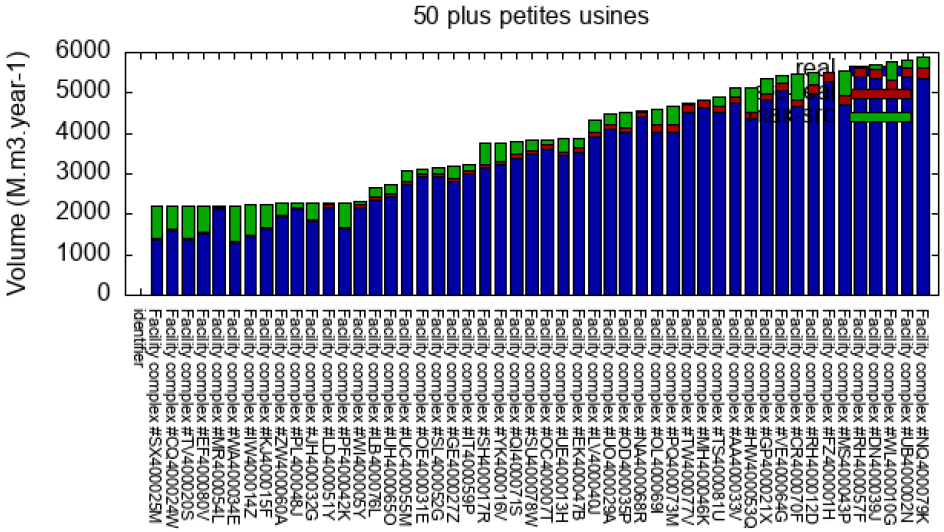
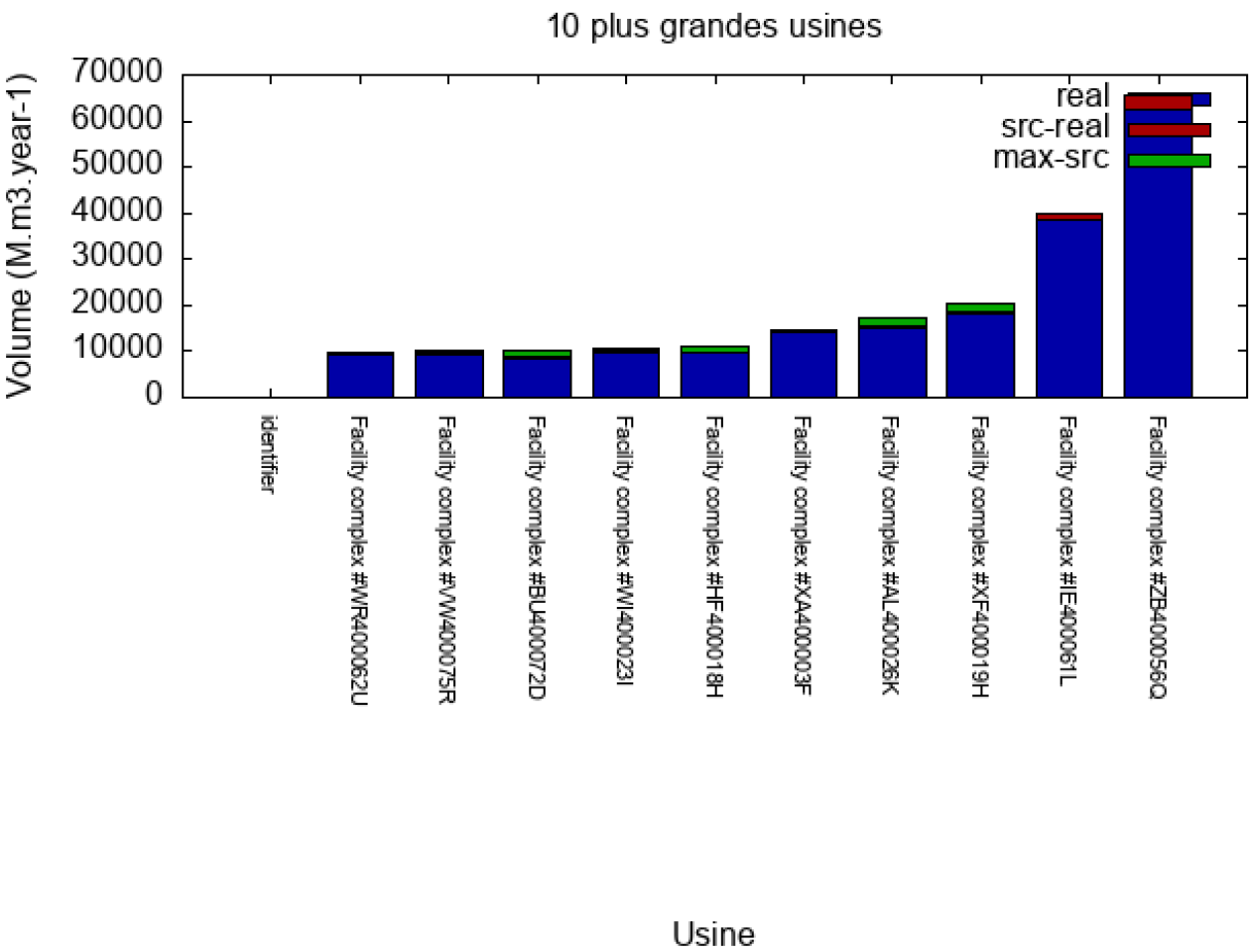
Test :


50 plus petites usines
Volume (M.m3.year-1)
6000
5000
4000
3000
2000
1000
0
real
src-real
max-src
identifier
Facility complex #SX400025M
Facility complex #CQ400024W
Facility complex #TV400020S
Facility complex #EF400080V
Facility complex #MR400054L
Facility complex #WA400034E
Facility complex #IW400014Z
Facility complex #KJ400015F
Facility complex #ZW400060A
Facility complex #PL400046J
Facility complex #JH400032G
Facility complex #LD400051Y
Facility complex #PF400042K
Facility complex #WJ400005Y
Facility complex #LB400076L
Facility complex #UH400065O
Facility complex #UC400055M
Facility complex #OE400031E
Facility complex #SL400052G
Facility complex #GE400027Z
Facility complex #IT400059P
Facility complex #SH400017R
Facility complex #YK400016V
Facility complex #QI400071S
Facility complex #SU400078W
Facility complex #OC400007T
Facility complex #UE400013H
Facility complex #EK400047B
Facility complex #LV400040J
Facility complex #UO400029A
Facility complex #OD400035P
Facility complex #NA400068R
Facility complex #OL400069I
Facility complex #PQ400073M
Facility complex #TW400077V
Facility complex #MH400046K
Facility complex #TS400081U
Facility complex #AA400033V
Facility complex #HW400053O
Facility complex #GP400021X
Facility complex #VE400064G
Facility complex #RH400012D
Facility complex #CR400070F
Facility complex #FZ400001H
Facility complex #MS400043P
Facility complex #RH400057F
Facility complex #DN400039U
Facility complex #WL400010G
Facility complex #UB400002N
Facility complex #NQ400079K
Usine


10 plus grandes usines
Volume (M.m3.year-1)
70000
60000
50000
40000
30000
20000
10000
0
real
src-real
max-src
identifier
Facility complex #WR400062U
Facility complex #VW400075R
Facility complex #BU400072D
Facility complex #WI400023I
Facility complex #HF400018H
Facility complex #XA400003F
Facility complex #AL400026K
Facility complex #XF400019H
Facility complex #IE400061L
Facility complex #ZB400056Q
Usine

L’histogramme cumulé regroupe simultanément les valeurs sources, maximales et réelles, offrant une vision comparative complète du réseau. Cette représentation permet d’analyser les écarts entre les différentes capacités pour une même installation et de mieux comprendre les relations entre potentiel, disponibilité et usage réel. Elle constitue un outil synthétique permettant d’identifier rapidement les incohérences, les marges de progression possibles et les zones où les pertes sont les plus significatives.

vol_all.dat

Users > abbadi > Documents > Info3 > vol_all.dat

```
identifier;max volume (M.m3.year-1);source volume (M.m3.year-1);real volume (M.m3.year-1)
Facility complex #ZW400060A;2267.838000;1981.105000;1938.301582
Facility complex #ZT400008G;7059.824000;6247.853000;5994.601965
Facility complex #ZB400056Q;65661.934000;65661.933000;62530.447006
Facility complex #YK400016V;3772.751000;3311.008000;3234.304797
Facility complex #YF400058I;6421.031000;5771.691000;5553.721995
Facility complex #XF400019H;20410.841000;18775.731000;17983.990163
Facility complex #XA400003F;14823.268000;14706.833000;14088.844118
Facility complex #WV400000Y;6755.845000;6306.826000;6072.602549
Facility complex #WR400062U;9527.415000;9514.949000;9223.321753
Facility complex #WL400010G;5753.270000;5330.754000;5098.431448
Facility complex #WI400023I;10520.126000;9989.061000;9583.608423
Facility complex #WI400005Y;2309.692000;2234.670000;2174.051920
Facility complex #WA400034E;2217.356000;1335.345000;1303.088236
Facility complex #VW400075R;9989.859000;9797.947000;9464.429120
Facility complex #VW400006S;6884.457000;6215.412000;5951.427510
Facility complex #VE400064G;5438.857000;5259.129000;5062.677939
Facility complex #VA400041C;6784.970000;5841.622000;5640.170754
Facility complex #UO400029A;4482.156000;4223.540000;4107.803239
Facility complex #UH400065O;2719.034000;2503.212000;2423.897666
Facility complex #UE400013H;3859.311000;3535.256000;3453.762830
Facility complex #UC400055M;3061.112000;2819.868000;2747.588120
Facility complex #UB400002N;5797.490000;5608.261000;5377.544738
Facility complex #TW400077V;4749.292000;4702.923000;4512.189962
Facility complex #TV400020S;2194.993000;1410.234000;1377.022391
Facility complex #TS400081U;4892.763000;4687.169000;4519.646399
Facility complex #SX400025M;2191.567000;1414.396000;1371.759646
Facility complex #SU400078W;3821.108000;3584.569000;3480.814058
Facility complex #SL400052G;3166.292000;2998.888000;2932.053937
Facility complex #SH400017R;3758.365000;3245.037000;3156.015234
Facility complex #RH400057F;5641.685000;5603.737000;5410.038384
Facility complex #RH400012D;5500.428000;5188.631000;4967.677026
Facility complex #QW400074Q;5971.722000;5350.480000;5152.334761
Facility complex #QI400071S;3807.244000;3485.007000;3386.194192
Facility complex #PQ400073M;4664.236000;4232.959000;4027.162332
Facility complex #PL400048J;2271.874000;2179.951000;2130.514320
Facility complex #PF400042K;2292.290000;1678.970000;1638.256702
Facility complex #OL400069I;4595.667000;4210.862000;4028.398959
```

vol_all.dat | vol_all_low.dat

Users > abbadi > Documents > Info3 > vol_all_low.dat

```
identifier;max volume (M.m3.year-1);source volume (M.m3.year-1);real volume (M.m3.year-1)
Facility complex #SX400025M;2191.567000;1414.396000;1371.759646
Facility complex #CQ400024W;2192.203000;1621.794000;1583.063423
Facility complex #TV400020S;2194.993000;1410.234000;1377.022391
Facility complex #EF400080V;2210.524000;1570.431000;1531.496544
Facility complex #MR400054L;2214.734000;2179.125000;2125.531337
Facility complex #WA400034E;2217.356000;1335.345000;1303.088236
Facility complex #IW400014Z;2225.904000;1490.480000;1456.120631
Facility complex #KJ400015F;2236.590000;1675.720000;1636.403824
Facility complex #ZW400060A;2267.838000;1981.105000;1938.301582
Facility complex #PL400048J;2271.874000;2179.951000;2130.514320
Facility complex #JH400032G;2279.872000;1854.083000;1803.932407
Facility complex #LD400051Y;2286.709000;2226.828000;2171.786317
Facility complex #PF400042K;2292.290000;1678.970000;1638.256702
Facility complex #WI400005Y;2309.692000;2234.670000;2174.051920
Facility complex #LB400076L;2653.629000;2422.236000;2366.095340
Facility complex #UH400065O;2719.034000;2503.212000;2423.897666
Facility complex #UC400055M;3061.112000;2819.868000;2747.588120
Facility complex #OE400031E;3118.843000;3017.422000;2938.197140
Facility complex #SL400052G;3166.292000;2998.888000;2932.053937
Facility complex #GE400027Z;3179.754000;2896.232000;2819.810404
Facility complex #IT400059P;3239.505000;3061.574000;2982.949342
Facility complex #SH400017R;3758.365000;3245.037000;3156.015234
Facility complex #YK400016V;3772.751000;3311.008000;3234.304797
Facility complex #QI400071S;3807.244000;3485.007000;3386.194192
Facility complex #SU400078W;3821.108000;3584.569000;3480.814058
Facility complex #OC400007T;3829.177000;3709.983000;3613.337140
Facility complex #UE400013H;3859.311000;3535.256000;3453.762830
Facility complex #EK400047B;3862.253000;3645.820000;3546.033437
Facility complex #LV400040J;4339.889000;4014.091000;3918.947030
Facility complex #UO400029A;4482.156000;4223.540000;4107.803239
Facility complex #OD400035P;4534.466000;4149.863000;4040.790096
Facility complex #NA400068R;4567.113000;4535.401000;4423.183153
Facility complex #OL400069I;4595.667000;4210.862000;4028.398959
Facility complex #PQ400073M;4664.236000;4232.959000;4027.162332
Facility complex #TW400077V;4749.292000;4702.923000;4512.189962
Facility complex #MH400046K;4824.634000;4820.631000;4628.733750
```

Le fichier de données au format .dat  constitue la base d'entrée du programme. Il contient l'ensemble des informations décrivant le réseau de distribution d'eau, notamment les identifiants des installations, les capacités sources, maximales et réelles, ainsi que les liaisons entre les différents tronçons. Ce format permet un traitement efficace de données volumineuses, comprenant plusieurs millions de lignes, sans surcharge mémoire excessive. Le programme lit et interprète ce fichier ligne par ligne afin d'extraire les informations nécessaires aux calculs et aux analyses. La fiabilité des résultats obtenus dépend directement de la cohérence et de la structure de ce fichier, qui sert de référence unique pour la génération des histogrammes et la détection des fuites.