

# weak scalability

January 17, 2018

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In [1]: %matplotlib inline

In [45]: import matplotlib.pyplot as plt
import numpy as np
import matplotlib as mpl
mpl.rcParams['figure.dpi']= 200

data10M = []
with open('wresultati10M.txt') as datafile10M:
    for line in datafile10M:
        data10M.append(float(line))

data1G = []
with open('wresultati1G.txt') as datafile1G:
    for line in datafile1G:
        data1G.append(float(line))

data100M = []
with open('wresultati100M.txt') as datafile100M:
    for line in datafile100M:
        data100M.append(float(line))

x = np.array([1,2,4,8,16,20])

data10M

Out[45]: [1.69181818182,
1.70272727273,
1.72545454545,
1.81,
1.97545454545,
2.04454545455]

In [37]: #errors
err1G = []
with open('werr1G.txt') as dataerr1G:
    for line in dataerr1G:
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err1G.append(float(line))

err10M = []
with open('werri10M.txt') as dataerr10M:
    for line in dataerr10M:
        err10M.append(float(line))

err100M = []
with open('werri100M.txt') as dataerr100M:
    for line in dataerr100M:
        err100M.append(float(line))

In [46]: plt.legend(bbox_to_anchor=(0., 1.02, 1., .102), loc=3,
                ncol=2, mode="expand", borderaxespad=0.)
plt.ylabel('Elapsed time')
plt.xlabel('Number of processors')
#plt.plot(x,y, 'r', label='bisector line')
plt.plot([1,2,4,8,16,20],data1G, 'g', label='problem size 10^9')
plt.plot([1,2,4,8,16,20],data10M, 'y', label='problem size 10^8')
plt.plot([1,2,4,8,16,20],data100M, 'b', label='problem size 10^7')
plt.errorbar([1,2,4,8,16,20],data1G,yerr=err1G, fmt='o')
plt.errorbar([1,2,4,8,16,20],data10M,yerr=err10M, fmt='o')
plt.errorbar([1,2,4,8,16,20],data100M,yerr=err100M, fmt='o')
#plt.plot(data, 'o')
#plt.plot(data)
#plt.xticks(x,[1,2,4,8,16,20])
plt.xticks(x,[1,2,4,8,16,20])
plt.title('WEAK SCALABILITY')
plt.legend()
plt.show()

```

