

Fork:

N = 10000

Macierzysty:

user time = 0.000001

system time = 0.000375

real time = 3452687

Potomne:

user time = 0.000001

system time = 0.000427

real time = 0

N= 40000

Macierzysty:

user time = 0.000002

system time = 0.002498

real time = 14818939

Potomne:

user time = 0.000003

system time = 0.001569

real time = 0

N = 55000

Macierzysty:

user time = 0.000003

system time = 0.002088

real time = 20973547

Potomne:

user time = 0.000004

system time = 0.002323

real time = 0

N = 70000

Macierzysty:

user time = 0.000000

system time = 0.000740

real time = 7412664

Potomne:

user time = 0.000000

system time = 0.000818

real time = 0

Vfork:

N = 10000

Macierzysty:

user time = 0.000000

system time = 0.000179

real time = 1796761

Potomne:

user time = 0.000000

system time = 0.000207

real time = 23088

N = 50000

Macierzysty:

user time = 0.000000

system time = 0.000904

real time = 9050361

Potomne:

user time = 0.000000

system time = 0.001023

real time = 117164

N = 100000

Macierzysty:

user time = 0.000000

system time = 0.000539

real time = 5393051

Potomne:

user time = 0.000000

system time = 0.000553

real time = 56901

N = 150000

Macierzysty:

user time = 0.000001

system time = 0.001234

real time = 12355777

Potomne:

user time = 0.000000

system time = 0.001304

real time = 151176

N = 190000

Macierzysty:

user time = 0.000003

system time = 0.003353

real time = 33567346

Potomne:

user time = 0.000000

system time = 0.003997

real time = 436603

N = 220000

Macierzysty:

user time = 0.000003

system time = 0.003877

real time = 38803103

Potomne:

user time = 0.000001

system time = 0.004536

real time = 525763

clone jako fork :

N = 40000

Macierzysty:

user time = 0.000000

system time = 0.000052

real time = 522239

Potomne:

user time = 0.000000

system time = 0.000000

real time = 0

N = 150000

Macierzysty:

user time = 0.000007

system time = 0.001993

real time = 20006470

Potomne:

user time = 0.000000

system time = 0.000000

real time = 0

N = 200000

Macierzysty:

user time = 0.000025

system time = 0.003975

real time = 60013764

Potomne:

user time = 0.000000

system time = 0.000000

real time = 0

N = 250000

Macierzysty:

user time = 0.000016

system time = 0.004033

real time = 50502622

Potomne:

user time = 0.000000

system time = 0.000000

real time = 0

N = 500000

Macierzysty:

user time = 0.000038

system time = 0.015937

real time = 139932072

Potomne:

user time = 0.000000

system time = 0.000000

real time = 0

clone jako vfork:

N = 10000

Macierzysty:

user time = 0.000000

system time = 0.000015

real time = 153264

Potomne:

user time = 0.000000

system time = 0.000000

real time = 5

N = 50000

Macierzysty:

user time = 0.000011

system time = 0.003455

real time = 34674221

Potomne:

user time = 0.000000

system time = 0.000000

real time = 8760

N = 250000

Macierzysty:

user time = 0.000010

system time = 0.003340

real time = 43509119

Potomne:

user time = 0.000000

system time = 0.000000

real time = 7729

N = 350000

Macierzysty:

user time = 0.000052

system time = 0.013465

real time = 13627286

Potomne:

user time = 0.000000

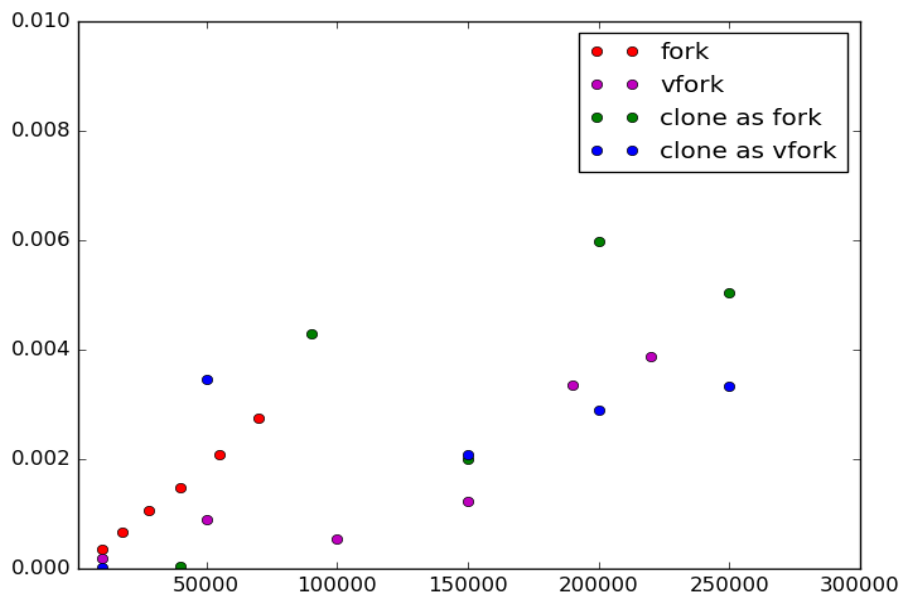
system time = 0.000000

real time = 9737

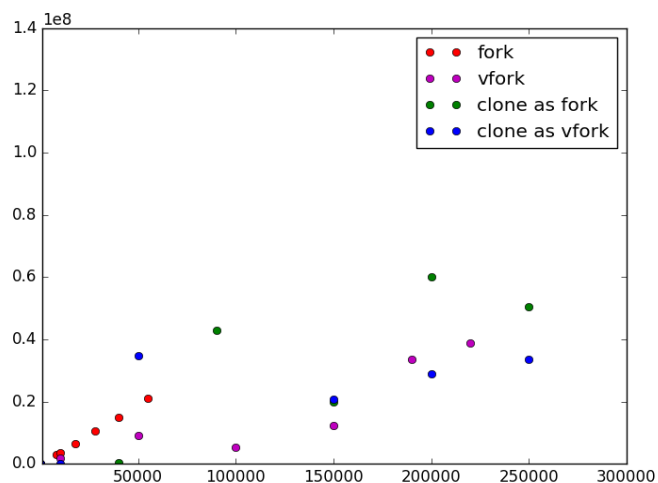
WYKRESY:

1) Czas procesu macierzystego

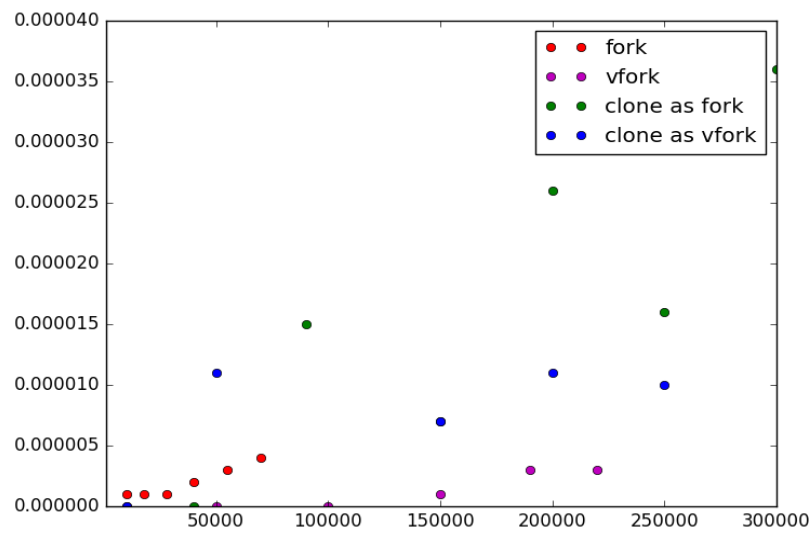
a) system time:



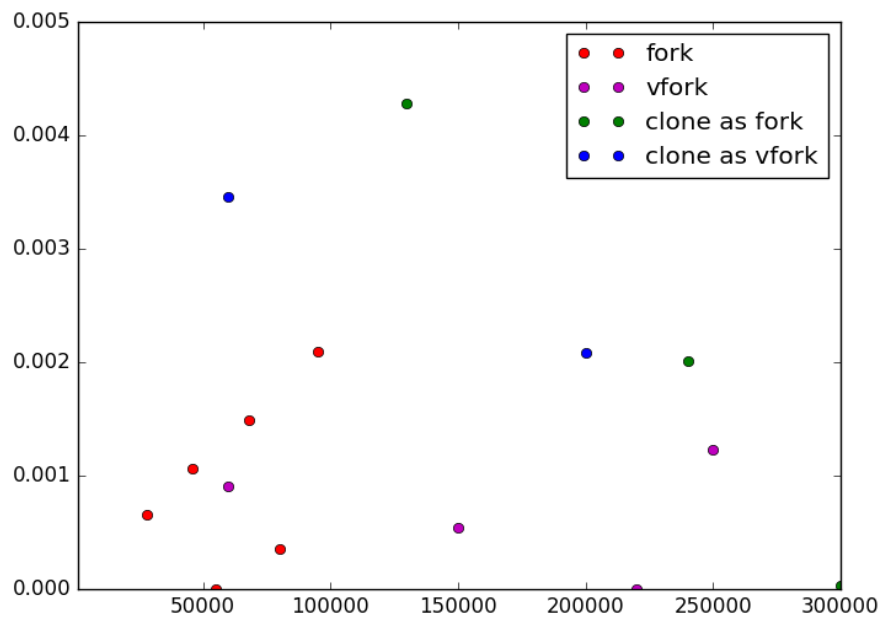
b) real time:



c) user time:

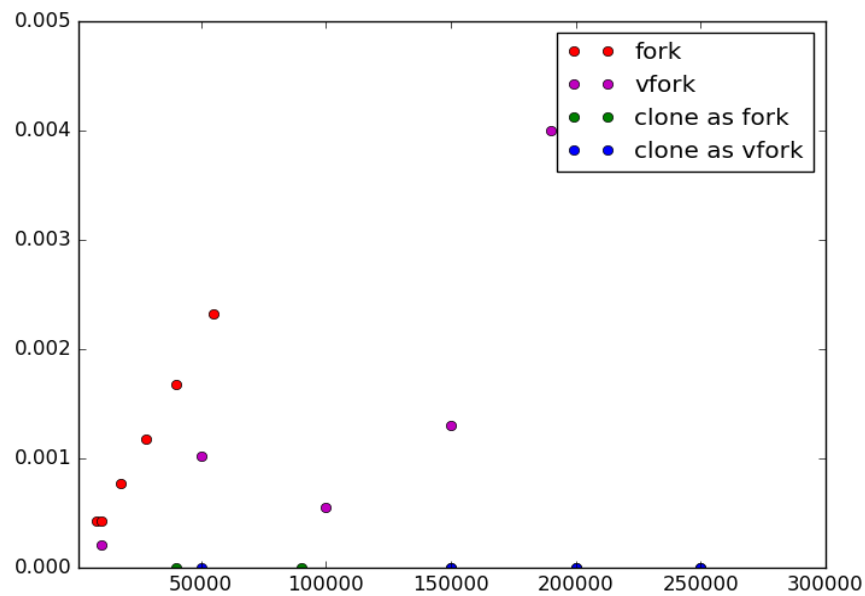


d) user time + system time:

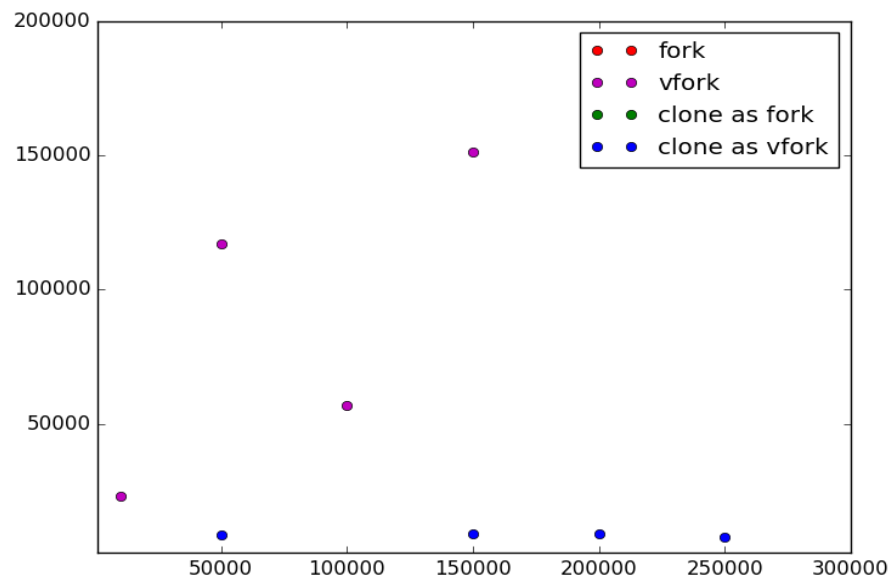


2) Sumaryczny czas procesów potomnych

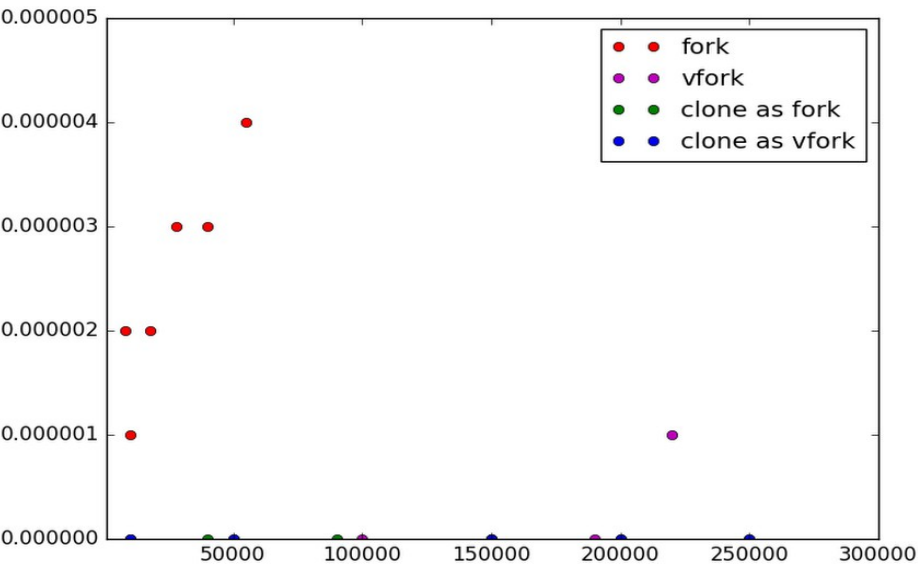
a) system time:



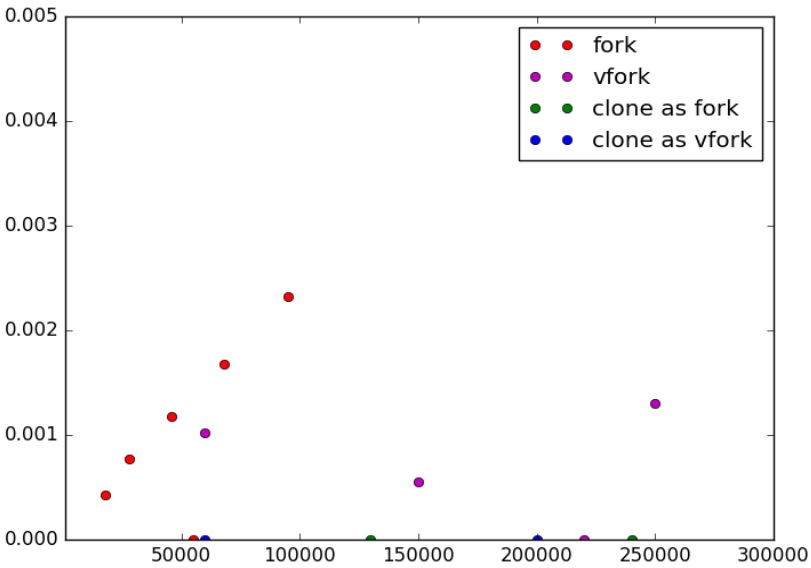
b) real time:



c) user time:

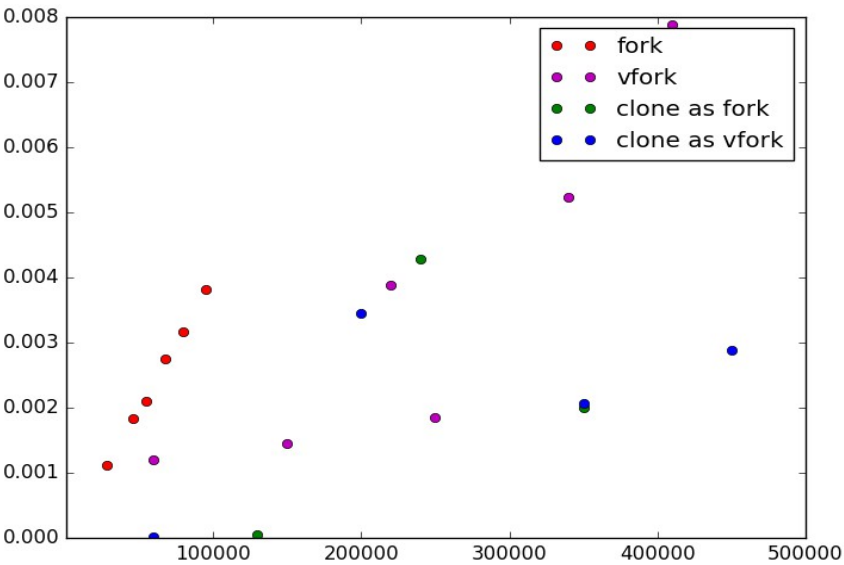


d) user time + system time

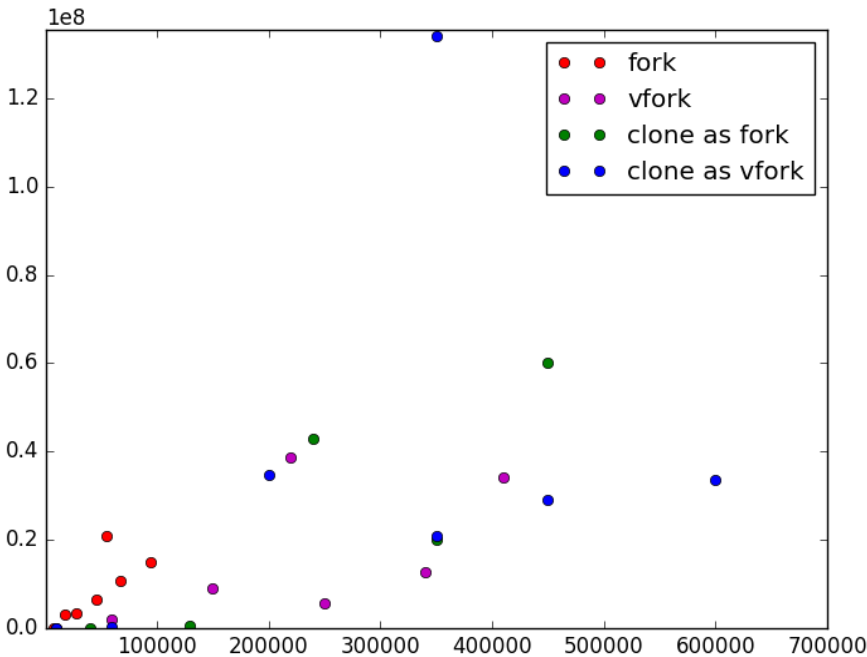


3) Suma czasów potomnych i macierzystych

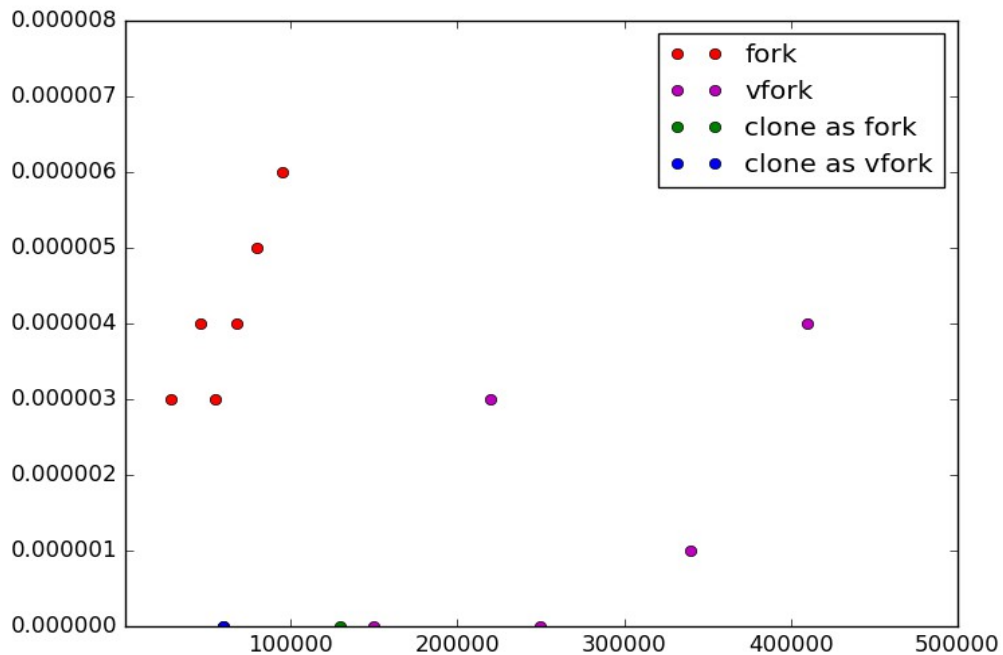
a) system time:



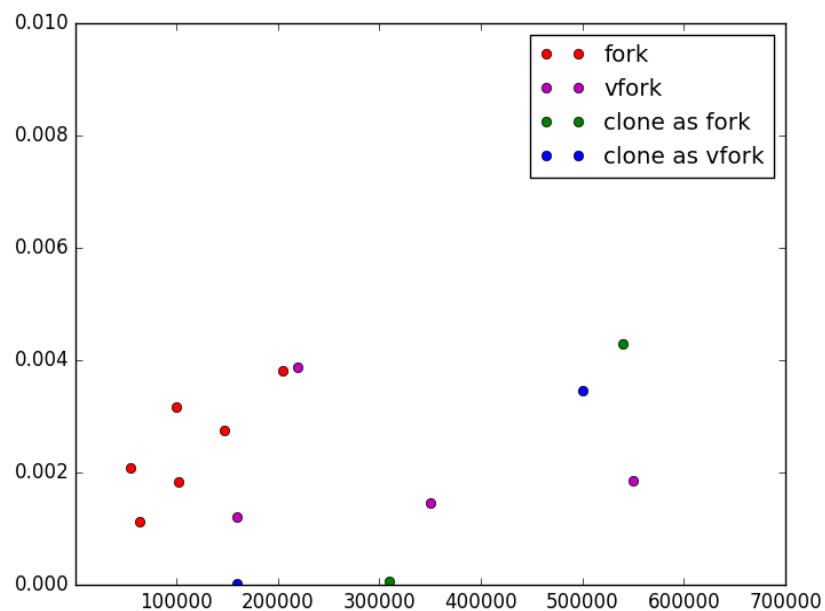
b) real time



c) user time:



d) user time + system time



Na załączonych wyżej wykresach widać, że real time procesów potomnych zawsze wychodzi 0, niezależnie od użytej funkcji. Jest to efekt, który był oczekiwany. Analizując wykresy można również dojść do wniosku, że szybkość forka rośnie niemalże liniowo, można z miarą dobrym przybliżeniem szacować ile zajmie nam wykonanie funkcji w zależności od ilości wywołań. Jest ona jednak wolniejsza od pozostałych funkcji. Bardzo dobrze tą relację widać porównując ją z vfork.