

# Location Base Services Database and Web API

## **API Specifications**

### **Version 1.0**

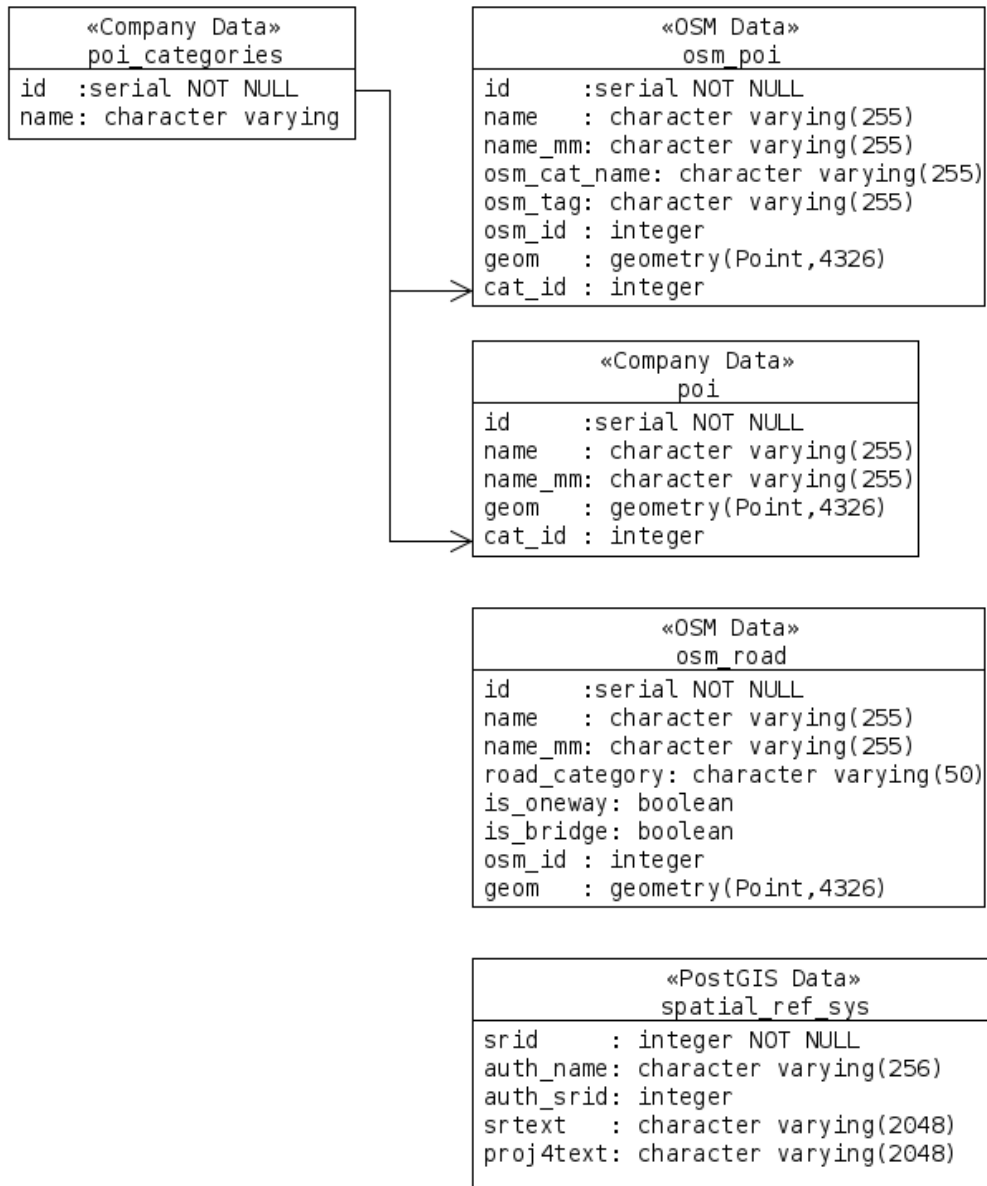
**Ref:** SW060213

**Date:** 13 March 2013

**By:** Zwenexsys Int'l Ltd

## 1.0 Database

### 1.1 Schema



## 1.2 Initially Loaded Data

Table Name	Description	Count
osm_poi	Open Street Map POI Data	5747
osm_road	Open Street Map Road Data	22257
poi_categories	Initially defined POI category names	115

## 2.0 API

### 2.1 Supported Data Formats

Following response data type will be available from API;

1. **TEXT** : comma separated values file with response data type text.
2. **CSV** : comma separated values file with default “comma” as separator.
3. **JSON** : Javascript object notification format of response data structure
4. **XML** : Extensible markup language format of response data structure

### 2.2 API Security

All end points in API is protected with HTTP authentication.

Server sends HTTP authentication challenge with status code 401 if UserName and Password is not provided in request.

- List of allowed UserName and Password pairs are defined in server.js (line 8).
- API security could be disabled by commenting (line 27) in server.js.

### 2.3 Common API Responses

Status Code	Response	Description
400	Custom error message in JSON format.	When the API end point is called without any extensions or invalid data type for parameters.
500	Internal server error.	When an an expected error occurs, ususally Database Error.
401	Unauthorized request.	When API is called without UserName and Password.

## 2.4 API End Points

Ref Code	api001		
Description	Get the whole list or partial list of POI Categories		
URL	http://[server]/poi_categories.[ext]		
Method	GET		
Parameters	Name	Mandatory	Description
	<i>p</i>	False	Page number of the records
	<i>l</i>	False	Number of records for each page

Ref Code	api002		
Description	Get the whole or partial list of POI for given POI Category.		
URL	http://[server]/poi.[ext]		
Method	GET		
Parameters	Name	Mandatory	Description
	<i>p</i>	False	Page number of the records
	<i>l</i>	False	Number of records for each page
	<i>cat_id</i>	False	POI Category id.

Ref Code	api003		
Description	Search POI Categories for a given name		
URL	http://[server]/poi_categories/search.[ext]		
Method	GET		
Parameters	Name	Mandatory	Description
	<i>l</i>	False	Number of top records from search result
	<i>q</i>	True	Query category name.

Ref Code	api004		
Description	Search POI for a given name		
URL	http://[server]/poi/search.[ext]		
Method	GET		
Parameters	Name	Mandatory	Description
	<i>p</i>	False	Page number of the records
	<i>l</i>	False	Number of records for each page
	<i>cat_id</i>	False	POI Category id. If provided, search with given category's scope.
	<i>q</i>	True	Query POI name.

Ref Code	api005		
Description	Query nearby POIs for a given coordinate.		
URL	http://[server]/poi/nearby.[ext]		
Method	GET		
Parameters	Name	Mandatory	Description
	<i>p</i>	False	Page number of the records
	<i>l</i>	False	Number of records for each page
	<i>cat_id</i>	False	POI Category id. If provided, search with given category's scope.
	<i>lat</i>	True	Latitude value of the coordinate
	<i>lon</i>	True	Longitude value of the coordinate
	<i>radius</i>	False	Radius distance to search. Default 3km. Maximum 50km (or as defined)

Ref Code	api006		
Description	Query nearby Roads for a given coordinate.		
URL	http://[server]/nearby/roads		
Method	GET		
Parameters	Name	Mandatory	Description
	<i>p</i>	False	Page number of the records

	<i>l</i>	False	Number of records for each page
	<i>lat</i>	True	Latitude value of the coordinate
	<i>lon</i>	True	Longitude value of the coordinate
	<i>radius</i>	False	Radius distance to search. Default 3km. Maximum 10km (or as defined)

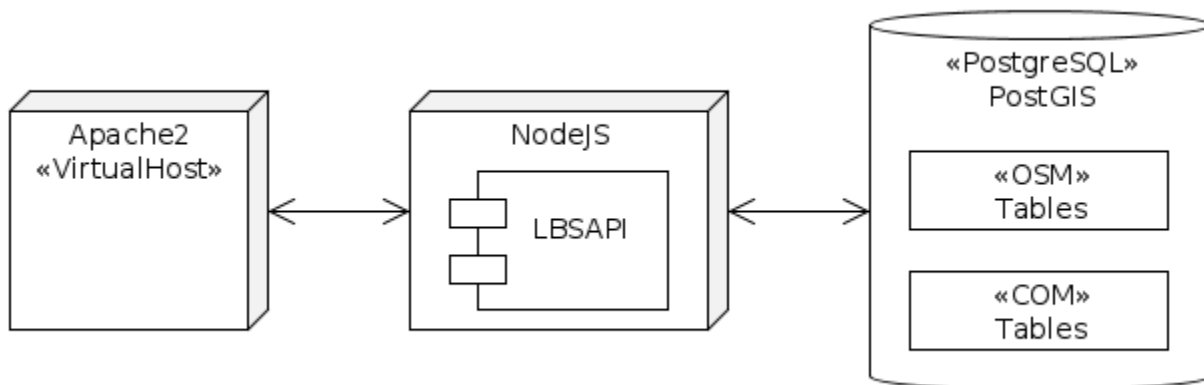
Ref Code	api007		
Description	Save a given POI location information.		
URL	http://[server]/poi		
Method	POST		
Parameters	Name	Mandatory	Description
	<i>name</i>	True	Name of the location.
	<i>cat_id</i>	True	POI Category id of the location.
	<i>lat</i>	True	Latitude value of the coordinate
	<i>lon</i>	True	Longitude value of the coordinate

## 2.5 Testing

Nearby POI and Road search features could be tested by opening [http://\[server\]/leaf.html](http://[server]/leaf.html) in browser.

Insert new POI feature could be tested by opening [http://\[server\]/new.html](http://[server]/new.html) in browsers.

## 2.6 Deployment architecture



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