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The IRIS rover user guide

Description

Rover is a tool to robustly retrieve geophysical timeseries data from data centers such as IRIS DMC. It builds an associated index for the downloaded data to generate a local repository.

Rover is a command-line tool and requires Python 2.7, 3.5 or a newer version. Python 3.5 and above is preferred.

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Installation

Rover requires mseedindex - see mseedindex install guidelines. This is a `C` language program that must be compiled.

Install rover, and other Python requirements, with `pip`:

```
pip install rover
```

You should now be able to type `rover --version` to see if it was successfully installed.

Quick start

Initialize a data repository, which creates the `datarepo` directory, and change into the new directory:

```
rover init-repository datarepo
cd datarepo
```

Create a request file named `request.txt` containing:

```
IU ANMO * LHZ 2012-01-01T00:00:00 2012-02-01T00:00:00
TA MSTX -- BH? 2012-01-01T00:00:00 2012-02-01T00:00:00
```

Run the process `rover retrieve` to fetch these data:

```
rover retrieve request.txt
```

`list-summary` prints the retrieved data from the earliest to the latest timespans:

```
rover list-summary
```

```
   IU_ANMO_00_LHZ 2012-01-01T00:00:00.069500 2012-01-31T23:59:59.069500
   IU_ANMO_10_LHZ 2012-01-01T00:00:00.069500 2012-01-31T23:59:59.069500
   TA_MSTX__BHE 2012-01-01T00:00:00.000000 2012-01-31T23:59:59.975000
   TA_MSTX__BHN 2012-01-01T00:00:00.000000 2012-01-31T23:59:59.975000
   TA_MSTX__BHZ 2012-01-01T00:00:00.000000 2012-01-31T23:59:59.975000
```

Retrieved files are miniseed format containing day lengths of station data. The files are saved with the path structure:

```
<datarepo>/data/<network>/<year>/<day>/<station>.<network>.<year>.<day>
```

Exploring Rover

Rover has built-in help. The command `rover help` prints a rover introduction to the terminal.

There are many more options available in rover including; the ability to send emails that monitor rover request and subscriptions (see the `--email` option), view listings of contiguous traces (via the `rover list-index join` command), or view the status of a long-running download using a web browser (by default at http://localhost:8000/).`rover help help` prints a list of commands available in the rover code suite.

Rover is configurable via the rover.config file or by using the command line. Type `rover -h` to see the configuration parameters that are adjustable using the command line.

For more detailed examples, see more example commands to download data and example commands to manage and maintain the local repository.

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