

# List

The verb `list` queries MARS about the data availability for a given request. It is suitable for interactive or batch use to check availability of certain datasets and its collocation in the archive.

Note that default values are not supplied by MARS. However, some keywords (namely `class`, `expver`, `stream`, `type` and `date`) are necessary in order to avoid listing the whole archive (which may take a long time!).

Users can specify a target in order to keep the report in a Unix file. Otherwise, MARS will write it to the standard output.

Here is a sample request with the report output. For this particular data set, not all parameters are present at all levels. The report shows there are 6 fields available, they are in 1 file, and they represent a total of 86.6 Kilobytes.

```
list,
      class      = od,
      type       = an,
      expver     = 1,
      stream     = kwbc,
      date       = 19990222,
      time       = 0000/1200,
      levtype    = pl,
      levelist   = 1000/850/500,
      param      = 129/130
```

Provides the following output:

```
class      = od
cost       = 6 fields, 86.6484 Kbytes on 1 tape
expver     = 1
file[0]    = hpss:/mars/prod/od/o/other/marsodkwbc/1/an/19990201/pl/62694.
                                     20030921.153024
file[1]    = -
id         = 62694
levtype    = pl
stream     = kwbc
type       = an
date       file length levelist offset param time
1999-02-22 0 16540 500 1751614 129.128 00:00:00
1999-02-22 0 11284 850 1768154 130.128 00:00:00
1999-02-22 0 16540 1000 1779438 129.128 00:00:00
1999-02-22 0 16540 500 1795978 129.128 12:00:00
1999-02-22 0 11284 850 1812518 130.128 12:00:00
1999-02-22 0 16540 1000 1823802 129.128 12:00:00

Grand Total:
=====

Entries    : 6
Total      : 88,728 (86.6484 Kbytes)
```

If the keyword `output=browser` is used, the list output will contain the same information as given by Web-MARS when browsing the catalogue. In other words, the MARS content can be browsed from the command line as shown in the following example where the request

```
list,
      output = browser,
      class  = ei,
      stream = moda,
      expver = 1,
      type   = an
```

will return the following output

```

class=cs
class=dm
class=dt
class=e4
class=ei,stream=mdfa
class=ei,stream=mnth
class=ei,stream=moda,expver=1,type=an,levtype=ml
class=ei,stream=moda,expver=1,type=an,levtype=pl
class=ei,stream=moda,expver=1,type=an,levtype=pt
class=ei,stream=moda,expver=1,type=an,levtype=pv
class=ei,stream=moda,expver=1,type=an,levtype=sfc
class=ei,stream=moda,expver=1,type=fc
class=ei,stream=moda,expver=1112
class=ei,stream=oper
class=ei,stream=wave
class=el
class=en
class=er
class=me
class=pv
class=to

```

If the keyword `output=cost` is used, the list output will generate a summary of the size, number of fields and the storage information about the data: disk or tapes. For example:

```

list,

  class      = od,
  type       = an,
  expver     = 1,
  stream     = kwbc,
  date       = 19990222,
  time       = 0000/1200,
  levtype    = pl,
  levelist   = 1000/850/500,
  param      = 129/130,
  output     = cost

```

Will generate:

```

size=88728;
number_of_fields=6;
online_size=0;
off_line_size=88728;
number_of_tape_files=1;
number_of_disk_files=0;
number_of_online_fields=0;
number_of_offline_fields=6;
number_of_tapes=1;

```

This information is useful to see if the data is scattered across too many tapes (maybe you have to rewrite the request). It also provides a foresight of the time the request could spend retrieving the data.