

Steps for importing in mysql database by CLI

Note: strictly advised – do at least one backup of your database/system to avoid any data loss.

All steps/commands by your own responsibility!

1. rename the origin file (i.e. to xxx.txt)
2. removing of headline and control codes in source file

Open the txt file with vi, run following command when cursor is in first line (headline):
dd → *this removes the headline*

ESC : g/CTRL V M/s///g Enter → where: CTRL V M means: press and hold CTRL, press V, press M, release CTRL

This command removes the ^M codes found in the file. The codes have been inserted by Windows.

ESC : w q → *this exits the file, saving the previous made changes.*

Check by open the file again using vi, exit with ESC : q (without any changes you can use w q again).

3. Create a shell script conv.sh with following content (note, the blue bold lines are one line each!!!)

```
# count rows
ANZ=$(cat /home/user/xxx.txt | wc -l)
echo $ANZ

## alldata: DateTime | T | Tmax | Tmin | H | D | W | G
| B | RR | R | P | S | A
##
## WD: 0-day 1-month 2-year 3-hour 4-minute 5-temperature 6-humidity 7-
dewpoint 8-barometer 9-windspeed 10-gustspeed 11-direction 12-
rainlastmin 13-dailyrain 14-monthlyrain 15-yearlyrain 16-heatindex
##
while IFS= read -r line || [[ -n "$line" ]]; do echo $line | awk -v OFS=" " -F"
" '{print $3-"$2-"$1"
"$4":"$5":"00":"$6";00;00;"$7":"$8":"$10":"$11":"$12":"$13":"$14":"$9":"$17";"00
}' >> out_01.txt ; done < /home/user/xxx.txt
# end
```

4. To execute the script you need to set correct file permissions:
sudo chmod 755 conv.sh

5. To run the script type *./conv.sh*

6. Check the file by typing *cat out_01.txt*

Examples up to this point:

Output of origin txt file (extract):

day	month	year	hour	minute	temperature	humidity	dewpoint	barometer	windspeed							
gustspeed	direction	rainlastmin				dailyrain	monthlyrain	yearlyrain	heatindex ^M							
1	1	2011	0	0	08.7	89	07.0	1021.0	0	0	182	0.0	0.0	0.0	0.0	8.7^M
1	1	2011	0	1	08.7	89	07.0	1021.0	0	0	225	0.0	0.0	0.0	0.0	8.7^M
1	1	2011	0	2	08.7	89	07.0	1021.0	0	0	225	0.0	0.0	0.0	0.0	8.7^M
1	1	2011	0	3	08.7	89	07.0	1021.0	0	0	225	0.0	0.0	0.0	0.0	8.7^M
1	1	2011	0	4	08.7	89	07.0	1021.0	0	0	225	0.0	0.0	0.0	0.0	8.7^M
1	1	2011	0	5	08.7	89	07.0	1021.0	0	0	225	0.0	0.0	0.0	0.0	8.7^M
1	1	2011	0	6	08.7	89	07.0	1021.0	0	0	225	0.0	0.0	0.0	0.0	8.7^M

Output after removing headline and control codes:

1	1	2011	0	0	08.7	89	07.0	1021.0	0	0	182	0.0	0.0	0.0	0.0	8.7
1	1	2011	0	1	08.7	89	07.0	1021.0	0	0	225	0.0	0.0	0.0	0.0	8.7
1	1	2011	0	2	08.7	89	07.0	1021.0	0	0	225	0.0	0.0	0.0	0.0	8.7
1	1	2011	0	3	08.7	89	07.0	1021.0	0	0	225	0.0	0.0	0.0	0.0	8.7
1	1	2011	0	4	08.7	89	07.0	1021.0	0	0	225	0.0	0.0	0.0	0.0	8.7
1	1	2011	0	5	08.7	89	07.0	1021.0	0	0	225	0.0	0.0	0.0	0.0	8.7
1	1	2011	0	6	08.7	89	07.0	1021.0	0	0	225	0.0	0.0	0.0	0.0	8.7

Output after running conv.sh:

```
2011-1-1 0:0:0;08.7;00;00;89;07.0;0;0;182;0.0;0.0;1021.0;8.7;0
2011-1-1 0:1:0;08.7;00;00;89;07.0;0;0;225;0.0;0.0;1021.0;8.7;0
2011-1-1 0:2:0;08.7;00;00;89;07.0;0;0;225;0.0;0.0;1021.0;8.7;0
2011-1-1 0:3:0;08.7;00;00;89;07.0;0;0;225;0.0;0.0;1021.0;8.7;0
2011-1-1 0:4:0;08.7;00;00;89;07.0;0;0;225;0.0;0.0;1021.0;8.7;0
2011-1-1 0:5:0;08.7;00;00;89;07.0;0;0;225;0.0;0.0;1021.0;8.7;0
2011-1-1 0:6:0;08.7;00;00;89;07.0;0;0;225;0.0;0.0;1021.0;8.7;0
```

Copy the file to a path mysql is allowed to import data, in default installations this is most likely /var/lib/mysql-files:

```
sudo cp out_01.txt /var/lib/mysql-files/
```

7. Now you can login to your host and to mysql:

At my Ubuntu the command is:

```
mysql -u root -p
```

Enter password for root (=database root, not OS root) user and you are at database prompt.

8. Select the database (here: meteo_db):

```
use meteo_db
```

9. Now run import command:

```
load data infile '/var/lib/mysql-files/out_01.txt' into table alldata COLUMNS  
TERMINATED BY ';' ;
```

10. Check import:

```
select * from alldata; → shows all data in table alldata
```

To show only specific data:

```
mysql> select * from alldata where day(datetime)=31 and hour(datetime)=23 and minute(datetime)>=50;
```

DateTime	T	Tmax	Tmin	H	D	W	G	B	RR	R	P	S	A
2011-01-31 23:50:00	7.2	0.0	0.0	68.0	1.7	0.0	0.0	90.0	0.000	0.000	1022.000	7.2	0.0
2011-01-31 23:51:00	7.2	0.0	0.0	67.0	1.5	0.0	1.0	292.0	0.000	0.000	1022.000	7.2	0.0
2011-01-31 23:52:00	7.2	0.0	0.0	67.0	1.5	0.0	1.0	292.0	0.000	0.000	1022.000	7.2	0.0
2011-01-31 23:53:00	7.2	0.0	0.0	66.0	1.3	1.0	3.0	292.0	0.000	0.000	1022.000	7.2	0.0
2011-01-31 23:54:00	7.2	0.0	0.0	66.0	1.3	1.0	3.0	292.0	0.000	0.000	1022.000	7.2	0.0
2011-01-31 23:55:00	7.2	0.0	0.0	66.0	1.3	2.0	0.0	315.0	0.000	0.000	1022.000	7.2	0.0
2011-01-31 23:56:00	7.2	0.0	0.0	66.0	1.3	2.0	0.0	315.0	0.000	0.000	1022.000	7.2	0.0
2011-01-31 23:57:00	7.2	0.0	0.0	66.0	1.3	0.0	0.0	248.0	0.000	0.000	1022.000	7.2	0.0
2011-01-31 23:58:00	7.2	0.0	0.0	66.0	1.3	0.0	0.0	248.0	0.000	0.000	1022.000	7.2	0.0
2011-01-31 23:59:00	7.1	0.0	0.0	66.0	1.2	1.0	2.0	248.0	0.000	0.000	1022.000	7.1	0.0

10 rows in set (0,07 sec)

```
mysql> select * from alldata where RR>0 ;
```

DateTime	T	Tmax	Tmin	H	D	W	G	B	RR	R	P	S	A
2011-01-28 19:57:00	8.0	0.0	0.0	81.0	4.9	1.0	1.0	22.0	1.000	1.000	1011.000	8.0	0.0
2011-01-28 20:01:00	7.9	0.0	0.0	81.0	4.9	1.0	1.0	68.0	1.300	2.300	1011.000	7.9	0.0
2011-01-28 20:17:00	7.8	0.0	0.0	85.0	5.4	2.0	3.0	57.0	1.000	3.300	1011.000	7.8	0.0
2011-01-28 20:22:00	7.7	0.0	0.0	86.0	5.5	1.0	2.0	42.0	1.100	4.400	1011.000	7.7	0.0
2011-01-29 00:13:00	4.9	0.0	0.0	95.0	4.2	2.0	3.0	68.0	4.400	4.400	1010.000	4.9	0.0
2011-01-29 11:18:00	9.0	0.0	0.0	69.0	3.7	0.0	1.0	90.0	9.000	13.400	1009.000	9.0	0.0
2011-01-29 11:21:00	9.3	0.0	0.0	70.0	4.1	0.0	3.0	83.0	9.000	22.400	1009.000	9.3	0.0

7 rows in set (0,06 sec)