Order Download

This is a simple set of utilities to download customer orders using the API and to report errors.

It is available currently in Python.

It can be configured to use multiple worker threads to allow a degree of concurrency when downloading the files.

There are options to support getting the latest run, preventing retrieval of runs already processed and retries.

Python instructions

Installation

Ensure you have python 3.7 minimum and pip installed, check with

```
py --version
```

and:

```
pip --version
```

If you wish to run in a virtual environment

Navigate to the root of the repository and create the virtual environment:

```
py -m venv env
```

And activate the virtual environment:

```
.\env\Scripts\activate
```

Finally, to install the required packages run this command in the root of the order_download project:

```
pip install requests
```

To deactivate the virtual environment, simple run:

```
.\env\Scripts\deactivate
```

Running

Assuming you have completed the install of the requests package.

To run:

```
py cda_download.py {arguments}
```

Client ID, the secret and orders to download are the only mandatory parameters.

The utility will follow any re-directs and thus supports redirected delivery.

Command line options

Option	-	Values	Description	Default
--url	-u	Service base URL	--url https://api-metoffice.apiconnect.ibmcloud.com/metoffice/production/1.0.0	
--client	-c	WDH client id key	For example: --client xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	
--secret	-s	WDH secret key	For example: --secret xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	
--orders	-o	List of orders by API name to download	For example: --orders p3_pp_euro,p3_pp_global	

Option	-	Values	Description	Default
--runs	-r	List of runs to download	For example: --runs 00,12 or latest	0,6,12,18
--workers	-w	Number of worker threads	For example: --workers 2	4
--join	-j	Join downloaded files together	For example: --join	False
--verbose	-v	Print extra status messages	For example: --verbose	False
--folderdate	-d	Add date/time/run to folder	For example: --folderdate	False
--location	-l	The base folder to store files	For example: --location C:\Data	
--modellist	-m	Pass the list of models to use	For example: --modellist mo-global,m-uk-latlon	
--retry	-a	Retry failures from each order	For example: --retry	False
--retryperiod	-p	Seconds to wait for retry	For example: --retryperiod 30	300
--debug	-z	Put into debug mode	For example: --debug	False

Some guidance on use

```
--runs latest
```

The --runs latest will return the latest set of files available for a particular order. So for example if you have a global order set for runs 00 and 12 (i.e. the full runs) calling the program with the latest parameter will ensure you only get what you want, once, despite how ofted you call the program. The latest/ folder will store the latest files for every order - these can be edited with a text editor (or deleted) to re-enable a run.

```
--retry
```

After the initial run - any files that failed to download are added to a retry list. If this list is too long (>100) or the fail percentage is greater than 50% and also more than 20 need to be downloaded or all files failed then the program terminates. This is to avoid excess errors as these conditions indicate something major is likely to be wrong.

Re-retrieves are attempted after the delay passed (--retryperiod) or the default 300 seconds. The list of files retrieved second time around is added to the results/ text list and anything left still unreceived can be found in the failures/ folder.

```
--location
```

This is the base location where all folders to store data and reports are stored. If not set the directory from where the program is invoked is used.

```
--folderdate
```

This creates an additional folder in the downloaded/ area called YYYYMMDDhhmm_RR - where the RR is the run. Within there is the normal order_RR folder.

```
--debug
```

This will allow the user to interactively fail a file receive to test the retry functionality and will be used for other debug style functions as needed. Limits the workers to one and you can carry on at any point by entering 'go'.