

(logistics),

가
가

('EMM')

가 (non-integral exponential power)

('X')

EMM

가

EMM

EMM

가 가

가

가

EMM

()

가

CPU

3
(b)

CPU

(c) CPU
EMM
EMM

가 (a)
3

EMM

, RAM,

EMM

(power basis)

가

(homogeneous peer group selection)

EMM

EMM

CPU,

CPU

CPU

CPU

32, 64
CPU

가

가 , 1

EMM (computing capacity quantity) EMM 가, MIPS(Million Instructions Per Second) (OS, TPC) EMM 가, EMM f(X) X EMM (software suits) EMM (software objects) EMM X CPU ; (a) CPU ; (b) CPU ; (c) CPU 가 'X' 가 Hertz 가 1)

EMM :

$$1 \text{ EMM} = aE - bX^3 - cE + dX^2 + gX - h$$

'E' (10)

$$2 \text{ X} = [(CPU * ()^n) + (CPU) * (/p)]$$

, c 1 4 , d 5 7 , a 1 10 , b 10 12 , h 0 20 , g 0.35 0.5

가 , , n 가 , 1 0.7 , p 1 16

EMM

769

EMM

a, b, c, d, g, h

가

$$3 EMM = 2E - 11X^3 - 3E - 6X^2 + 0.4519X - 8.471$$

X n p

$$4 X = [(CPU * ()^{0.9979}) + (CPU * (/8))]$$

, EMM

1 4 CPU , CPU

1 3 4

(X 가 , 1)

X

가

X

X

가

(57)

1.

(computer system processing capacity metric)

가 (non-integral exponential power)

X

2.

1 ,

2 **3.** ,

(curve-fitting procedure)

2 **4.** ,

X

2 **5.** ,

X

2 **6.** ,

() ;

() ;

()

2 **7.** ,

2 **8.** ,

$$f(X) = aE - bX^3 - cE - dX^2 + gX - h$$

$$X = [(\text{...}) * (\text{...})^n] + (\text{...}) * (\text{...})$$

a, b, c, d, g, h, p, n 1 0.7

8 **9.** ,

a 1 10 ,

b 10 12 ,

c 1 4 ,

d 5 7 ,

g 0.35 0.5 ,

h 0 20 ,

p 1 16

10.

9 ,

$$f(X) = 2E - 11X^3 - 3E - 6X^2 + 0.4519X - 18.471 ,$$

$$n = 0.9979$$

11.

,

,

가

X

12.

11 ,

13.

12 ,

14.

12 ,

X

15.

12 ,

X

16.

12 ,

() ;

() ;

()

17.

12 ,

18.

12 ,

$$f(X) = aE - bX^3 - cE - dX^2 + gX - h$$

,

$$X = [(\frac{\quad}{p})] \cdot (\quad)^n + (\quad) \cdot (\quad)$$

a, b, c, d, g, h, p , n 1 0.7

19.

18 ,

a 1 10 ,

b 10 12 ,

c 1 4 ,

d 5 7 ,

g 0.35 0.5 ,

h 0 20 ,

p 1 16

20.

19 ,

$$f(X) = 2E - 11X^3 - 3E - 6X^2 + 0.4519X - 18.471 ,$$

n = 0.9979

21.

가

,
,

,

(exponential product)

,
0.9 1 ,

22.

.
,
,

가

X