Publishing vector tiles with t-rex

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Linux & Open Source Solutions

Vector tile support for QGIS server?

t-rex

t-rex

- Open Source vector tile server
- Create tiles from PostGIS data
- Single executable file, minimal library dependencies
- Built-in web server
- Built-in caching
- From zero-configuration to complex layer setups

t-rex usage

> **Start server:**

```
t_rex serve --dbconn postgresql://user@host/database
```

> **Use a tile cache:**

```
t_rex serve --dbconn postgresql://user@host/database
            --cache /tmp/mvtcache
```

t-rex usage

> **Tiles served at:**

`http://localhost:6767/{layer}/{z}/{x}/{y}.pbf`

> **List of layers and built-in viewer:**

`http://localhost:6767/`

t-rex usage

> **Generate a configuration template:**

```
t_rex genconfig --dbconn postgresql://user@host/database
```

> **Run with configuration file:**

```
t_rex serve --config myconfig.cfg
```

Configuration

```
[[layer]]
name = "buildings"
geometry_field = "way"
geometry_type = "POLYGON"
fid_field = "osm_id"
buffer = 16
  [[layer.query]]
  sql = """
    SELECT name, type, 0 as osm_id, ST_Union(geometry) AS way
    FROM osm_buildings_gen0
    WHERE geometry && !bbox!
    GROUP BY name, type
    ORDER BY sum(area) DESC"""
  [[layer.query]]
  minzoom = 14
  maxzoom = 16
  sql = """
    SELECT name, type, 0 as osm_id,
ST_SimplifyPreserveTopology(ST_Union(geometry),!pixel_width!/2) AS way
    FROM osm_buildings
    WHERE geometry && !bbox!
    GROUP BY name, type
    ORDER BY sum(area) DESC"""
```

MBTiles creation

> **Create MBTiles from local cache:**

```
mb-util –image_format=pbf
        /tmp/mvtcache/streets
        streets.mbtiles
```

Planned features

First release:
- Automatic clipping
- Cache seeding

Planned:
- More built-in viewers
- Cache seeding optimizations
- Other projections than Web Mercator
- OGR data source (84 drivers)
- Support for multi-geometries
- Built-in GeoPackage/MBTiles creation

Styling with QGIS

qgis2web:

- **QGIS Plugin**
- **Export of QGIS styles**
  - OpenLayers 3
  - Leaflet
- **Extensions for Vector tiles**
  - Tilesets
  - Zoom-level dependent queries

Download and test

Binaries for Linux and Windows:

> https://github.com/pka/t-rex

Feedback welcome!