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## Raster

### Open

Open a Raster.

```
geo-shell> raster open --format earth --raster earth --name earth
```

Name	Description	Mandatory	Specified Default	Unspecified Default
format	The Format name	true		
raster	The Raster name	true		

name	The name	false		
------	----------	-------	--	--

```
geo-shell> format open --name earth --input src/test/resources/earth.tif
Format earth opened!
```

```
geo-shell> raster open --format earth --raster earth --name earth
Opened Format earth Raster earth as earth
```

```
geo-shell> raster close --name earth
Raster earth closed!
```

```
geo-shell> format close --name earth
Format earth closed!
```

## Close

Close a Raster.

```
geo-shell> raster close --name earth
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		

```
geo-shell> format open --name earth --input src/test/resources/earth.tif
Format earth opened!
```

```
geo-shell> raster open --format earth --raster earth --name earth
Opened Format earth Raster earth as earth
```

```
geo-shell> raster close --name earth
Raster earth closed!
```

```
geo-shell> format close --name earth
Format earth closed!
```

## List

List open Rasters.

```
geo-shell> raster list
```



No parameters

```
geo-shell> format open --name earth --input src/test/resources/earth.tif
Format earth opened!
```

```
geo-shell> raster open --format earth --raster earth --name earth
Opened Format earth Raster earth as earth
```

geo-shell> **raster list**

earth = GeoTIFF

geo-shell> **raster close** --name earth

Raster earth closed!

geo-shell> **format close** --name earth

Format earth closed!

## Info

Get information about a Raster.

geo-shell> **raster info** --name earth

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		

geo-shell> **format open** --name earth --input src/test/resources/earth.tif

Format earth opened!

geo-shell> **raster open** --format earth --raster earth --name earth

Opened Format earth Raster earth as earth

geo-shell> **raster info** --name earth

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, -89.999999999998205, 179.999999999996405, 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

```
geo-shell> raster close --name earth
Raster earth closed!
```

```
geo-shell> format close --name earth
Format earth closed!
```

## Value

Get a value from the Raster.

```
geo-shell> raster value --name earth --x 60 --y 45
```

```
geo-shell> raster value --name earth --x 10 --y 15 --type pixel
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
band	The x coordinate	false	0	0
x	The x coordinate	true		
y	The y coordinate	true		
type	The y coordinate	false	geometry	geometry

```
geo-shell> format open --name earth --input src/test/resources/earth.tif
Format earth opened!
```

```
geo-shell> raster open --format earth --raster earth --name earth
Opened Format earth Raster earth as earth
```

```
geo-shell> raster value --name earth --x 60 --y 45
235.0
```

```
geo-shell> raster value --name earth --x 10 --y 15 --type pixel
109.0
```

```
geo-shell> raster close --name earth
Raster earth closed!
```

```
geo-shell> format close --name earth
Format earth closed!
```

## Envelope

Create a Vector Layer from the envelope of a Raster.

```
geo-shell> raster envelope --name earth --output-workspace layers --output-name outline
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-workspace	The output Layer Workspace	true		
output-name	The output Layer name	true		

geo-shell> **format open** --name earth --input src/test/resources/earth.tif  
Format earth opened!

geo-shell> **raster open** --format earth --raster earth --name earth  
Opened Format earth Raster earth as earth

geo-shell> **workspace open** --name layers --params memory  
Workspace layers opened!

geo-shell> **raster envelope** --name earth --output-workspace layers --output-name outline  
Done creating envelope in outline from earth!

geo-shell> **style create** --params "stroke=black stroke-width=3" --file examples/outline.sld  
Style stroke=black stroke-width=3 written to /home/runner/work/geo-shell/geo-shell/examples/outline.sld!

geo-shell> **layer style set** --name outline --style examples/outline.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/outline.sld set on outline

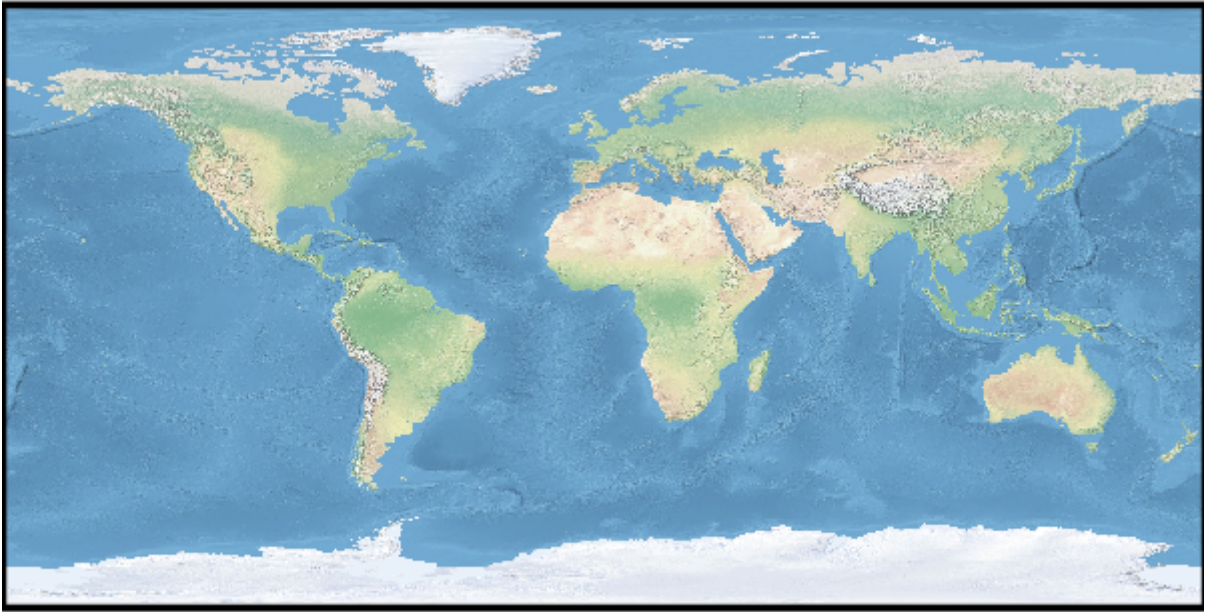
geo-shell> **map open** --name map  
Map map opened!

geo-shell> **map add raster** --name map --raster earth  
Added earth layer to map map

geo-shell> **map add layer** --name map --layer outline  
Added outline layer to map map

geo-shell> **map draw** --name map --file examples/raster\_envelope.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_envelope.png!

geo-shell> **map close** --name map  
Map map closed!



# Get Style

Get the Raster’s style.

```
geo-shell> raster style get --name pc --style examples/pc_style.sld
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
style	The SLD File	false		

```
geo-shell> format open --name pierce_county --input src/test/resources/pc.tif
Format pierce_county opened!
```

```
geo-shell> raster open --format pierce_county --raster pc --name pc
Opened Format pierce_county Raster pc as pc
```

```
geo-shell> style raster colormap --raster pc --values
"25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#ffffff5"
examples/style_raster_colormap.sld
Colormap Raster Style for pc written to /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld!
```

```
geo-shell> raster style set --name pc --style examples/style_raster_colormap.sld
Style /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld set on pc
```

```
geo-shell> map open --name map
Map map opened!
```

```
geo-shell> map add raster --name map --raster pc
```

Added pc layer to map map

```
geo-shell> map draw --name map --file examples/raster_style_get.png
```

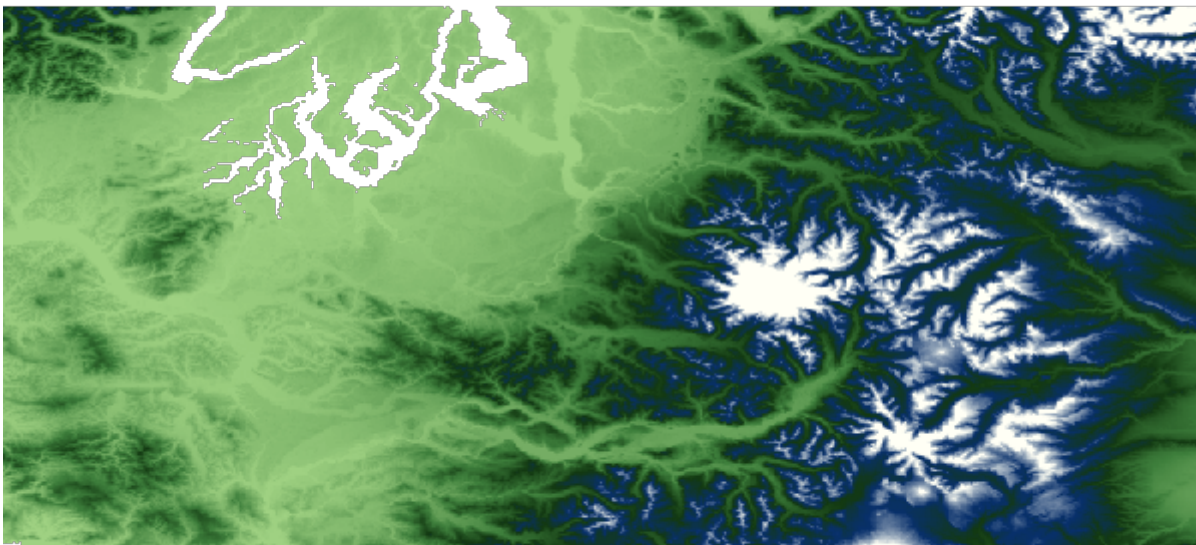
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_style\_get.png!

```
geo-shell> map close --name map
```

Map map closed!

```
geo-shell> raster style get --name pc --style examples/pc_style.sld
```

pc style written to /home/runner/work/geo-shell/geo-shell/examples/pc\_style.sld



## Set Style

Set a Raster's style

```
geo-shell> raster style set --name pc --style examples/style_raster_colormap.sld
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
style	The SLD or CSS File	true		

```
geo-shell> format open --name pierce_county --input src/test/resources/pc.tif
```

Format pierce\_county opened!

```
geo-shell> raster open --format pierce_county --raster pc --name pc
```

Opened Format pierce\_county Raster pc as pc

```
geo-shell> style raster colormap --raster pc --values  
"25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#ffffff5"  
--file  
examples/style_raster_colormap.sld  
Colormap Raster Style for pc written to /home/runner/work/geo-shell/geo-  
shell/examples/style_raster_colormap.sld!
```

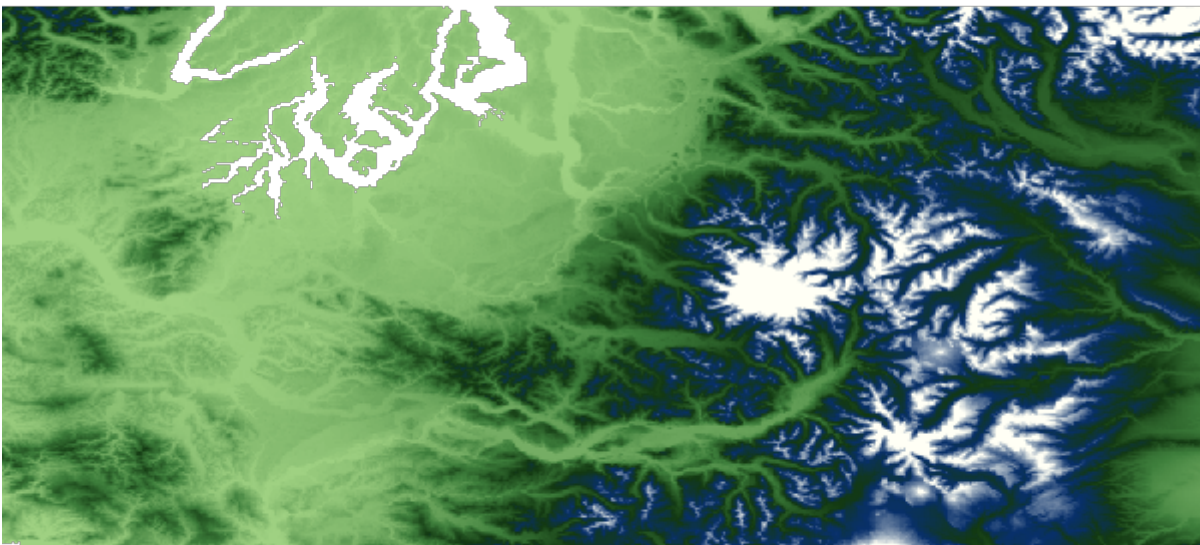
```
geo-shell> raster style set --name pc --style examples/style_raster_colormap.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld set on pc
```

```
geo-shell> map open --name map  
Map map opened!
```

```
geo-shell> map add raster --name map --raster pc  
Added pc layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_style_set.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_style_set.png!
```

```
geo-shell> map close --name map  
Map map closed!
```



## Add Raster

Add two Rasters together

```
geo-shell> raster add raster --name1 high --name2 low --output-format add --output-name add
```



Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

geo-shell> **format open** --name high --input src/test/resources/high.tif  
Format high opened!

geo-shell> **raster open** --format high --raster high --name high  
Opened Format high Raster high as high

geo-shell> **workspace open** --name layers --params memory  
Workspace layers opened!

geo-shell> **style create** --params "stroke=black stroke-width=2 label=value label-size=12" --file examples/grid.sld  
Style stroke=black stroke-width=2 label=value label-size=12 written to /home/runner/work/geo-shell/geo-shell/examples/grid.sld!

geo-shell> **raster polygon** --name high --output-workspace layers --output-name high\_polygons  
Done converting Raster high to a Polygon Layer high\_polygons!

geo-shell> **style raster palette colormap** --min 1 --max 50 --palette MutedTerrain --number 20 --file examples/high.sld  
Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/high.sld!

geo-shell> **raster style set** --name high --style examples/high.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/high.sld set on high

geo-shell> **layer style set** --name high\_polygons --style examples/grid.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on high\_polygons

geo-shell> **map open** --name mapHigh  
Map mapHigh opened!

geo-shell> **map add raster** --name mapHigh --raster high  
Added high layer to map mapHigh

geo-shell> **map add layer** --name mapHigh --layer high\_polygons  
Added high\_polygons layer to map mapHigh

geo-shell> **map draw** --name mapHigh --file examples/raster\_add\_raster\_high.png --bounds "-180,-90,180,90,EPSG:4326"  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_add\_raster\_high.png!

```
geo-shell> map close --name mapHigh
Map mapHigh closed!
```

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

```
geo-shell> format open --name low --input src/test/resources/low.tif
Format low opened!
```

```
geo-shell> raster open --format low --raster low --name low
Opened Format low Raster low as low
```

```
geo-shell> raster polygon --name low --output-workspace layers --output-name low_polygons
Done converting Raster low to a Polygon Layer low_polygons!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file
examples/low.sld
Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/low.sld!
```

```
geo-shell> raster style set --name low --style examples/low.sld
Style /home/runner/work/geo-shell/geo-shell/examples/low.sld set on low
```

```
geo-shell> layer style set --name low_polygons --style examples/grid.sld
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on low_polygons
```

```
geo-shell> map open --name mapLow
Map mapLow opened!
```

```
geo-shell> map add raster --name mapLow --raster low
Added low layer to map mapLow
```

```
geo-shell> map add layer --name mapLow --layer low_polygons
Added low_polygons layer to map mapLow
```

```
geo-shell> map draw --name mapLow --file examples/raster_add_raster_low.png --bounds "-180,-90,180,90,EPSG:4326"
```

Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_add\_raster\_low.png!

```
geo-shell> map close --name mapLow
```

Map mapLow closed!

13.0	14.0	15.0	16.0
9.0	10.0	11.0	12.0
5.0	6.0	7.0	8.0
1.0	2.0	3.0	4.0

```
geo-shell> format open --name add --input examples/add.tif
```

Format add opened!

```
geo-shell> raster add raster --name1 high --name2 low --output-format add --output-name add
```

Added high to low to create add!

```
geo-shell> raster polygon --name add --output-workspace layers --output-name add_polygons
```

Done converting Raster add to a Polygon Layer add\_polygons!

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file examples/add.sld
```

Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/add.sld!

```
geo-shell> raster style set --name add --style examples/add.sld
```

Style /home/runner/work/geo-shell/geo-shell/examples/add.sld set on add

```
geo-shell> layer style set --name add_polygons --style examples/grid.sld
```

Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on add\_polygons

```
geo-shell> map open --name mapAdd
```

Map mapAdd opened!

```
geo-shell> map add raster --name mapAdd --raster add
```

Added add layer to map mapAdd

```
geo-shell> map add layer --name mapAdd --layer add_polygons
Added add_polygons layer to map mapAdd
```

```
geo-shell> map draw --name mapAdd --file examples/raster_add_raster_add.png --bounds "-180,-90,180,90,EPSG:4326"
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_add_raster_add.png!
```

```
geo-shell> map close --name mapAdd
Map mapAdd closed!
```

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

## Add Constant

Add constant values to a Raster

```
geo-shell> raster add constant --name pc --output-format pcAdd100 --output-name pcAdd100
--values 100
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
values	The values	true		

geo-shell> **format open** --name pierce\_county --input src/test/resources/pc.tif  
Format pierce\_county opened!

geo-shell> **raster open** --format pierce\_county --raster pc --name pc  
Opened Format pierce\_county Raster pc as pc

geo-shell> **raster value** --name pc --x -121.799927 --y 46.867703  
3069.0

geo-shell> **format open** --name pcAdd100 --input examples/pcAdd100.tif  
Format pcAdd100 opened!

geo-shell> **raster add constant** --name pc --output-format pcAdd100 --output-name pcAdd100  
--values 100  
Added 100 to pc to create pcAdd100!

geo-shell> **raster value** --name pcAdd100 --x -121.799927 --y 46.867703  
3169.0

geo-shell> **style raster colormap** --raster pcAdd100 --values  
"25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#ffff5"  
--file  
examples/style\_raster\_colormap.sld  
Colormap Raster Style for pcAdd100 written to /home/runner/work/geo-shell/geo-shell/examples/style\_raster\_colormap.sld!

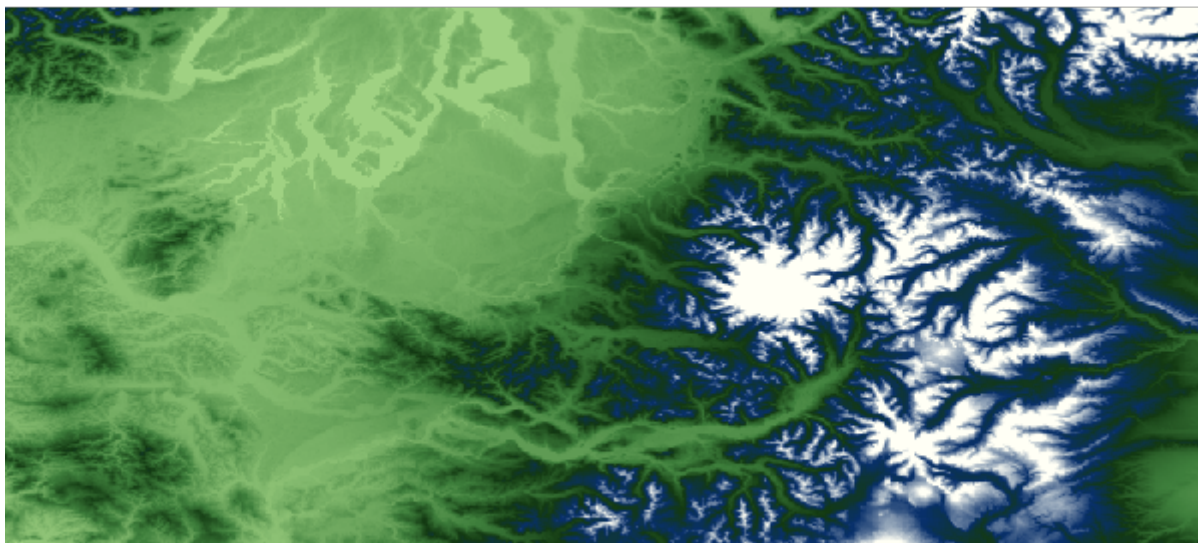
geo-shell> **raster style set** --name pcAdd100 --style examples/style\_raster\_colormap.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/style\_raster\_colormap.sld set on pcAdd100

geo-shell> **map open** --name map  
Map map opened!

geo-shell> **map add raster** --name map --raster pcAdd100  
Added pcAdd100 layer to map map

geo-shell> **map draw** --name map --file examples/raster\_add\_constant.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_add\_constant.png!

geo-shell> **map close** --name map  
Map map closed!



## Subtract Raster

Subtract one Raster from another

```
geo-shell> raster subtract raster --name1 high --name2 low --output-format subtract --output-name subtract
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

```
geo-shell> format open --name high --input src/test/resources/high.tif  
Format high opened!
```

```
geo-shell> raster open --format high --raster high --name high  
Opened Format high Raster high as high
```

```
geo-shell> workspace open --name layers --params memory  
Workspace layers opened!
```

```
geo-shell> style create --params "stroke=black stroke-width=2 label=value label-size=12" --file examples/grid.sld
```

Style stroke=black stroke-width=2 label=value label-size=12 written to /home/runner/work/geo-shell/geo-shell/examples/grid.sld!

geo-shell> **raster polygon** --name high --output-workspace layers --output-name high\_polygons  
Done converting Raster high to a Polygon Layer high\_polygons!

geo-shell> **style raster palette colormap** --min 1 --max 50 --palette MutedTerrain --number 20 --file examples/high.sld

Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/high.sld!

geo-shell> **raster style set** --name high --style examples/high.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/high.sld set on high

geo-shell> **layer style set** --name high\_polygons --style examples/grid.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on high\_polygons

geo-shell> **map open** --name mapHigh  
Map mapHigh opened!

geo-shell> **map add raster** --name mapHigh --raster high  
Added high layer to map mapHigh

geo-shell> **map add layer** --name mapHigh --layer high\_polygons  
Added high\_polygons layer to map mapHigh

geo-shell> **map draw** --name mapHigh --file examples/raster\_subtract\_raster\_high.png --bounds "-180,-90,180,90,EPSG:4326"  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_subtract\_raster\_high.png!

geo-shell> **map close** --name mapHigh  
Map mapHigh closed!

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

```
geo-shell> format open --name low --input src/test/resources/low.tif
Format low opened!
```

```
geo-shell> raster open --format low --raster low --name low
Opened Format low Raster low as low
```

```
geo-shell> raster polygon --name low --output-workspace layers --output-name low_polygons
Done converting Raster low to a Polygon Layer low_polygons!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file
examples/low.sld
Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/low.sld!
```

```
geo-shell> raster style set --name low --style examples/low.sld
Style /home/runner/work/geo-shell/geo-shell/examples/low.sld set on low
```

```
geo-shell> layer style set --name low_polygons --style examples/grid.sld
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on low_polygons
```

```
geo-shell> map open --name mapLow
Map mapLow opened!
```

```
geo-shell> map add raster --name mapLow --raster low
Added low layer to map mapLow
```

```
geo-shell> map add layer --name mapLow --layer low_polygons
Added low_polygons layer to map mapLow
```

```
geo-shell> map draw --name mapLow --file examples/raster_subtract_raster_low.png --bounds "-
180,-90,180,90,EPSG:4326"
```



Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_subtract\_raster\_low.png!

```
geo-shell> map close --name mapLow  
Map mapLow closed!
```

13.0	14.0	15.0	16.0
9.0	10.0	11.0	12.0
5.0	6.0	7.0	8.0
1.0	2.0	3.0	4.0

```
geo-shell> format open --name subtract --input examples/subtract.tif  
Format subtract opened!
```

```
geo-shell> raster subtract raster --name1 high --name2 low --output-format subtract --output-name  
subtract  
Subtracted high from low to create subtract!
```

```
geo-shell> raster polygon --name subtract --output-workspace layers --output-name  
subtract_polygons  
Done converting Raster subtract to a Polygon Layer subtract_polygons!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file  
examples/subtract.sld  
Colormap    Palette    Raster    Style    written    to    /home/runner/work/geo-shell/geo-  
shell/examples/subtract.sld!
```

```
geo-shell> raster style set --name subtract --style examples/subtract.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/subtract.sld set on subtract
```

```
geo-shell> layer style set --name subtract_polygons --style examples/grid.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on subtract_polygons
```

```
geo-shell> map open --name mapSubtract  
Map mapSubtract opened!
```

```

geo-shell> map add raster --name mapSubtract --raster subtract
Added subtract layer to map mapSubtract

geo-shell> map add layer --name mapSubtract --layer subtract_polygons
Added subtract_polygons layer to map mapSubtract

geo-shell> map draw --name mapSubtract --file examples/raster_subtract_raster_subtract.png
--bounds "-180,-90,180,90,EPSG:4326"
Done                                drawing                                /home/runner/work/geo-shell/geo-
shell/examples/raster_subtract_raster_subtract.png!

geo-shell> map close --name mapSubtract
Map mapSubtract closed!

```



## Subtract Constant

Subtract constant values from a Raster

```

geo-shell> raster subtract constant --name pc --output-format pcMinus100 --output-name
pcMinus100 --values 100

```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		

output-name	The output Raster name	false		
values	The values	true		
from	Whether to subtract the Raster from the constant or vice verse	false	false	false

geo-shell> **format open** --name pierce\_county --input src/test/resources/pc.tif  
Format pierce\_county opened!

geo-shell> **raster open** --format pierce\_county --raster pc --name pc  
Opened Format pierce\_county Raster pc as pc

geo-shell> **raster value** --name pc --x -121.799927 --y 46.867703  
3069.0

geo-shell> **format open** --name pcMinus100 --input examples/pcMinus100.tif  
Format pcMinus100 opened!

geo-shell> **raster subtract constant** --name pc --output-format pcMinus100 --output-name pcMinus100 --values 100  
Subtracted 100 from pc to create pcMinus100!

geo-shell> **raster value** --name pcMinus100 --x -121.799927 --y 46.867703  
2969.0

geo-shell> **style raster colormap** --raster pcMinus100 --values "25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#fffff5" --file examples/style\_raster\_colormap.sld  
Colormap Raster Style for pcMinus100 written to /home/runner/work/geo-shell/geo-shell/examples/style\_raster\_colormap.sld!

geo-shell> **raster style set** --name pcMinus100 --style examples/style\_raster\_colormap.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/style\_raster\_colormap.sld set on pcMinus100

geo-shell> **map open** --name map  
Map map opened!

geo-shell> **map add raster** --name map --raster pcMinus100  
Added pcMinus100 layer to map map

geo-shell> **map draw** --name map --file examples/raster\_subtract\_constant.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_subtract\_constant.png!

geo-shell> **map close** --name map  
Map map closed!



## Multiply Raster

Multiply two Raster together

```
geo-shell> raster multiply raster --name1 high --name2 low --output-format multiply --output
-name multiply
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

```
geo-shell> format open --name high --input src/test/resources/high.tif
Format high opened!
```

```
geo-shell> raster open --format high --raster high --name high
Opened Format high Raster high as high
```

```
geo-shell> workspace open --name layers --params memory
Workspace layers opened!
```

```
geo-shell> style create --params "stroke=black stroke-width=2 label=value label-size=12" --file
examples/grid.sld
```

Style stroke=black stroke-width=2 label=value label-size=12 written to /home/runner/work/geo-shell/geo-shell/examples/grid.sld!

geo-shell> **raster polygon** --name high --output-workspace layers --output-name high\_polygons  
Done converting Raster high to a Polygon Layer high\_polygons!

geo-shell> **style raster palette colormap** --min 1 --max 50 --palette MutedTerrain --number 20 --file examples/high.sld

Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/high.sld!

geo-shell> **raster style set** --name high --style examples/high.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/high.sld set on high

geo-shell> **layer style set** --name high\_polygons --style examples/grid.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on high\_polygons

geo-shell> **map open** --name mapHigh  
Map mapHigh opened!

geo-shell> **map add raster** --name mapHigh --raster high  
Added high layer to map mapHigh

geo-shell> **map add layer** --name mapHigh --layer high\_polygons  
Added high\_polygons layer to map mapHigh

geo-shell> **map draw** --name mapHigh --file examples/raster\_multiply\_raster\_high.png --bounds "-180,-90,180,90,EPSG:4326"  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_multiply\_raster\_high.png!

geo-shell> **map close** --name mapHigh  
Map mapHigh closed!

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

```
geo-shell> format open --name low --input src/test/resources/low.tif
Format low opened!
```

```
geo-shell> raster open --format low --raster low --name low
Opened Format low Raster low as low
```

```
geo-shell> raster polygon --name low --output-workspace layers --output-name low_polygons
Done converting Raster low to a Polygon Layer low_polygons!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file
examples/low.sld
Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/low.sld!
```

```
geo-shell> raster style set --name low --style examples/low.sld
Style /home/runner/work/geo-shell/geo-shell/examples/low.sld set on low
```

```
geo-shell> layer style set --name low_polygons --style examples/grid.sld
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on low_polygons
```

```
geo-shell> map open --name mapLow
Map mapLow opened!
```

```
geo-shell> map add raster --name mapLow --raster low
Added low layer to map mapLow
```

```
geo-shell> map add layer --name mapLow --layer low_polygons
Added low_polygons layer to map mapLow
```

```
geo-shell> map draw --name mapLow --file examples/raster_multiply_raster_low.png --bounds "-
180,-90,180,90,EPSG:4326"
```

Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_multiply\_raster\_low.png!

```
geo-shell> map close --name mapLow  
Map mapLow closed!
```

13.0	14.0	15.0	16.0
9.0	10.0	11.0	12.0
5.0	6.0	7.0	8.0
1.0	2.0	3.0	4.0

```
geo-shell> format open --name multiply --input examples/multiply.tif  
Format multiply opened!
```

```
geo-shell> raster multiply raster --name1 high --name2 low --output-format multiply --output  
-name multiply  
Multiplied high and low to create multiply!
```

```
geo-shell> raster polygon --name multiply --output-workspace layers --output-name  
multiply_polygons  
Done converting Raster multiply to a Polygon Layer multiply_polygons!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file  
examples/multiply.sld  
Colormap   Palette   Raster   Style   written   to   /home/runner/work/geo-shell/geo-  
shell/examples/multiply.sld!
```

```
geo-shell> raster style set --name multiply --style examples/multiply.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/multiply.sld set on multiply
```

```
geo-shell> layer style set --name multiply_polygons --style examples/grid.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on multiply_polygons
```

```
geo-shell> map open --name mapSubtract  
Map mapSubtract opened!
```

```
geo-shell> map add raster --name mapSubtract --raster multiply
```

Added multiply layer to map mapSubtract

```
geo-shell> map add layer --name mapSubtract --layer multiply_polygons
```

Added multiply\_polygons layer to map mapSubtract

```
geo-shell> map draw --name mapSubtract --file examples/raster_multiply_raster_multiply.png  
--bounds "-180,-90,180,90,EPSG:4326"
```

Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_multiply\_raster\_multiply.png!

```
geo-shell> map close --name mapSubtract
```

Map mapSubtract closed!

221.0	252.0	285.0	320.0
117.0	140.0	165.0	192.0
45.0	60.0	77.0	96.0
5.0	12.0	21.0	32.0

## Multiply Constant

Multiply constant values to a Raster

```
geo-shell> raster multiply constant --name pc --output-format pcTimes2 --output-name pcTimes2  
--values 2
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		



output-name	The output Raster name	false		
values	The values	true		

```
geo-shell> format open --name pierce_county --input src/test/resources/pc.tif
Format pierce_county opened!
```

```
geo-shell> raster open --format pierce_county --raster pc --name pc
Opened Format pierce_county Raster pc as pc
```

```
geo-shell> raster value --name pc --x -121.799927 --y 46.867703
3069.0
```

```
geo-shell> format open --name pcTimes2 --input examples/pcTimes2.tif
Format pcTimes2 opened!
```

```
geo-shell> raster multiply constant --name pc --output-format pcTimes2 --output-name pcTimes2
--values 2
Multiplied pc by 2 to create pcTimes2!
```

```
geo-shell> raster value --name pcTimes2 --x -121.799927 --y 46.867703
6138.0
```

```
geo-shell> style raster colormap --raster pcTimes2 --values
"25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#ffff5" --file
examples/style_raster_colormap.sld
Colormap Raster Style for pcTimes2 written to /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld!
```

```
geo-shell> raster style set --name pcTimes2 --style examples/style_raster_colormap.sld
Style /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld set on pcTimes2
```

```
geo-shell> map open --name map
Map map opened!
```

```
geo-shell> map add raster --name map --raster pcTimes2
Added pcTimes2 layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_multiply_constant.png
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_multiply_constant.png!
```

```
geo-shell> map close --name map
Map map closed!
```



## Divide Raster

Divide one Raster by another Raster

```
geo-shell> raster divide raster --name1 high --name2 low --output-format divide --output-name divide
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

```
geo-shell> format open --name high --input src/test/resources/high.tif  
Format high opened!
```

```
geo-shell> raster open --format high --raster high --name high  
Opened Format high Raster high as high
```

```
geo-shell> workspace open --name layers --params memory  
Workspace layers opened!
```

```
geo-shell> style create --params "stroke=black stroke-width=2 label=value label-size=12" --file examples/grid.sld
```

Style stroke=black stroke-width=2 label=value label-size=12 written to /home/runner/work/geo-shell/geo-shell/examples/grid.sld!

geo-shell> **raster polygon** --name high --output-workspace layers --output-name high\_polygons  
Done converting Raster high to a Polygon Layer high\_polygons!

geo-shell> **style raster palette colormap** --min 1 --max 50 --palette MutedTerrain --number 20 --file examples/high.sld

Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/high.sld!

geo-shell> **raster style set** --name high --style examples/high.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/high.sld set on high

geo-shell> **layer style set** --name high\_polygons --style examples/grid.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on high\_polygons

geo-shell> **map open** --name mapHigh  
Map mapHigh opened!

geo-shell> **map add raster** --name mapHigh --raster high  
Added high layer to map mapHigh

geo-shell> **map add layer** --name mapHigh --layer high\_polygons  
Added high\_polygons layer to map mapHigh

geo-shell> **map draw** --name mapHigh --file examples/raster\_divide\_raster\_high.png --bounds "-180,-90,180,90,EPSG:4326"  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_divide\_raster\_high.png!

geo-shell> **map close** --name mapHigh  
Map mapHigh closed!

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

```
geo-shell> format open --name low --input src/test/resources/low.tif
Format low opened!
```

```
geo-shell> raster open --format low --raster low --name low
Opened Format low Raster low as low
```

```
geo-shell> raster polygon --name low --output-workspace layers --output-name low_polygons
Done converting Raster low to a Polygon Layer low_polygons!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file
examples/low.sld
Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/low.sld!
```

```
geo-shell> raster style set --name low --style examples/low.sld
Style /home/runner/work/geo-shell/geo-shell/examples/low.sld set on low
```

```
geo-shell> layer style set --name low_polygons --style examples/grid.sld
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on low_polygons
```

```
geo-shell> map open --name mapLow
Map mapLow opened!
```

```
geo-shell> map add raster --name mapLow --raster low
Added low layer to map mapLow
```

```
geo-shell> map add layer --name mapLow --layer low_polygons
Added low_polygons layer to map mapLow
```

```
geo-shell> map draw --name mapLow --file examples/raster_divide_raster_low.png --bounds "-180,-
90,180,90,EPSG:4326"
```

Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_divide\_raster\_low.png!

```
geo-shell> map close --name mapLow  
Map mapLow closed!
```

13.0	14.0	15.0	16.0
9.0	10.0	11.0	12.0
5.0	6.0	7.0	8.0
1.0	2.0	3.0	4.0

```
geo-shell> format open --name divide --input examples/divide.tif  
Format divide opened!
```

```
geo-shell> raster divide raster --name1 high --name2 low --output-format divide --output-name  
divide  
Divided high by low to create divide!
```

```
geo-shell> raster polygon --name divide --output-workspace layers --output-name divide_polygons  
Done converting Raster divide to a Polygon Layer divide_polygons!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file  
examples/divide.sld  
Colormap   Palette   Raster   Style   written   to   /home/runner/work/geo-shell/geo-  
shell/examples/divide.sld!
```

```
geo-shell> raster style set --name divide --style examples/divide.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/divide.sld set on divide
```

```
geo-shell> layer style set --name divide_polygons --style examples/grid.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on divide_polygons
```

```
geo-shell> map open --name mapSubtract  
Map mapSubtract opened!
```

```
geo-shell> map add raster --name mapSubtract --raster divide
```

Added divide layer to map mapSubtract

```
geo-shell> map add layer --name mapSubtract --layer divide_polygons
```

Added divide\_polygons layer to map mapSubtract

```
geo-shell> map draw --name mapSubtract --file examples/raster_divide_raster_divide.png --bounds  
"-180,-90,180,90,EPSG:4326"
```

Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_divide\_raster\_divide.png!

```
geo-shell> map close --name mapSubtract
```

Map mapSubtract closed!

1.307692289352417	1.2857142686843872	1.2666666507720947	1.25
1.4444444179534912	1.399999976158142	1.3636363744735718	
1.7999999523162842	1.6666666269302368	1.5714285373687744	1.5
5.0	3.0	2.3333332538604736	2.0

## Divide Constant

Divide constant values against a Raster

```
geo-shell> raster divide constant --name pc --output-format pcDividedBy2 --output-name  
pcDividedBy2 --values 2
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
values	The values	true		

geo-shell> **format open** --name pierce\_county --input src/test/resources/pc.tif  
Format pierce\_county opened!

geo-shell> **raster open** --format pierce\_county --raster pc --name pc  
Opened Format pierce\_county Raster pc as pc

geo-shell> **raster value** --name pc --x -121.799927 --y 46.867703  
3069.0

geo-shell> **format open** --name pcDividedBy2 --input examples/pcDividedBy2.tif  
Format pcDividedBy2 opened!

geo-shell> **raster divide constant** --name pc --output-format pcDividedBy2 --output-name pcDividedBy2 --values 2  
Divided pc by 2 to create pcDividedBy2!

geo-shell> **raster value** --name pcDividedBy2 --x -121.799927 --y 46.867703  
1534.5

geo-shell> **style raster colormap** --raster pcDividedBy2 --values "25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#ffff5"  
--file examples/style\_raster\_colormap.sld  
Colormap Raster Style for pcDividedBy2 written to /home/runner/work/geo-shell/geo-shell/examples/style\_raster\_colormap.sld!

geo-shell> **raster style set** --name pcDividedBy2 --style examples/style\_raster\_colormap.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/style\_raster\_colormap.sld set on pcDividedBy2

geo-shell> **map open** --name map  
Map map opened!

geo-shell> **map add raster** --name map --raster pcDividedBy2  
Added pcDividedBy2 layer to map map

geo-shell> **map draw** --name map --file examples/raster\_divide\_constant.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_divide\_constant.png!

geo-shell> **map close** --name map  
Map map closed!



## Contours

Create contours.

```
geo-shell> raster contours --name pc --output-workspace contours --output-name contours --levels 0,100,200,300,600,900
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-workspace	The output Layer Workspace	true		
output-name	The output Layer name	true		
band	The Raster band to contour	false	0	0
levels	The contour level or interval	true		
simplify	Whether to simplify	false	false	false
smooth	Whether to smooth	false	false	false
bounds	The Bounds	false		

```
geo-shell> format open --name pc --input src/test/resources/pc.tif
```



Format pc opened!

```
geo-shell> raster open --format pc --raster pc --name pc  
Opened Format pc Raster pc as pc
```

```
geo-shell> style raster colormap --raster pc --values  
"25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#fffff5" --file examples/pc.sld  
Colormap Raster Style for pc written to /home/runner/work/geo-shell/geo-shell/examples/pc.sld!
```

```
geo-shell> raster style set --name pc --style examples/pc.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/pc.sld set on pc
```

```
geo-shell> workspace open --name contours --params examples/contours.shp  
Workspace contours opened!
```

```
geo-shell> raster contours --name pc --output-workspace contours --output-name contours --levels  
0,100,200,300,600,900  
Done creating contours!
```

```
geo-shell> style create --params "stroke=black stroke-width=0.25" --file examples/contours.sld  
Style stroke=black stroke-width=0.25 written to /home/runner/work/geo-shell/geo-shell/examples/contours.sld!
```

```
geo-shell> layer style set --name contours --style examples/contours.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/contours.sld set on contours
```

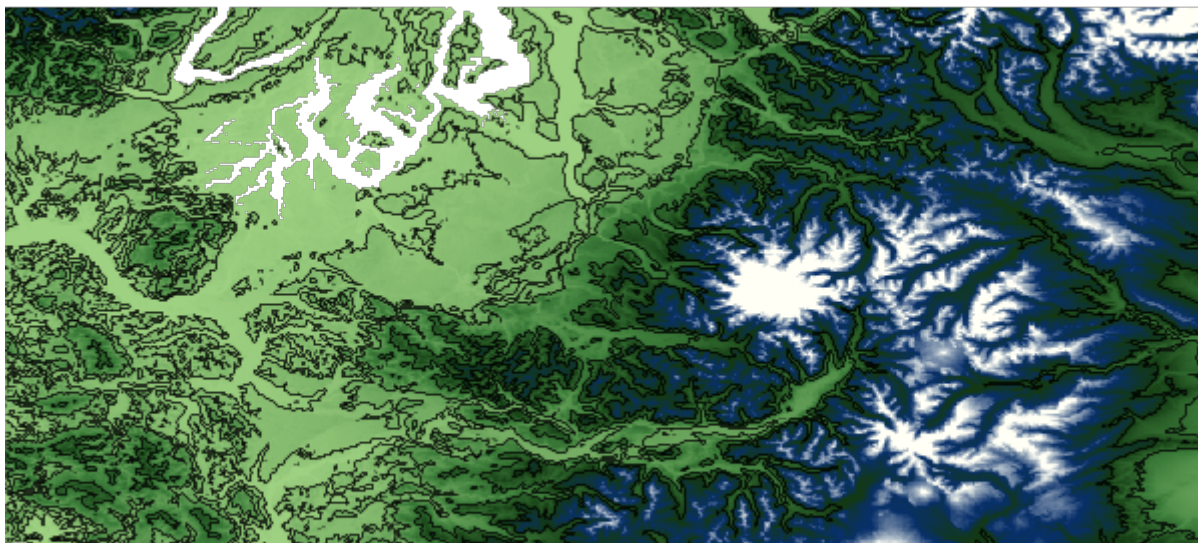
```
geo-shell> map open --name map  
Map map opened!
```

```
geo-shell> map add raster --name map --raster pc  
Added pc layer to map map
```

```
geo-shell> map add layer --name map --layer contours  
Added contours layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_contours.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_contours.png!
```

```
geo-shell> map close --name map  
Map map closed!
```



## Crop

Crop a Raster.

```
geo-shell> raster crop --name earth --output-format earthCropped --output-name earthCropped
--geometry "-160.927734,6.751896,-34.716797,57.279043"
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
geometry	The geometry	true		

```
geo-shell> format open --name earth --input src/test/resources/earth.tif
Format earth opened!
```

```
geo-shell> raster open --format earth --raster earth --name earth
Opened Format earth Raster earth as earth
```

```
geo-shell> format open --name earthCropped --input examples/earthCropped.tif
Format earthCropped opened!
```

```
geo-shell> raster crop --name earth --output-format earthCropped --output-name earthCropped
--geometry "-160.927734,6.751896,-34.716797,57.279043"
```

Raster earth cropped to earthCropped!

```
geo-shell> map open --name map
Map map opened!
```

```
geo-shell> map add raster --name map --raster earthCropped
Added earthCropped layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_crop.png
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_crop.png!
```

```
geo-shell> map close --name map
Map map closed!
```



## Mosaic

Mosaic two Rasters together

```
geo-shell> raster mosaic --name1 alki2 --name2 alki3 --output-format mosaic --output-name mosaic
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		
output-format	The output Format Workspace	true		

output-name	The output Raster name	false		
-------------	------------------------	-------	--	--

geo-shell> **format open** --input examples/alki2.tif --name alki2  
Format alki2 opened!

geo-shell> **raster open** --format alki2 --raster alki2 --name alki2  
Opened Format alki2 Raster alki2 as alki2

geo-shell> **format open** --input examples/alki3.tif --name alki3  
Format alki3 opened!

geo-shell> **raster open** --format alki3 --raster alki3 --name alki3  
Opened Format alki3 Raster alki3 as alki3

geo-shell> **format open** --input examples/mosaic.tif --name mosaic  
Format mosaic opened!

geo-shell> **raster mosaic** --name1 alki2 --name2 alki3 --output-format mosaic --output-name mosaic  
Mosaic alki2 and alki3 to create mosaic!

geo-shell> **map open** --name map  
Map map opened!

geo-shell> **map add raster** --name map --raster mosaic  
Added mosaic layer to map map

geo-shell> **map draw** --name map --file examples/raster\_mosaic.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_mosaic.png!

geo-shell> **map close** --name map  
Map map closed!



## Reclassify

Reclassify a Raster.

```
geo-shell> raster reclassify --name pc --output-format pcReclass --output-name pcReclass --ranges
"0-0=1,0-50=2,50-200=3,200-1000=4,1000-1500=5,1500-4000=6"
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
ranges	The comma delimited reclassification ranges (from-to=value)	true		
band	The Raster band to contour	false	0	0
nodata	The NODATA value	false	0	0

```
geo-shell> format open --name pc --input src/test/resources/pc.tif
```

Format pc opened!

```
geo-shell> raster open --format pc --raster pc --name pc  
Opened Format pc Raster pc as pc
```

```
geo-shell> format open --name pcReclass --input examples/pcReclass.tif  
Format pcReclass opened!
```

```
geo-shell> raster reclassify --name pc --output-format pcReclass --output-name pcReclass --ranges  
"0-0=1,0-50=2,50-200=3,200-1000=4,1000-1500=5,1500-4000=6"  
Raster pc reclassified to pcReclass!
```

```
geo-shell> style raster colormap --raster pcReclass --values  
"1=#9fd182,2=#3e7f3c,3=#133912,4=#08306b,5=#FFF8DC,6=#ffffff" --file examples/pcReclass.sld  
Colormap Raster Style for pcReclass written to /home/runner/work/geo-shell/geo-shell/examples/pcReclass.sld!
```

```
geo-shell> raster style set --name pcReclass --style examples/pcReclass.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/pcReclass.sld set on pcReclass
```

```
geo-shell> map open --name map  
Map map opened!
```

```
geo-shell> map add raster --name map --raster pcReclass  
Added pcReclass layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_reclassify.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_reclassify.png!
```

```
geo-shell> map close --name map  
Map map closed!
```



## Reproject

Project a Raster.

```
geo-shell> raster reproject --name earthCropped --output-format earth3857 --output-name earth3857 --projection "EPSG:3857"
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
projection	The projection	true		

```
geo-shell> format open --name earth --input src/test/resources/earth.tif  
Format earth opened!
```

```
geo-shell> raster open --format earth --raster earth --name earth  
Opened Format earth Raster earth as earth
```

```
geo-shell> format open --name earthCropped --input examples/earthCropped.tif  
Format earthCropped opened!
```

```
geo-shell> raster crop --name earth --output-format earthCropped --output-name earthCropped  
--geometry "-180.0,-85.06,180.0,85.06"
```



Raster earth cropped to earthCropped!

```
geo-shell> format open --name earth3857 --input examples/earth3857.tif
Format earth3857 opened!
```

```
geo-shell> raster reproject --name earthCropped --output-format earth3857 --output-name
earth3857 --projection "EPSG:3857"
Raster earthCropped reprojected to earth3857 as EPSG:3857!
```

```
geo-shell> map open --name map
Map map opened!
```

```
geo-shell> map add raster --name map --raster earth3857
Added earth3857 layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_reproject.png
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_reproject.png!
```

```
geo-shell> map close --name map
Map map closed!
```



## Scale

Scale a Raster.

```
geo-shell> raster scale --name pc --output-format pcScaled --output-name pcScaled --x 0.5 --y 0.5
```

Name	Description	Mandatory	Specified Default	Unspecified Default
------	-------------	-----------	-------------------	---------------------



name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
x	The scale factor along the x axis	true		
y	The scale factor along the y axis	true		
x-trans	The x translation	false	0	0
y-trans	The y translation	false	0	0
interpolation	The interpolation method (bicubic, bicubic2, bilinear, nearest)	false	nearest	nearest

```
geo-shell> format open --name pc --input src/test/resources/pc.tif
Format pc opened!
```

```
geo-shell> raster open --format pc --raster pc --name pc
Opened Format pc Raster pc as pc
```

```
geo-shell> format open --name pcScaled --input examples/pcScaled.tif
Format pcScaled opened!
```

```
geo-shell> raster scale --name pc --output-format pcScaled --output-name pcScaled --x 0.5 --y 0.5
Raster pc scaled to pcScaled!
```

```
geo-shell> style raster colormap --raster pc --values
"25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#ffff5" --file examples/pcScaled.sld
Colormap Raster Style for pc written to /home/runner/work/geo-shell/geo-shell/examples/pcScaled.sld!
```

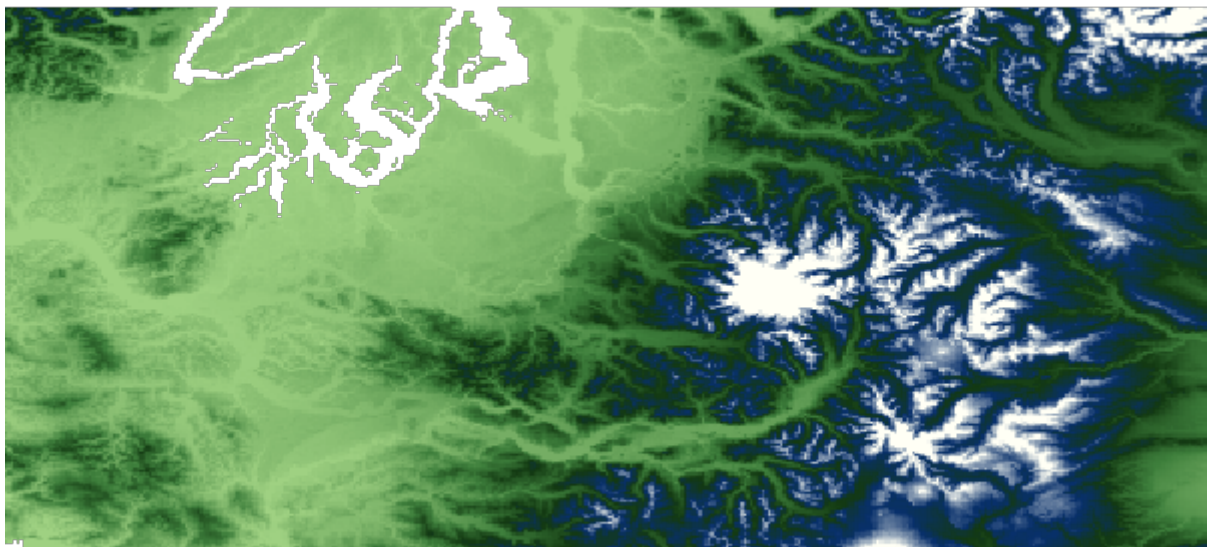
```
geo-shell> raster style set --name pcScaled --style examples/pcScaled.sld
Style /home/runner/work/geo-shell/geo-shell/examples/pcScaled.sld set on pcScaled
```

```
geo-shell> map open --name map
Map map opened!
```

```
geo-shell> map add raster --name map --raster pcScaled
Added pcScaled layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_scale.png
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_scale.png!
```

```
geo-shell> map close --name map
Map map closed!
```



## Shaded Relief

Create a shaded relief raster

```
geo-shell> raster shadedrelief --name pc --output-format pcShaded --output-name pcShaded --scale 1.0 --altitude 25 --azimuth 260
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
scale	The scale	true		
altitude	The altitude	true		
azimuth	The azimuth	true		
resx	The x resolution	false	0.5	0.5
resy	The y resolution	false	0.5	0.5
zetafactory	The zeta factory	false	1.0	1.0
algorithm	The x resolution	false	DEFAULT	DEFAULT

```
geo-shell> format open --name pc --input src/test/resources/pc.tif
Format pc opened!
```

```
geo-shell> raster open --format pc --raster pc --name pc  
Opened Format pc Raster pc as pc
```

```
geo-shell> format open --name pcShaded --input examples/pcShaded.tif  
Format pcShaded opened!
```

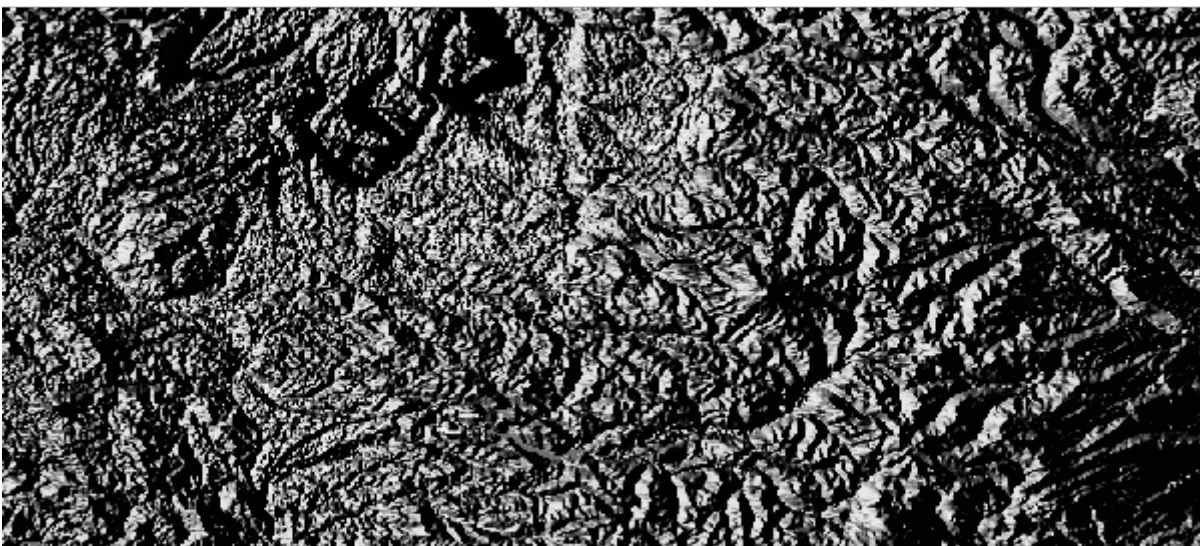
```
geo-shell> raster shadedrelief --name pc --output-format pcShaded --output-name pcShaded --scale  
1.0 --altitude 25 --azimuth 260  
Create shaded relief pcShaded from pc!
```

```
geo-shell> map open --name map  
Map map opened!
```

```
geo-shell> map add raster --name map --raster pcShaded  
Added pcShaded layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_shadedrelief.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_shadedrelief.png!
```

```
geo-shell> map close --name map  
Map map closed!
```



## Stylize

Create a new Raster by baking the style into an existing Raster

```
geo-shell> raster stylize --name pc --output-format pcStyled --output-name pcStyled
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

geo-shell> **format open** --name pc --input src/test/resources/pc.tif  
Format pc opened!

geo-shell> **raster open** --format pc --raster pc --name pc  
Opened Format pc Raster pc as pc

geo-shell> **style raster colormap** --raster pc --values  
"25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#ffff5" --file examples/pc.sld  
Colormap Raster Style for pc written to /home/runner/work/geo-shell/geo-shell/examples/pc.sld!

geo-shell> **raster style set** --name pc --style examples/pc.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/pc.sld set on pc

geo-shell> **format open** --name pcStyled --input examples/pcStyled.tif  
Format pcStyled opened!

geo-shell> **raster stylize** --name pc --output-format pcStyled --output-name pcStyled  
Stylized pc to create pcStyled!

geo-shell> **map open** --name map  
Map map opened!

geo-shell> **map add raster** --name map --raster pcStyled  
Added pcStyled layer to map map

geo-shell> **map draw** --name map --file examples/raster\_stylize.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster\_stylize.png!

geo-shell> **map close** --name map  
Map map closed!



## Polygon

Convert a raster in a polygon

geo-shell> **raster polygon** --name high --output-workspace layers --output-name grid

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-workspace	The output Layer Workspace	true		
output-name	The output Layer name	true		
band	The band	false	0	0
inside-edges	Whether to include inside edges	false	true	true
roi	The region of interest	false		
nodata	The NODATA value	false	0	0

ranges	The comma delimited reclassification ranges (min,minIncluded, max,maxIncluded)	false		
--------	--	-------	--	--

```
geo-shell> format open --name high --input src/test/resources/high.tif
Format high opened!
```

```
geo-shell> raster open --format high --raster high --name high
Opened Format high Raster high as high
```

```
geo-shell> workspace open --name layers --params memory
Workspace layers opened!
```

```
geo-shell> raster polygon --name high --output-workspace layers --output-name grid
Done converting Raster high to a Polygon Layer grid!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file
examples/high.sld
Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/high.sld!
```

```
geo-shell> raster style set --name high --style examples/high.sld
Style /home/runner/work/geo-shell/geo-shell/examples/high.sld set on high
```

```
geo-shell> style create --params "stroke=black stroke-width=2 label=value label-size=12" --file
examples/grid.sld
Style stroke=black stroke-width=2 label=value label-size=12 written to /home/runner/work/geo-shell/geo-shell/examples/grid.sld!
```

```
geo-shell> layer style set --name grid --style examples/grid.sld
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on grid
```

```
geo-shell> map open --name map
Map map opened!
```

```
geo-shell> map add raster --name map --raster high
Added high layer to map map
```

```
geo-shell> map add layer --name map --layer grid
Added grid layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_polygon.png --bounds "-180,-
90,180,90,EPSG:4326"
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_polygon.png!
```

```
geo-shell> map close --name map
Map map closed!
```

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