

Dear RETS Customer,

The following Associations use Matrix for their MLS software system and this is collectively known as Ontario Regional Technology Information System (ORTIS).

1. Brantford
2. Cambridge
3. Guelph
4. Kitchener/Waterloo
5. Niagara
6. Oakville/Milton
7. Simcoe
8. Barrie
9. Huron-Perth
10. Mississauga

There is an associated RETS server and schema. Please read this document completely as it will answer all of your questions about how to retrieve data from RETS.

IDs and URL

Please confirm with your Association which ID and password you should be using.

IDs and passwords are case sensitive with Matrix RETS.

A User Agent is not necessary to use Matrix RETS. If your software needs one, just leave what you had before.

The URL for the new Matrix RETS server is: <https://matrixrets.onregional.ca/rets/Login.ashx>

Data Overview

The listing data is a general pool of data of all board systems merged into one. There is only one resulting schema that applies to all current boards. Below is a synopsis of key points to know about this schema. It's best to use the metadata from the server to see all the data tables, fields (and associated data types) and lookup values.

Unique ID

In Matrix, **Matrix_Unique_ID (MUI)** exists in every class/resource as the unique key identifier field. Do not use MLS Number as that may not be unique or may change depending upon the MLS. The MUI is the primary key in the database and will never change.

See the section below called **Downloading the Entire Set of Listings** for the best way to obtain all listings from the Matrix RETS server.

Matrix_Unique_ID (MUI) is the unique id for each record. If there is a relationship between two resources, you will see another ID that would relate to it with MUI in its name. Example:

OpenHouse

- Matrix_Unique_ID = unique id within Open House data
- Listing_MUI = MUI to the listing resource (cross property).

Listing

- Matrix_unique_ID = unique id within listing data

The join needed to find the data would be OpenHouse.Listing_MUI = Listing.Matrix_Unique_ID.

The same type of logic would be used for other relationships.

- Rooms.Listing_MUI = Listing.Matrix_Unique_ID
- Listing.ListAgent_MUI = Agent.Matrix_Unique_ID
- Media.Table_MUI = Listing.Matrix_Unique_ID (media is where photos are stored)

Classes

ORTIS Matrix system **has just one Class - Cross Property**. To filter the information, use the field called **Property Type**. More information about Property Type and other fields that help classify data is discussed below.

Property Types

Property Type in ORTIS is a database field, not a class. In Matrix, there will be five Property Types. A Property Sub Type can be used as well. Also, a Transaction Type has been added to distinguish between Rental/Lease and Sale listings. These changes were made to allow more flexibility with searching for listings, especially across property types. Below is a list of the options available.

- Single Family
 - Property Sub Type
 - Freehold
 - Condominium
- Land
 - Property Sub Type
 - Residential
 - Commercial
- Multi-Family
 - Property Sub Type
 - 3 Units
 - 4 Units
 - 5 Units
 - 6-11 Units
 - 12 + Units
 - Apartment Complex
 - Bed and Breakfast

Commercial Apartments
Duplex - Side/Side
Duplex - Up/Down
Licensed Dwelling
Rooming House
Row Housing

- Commercial

- Property Sub Type

- Industrial
 - Investment
 - Land
 - Office
 - Retail
 - Sale of Business
 - Store with Apartment/Office

- Farm

- Property Sub Type

- Agricultural
 - Agricultural in City Limits
 - Other

- Cross Property

- Property Sub Type

- 3 Units
 - 4 Units
 - 5 Units
 - 6-11 Units
 - 12 + Units
 - Agricultural
 - Agricultural in City Limits
 - Apartment Complex
 - Bed and Breakfast
 - Commercial
 - Commercial Apartments
 - Condominium
 - Duplex - Side/Side
 - Duplex - Up/Down
 - Freehold
 - Industrial
 - Investment
 - Land
 - Licensed Dwelling

Office
Other
Residential
Retail
Rooming House
Row Housing
Sale of Business
Store with Apartment/Office

Transaction Type

Within each property type, there is a transaction type to indicate if the listing is for sale, lease or sublease.

- Sale
- Lease/Rent
- Sub-lease

Status

In Matrix, the following Statuses will be available:

Active (A)
Active – Conditional Sale (ACS)
Conditional – No Show – (ANS)
Sold Pending (P)
Suspended (S)
Expired (X)
Sold Closed (S)
Cancelled (C)

Rooms

In other MLS Systems, the information about Rooms are often flattened out in each listing and limits the system to only track information about a certain number of rooms. Rooms in Matrix are considered a separate data set and are unlimited in number of rooms due to this.

Matrix_Unique_ID (MUI) is the unique id for each record. If there is a relationship between two resources, you will see another ID that would relate to it with MUI in its name. For rooms, the relationship is Rooms.Listing_MUI = Listing.Matrix_Unique_ID

Below is the structure of the Rooms. Both the imperial and metric measurements are included. You may choose either for your purposes as both will be populated.

- Room Type (i.e. Kitchen, Bedroom)
- Room Level (upper, main, lower)
- Room Features (skylight, etc.)
- Dimensions – L x W x H that will be auto-filled from the information entered below
- Dimensions Meter – L x W x H that will be auto-filled from the information entered below
- Measurement Type (Imperial or Metric)
- Height Feet
- Height Inches
- Height Meter
- Length Feet
- Length Inches
- Length Meter
- Width Feet
- Width Inches
- Width Meter

Media

Media contains all images or documents stored in a Matrix system. They can relate to listings or to other resources.

For media and listings, the relationship is `Media.Table_MUI = Listing.Matrix_Unique_ID`.

There is a field called `PhotoCount` in the listing tables that indicates the number of photos for that particular listing.

We have added a field to the listings called `PhotoModificationTimestamp`. This field contains a modification timestamp for the photos for a listing. So if any new pictures are added, removed or replaced the listing's `PhotoModificationTimestamp` would be changed as well as the `MatrixModifiedDT`.

You can pull photo updates for listings using a similar method for pulling listing updates, but instead of using `MatrixModifiedDT` you can `PhotoModificationTimestamp`. When listings have a newer `PhotoModificationTimestamp`, you need to download the photos for that listing. Alternatively, you could use a different method whereby when you download updates for a listing, you can compare the old `PhotoModificationTimestamp` with the new one. If they differ, re-download the photos for that listing. This method works because the `MatrixModifiedDT` is updated at the same time as the `PhotoModificationTimestamp`.

The same exists for Supplements. There are `SupplementCount` and `SupplementModificationTimestamp` fields, so it can be determined if new or changed supplements are available. Not all RETS User Classes have the supplements available for download.

If agent photos are available, there is also a relationship of `Media.Table_MUI = Agent.Matrix_Unique_ID`. Agent photos have an Object Type of Agent. If Agent Photos exist, there will be a `PhotoModificationTimestamp` in the Agent records similar to the one noted above for listings.

Only one photo per Agent is stored.

See the section below on **Downloading Photos** for specifics on how to obtain all media images.

Below are frequently asked questions regarding the Media resource.

- How do I obtain the largest resolution images? Use the Object Type of Large Photo.
- Do I have the ability to directly link to the images on your server opposed to downloading the images to my local server? No, you must download the media to your server.
- How many photos are allowed per listing? The limit is 50 with Matrix.
- What is the best way to download photos? See the section below called Downloading Photos

Downloading the Entire Set of Listings

There is a limit of 5,000 records that can be downloaded at one time with Matrix RETS. You can use the Offset feature if you have the need to obtain more than 5,000 records. Below is what is recommended for you to do to populate the initial load:

1. Take note of the time that you start this process - it will be used later.
2. Use a query of (matrix_unique_id = 0+)&Limit=1000
3. Retrieve all those listings
4. Find the highest matrix_unique_id from those listings
5. Create a new query with (matrix_unique_id=<HighestID from step 4>+)&Limit=1000
6. Repeat from Start step 3 until you receive all listings.
7. The general download of listings using the dt_mod equal to the date you got in step 1. This makes sure to get any changes you may have missed while getting the entire set of listings.

This process works because all of our output is ordered by the primary key, the Matrix_unique_Id field. The RETS spec does not allow a client to specify an order.

Matrix RETS servers will have only one property resource called Cross Property. Typically, fields such as PropertyType, PropertySubType and TransactionType will indicate if a listing is Residential, Commercial or a Rental. See above as to what data fields are used to identify these key fields.

Downloading Photos

Matrix does not provide URLs to the photos, they must be downloaded. Downloading photos in RETS is performed through the GetObject request. Here is an example of the GetObject request to get an image for a property. It is a sample of the code to retrieve an actual photo.

<http://rets.hgmls.mlsmatrix.com/rets/GetObject.ashx?Type=Photo&Resource=Property&ID=269251:0>

The ID portion of the parameters (ID=269251:0) has two parts.

- The 269251 is the Matrix_Unique_ID of the listing, our primary key, as noted in the METADATA-RESOURCE. It is not the MLS number. This has caught other users in the past.
- The “:0” of the ID is used to get the primary picture.
 - A “:1” will get you the first picture, which on our system is the primary picture, so in effect, :0 and :1 are equivalent.
 - Using “:2” will give you the second picture.
 - If you use a “:*” you will receive a multipart response which contains all of the images for that property.

There is no request in RETS to simply ask for ALL of the images.

Note: As mentioned above, there is a field called PhotoCount in the listing tables that indicates the number of photos for that particular listing.

There is also a field called PhotoModificationTimestamp, which contains the modification timestamp for the photos for a listing. So, if any new pictures are added, removed or replaced the listing’s PhotoModificationTimestamp would be changed as well as the MatrixModifiedDT.

You can pull photo updates for listings using a similar method for pulling listing updates, but instead of using MatrixModifiedDT you can PhotoModificationTimestamp. When listings have a newer PhotoModificationTimestamp, you need to download the photos for that listing.

Alternatively, you could use a different method whereby when you download updates for a listing, you can compare the old PhotoModificationTimestamp with the new one. If they differ, re-download the photos for that listing. This method works because the MatrixModifiedDT is updated at the same time as the PhotoModificationTimestamp.

If available for your RETS User Class, the same field exists for Supplements/Attachments. There is a SupplementCount and SupplementModificationTimestamp available so it can be determined if new or changed supplements are available.

If agent photos are available, there is also a relationship of Media.Table_MUI = Agent.Matrix_Unique_ID. Agent photos have an Object Type of Agent. If Agent Photos exist, there will be a PhotoModificationTimestamp in the Agent records similar to the one noted above for listings. Only one photo per Agent is stored.