG","8901"]],
  UNIT["degree", 0.017453292519943295],
  AXIS["Geodetic longitude", EAST],
  AXIS["Geodetic latitude", NORTH],
  AUTHORITY["EPSG","4326"]]
Extent: -123.55291606131708, 46.25375026634816, -120.73958272798374,
47.522916933014834
Pixel Size: 0.0035166666666666658, 0.0031729166666666763
Block Size: 800, 10
Bands:
   GRAY_INDEX
      Min Value: -32767.0 Max Value: 17278.0
```

Contour

Create contours from a Raster.

Short Name	Long Name	Description
-b	--band	The band
-v	--level	A level or interval
-s	--simplify	Whether to simplify
-m	--smooth	Whether to smooth
-n	--bounds	The bounds
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster contour -i src/test/resources/pc.tif -b 0 -v 300 -s -m -o
target/contours.shp
```

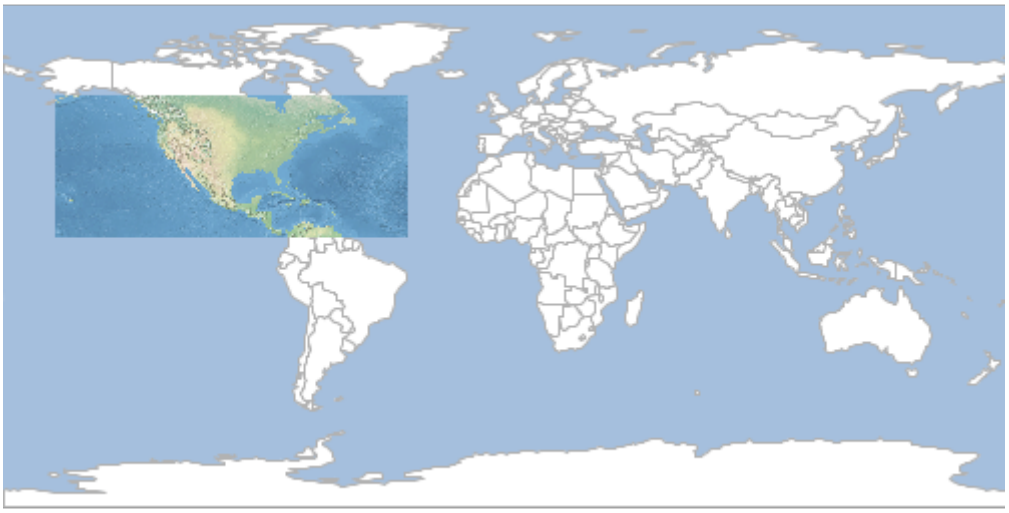


Crop with Bounds

Crop a Raster with Bounds.

Short Name	Long Name	Description
-b	--bound	The Bounds
-x	--pixel	Whether the Bounds is pixel or geographic
-o	--output-raster	The output raster
-f	--output-raster-format	The output raster format
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster crop -i src/test/resources/earth.tif -b -160.927734,6.751896,
-34.716797,57.279043 -o target/earth_cropped.tif
```

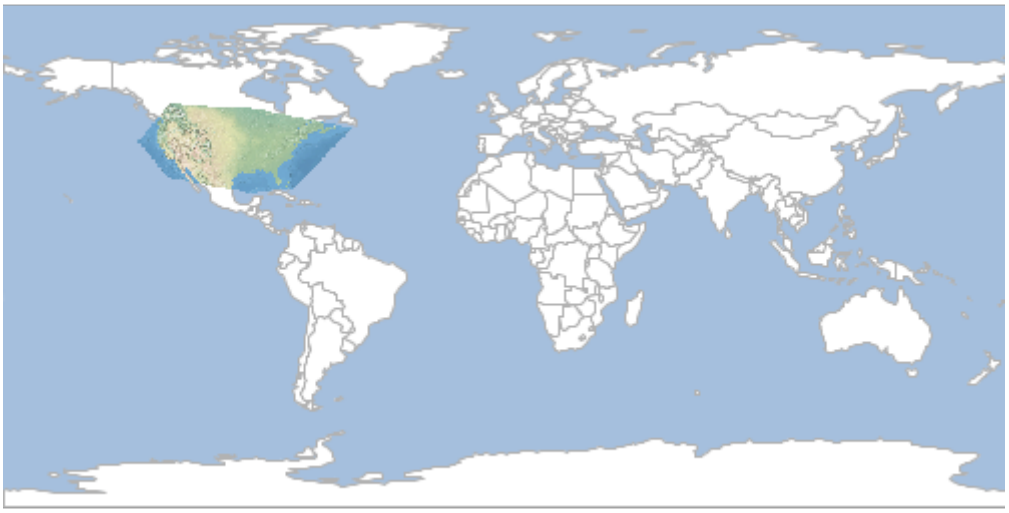


Crop with Geometry

Crop a Raster with Geometry.

Short Name	Long Name	Description
-g	--geometry	The Geometry
-o	--output-raster	The output raster
-f	--output-raster-format	The output raster format
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster crop with geometry -i src/test/resources/earth.tif -g "POLYGON ((-
120.06886118446164 54.657570186377484, -131.4744345802818 40.88641840854305,
-120.66873293244274 27.841500134049014, -91.23852896646747 22.376168381822453,
-75.66538001484537 23.99772020337508, -54.66444615739175 45.994788780815526,
-91.94198075352523 53.20175611636799, -120.06886118446164 54.657570186377484))" -o
target/earth_cropped.tif
```



Crop with Layer

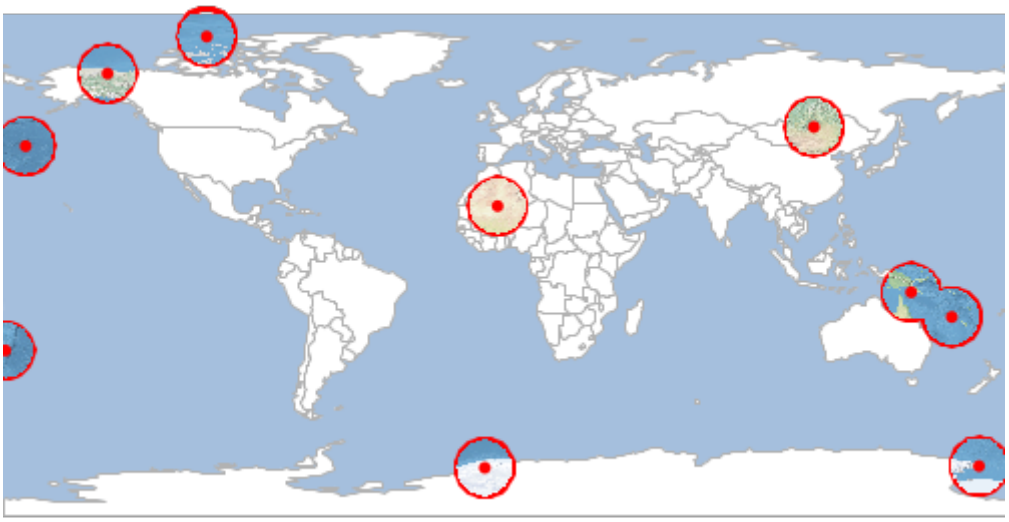
Crop a Raster with a Layer.

Short Name	Long Name	Description
-w	--input-workspace	The input workspace
-y	--input-layer	The input layer
-o	--output-raster	The output raster
-f	--output-raster-format	The output raster format
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector randompoints -n 10 -g -180,-90,180,90 -o target/locations.shp
```

```
geoc vector buffer -d 10 -i target/locations.shp -o target/buffers.shp
```

```
geoc raster crop with layer -i src/test/resources/earth.tif -o
target/earth_cropped.tif -w target/buffers.shp
```

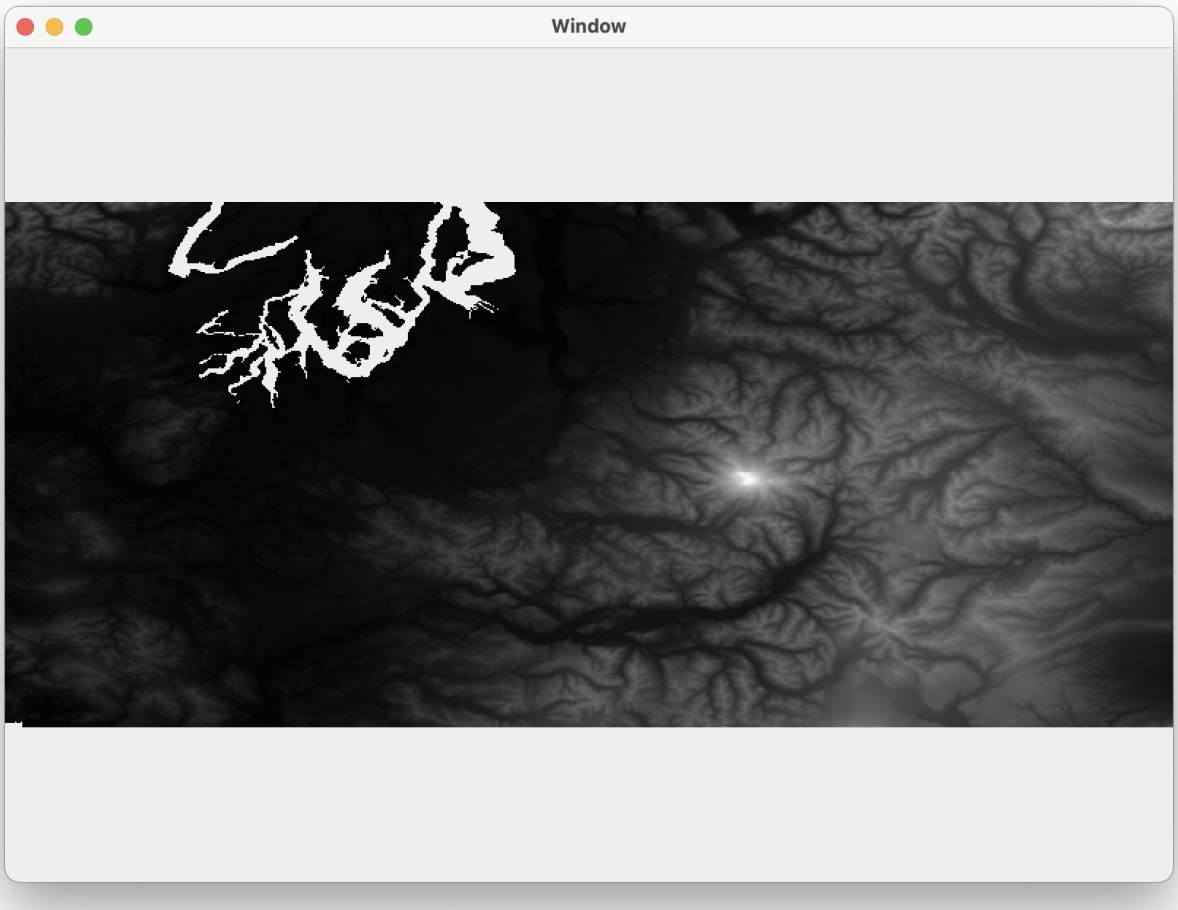


Display

Display a Raster in a simple GUI Window.

Short Name	Long Name	Description
-w	--width	The width
-h	--height	The height
-s	--sld-file	The sld file
-b	--bounds	The bounds
-m	--layer	The map layer
-g	--background-color	The background color
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster display -i src/test/resources/pc.tif
```



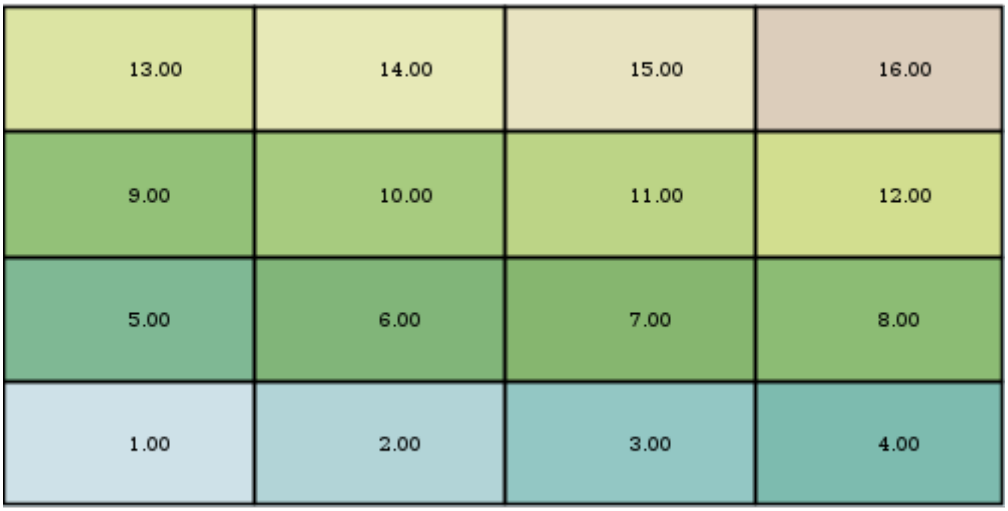
Divide

Divide one Raster by another Raster.

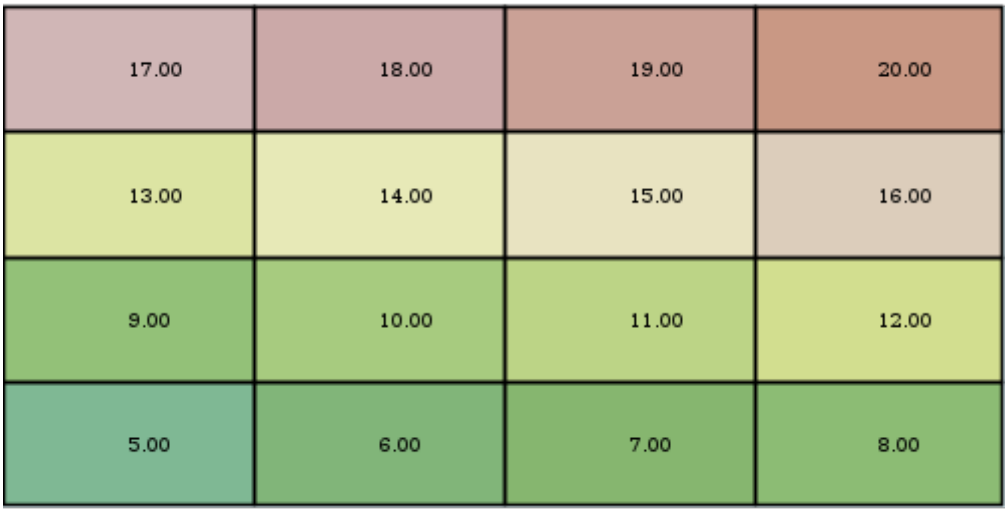
Short Name	Long Name	Description
-k	--other-raster	The other raster
-y	--other-raster-name	The other raster name
-j	--other-projection	The other projection
-o	--output-raster	The output raster
-f	--output-raster-format	The output raster format
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster divide -i src/test/resources/high.tif -k src/test/resources/low.tif -o
target/divided.tif
```

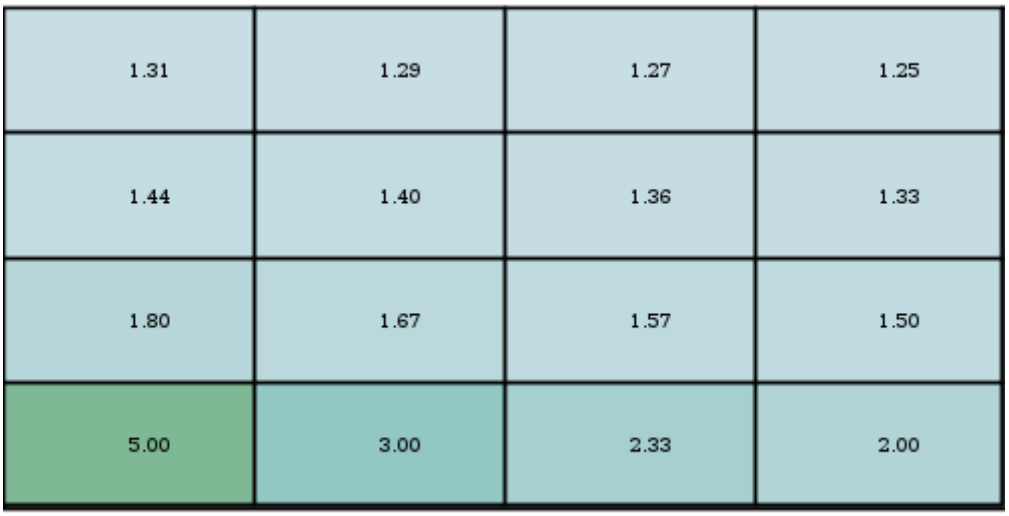
Low



High



High / Low



Divide Constant

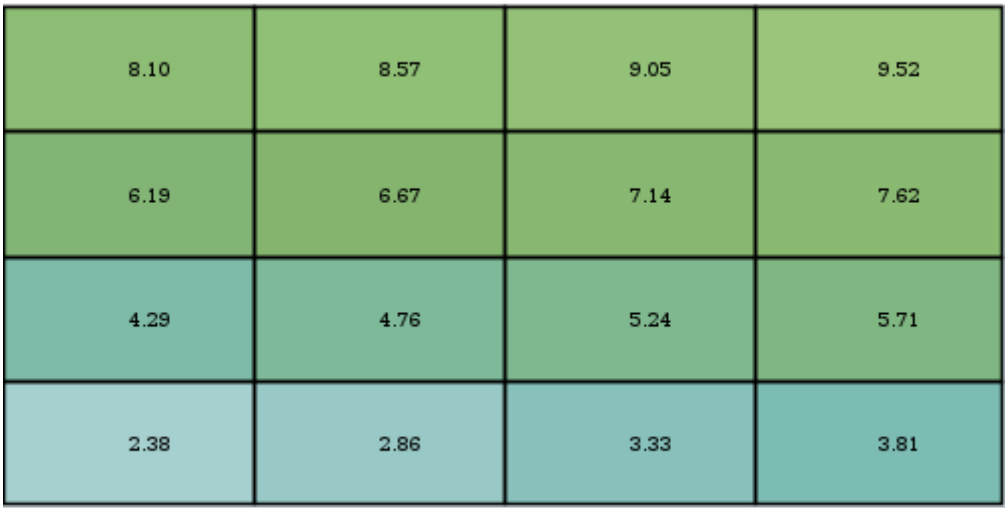
Divide a Raster by a constant value.

Short Name	Long Name	Description
-v	--value	The value
-o	--output-raster	The output raster
-f	--output-raster-format	The output raster format
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster divide constant -i src/test/resources/high.tif -v 2.1 -o
target/divided.tif
```

Raster

Raster / 2.1



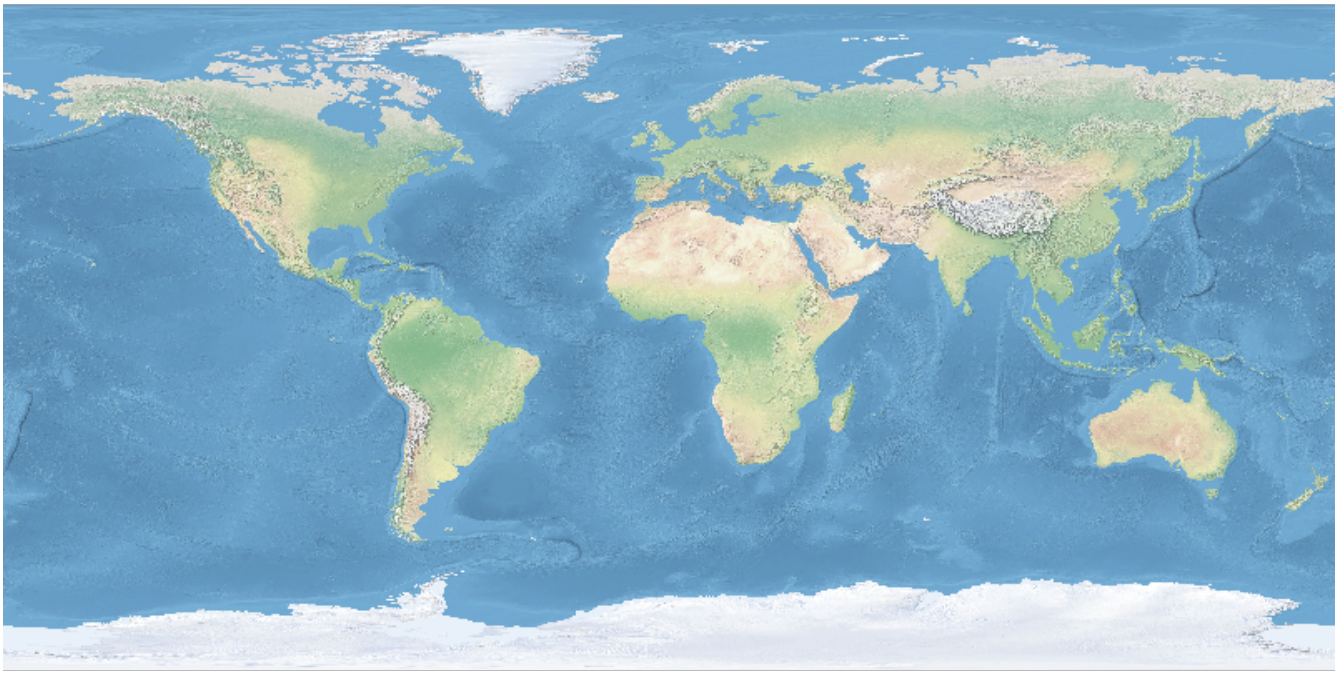
Draw

Draw a Raster to an image.

Short Name	Long Name	Description
-f	--file	The output file
-t	--type	The type of document
-w	--width	The width
-h	--height	The height
-s	--sld-file	The sld file
-b	--bounds	The bounds
-m	--layer	The map layer

Short Name	Long Name	Description
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster draw -i src/test/resources/earth.tif -f target/image.png
```



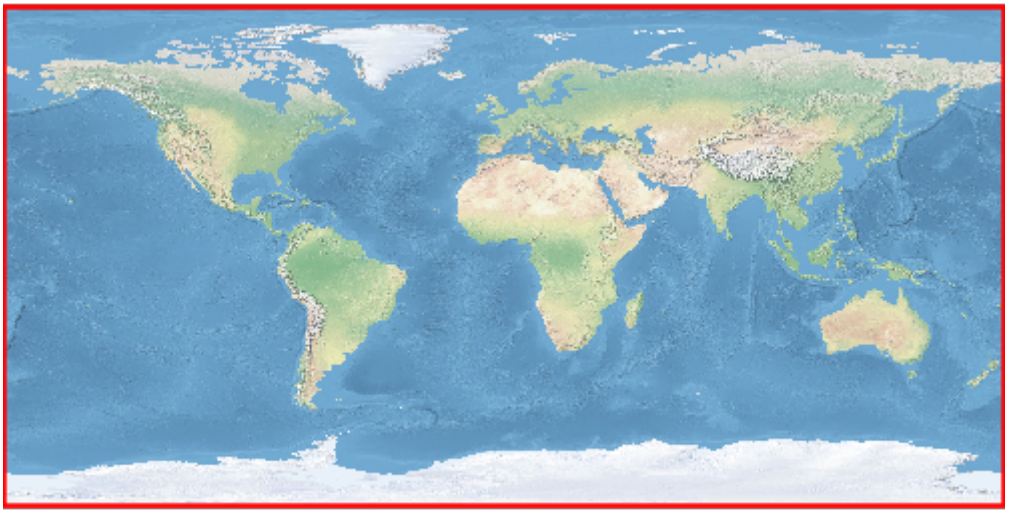
Envelope

Get the Envelope of a Raster as a Vector Layer.

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name

Short Name	Long Name	Description
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster envelope -i src/test/resources/earth.tif -o target/earth_envelope.shp
```



Exponent

Calculate the exponent for each cell..

Short Name	Long Name	Description
-o	--output-raster	The output raster
-f	--output-raster-format	The output raster format
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster exp -i src/test/resources/pc.tif -o target/pc_exp.tif
```

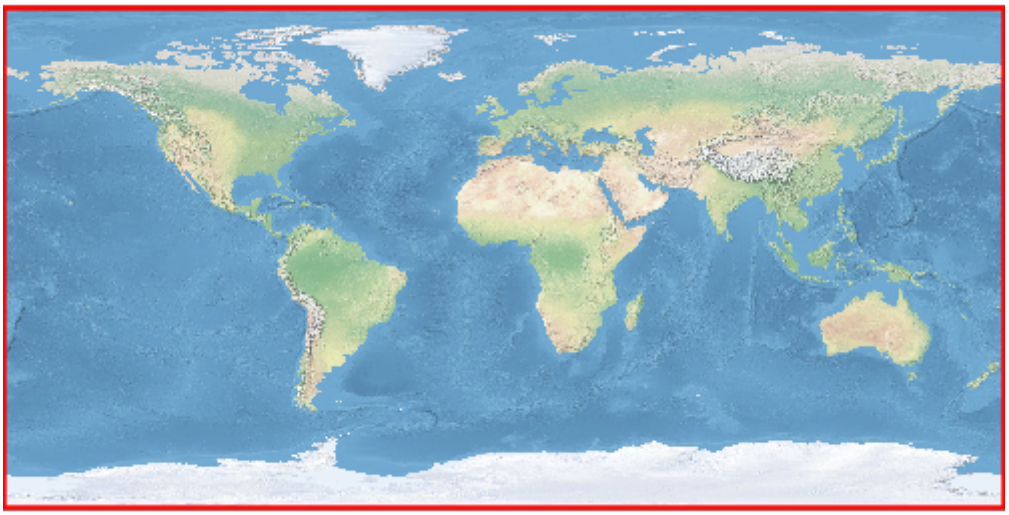
Extract Footprint

Extract the footprint of the Raster as a Vector Layer.

Short Name	Long Name	Description
-e	--exclusion-range	A comma delimited range of values to exclude from the search.
-t	--threshold-area	A number used to exclude small Polygons. The default is 5.
-f	--compute-simplified-footprint	Whether to compute a simplified footprint or not. The default is false.
-s	--simplifier-factor	A number used to simplify the geometry. The default is 2.
-c	--remove-collinear	Whether to remove collinear coordinates. The default is true.
-v	--force-valid	Whether to force creation of valid polygons. The default is true.
-y	--loading-type	The image loading type (Deferred or Immediate). Immediate is the default.
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name

Short Name	Long Name	Description
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster extractfootprint -i src/test/resources/earth.tif -o
target/earth_footprint.shp
```



Info

Get information about a Raster.

Short Name	Long Name	Description
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster info -i src/test/resources/earth.tif
```

```
Format: GeoTIFF
Size: 800, 400
Projection ID: EPSG:4326
Projection WKT: GEOGCS["WGS 84",
  DATUM["World Geodetic System 1984",
    SPHEROID["WGS 84", 6378137.0, 298.257223563, AUTHORITY["EPSG","7030"]],
    AUTHORITY["EPSG","6326"]],
  PRIMEM["Greenwich", 0.0, AUTHORITY["EPSG","8901"]],
  UNIT["degree", 0.017453292519943295],
  AXIS["Geodetic longitude", EAST],
  AXIS["Geodetic latitude", NORTH],
  AUTHORITY["EPSG","4326"]]
Extent: -179.99999999999997, -89.99999999998205, 179.99999999996405, 90.0
Pixel Size: 0.44999999999995505, 0.4499999999999551
Block Size: 800, 8
Bands:
   RED_BAND
      Min Value: 56.0 Max Value: 255.0
   GREEN_BAND
      Min Value: 84.0 Max Value: 255.0
   BLUE_BAND
      Min Value: 91.0 Max Value: 255.0
```

Get Projection

Get the Raster Projection.

Short Name	Long Name	Description
-t	--type	The output type (epsg, id, srs, wkt)
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster projection -i src/test/resources/earth.tif
```

```
EPSG:4326
```

Get Size

Get the Raster size (width,height).

Short Name	Long Name	Description
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster size -i src/test/resources/earth.tif
```

```
800,400
```

Get Value

Get a value from a Raster

Short Name	Long Name	Description
-x	--x-coordinate	The x coordinate
-y	--y-coordinate	The y coordinate
-t	--type	The type can be point or pixel
-b	--band	The band to get a value from
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster get value -i src/test/resources/pc.tif -x -121.799927 -y 46.867703
```

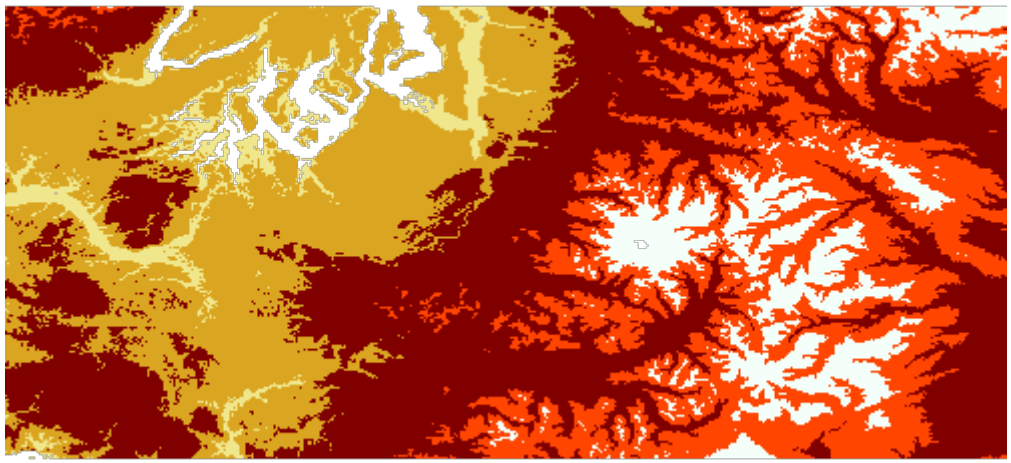
```
3069.0
```

Reclassify

Reclassify a Raster.

Short Name	Long Name	Description
-b	--band	The band
-n	--nodata	The NODATA value
-r	--range	A range: from-to=value or 1-10=5
-o	--output-raster	The output raster
-f	--output-raster-format	The output raster format
-i	--input-raster	The input raster
-l	--input-raster-name	The input raster name
-p	--input-projection	The input projection
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc raster reclassify -i src/test/resources/pc.tif -o target/pc_reclass.tif -r 0-0=1
-r 0-50=2 -r 50-200=3 -r 200-1000=5 -r 1000-1500=4 -r 1500-4000=6
```



World File

Create a Raster world file

Short Name	Long Name	Description
-b	--bounds	The bounds
-s	--size	The size
-f	--file	The world file
	--help	Print the help message

Short Name	Long Name	Description
	--web-help	Open help in a browser

```
geoc raster worldfile -b 10,11,20,21 -s 800,751
```

```
0.0125
0.0
0.0
-0.013315579227696404
10.00625
20.993342210386153
```