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WMS Recipes

The WMS classes are in the **geoscript.layer** package.

WMS Server

Connect to a WMS Server and list properties

```
WMS wms = new WMS("https://lpdaacsvc.cr.usgs.gov/ogc/wms")
println "Name = ${wms.name}"
println "Title = ${wms.title}"
println "Abstract = ${wms.abstract}"
println "Keywords = ${wms.keywords.join(', ')}"
println "Online Resource = ${wms.onlineResource}"
println "Update Sequence = ${wms.updateSequence}"
println "Version = ${wms.version}"
println "Map Formats = ${wms.getMapFormats.join(', ')}"
```

```
Name = WMS
Title = GeoServer Web Map Service
Abstract = A compliant implementation of WMS plus most of the SLD extension (dynamic
styling). Can also generate PDF, SVG, KML, GeoRSS
Keywords = WFS, WMS, GEOSERVER
Online Resource = http://geoserver.sourceforge.net/html/index.php
Update Sequence = 35327
Version = 1.3.0
Map Formats = image/png, application/atom+xml, application/pdf, application/rss+xml,
application/vnd.google-earth.kml+xml, application/vnd.google-
earth.kml+xml;mode=networklink, application/vnd.google-earth.kmz, image/geotiff,
image/geotiff8, image/gif, image/jpeg, image/png; mode=8bit, image/svg+xml,
image/tiff, image/tiff8, text/html; subtype=openlayers
```

Get a list of Layers

```
WMS wms = new WMS("https://lpdaacsvc.cr.usgs.gov/ogc/wms")
wms.layers.subList(0,10).each { WMS.Layer layer ->
    println layer
}
```

```
MODIS:MCD12Q1.2016001.006.LandCover
MODIS:MOD09A1.2018073.006.SurRefl
MODIS:MOD09A1.2018081.006.SurRefl
MODIS:MOD09A1.2018089.006.SurRefl
MODIS:MOD09A1.2018097.006.SurRefl
MODIS:MOD09A1.2018105.006.SurRefl
MODIS:MOD09A1.2018113.006.SurRefl
MODIS:MOD09A1.2018121.006.SurRefl
MODIS:MOD09A1.2018129.006.SurRefl
MODIS:MOD09A1.2018137.006.SurRefl
```

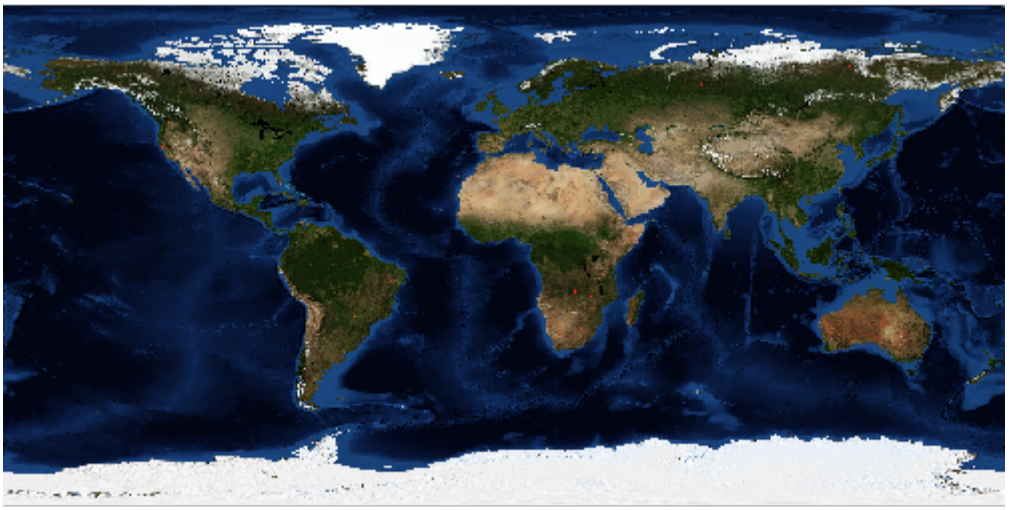
Get a Layer

```
WMS wms = new WMS("https://lpdaacsvc.cr.usgs.gov/ogc/wms")
WMS.Layer layer = wms.getLayer("MODIS:MOD09A1.2018185.006.SurRefl")
println "Name = ${layer.name}"
println "Title = ${layer.title}"
println "Bounds = ${layer.bounds}"
println "Lat/Lon Bounds = ${layer.latLonBounds}"
println "Queryable = ${layer.queryable}"
println "Min Scale = ${layer.minScale}"
println "Max Scale = ${layer.maxScale}"
```

```
Name = MODIS:MOD09A1.2018185.006.SurRefl
Title = MOD09A1.2018185.006.SurRefl
Bounds = [(-90.00000143999999,-180.0,90.0,180.00000287999998,EPSG:4326), (-180.0,-
90.00000143999999,180.00000287999998,90.0,EPSG:4326)]
Lat/Lon Bounds = (-180.0,-90.00000143999999,180.00000287999998,90.0,EPSG:4326)
Queryable = true
Min Scale = NaN
Max Scale = NaN
```

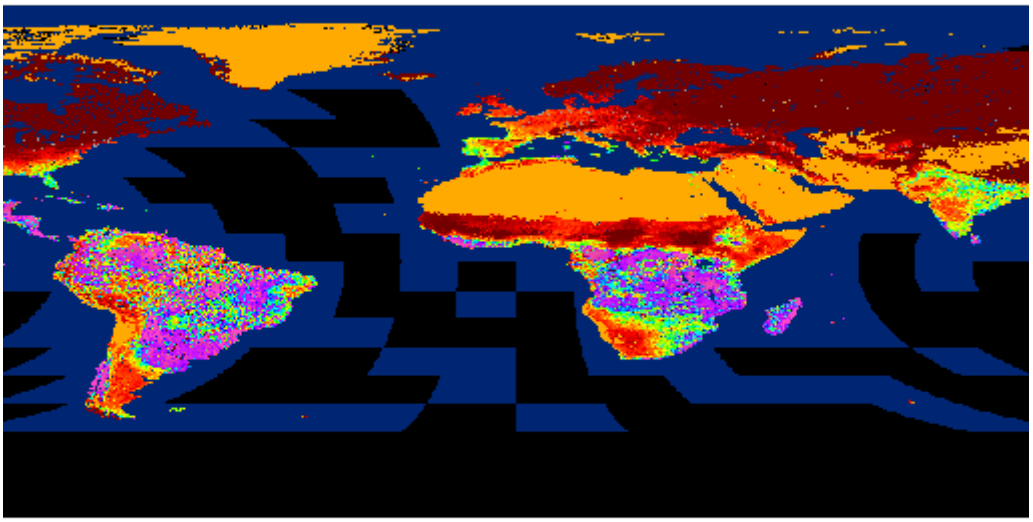
Get a Raster

```
WMS wms = new WMS("https://lpdaacsvc.cr.usgs.gov/ogc/wms")
Raster raster = wms.getRaster(["MODIS:MOD14A2.2018209.006.Fire"])
```



Get an Image

```
WMS wms = new WMS("https://lpdaacsvc.cr.usgs.gov/ogc/wms")
BufferedImage image = wms.getImage(["MODIS:MOD17A2H.2019041.006.GPP"])
```



WMSLayer

A WMSLayer is a way to draw one or more WMS layers on a Map.

Use WMS Layers to render a Map

```
WMS wms = new WMS("http://1maps.geo-
solutions.it/geoserver/osm/wms?service=wms&version=1.1.1&request=GetCapabilities")
WMSLayer layer = new WMSLayer(wms, ["icesheet_polygons", "ne_10m_admin_0_countries"])
Map map = new Map(layers: [layer], backgroundColor: "#B0C4DE", bounds: new Bounds(-
179, -85, 179, 85, "EPSG:4326").reproject("EPSG:3857"))
BufferedImage image = map.renderToImage()
```