

# NWC Data Exporter

This script exports raw Network Window Controller (NWC) data from a MongoDB database, given a specified date range. The data is saved in a CSV file with the format

`<buildingId>_raw_nwc_data_<from_date>.csv.`

## Dependencies

- Python 3.6 or higher
- pandas
- pymongo

## Functions

### **get\_site\_configuration(client)**

- **Input:** `client` - MongoClient instance
- **Output:** A DataFrame containing site configuration data
- **Description:** Connects to the 'site\_configurations' collection and retrieves all documents. Returns a DataFrame containing the site configuration data.

### **get\_raw\_nwc\_data(client, from\_date, to\_date)**

- **Input:**
  - `client` - MongoClient instance
  - `from_date` - Start date and time in UTC (string)
  - `to_date` - End date and time in UTC (string)
- **Output:** A DataFrame containing the raw NWC data between the specified dates
- **Description:** Connects to the 'network\_window\_controller' collection, searches for documents with 'created\_at' between `from_date` and `to_date`, and returns a DataFrame containing the raw NWC data.

### **create\_connection(host)**

- **Input:** `host` - The Tailscale IP address of the MongoDB server (string)
- **Output:** A MongoClient instance connected to the specified MongoDB server
- **Description:** Creates a MongoClient instance with SSL configuration using the provided Tailscale IP address and returns the instance.

## **check\_building(client)**

- **Input:** `client` - MongoClient instance
- **Output:** The Building ID (string) or None if the zone configuration has not been pushed to the site
- **Description:** Retrieves the site configuration data and extracts the Building ID. If the zone configuration has not been pushed to the site, it prints an error message and returns None.

## **write\_to\_file(datafile, buildingId, from\_date)**

- **Input:**
  - `datafile` - A DataFrame containing the data to write to the CSV file
  - `buildingId` - The Building ID (string)
  - `from_date` - Start date and time in UTC (string)
- **Output:** None
- **Description:** Writes the content of the DataFrame to a CSV file with the format `<buildingId>_raw_nwc_data_<from_date>.csv`.

## **Usage**

1. Run the script from the command line.
2. Enter the Tailscale IP address of the MongoDB server when prompted.
3. Select the time range for the data export:
  - Last 15 minutes
  - Last 4 hours
  - Specify timestamps
4. If you chose to specify timestamps, enter the start and end date/time in UTC, using the format `YYYY-MM-DDTHH:mm:ss.fffZ`.
5. The script will connect to the MongoDB server, retrieve the raw NWC data for the specified time range, and save it as a CSV file in the current working directory.