## Overview

Visulate displays property records for 3 counties in Central Florida. We want to integrate these records with MLS listings.

## Problem Description

MLS listings are available via web service requests using the RETS protocol. Need to pull data from MLS, integrate with Visulate records and display to users. Oracle provides a pl/sql package called utl\_http. It can be used to make web service requests. RETS service requests must be authenticated using digest-auth. Utl\_http does not provide support for digest-auth authentication.

Most MLS vendors place limits on the size of the data set returned by a RETS request. They may also place timeout limits on the digest authenticated session. The web service request parameters vary by property type.

## Solution

Develop a RETS client that implements digest-auth authenticated web service requests via utl\_http. Use this client to make WS requests to RETS servers. Store the result as XML in a database table. Process the results table to identify matches with existing record. Save the result in a database table that has a foreign key to the pr\_properties table. Modify the public records reports that are displayed on the website to display MLS data.

## Business Need

The Visulate site currently receives 50,000 visits per month. We believe we can generate leads for the brokerage by displaying property listings.

## Requirements

### Functional Requirements

#### 1. Customer Requirement

Customers use Visulate to research property and company details. Most visits are the result of a Google search. A typical visit lasts around a minute and visits 2 pages on the site. We want to increase both of these metrics by displaying attractive content. In most cases we also want to direct the user away from the property that they initially searched and onto one that is listed for sale. The goal is to generate email and telephone enquiries for actively listed properties.

#### 2. Use Cases

1. Search Result
   1. User uses Google to search an address
   2. Visulate appears in the search results
   3. User clicks on the link and is taken to a property record page
   4. Visulate displays details of the property along with listing data for similar properties
   5. User clicks on a listing
   6. A contact us button on the listing page is used to generate leads
2. Home Page
   1. User visits the Visulate home page
   2. This page displays market news and a summary of latest commercial, residential, investment, land and rental listings.
   3. Links on the page direct the user to the detail page.
   4. A contact us button on the detail page is used to generate leads

#### 3. Functionality and Feature Description

##### Current behavior

Visulate displays property details based on public records. This data is updated periodically. It includes historical sales data, geo spatial location data and a description of the property’s physical characteristics.

##### New functionality

Extend Visulate to include listing data from one or more RETS data sources.

##### New concepts - Brevard RETS Implementation

RETS is a webservice protocol developed by the National Association of Realtors. RETS requests are broken down by SearchType and Class. The following query returns values for the SearchType.

* <http://rets.offutt-innovia.com:8080/brv/GetMetadata?Type=METADATA-RESOURCE&ID=0>

Pass the values into queries in the following form to find the available properties for a SearchType:

* http://rets.offutt-innovia.com:8080/brv/GetMetadata?Type=METADATA-CLASS&ID=Property
* <http://rets.offutt-innovia.com:8080/brv/GetMetadata?Type=METADATA-TABLE&ID=Property>

The Brevard MLS Innovia instance supports the following classes: ResidentialProperty, CommercialProperty, IncomeProperty, VacantLand and Rental. Use a query in the following form to find all active listings for a class:

<http://rets.offutt-innovia.com:8080/brv/Search?SearchType=Property&Class=ResidentialProperty&Format=COMPACT-DECODED&QueryType=DQML2&Query=(ListingStatus=A)&Select=ListingID>

This query returns the listing ID for each Active ResidentialProperty listing. The Select identifies the items that the query will return. It accepts a comma separated list of query values:

&Select=Bedrooms,BathsTotal,BathsHalf,ListDate,IDX,ListPrice,OriginalListPrice,PhotoCount,OriginalListingFirmName,TaxID,ShortSaleYN,OfficeIDX,PublicRemarks,YearBuilt,OwnerBankCorporationYN

RETS supports 3 types of response format. These are STANDARD-XML, COMPACT and COMPACT-DECODED. STANDARD-XML returns a conventional XML document where each item is contained in an XML element. COMPACT and COMPACT-DECODED documents return character delimited values in 2 XML elements – a header element and a data element.

FlexMLS

<http://retsgw.flexmls.com/rets2_0/GetMetadata?Type=METADATA-RESOURCE&ID=0>

<http://retsgw.flexmls.com/rets2_0/GetMetadata?Type=METADATA-CLASS&ID=Property>

A=ResidentialProperty

http://retsgw.flexmls.com/rets2\_0/GetMetadata?Type=METADATA-TABLE&ID=Property:A&Format=STANDARD-XML

B=MultiFamily

C=LotsAndLand

D=Rental

E=CommonInterest

##### Central Florida MLS RETS Implementation

URLs:

* [**http://mfr.rets.interealty.com/Login.asmx/Login**](http://mfr.rets.interealty.com/Login.asmx/Login)
* [**http://mfr.rets.interealty.com/Search.asmx/Search**](http://mfr.rets.interealty.com/Search.asmx/Search)
* [**http://mfr.rets.interealty.com**](http://mfr.rets.interealty.com/) **/GetObject.asmx/GetObject**
* [**http://mfr.rets.interealty.com**](http://mfr.rets.interealty.com/) **/GetMetadata.asmx/GetMetadata**
* [**http://mfr.rets.interealty.com**](http://mfr.rets.interealty.com/) **/ChangePassword.asmx/ChangePassword**
* **http://mfr.rets.interealty.com** **/Logout.asmx/Logout**

**User ID: RETS534**

**Password: 7+Er+7aqeD**

<http://mfr.rets.interealty.com/GetMetadata.asmx/GetMetadata?Type=METADATA-RESOURCE&ID=0>

<http://mfr.rets.interealty.com/GetMetadata.asmx/GetMetadata?Type=METADATA-CLASS&ID=Property>

<http://mfr.rets.interealty.com/GetMetadata.asmx/GetMetadata?Type=METADATA-TABLE&ID=Property>

[**http://mfr.rets.interealty.com/Search.asmx/Search**](http://mfr.rets.interealty.com/Search.asmx/Search)**?SearchType=Office&Class=Office&Format=COMPACT-DECODED&QueryType=DMQL2**

<http://mfr.rets.interealty.com/GetObject.asmx/GetObject?Type=Photo&Resource=Property&ID=40041364:3>

Example Queries:

http://rets.mfrmls.com/contact/rets/login

RETS534

7+Er+7aqeD

http://rets.mfrmls.com/contact/rets/search?SearchType=Property&Class=Listing&PropertyType=COM&Format=COMPACT-DECODED&QueryType=DMQL2&Query=(Matrix\_Unique\_ID=162849195),(CountyorParish=Sarasota),(PropertyType=COM)&Select=Matrix\_Unique\_ID,MLSNumber,ParcelNumber,NetLeasableSqFt,SqFtGross,PropertyUse,ListingContractDate,ListPrice,RoadFrontage,LeasePrice,Zoning,ListOfficeName,ShowPropAddrOnInternetYN,PublicRemarksNew,MatrixModifiedDT,ListAgentFullName,ListAgentEmail,ListAgentDirectWorkPhone

|  |  |  |
| --- | --- | --- |
| Class 1 - Commercial | Class 2 - Income | Class 3 - Rental |
| sysid = sysid  1 = Property Type  3 = Record Delete Flag  4 = Record Delete Date  5 = Last Transaction Code  9 = Photos, Number of  15 = Tax ID  17 = Agent ID  18 = Selling Agent ID  19 = County  33 = CDOM  35 = Agent Name  46 = Zip Code  47 = Zip Plus 4  49 = Address  55 = Year Built  59 = Status Change Date  62 = Additional Public Remarks  63 = Additional Parcel Y/N  77 = Property Style  79 = Net Leasable Sq.Ft.  80 = Sq.Ft. Gross  86 = Property Use  104 = Taxes  106 = Entry Date  108 = Listing Date  112 = Last Update Date  138 = Office ID #  140 = Sold Office ID  143 = Str. Dir. Pre  151 = Front Footage  165 = Street #  174 = Legal Description  175 = ML# (w/Board ID)  176 = List Price  178 = Status  182 = Lot #  204 = Public Remarks  216 = Ceiling Height  283 = Net Operating Income  384 = Road Frontage  391 = Sold Price  406 = Sold Date  421 = Street Name  425 = Subdivision #  432 = Floors #  443 = Total Num Bldg  465 = Contract Status  466 = Realtor Info  468 = Lease Terms  473 = Location  475 = Utilities  486 = Heating and Fuel  487 = Air Conditioning  488 = Exterior Construction  490 = Roof  491 = Parking  499 = Electrical Service  2292 = Str. Dir. Post  2298 = Price Change Date  2300 = Driving Directions  2302 = City  2304 = State ID  2306 = Street Type  2308 = Lease Rate  2316 = Complex/Community Name/NCCB  2320 = Zoning  2322 = Lot Dimensions  2326 = Square Foot Source  2328 = Total Acreage  2334 = Listing Type  2338 = Trans Broker Comp  2340 = Buyer Agent Comp  2344 = Non-Rep Comp  2346 = Sq Ft Heated  2368 = Office Name  2386 = Sell Agent Name  2390 = Sell Office Name  2455 = List Agent 2 ID  2497 = Virtual Tour Link  2606 = List Agent 2 Name  2612 = Virtual Tour  2620 = Office Primary Board ID  2622 = Lot Size [SqFt]  2624 = Lot Size [Acres]  2632 = # of Add Parcels  2644 = # of Hotel/Motel Rms  2646 = # of Bays  2648 = # of Restrooms  2650 = # of Offices  2652 = Converted Residence Y/N  2654 = Freezer Space Y/N  2664 = Leased Amount  2708 = MLS Area - Zip  2759 = LastImgTransDate  2763 = LP/SqFt  2765 = SP/SqFt  2769 = ADOM  2779 = Area (Range)  2781 = Sales Team Name  2826 = Availability  2828 = Easements  2935 = LSC List Side  2951 = Property Status  2952 = Class of Space  2953 = Space Type  2955 = Rent Concession  2956 = Existing Lease Buyout Allow  2991 = Selling Agent 2 ID  2992 = Listing Office 2 ID #  2993 = Selling Office 2 ID  2995 = Listing Office 2 Name  2996 = Selling Office 2 Name  2999 = Lease Price per SF  3000 = Lease Price Per Yr  3001 = Length of Lease  3002 = CAM Per Sq Ft  3005 = Lease Remarks  3010 = Show Prop Address on Internet  3011 = Water View  3020 = Selling Agent 2 Name  3022 = Waterfront Feet  3048 = LSC Sell Side  3062 = Special Sale Provision  3063 = Water Access Y/N  3064 = Water View Y/N  3065 = Water Frontage Y/N  3066 = Water Extras Y/N  3067 = Water Frontage  3068 = Water Access  3075 = Pets Allowed Y/N  3076 = Pet Restrictions  3077 = Study/Den Dimensions  3078 = Country  3084 = New Construction  3086 = Projected Completion Date  3109 = Complex/Development Name  3162 = Financing Terms  3163 = Net Operating Income Type  3187 = Public Remarks New | sysid = sysid  1 = Property Type  3 = Record Delete Flag  4 = Record Delete Date  5 = Last Transaction Code  9 = Photos, Number of  15 = Tax ID  17 = Agent ID  18 = Selling Agent ID  19 = County  33 = CDOM  35 = Agent Name  46 = Zip Code  47 = Zip Plus 4  49 = Address  55 = Year Built  59 = Status Change Date  106 = Entry Date  108 = Listing Date  112 = Last Update Date  138 = Office ID #  140 = Sold Office ID  143 = Str. Dir. Pre  165 = Street #  175 = ML# (w/Board ID)  176 = List Price  178 = Status  391 = Sold Price  406 = Sold Date  421 = Street Name  504 = Additional Public Remarks  505 = Additional Parcel Y/N  507 = Annual Gross Income  519 = Property Style  520 = Building Name/Number  545 = Taxes  564 = Efficiency Avg Rent  566 = Efficiencies-Number Of  567 = Elementary School  588 = HOA Fee  590 = High School  595 = Middle or Junior School  602 = Legal Description  607 = Lot #  627 = Public Remarks  641 = 1 Bed/1 Bath Avg Rent  646 = 1 Bed/1 Bath #  649 = 2 Bed/1 Bath Avg Rent  654 = 2 Bed/1 Bath #  657 = 2 Bed/2 Bath Avg Rent  662 = 2 Bed/2 Bath #  668 = 3 Bed/1 Bath Avg Rent  673 = 3 Bed/1 Bath #  676 = 3 Bed/2 Bath Avg Rent  681 = 3 Bed/2 Bath #  709 = Total Units  816 = Security Deposit  830 = Special Listing Type  840 = Subdivision #  853 = Total Monthly Rent  855 = Total Monthly Expenses  858 = Total # Buildings  879 = Financing Available  881 = Realtor Info  883 = Lease Terms  886 = Architectural Style  887 = Additional Rooms  888 = Location  890 = Utilities  892 = Water Extras  893 = Fireplace Description  894 = Master Bath Features  895 = Interior Layout  896 = Interior Features  897 = Kitchen Features  898 = Appliances Included  899 = Floor Covering  901 = Heating and Fuel  902 = Air Conditioning  903 = Exterior Construction  904 = Exterior Features  905 = Roof  906 = Garage Features  907 = Pool Type  913 = Community Features  2292 = Str. Dir. Post  2298 = Price Change Date  2300 = Driving Directions  2302 = City  2304 = State ID  2306 = Street Type  2308 = Lease Rate  2314 = Legal Subdivision Name  2316 = Complex/Community Name/NCCB  2320 = Zoning  2322 = Lot Dimensions  2326 = Square Foot Source  2328 = Total Acreage  2334 = Listing Type  2338 = Trans Broker Comp  2340 = Buyer Agent Comp  2344 = Non-Rep Comp  2346 = Sq Ft Heated  2350 = Water Name  2352 = Private Pool Y/N  2368 = Office Name  2386 = Sell Agent Name  2390 = Sell Office Name  2455 = List Agent 2 ID  2497 = Virtual Tour Link  2606 = List Agent 2 Name  2620 = Office Primary Board ID  2622 = Lot Size [SqFt]  2624 = Lot Size [Acres]  2688 = Annual Net Income  2694 = Num of Add Parcels  2698 = Property Description  2708 = MLS Area - Zip  2759 = LastImgTransDate  2763 = LP/SqFt  2765 = SP/SqFt  2769 = ADOM  2779 = Area (Range)  2781 = Sales Team Name  2793 = Annual CDD Fee  2795 = CDD Y/N  2801 = Fireplace Y/N  2805 = Garage/Carport  2809 = Homestead Y/N  2823 = Special Tax Dist.Y/N (Tampa  2836 = Sidewalk Y/N  2854 = Unit #  2901 = HOA Payment Schedule  2935 = LSC List Side  2983 = SW Subdv Community Name  2984 = SW Subdv Condo #  2991 = Selling Agent 2 ID  2992 = Listing Office 2 ID #  2993 = Selling Office 2 ID  2995 = Listing Office 2 Name  2996 = Selling Office 2 Name  3010 = Show Prop Address on Internet  3011 = Water View  3015 = Green Certifications  3020 = Selling Agent 2 Name  3022 = Waterfront Feet  3036 = Housing for Older Persons  3048 = LSC Sell Side  3062 = Special Sale Provision  3063 = Water Access Y/N  3064 = Water View Y/N  3065 = Water Frontage Y/N  3066 = Water Extras Y/N  3067 = Water Frontage  3068 = Water Access  3074 = HOA/Comm Assn  3075 = Pets Allowed Y/N  3076 = Pet Restrictions  3077 = Study/Den Dimensions  3078 = Country  3079 = Max Pet Weight  3081 = # of Pets  3084 = New Construction  3085 = Construction Status  3086 = Projected Completion Date  3165 = DPR Y/N  3186 = Pool  3187 = Public Remarks New | sysid = sysid  1 = Property Type  3 = Record Delete Flag  4 = Record Delete Date  5 = Last Transaction Code  9 = Photos, Number of  11 = Original List Price  15 = Tax ID  17 = Agent ID  18 = Selling Agent ID  19 = County  32 = Beds  33 = CDOM  35 = Agent Name  46 = Zip Code  47 = Zip Plus 4  49 = Address  55 = Year Built  59 = Status Change Date  106 = Entry Date  108 = Listing Date  112 = Last Update Date  138 = Office ID #  140 = Sold Office ID  143 = Str. Dir. Pre  165 = Street #  175 = ML# (w/Board ID)  178 = Status  391 = Sold Price  406 = Sold Date  421 = Street Name  918 = Active Status Date  919 = Additional Public Remarks  927 = Application Fee Per Person  931 = Date Available  934 = Property Style  982 = Elementary School  1005 = High School  1010 = Middle or Junior School  1042 = Public Remarks  1055 = Max Pet Weight  1117 = Minimum Days Leased  1139 = Garage/Carport  1213 = Pet Deposit  1215 = Pet Fee  1231 = Security Deposit  1248 = Long Term Y/N  1296 = Realtor Info  1302 = Additional Rooms  1303 = Location  1307 = Water Extras  1310 = Interior Layout  1314 = Floor Covering  1316 = Heating and Fuel  1317 = Air Conditioning  1321 = Garage Features  1328 = Community Features  2292 = Str. Dir. Post  2294 = Full Baths  2296 = Half Baths  2298 = Price Change Date  2300 = Driving Directions  2302 = City  2304 = State ID  2306 = Street Type  2314 = Legal Subdivision Name  2316 = Complex/Community Name/NCCB  2322 = Lot Dimensions  2346 = Sq Ft Heated  2350 = Water Name  2352 = Private Pool Y/N  2364 = Rent Price Per Month  2368 = Office Name  2386 = Sell Agent Name  2390 = Sell Office Name  2455 = List Agent 2 ID  2497 = Virtual Tour Link  2606 = List Agent 2 Name  2620 = Office Primary Board ID  2622 = Lot Size [SqFt]  2624 = Lot Size [Acres]  2704 = Assoc Appr Req Y/N  2708 = MLS Area - Zip  2759 = LastImgTransDate  2763 = LP/SqFt  2765 = SP/SqFt  2769 = ADOM  2779 = Area (Range)  2781 = Sales Team Name  2805 = Garage/Carport  2840 = Appliances Included  2842 = Floor # of Unit  2844 = Lease Fee  2846 = Lease Paid  2848 = Lease Terms  2850 = Services Include  2854 = Unit #  2893 = Fireplace Y/N  2895 = Fireplace Description  2935 = LSC List Side  2981 = Pool Type  2983 = SW Subdv Community Name  2984 = SW Subdv Condo #  2991 = Selling Agent 2 ID  2992 = Listing Office 2 ID #  2993 = Selling Office 2 ID  2995 = Listing Office 2 Name  2996 = Selling Office 2 Name  3008 = Rented Furnish Info  3010 = Show Prop Address on Internet  3011 = Water View  3013 = # of Pets  3014 = Pet Size  3015 = Green Certifications  3020 = Selling Agent 2 Name  3022 = Waterfront Feet  3026 = Subdivision Section Number  3027 = Total Building SF  3036 = Housing for Older Persons  3048 = LSC Sell Side  3063 = Water Access Y/N  3064 = Water View Y/N  3065 = Water Frontage Y/N  3066 = Water Extras Y/N  3067 = Water Frontage  3068 = Water Access  3074 = HOA/Comm Assn  3075 = Pets Allowed Y/N  3076 = Pet Restrictions  3077 = Study/Den Dimensions  3078 = Country  3084 = New Construction  3085 = Construction Status  3086 = Projected Completion Date  3152 = Association Application Fee  3153 = Mandatory Fees  3156 = Disclosures  3157 = Master Bed Size  3158 = Window Coverings  3159 = Lease Information  3186 = Pool  3187 = Public Remarks New |

|  |  |  |
| --- | --- | --- |
| Class 4 – Residential Property | Class 5 - Lots and Land | Class 6 – Cross Property |
| sysid = sysid  1 = Property Type  3 = Record Delete Flag  4 = Record Delete Date  5 = Last Transaction Code  9 = Photos, Number of  15 = Tax ID  17 = Agent ID  18 = Selling Agent ID  19 = County  32 = Beds  33 = CDOM  35 = Agent Name  46 = Zip Code  47 = Zip Plus 4  49 = Address  55 = Year Built  59 = Status Change Date  106 = Entry Date  108 = Listing Date  112 = Last Update Date  138 = Office ID #  140 = Sold Office ID  143 = Str. Dir. Pre  165 = Street #  175 = ML# (w/Board ID)  176 = List Price  178 = Status  391 = Sold Price  406 = Sold Date  410 = Sold Agent ID  421 = Street Name  1334 = Additional Public Remarks  1335 = Additional Parcel Y/N  1349 = Property Style  1350 = Building Name/Number  1354 = Bonus Room (Approx.)  1368 = Minimum Lease  1374 = # Times per Year  1375 = Taxes  1381 = Dining Room (Approx.)  1384 = Dinette (Approx.)  1397 = Elementary School  1405 = Family Room (Approx.)  1415 = Living Room (Approx.)  1418 = HOA Fee  1420 = High School  1425 = Middle or Junior School  1426 = Kitchen (Approx.)  1432 = Legal Description  1437 = Lot #  1455 = Model/Make  1457 = Public Remarks  1466 = Master Bedroom (Approx.)  1495 = 2nd Bedroom (Approx.)  1514 = 3rd Bedroom (Approx.)  1518 = 4th Bedroom (Approx.)  1522 = 5th Bedroom (Approx.)  1660 = Special Listing Type  1670 = Subdivision #  1709 = Financing Available  1711 = Realtor Info  1716 = Architectural Style  1717 = Additional Rooms  1718 = Location  1720 = Utilities  1722 = Water Extras  1723 = Fireplace Description  1724 = Master Bath Features  1725 = Interior Layout  1726 = Interior Features  1727 = Kitchen Features  1728 = Appliances Included  1729 = Floor Covering  1731 = Heating and Fuel  1732 = Air Conditioning  1733 = Exterior Construction  1734 = Exterior Features  1735 = Roof  1736 = Garage Features  1737 = Pool Type  1739 = Foundation  1743 = Community Features  2292 = Str. Dir. Post  2294 = Full Baths  2296 = Half Baths  2298 = Price Change Date  2300 = Driving Directions  2302 = City  2304 = State ID  2306 = Street Type  2314 = Legal Subdivision Name  2316 = Complex/Community Name/NCCB  2320 = Zoning  2322 = Lot Dimensions  2326 = Square Foot Source  2328 = Total Acreage  2334 = Listing Type  2338 = Trans Broker Comp  2340 = Buyer Agent Comp  2344 = Non-Rep Comp  2346 = Sq Ft Heated  2350 = Water Name  2352 = Private Pool Y/N  2362 = Lot Size  2368 = Office Name  2386 = Sell Agent Name  2390 = Sell Office Name  2455 = List Agent 2 ID  2497 = Virtual Tour Link  2606 = List Agent 2 Name  2620 = Office Primary Board ID  2622 = Lot Size [SqFt]  2624 = Lot Size [Acres]  2708 = MLS Area - Zip  2759 = LastImgTransDate  2763 = LP/SqFt  2765 = SP/SqFt  2769 = ADOM  2779 = Area (Range)  2781 = Sales Team Name  2789 = Balcony/Porch/Lanai (Approx)  2791 = Building # Floors  2793 = Annual CDD Fee  2795 = CDD Y/N  2797 = Condo Floor #  2801 = Fireplace Y/N  2803 = Floors in Unit  2805 = Garage/Carport  2809 = Homestead Y/N  2811 = Maintenance Includes  2813 = Max Pet Weight  2819 = Property Description  2823 = Special Tax Dist.Y/N (Tampa  2854 = Unit #  2856 = Total Units  2879 = MH Width  2899 = Mo.Maint.$(addition to HOA)  2901 = HOA Payment Schedule  2935 = LSC List Side  2945 = Studio Dimensions  2983 = SW Subdv Community Name  2991 = Selling Agent 2 ID  2992 = Listing Office 2 ID #  2993 = Selling Office 2 ID  2995 = Listing Office 2 Name  2996 = Selling Office 2 Name  3010 = Show Prop Address on Internet  3011 = Water View  3015 = Green Certifications  3020 = Selling Agent 2 Name  3021 = Great Room (Approx.)  3022 = Waterfront Feet  3026 = Subdivision Section Number  3027 = Total Building SF  3036 = Housing for Older Persons  3048 = LSC Sell Side  3062 = Special Sale Provision  3063 = Water Access Y/N  3064 = Water View Y/N  3065 = Water Frontage Y/N  3066 = Water Extras Y/N  3067 = Water Frontage  3068 = Water Access  3074 = HOA/Comm Assn  3075 = Pets Allowed Y/N  3076 = Pet Restrictions  3077 = Study/Den Dimensions  3078 = Country  3080 = # of Pets  3084 = New Construction  3085 = Construction Status  3086 = Projected Completion Date  3146 = Planned Unit Development  3147 = HERS Index  3148 = Flood Zone Code  3149 = Land Lease Fee  3165 = DPR Y/N  3186 = Pool  3187 = Public Remarks New | sysid = sysid  1 = Property Type  3 = Record Delete Flag  4 = Record Delete Date  5 = Last Transaction Code  9 = Photos, Number of  11 = Original List Price  15 = Tax ID  17 = Agent ID  18 = Selling Agent ID  19 = County  33 = CDOM  35 = Agent Name  46 = Zip Code  47 = Zip Plus 4  49 = Address  59 = Status Change Date  106 = Entry Date  108 = Listing Date  112 = Last Update Date  138 = Office ID #  140 = Sold Office ID  143 = Str. Dir. Pre  165 = Street #  175 = ML# (w/Board ID)  176 = List Price  178 = Status  391 = Sold Price  406 = Sold Date  421 = Street Name  1749 = Additional Public Remarks  1750 = Additional Parcel Y/N  1764 = Property Style  1790 = Taxes  1812 = Elementary School  1815 = Easements  1823 = For Lease Y/N  1825 = Front Footage  1827 = For Sale Y/N  1833 = HOA Fee  1835 = High School  1840 = Middle or Junior School  1847 = Legal Description  1852 = Lot #  1857 = Lease Price Per Acre  1872 = Public Remarks  1968 = Price Per Acre  2075 = Special Listing Type  2085 = Subdivision #  2124 = Financing Available  2126 = Realtor Info  2128 = Lease Terms  2133 = Location  2134 = Fences  2135 = Utilities  2137 = Water Extras  2158 = Community Features  2292 = Str. Dir. Post  2298 = Price Change Date  2300 = Driving Directions  2302 = City  2304 = State ID  2306 = Street Type  2308 = Lease Rate  2314 = Legal Subdivision Name  2316 = Complex/Community Name/NCCB  2320 = Zoning  2322 = Lot Dimensions  2328 = Total Acreage  2334 = Listing Type  2338 = Trans Broker Comp  2340 = Buyer Agent Comp  2344 = Non-Rep Comp  2350 = Water Name  2368 = Office Name  2386 = Sell Agent Name  2390 = Sell Office Name  2455 = List Agent 2 ID  2497 = Virtual Tour Link  2606 = List Agent 2 Name  2620 = Office Primary Board ID  2622 = Lot Size [SqFt]  2624 = Lot Size [Acres]  2666 = Num of Add Parcels  2678 = Site Improvements  2708 = MLS Area - Zip  2759 = LastImgTransDate  2769 = ADOM  2779 = Area (Range)  2781 = Sales Team Name  2793 = Annual CDD Fee  2795 = CDD Y/N  2838 = Road Frontage  2883 = Availability  2901 = HOA Payment Schedule  2935 = LSC List Side  2983 = SW Subdv Community Name  2984 = SW Subdv Condo #  2991 = Selling Agent 2 ID  2992 = Listing Office 2 ID #  2993 = Selling Office 2 ID  2995 = Listing Office 2 Name  2996 = Selling Office 2 Name  3010 = Show Prop Address on Internet  3011 = Water View  3020 = Selling Agent 2 Name  3022 = Waterfront Feet  3026 = Subdivision Section Number  3048 = LSC Sell Side  3062 = Special Sale Provision  3063 = Water Access Y/N  3064 = Water View Y/N  3065 = Water Frontage Y/N  3066 = Water Extras Y/N  3067 = Water Frontage  3068 = Water Access  3074 = HOA/Comm Assn  3075 = Pets Allowed Y/N  3076 = Pet Restrictions  3078 = Country  3165 = DPR Y/N  3187 = Public Remarks New | sysid = sysid  1 = Property Type  59 = Status Change Date  109 = Expiration Date  112 = Last Update Date  175 = ML# (w/Board ID)  178 = Status  300 = Contract Date  406 = Sold Date  2429 = IDX Y/N  2852 = Temporary Off-Market Date  2887 = Withdrawn Date  3044 = Internet Y/N  3187 = Public Remarks New |

My Florida Homes MLS publishes a webservice for photo urls and other items at http://myfloridahomesmls.com/MyAjaxService.asmx

**Request**: Source=MFR&SysID=40217156

POST /MyAjaxService.asmx HTTP/1.1

Host: myfloridahomesmls.com

Content-Type: text/xml; charset=utf-8

Content-Length: length

SOAPAction: "http://tempuri.org/GetAuxPhotos"

<?xml version="1.0" encoding="utf-8"?>

<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">

<soap:Body>

<GetAuxPhotos xmlns="http://tempuri.org/">

<Source>MFR</Source>

<SysID>50217156</SysID>

</GetAuxPhotos>

</soap:Body>

</soap:Envelope>

**Response:**

HTTP/1.1 200 OK

Content-Type: text/xml; charset=utf-8

Content-Length: length

<?xml version="1.0" encoding="utf-8"?>

<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">

<soap:Body>

<GetAuxPhotosResponse xmlns="http://tempuri.org/">

<GetAuxPhotosResult>

<string>string</string>

<string>string</string>

</GetAuxPhotosResult>

</GetAuxPhotosResponse>

</soap:Body>

</soap:Envelope>

##### User Interface

Listings are embedded within the property details page and a subject to IDX rules. Key rules can be summarized as follows. Listing must:

1. Identify the listing firm or broker.
2. Show MLS as the source of information.
3. Include usage terms and conditions text specified by the MLS.
4. Display IDX icons.
5. Display no more than 15 listings per page.
6. Not display expired or pending sale listings

#### 4. Preconditions and Assumptions

Need to create and configure a database access control list for each RETS server.

#### 5. Limitations

#### 6. Dependencies and Impact Analysis

RETS 1.0 requests use digest-auth authentication. UTL\_HTTP does not support digest-auth. We will need to write our own digest-auth client.

#### 7. Known issues

### User Interface Requirements

Include the following disclosures and disclaimers on each display page that shows information from the Brevard MLS:

* “The data relating to real estate for sale on this web site comes in part from the Broker Reciprocity™ Program of Brevard County, Florida. Real estate listings held by brokerage firms other than [insert your firm’s name here] are marked with the Broker Reciprocity™ logo or the Broker Reciprocity™ thumbnail logo (a little black house) and detailed information about them includes the name of the listing brokers.”
* Site must display a disclosure indicating that data from other BRSs is “deemed reliable but not guaranteed.”
* “Copyright nnnn Multiple Listing Service of South Brevard, Inc. and Space Coast Association of REALTORS, Inc. All rights reserved.” [Where nnnn is the current year.]
* “Visulate participates in the Brevard County Broker Reciprocity™ program, allowing us to display other broker’s listings on our site. “Visulate does not display the entire Brevard County Broker Reciprocity™ database on this web site. The listings of some real estate brokerage firms have been excluded.”
* “Data last updated: xx/xx/xx”

### Performance Requirements

Inclusion of MLS data must not introduce a noticeable delay in the time taken to present each page. The total processing time for the batch program that replicates data from MLS and stores in the Visulate database must not exceed 6 hours.

## Design

### Data Model

#### Schema Changes

Create 3 new tables:

* MLS\_RETS\_RESPONSES – Stores the raw response from a RETS request
* MLS\_LISTINGS – Stores the processed response
* MLS\_PHOTOS – Stores the URLs for photos associated with the listing.

#### 

#### Seed Data

Create an ACL for the RNTMGR user and register rets.offutt-innovia.com:8080

#### Data Upgrade

grant execute on dbms\_crypto to rntmgr; Needed for use by the digest auth implementation.

### Code

#### APIs

Write a RETS client in PL/SQL. Write a separate package that uses this client to perform the following features:

1. Assemble a list of participating brokers and write them to a database table.
2. Update the broker list periodically.
3. Read active listings and store the result in MLS\_RETS\_RESPONSES
4. Read responses from MLS\_RETS\_RESPONSES and write to MLS\_LISTINGS
   1. Read a row.
   2. Verify the record is IDX enabled.
   3. Identify the corresponding property based on the Tax ID.
   4. Insert or update MLS\_LISTINGS as required.
   5. Insert or update MLS\_PHOTOS as required.
5. Implement separate mapping rules for ResidentialProperty, CommercialProperty, IncomeProperty, VacantLand and Rental listings. See table below.
6. Generate latest listings report for display on home page.
7. Generate processing summary report for debugging failed updates.

##### Brevard MLS\_LISTINGS

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| MLS\_LISTING | ResidentialProperty | CommercialProperty | IncomeProperty | VacantLand | Rental |
| MLS\_NUMBER | ListingID | ListingID | ListingID | ListingID | ListingID |
| QUERY\_TYPE | ResidentialProperty | CommercialProperty | IncomeProperty | VacantLand | Rental |
| LISTING\_TYPE | ‘Sale’ | SaleLease | ‘Sale’ | ‘Sale’ | ‘Rent’ |
| LISTING\_STATUS |  |  |  |  |  |
| PRICE | ListPrice | ListPrice  LeaseType | ListPrice | ListPrice | ListPrice  ’/month’ |
| IDX\_YN | IDX|OfficeIDX | IDX|OfficeIDX | IDX|OfficeIDX | IDX|OfficeIDX | IDX|OfficeIDX |
| LISTING\_BROKER | OriginalListingFirmName | OriginalListingFirmName | ListingOfficeUID | ListingOfficeUID | ListingOfficeUID |
| LISTING\_DATE | ListDate | ListDate | ListDate | ListDate | ListDate |
| SHORT\_DESC | SqFtLivingArea  Bedrooms  BathsTotal  BathsHalf | SqFtTotal  PropertyType | SqFtLivingArea  PropertyType | Area  PropertyUse | Bedrooms  BathsTotal  BathsHalf  RentalPropertyType  SqFtLivingArea |
| LINK\_TEXT | ADDRESS1  PRICE | ADDRESS1  PRICE | ADDRESS1  PRICE | ADDRESS1  PRICE | ADDRESS1  PRICE |
| DESCRIPTION | PublicRemarks  ShortSaleYN  OwnerBankCorporationYN  OriginalListPrice  Parking  PoolPresent  VirtualTourURL  OwnerWillConsider | PublicRemarks  ShortSaleYN  OwnerBankCorporationYN  CurrentUse  SiteImprovements  InteriorImprovements  AssumableLoanYN  OriginalListPrice | PublicRemarks  ShortSaleYN  OwnerBankCorporationYN  OriginalListPrice  OwnerWillConsider | PublicRemarks  ShortSaleYN  OwnerBankCorporationYN  OwnerWillConsider  UtilitiesAndFuel  PreviousListPrice | PublicRemarks  AnimalsPermitted  LeaseTerms  PetFeeAmount  Parking  OriginalListPrice  EquipmentAndAppliances  ApplicationFeeAmount |
| LAST\_ACTIVE | SYSDATE | SYSDATE | SYSDATE | SYSDATE | SYSDATE |

##### MLS\_PHOTOS

Read PhotoCount from RETS response and assemble url in the form:

http://www.brevardmls.com/brv/jpg#/xxx/mls\_xxx.jpg - e.g.

* http://www.brevardmls.com/brv/jpg7/449/625449.jpg

Numbers start from 2 main image has no number.

* <http://www.brevardmls.com/brv/jpg/449/625449.jpg>

##### MLS\_BROKERS

Query to get list of active brokers:

<http://rets.offutt-innovia.com:8080/brv/Search?SearchType=Office&Class=Office&Format=COMPACT-DECODED&QueryType=DQML2&Query=(OfficeStatus=A)&Select=OfficeUID>,Name, OfficePhone,URL

Available values:

* StreetAdditionalInfo
* Fax
* OfficeUID
* City
* Name
* PostalCode
* OfficePhone
* ListingServiceName
* Email
* OfficeStatus = A|I|P
* OfficeID
* URL
* ModificationTimestamp
* StreetAddress
* StateOrProvince
* FirmID

Join OfficeUID to listing ListingOfficeUID

#### Non-API Code Changes

1. Modify visulate\_search.php to display listings on the property report page
2. Modify visulate\_search.php to include a new listing news report.

### User Interface

## Test Plans