Oracle Utilities
Customer Self Service

Whitepaper:
Using Google Maps™

Release 2.0.1

E36188-01

July 2012

ORACLE

Oracle Utilities Customer Self Service

Whitepaper: Using Google Maps™

E36188-01

Copyright © 2012, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing. If this software or related documentation is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS

Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle America, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications which may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Google Maps is a trademark of Google Inc. Other names may be trademarks of their respective owners.

This software or hardware and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third party content, products and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third party content, products or services.

.

Table of Contents

Overview 4
Additional Resources 4
Abbreviations 4
Configuration 4
Assumptions 4
MapViewer Configuration 4
MapViewer Schema Configuration 5
Google Maps Configuration 7
MapViewer Metadata Configuration 8
MapViewer Metadata Configuration 10

Copyright © 2012, Oracle and/or its affiliates. All rights reserved.

Overview

This document provides an overview of using the base map provided by Google Maps service in conjunction with OUCSS's Outage Map screen.

Additional Resources

For additional details on functionality and procedures described in this document, see the *Oracle Utilities Customer Self Service Installation Guide* and the *Oracle Utilities Customer Self Service Implementation Guide*. Both documents are available on the Oracle Technology Network (OTN) in the Oracle Utilities Documentation section (http://www.oracle.com/technetwork/documentation/utilities-155272.html, expand **Oracle Utilities Customer Self Service**, then choose **View Library** or **Download** part number E36170-01).

Further information is available in the *Oracle MapViewer User Guide*, available on the OTN at http://docs.oracle.com/otndocs/products/mapviewer/mapviewer_ug_11p5.pdf.

Abbreviations

OUCSS - Oracle Utilities Customer Self Service

Configuration

This section describes how to reconfigure your existing installation of OUCSS to work with the Google Maps service.

Assumptions

- Google Maps will be used to draw the base map (roads, geographic features, etc); but postal code data must be available for the MapViewer component to overlay the base map with areas where outages occur.
- For illustrative purposes this document assumes that NAVTEQ data is used for postal codes; the data can be obtained elsewhere, provided that it is loaded into the schema that is available to MapViewer and contains postal code geometry information.

> **Note:** This document also contains a description of steps that should be performed to make the spatial data available to MapViewer.

MapViewer Configuration

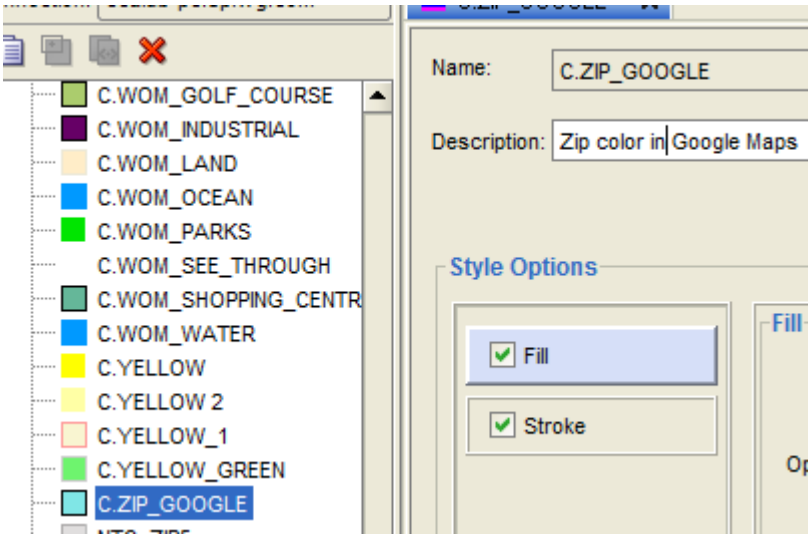
The configuration consists of four steps:

- Configuration of the MapViewer schema, including possible adjustment of transformation rules (see not at the end of the chapter).
- Enabling the Google Maps service using Google configuration screens
- Configuration of MapViewer metadata.
- Adjustment of OUCSS settings.

Copyright © 2012, Oracle and/or its affiliates. All rights reserved.

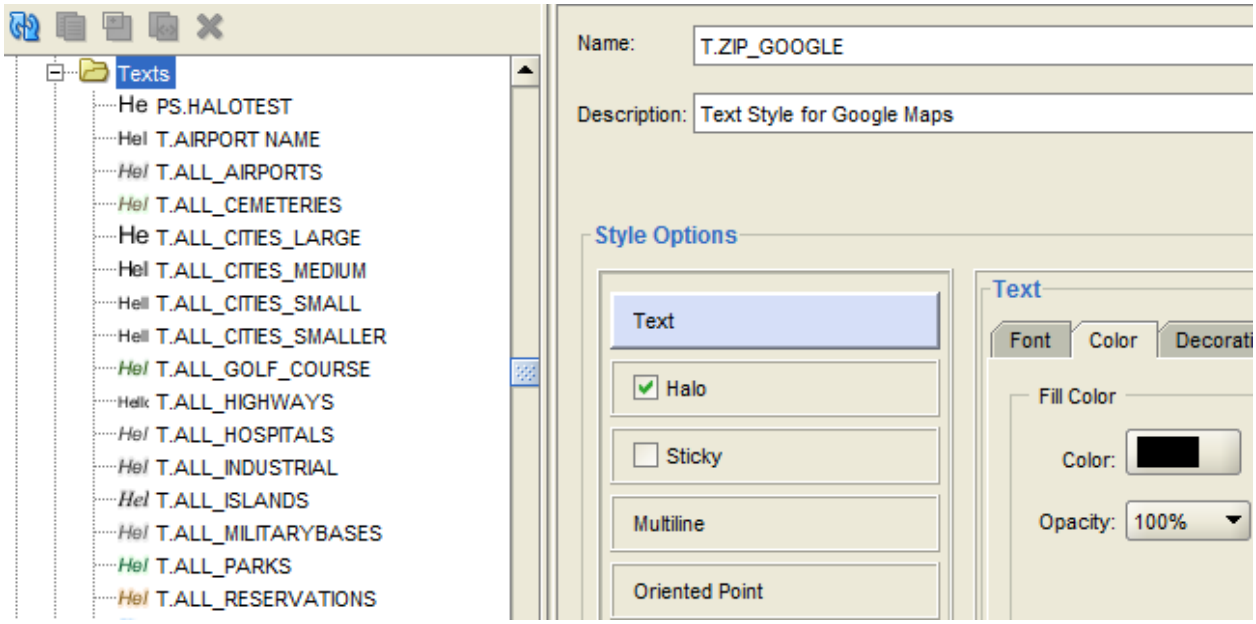
MapViewer Schema Configuration

1. Download MapViewer and upload data into the Oracle Database. This data can be obtained from various vendors. For example, a list of Oracle spatial data partners can be found at http://www.oracle.com/technetwork/database/options/spatial/downloads/partners/spatial-partners-data-087203.html.
2. Verify that the data contains a table with postal codes and their geometries. At a minimum, the table should contain two columns: **postal codes** and **geometries**.
3. If the spatial data included preconfigured styles and base maps, you can skip steps 5 and 6. Otherwise, you must prepare visual styles used to overlay postal codes data over Google Maps.
4. For this example,we will use the MapBuilder tool that comes with MapViewer to create the theme for the overlay. The theme consists of two parts: a color that will be used as a base for the postal code area display, and a text style to display the postal code value. Note that the color will be displayed in MapBuilder preview only. For outages, the color will be overridden by the color specified in the SS_CONFIGURATION settings.
5. Create a new color that will be used for outlining postal code areas when using MapBuilder preview. At this point, MapBuilder must be connected to the spatial schema that will be used for the MapViewer postal code overlay.
   A. Navigate to the **Metadata > Styles > Colors** node.
   B. Right-click the **Colors** node and select **Create color style**.
   C. Customize the style as needed.



6. Create a new text style to be used for displaying postal code text on the overlay.
   A. Navigate to **Metadata > Styles > Texts**.
   B. Right-click **Texts** and select **Create test style**.
   C. Customize the style as needed.

Copyright © 2012, Oracle and/or its affiliates. All rights reserved.

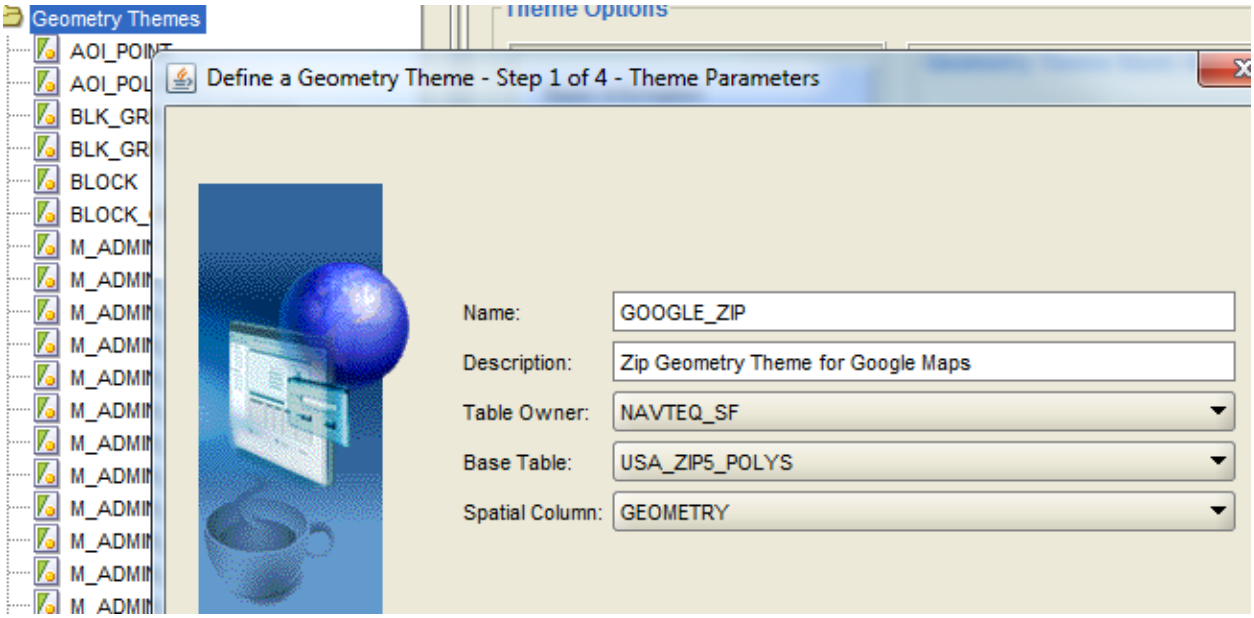


7 Create a new geometry theme that specifies the table to use for the postal code overlay, and which styles (defined in steps 5 and 6) to apply. If your spatial data comes with themes and styles predefined, verify that it contains a theme with postal codes. If it is absent you can create one as follows:

A. Navigate to **Metadata > Themes > Geometry Themes** node.

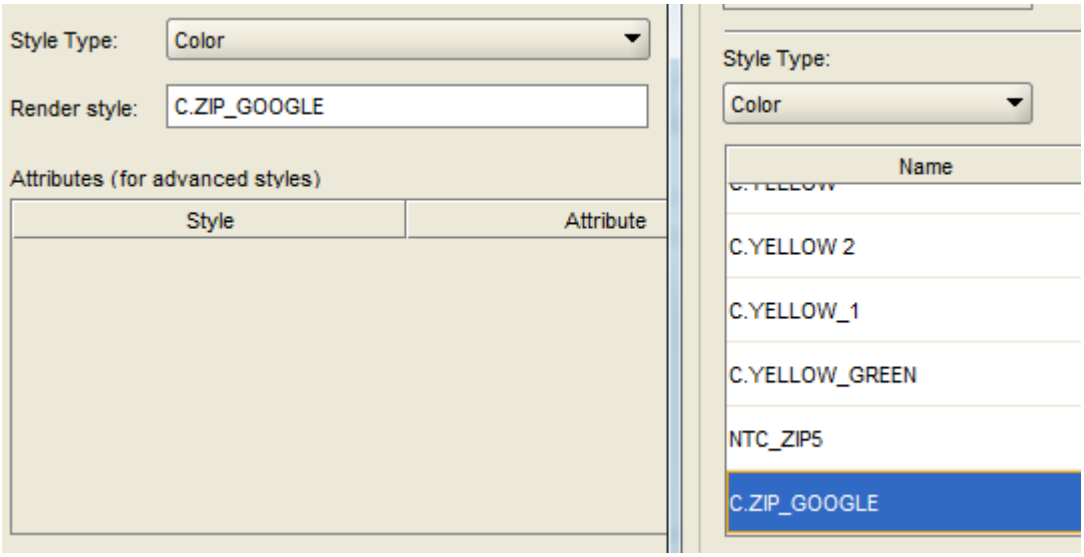
B. Right-click the **Geometry Themes** node and select **Create Geometry Theme**.

C. Enter a name and description for the theme, specify the table that contains postal codes that MapViewer should use, then select a column in that table that contains the postal codes' geometry.

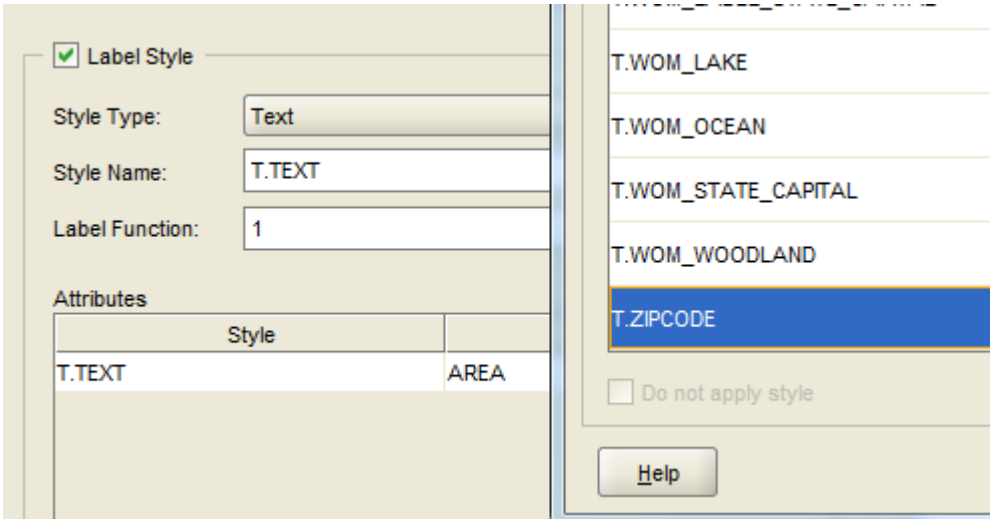


D. Click **Next** to select the color defined in Step 5.

Copyright © 2012, Oracle and/or its affiliates. All rights reserved.



E. Click **Next** and choose text style that was created in Step 6. Make sure the style is using the column that contains correct postal code descriptions.



8 Save all changes.

9 Verify the theme is present in the USER_SDO_THEMES table in the database.

10 You can preview theme by clicking the **Preview** tab in the bottom part of the window

---

IMPORTANT: If the postal code spatial data comes in datum wgs84 (8307), 4326, OS BNG, 81989 or 27700, consult the *MapViewer User Guide*'s section "8.7.1 Creating a Transformation Rule to Skip Datum Conversion." The transformation rule will eliminate a mismatch between the spatial data for postal code and the Google Maps base layer.

Google Maps Configuration

Follow the steps outlined in 'Obtaining an API Key' chapter in the *Google Developers* document at: https://developers.google.com/maps/documentation/javascript/v2/introduction#Intro.

After completing the procedure, the Google Maps (version 2) service should be enabled and the API key should be ready for subsequent setup steps.

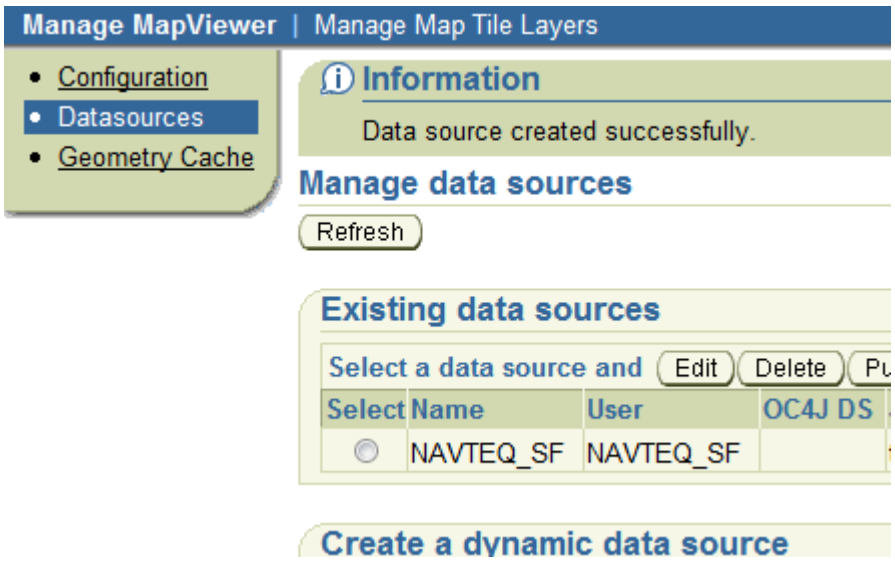
Copyright © 2012, Oracle and/or its affiliates. All rights reserved.

Note: Google Maps version 2 is used, since version 3 is not compatible with version of ADF used in the current OUCSS installation.

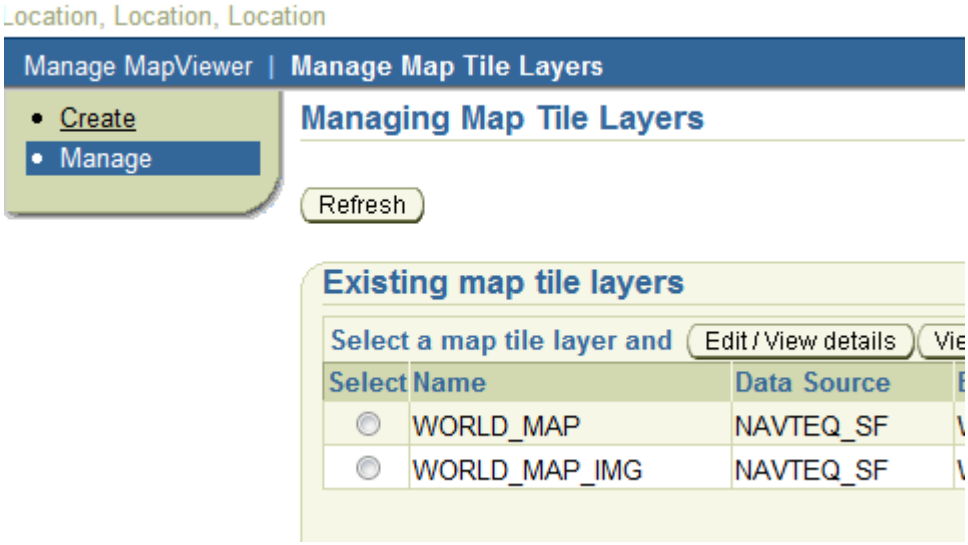
MapViewer Metadata Configuration

This procedure configures MapViewer to use the base map from Google Maps and use overlay data from the local database.

1. Create a new datasource as described in the "Configuring MapViewer" section of the *OUCSS Installation Guide*. The name of this datasource will later be used to adjust SS_Configuration parameters.

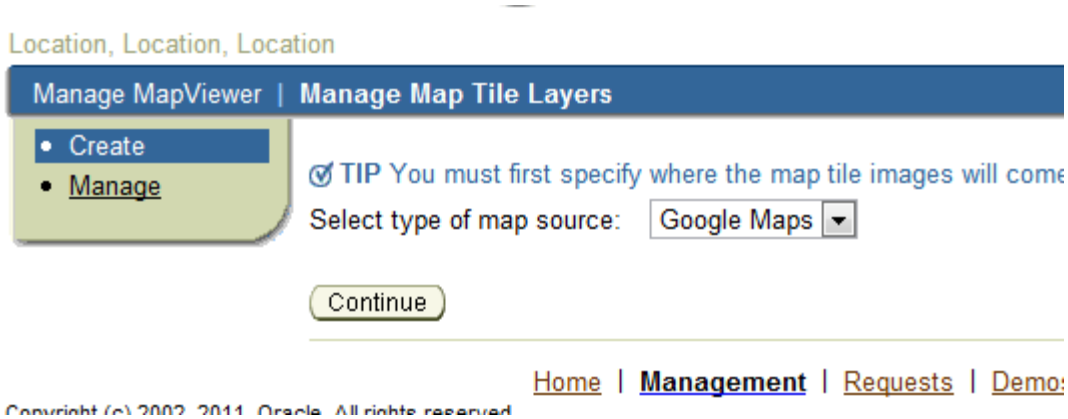


2. A new tile should be created to be used with Google Maps. To create the new tile, click the **Manage Map Tile Layers** link, then click **Create**.



3. In the **Map Source** dropdown list, select **Google Maps**.

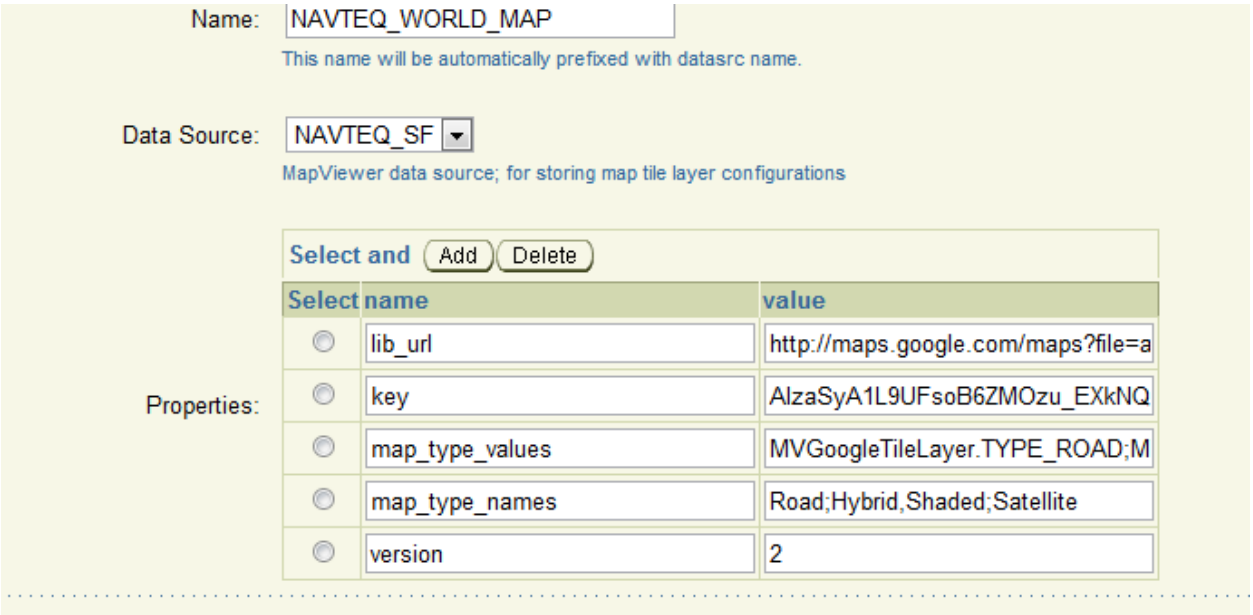
Copyright © 2012, Oracle and/or its affiliates. All rights reserved.



4 Select the datasource defined in Step 1 and leave other parameters as is (otherwise, you may have a problem saving the input).

5 Save the new map tile layer.

6 In the **Map Tile Layer** list, select the newly-created tile layer and edit it:



For *lib_url* use the following URL:

http://*maps.google.com/maps?file=api&v=2&key=<your_GOOGLE_API_key>&*

This URL ensures that the ADF component will fetch the Google Maps version 2 API. Also note that it contains the Google API key that was obtained in the previous "Google Maps Configuration" procedure.

For the *version* parameter, use '2'.

For the *key* parameter, use the previously-obtained Google API key.

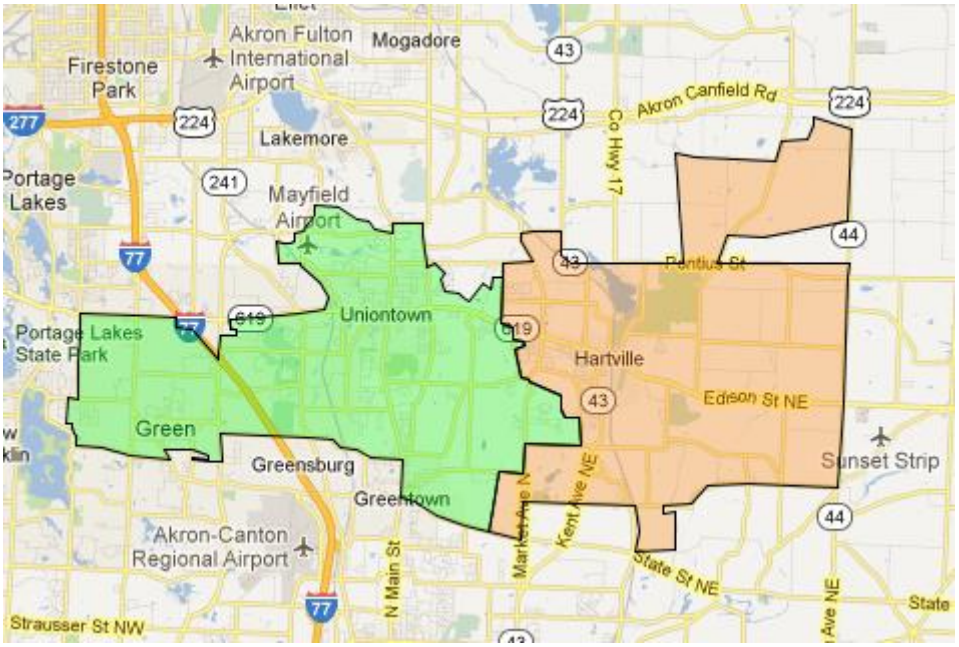
7 Save your changes.

Copyright © 2012, Oracle and/or its affiliates. All rights reserved.

MapViewer Metadata Configuration

Values in the SS_CONFIGURATION table must be adjusted to match the datasource name, tile layer name, and geometry theme name that were created in the previous procedures.

1. ***'outage.map.base.map'*** should contain the value <Datasource_Name>.<Tile_Layer_Name>. For example, NAVTEQ_SF.GOOGLE_WORLD_MAP.
2. ***'outage.map.color.theme'*** should contain the name of geometry theme. For example, 'GOOGLE_ZIP'.
3. ***'outage.map.color.theme.loc'*** points to the column in the table with postal codes. It should match the one that was used during creation of a text style. For example, 'POSTALCODE'.
4. ***'outage.map.srid'*** should reflect the spatial reference system identifier of the data.
5. Restart OUCSS servers and verify that the Outage Map shows the base map from Google Map service, as well as the outage data overlay.



Copyright © 2012, Oracle and/or its affiliates. All rights reserved.