Lightning Mapping using OSGeo's MapCache

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WMS Request

1. WMS Request
2. Read Data
3. Apply Styling
4. Render Image

Database
Seeding
- On request
- Prefilled

mapcache_seed.exe -c mapcache.xml -t NationalSpeedLimits -e -1165312,6701360,-668544,7435992 -z 7,10

17,592,186,044,416 tiles at zoom level 22 – would take 54 TB of storage
Only 1.79% are viewed
http://tools.geofabrik.de/calc/

Tile size and number of tiles in given bounding box:

<table>
<thead>
<tr>
<th>Zoom</th>
<th>Size</th>
<th>Total Size</th>
<th>#tiles</th>
<th>Total #tiles</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5848</td>
<td>5848</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>14.47</td>
<td>14.47</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>3.62</td>
<td>3.62</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>3</td>
<td>1.45</td>
<td>1.45</td>
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<td>0.363</td>
<td>99</td>
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</tr>
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<td>0.182</td>
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</tr>
<tr>
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<td>820</td>
</tr>
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<td>0.000</td>
<td>0.000</td>
<td>182</td>
<td>182</td>
</tr>
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<td>16</td>
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<td>182</td>
<td>182</td>
</tr>
</tbody>
</table>

This table approximates the tile sizes of the given bounding box. The calculation is based on all rendered tiles on the server. Be aware that these values may be biased by spots on the map which have been viewed more often.

Click on "+" to choose other maps.

Hold "Ctrl" to draw a new rectangle.
MapRoad Licensing

6 months of dynamic caching
Accessing a TileCache

```javascript
new TileLayer({
    source: new XYZ({
        url: 'https://{a-c}.tile.thunderforest.com/cycle/{z}/{x}/{y}.png' +
            '?apikey=Your API key from http://www.thunderforest.com/docs/apikeys/ here'
    })
})
```
Advantages of a TileCache

- Fast mapping
- Support large numbers of users
- Cheaper servers
- Read-only exports
- Secure data access

When not to Use

- High resolution printing
- Dynamic data
- When seeding takes longer than updating the cache
Installing MapCache

Windows - [https://ms4w.com/](https://ms4w.com/) - comes with Apache

Linux - [https://mapserver.org/mapcache/install.html](https://mapserver.org/mapcache/install.html)

```
sudo apt-get install cgi-mapserver mapcache-cgi libapache2-mod-mapcache
```

Coming soon on **OSGeoLive 13**

Alternatives

[GeoWebCache](https://geowebcache.org/)
[MapProxy](https://mapproxy.org/)
Thank you for your time!

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