**Resource usage:**

clc

clear

close all;

T=[0.7049, 0.7865, 0.8491, 0.9325, 1.0000, 1.0000, 1.0000, 1.0000, 1.0000, 1.0000, 1.0000];

S=[0.5829, 0.6545, 0.7003, 0.7734, 0.8365, 0.8814, 0.9299, 0.9939, 1.0000, 1.0000, 1.0000];

X=[0.4950, 0.5444, 0.5989, 0.6470, 0.7027, 0.7477, 0.8036, 0.8575, 0.8956, 0.9516, 0.9995];

Z=[0.4312, 0.4777, 0.5211, 0.5624, 0.6081, 0.6484, 0.6909, 0.7386, 0.7932, 0.8210, 0.8725];

u=1000000:100000:2000000;

ax= subplot(1,1,1);

plot(u(1:11),T(1:11),'-o b', 'LineWidth',1.5,'MarkerSize',6)

hold on

plot(u(1:11),S(1:11),'-.\* r','LineWidth',1.5,'MarkerSize',6)

plot(u(1:11),X(1:11),'-+ m','LineWidth',1.5,'MarkerSize',6)

plot(u(1:11),Z(1:11),'-.s g','LineWidth',1.5,'MarkerSize',6)

grid on

legend('vMEC=14','vMEC=17','vMEC=20','vMEC=23')

xlabel('Messages arrival rate(Messages/s)')

ylabel('resource usage(%)')

**Throughput:**

clc

clear

close all;

T=[1.00E6, 1.11E6, 1.20E6, 1.30E6, 1.39E6, 1.41E6, 1.40E6, 1.40E6, 1.39E6, 1.42E6, 1.41E6];

S=[9.95E5, 1.11E6, 1.20E6, 1.30E6, 1.41E6, 1.49E6, 1.59E6, 1.68E6, 1.69E6, 1.69E6, 1.69E6];

X=[9.96E5, 1.10E6, 1.20E6, 1.30E6, 1.41E6, 1.50E6, 1.60E6, 1.69E6, 1.81E6, 1.90E6, 1.98E6];

Z=[9.93E5, 1.10E6, 1.20E6, 1.30E6, 1.40E6, 1.49E6, 1.59E6, 1.70E6, 1.81E6, 1.91E6, 2.01E6];

u=1000000:100000:2000000;

ax= subplot(1,1,1);

plot(u(1:11),T(1:11),'-o b', 'LineWidth',1.5,'MarkerSize',6)

hold on

plot(u(1:11),S(1:11),'-.\* r','LineWidth',1.5,'MarkerSize',6)

plot(u(1:11),X(1:11),'-+ m','LineWidth',1.5,'MarkerSize',6)

plot(u(1:11),Z(1:11),'-.s g','LineWidth',1.5,'MarkerSize',6)

grid on

legend('vMEC=14','vMEC=17','vMEC=20','vMEC=23')

xlabel('Messages arrival rate(Messages/s)')

ylabel('Mean throughput(Messages/s)')

**Number of requests:**

clc

clear

close all;

T=[36.1372, 448.2709, 604.4290, 609.5042, 611.0202, 612.1450, 612.2992, 612.7632, 613.5447, 613.4673, 614.2219, 613.9967, 614.2976, 613.8676, 614.1823, 614.5736];

S=[27.7774, 31.1058, 35.6129, 45.5727, 366.2270, 599.8439, 611.3228, 614.6429, 614.7070, 615.1051, 616.4094, 616.5185, 617.0064, 616.8854, 617.5152, 617.2996];

X=[27.2861, 29.5792, 32.1488, 34.4917, 38.2366, 43.1211, 55.4350, 293.9357, 601.7387, 612.5882, 618.4006, 620.7390, 619.7454, 619.0197, 620.6559, 621.5188];

Z=[27.0137, 29.1379, 32.0862, 34.2656, 36.0955, 39.0952, 42.6568, 46.9772, 53.4866, 70.5881, 331.0303, 613.1030, 623.2177, 625.8538, 627.7745, 630.0455];

u=1300000:100000:2500000;

ax= subplot(1,1,1);

plot(u(1:13),T(1:13),'-o b', 'LineWidth',1.5,'MarkerSize',6)

hold on

plot(u(1:13),S(1:13),'-.\* r','LineWidth',1.5,'MarkerSize',6)

plot(u(1:13),X(1:13),'-+ m','LineWidth',1.5,'MarkerSize',6)

plot(u(1:13),Z(1:13),'-.s g','LineWidth',1.5,'MarkerSize',6)

grid on

legend('vMEC=14','vMEC=17','vMEC=20','vMEC=23')

xlabel('Messages arrival rate(Messages/s)')

ylabel('Mean number of requests(Messages)')

**Drop rate:**

clc

clear

close all;

T=[0.0, 0.0, 0.0, 0.0, 5038.0945, 1.01E5, 1.97E5, 3.01E5, 4.01E5, 4.93E5, 6.08E5];

S=[0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 1.00E5, 2.03E5, 3.00E5];

X=[0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 1636.1395];

Z=[0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0];

u=1000000:100000:2000000;

ax= subplot(1,1,1);

plot(u(1:11),T(1:11),'-o b', 'LineWidth',1.5,'MarkerSize',6)

hold on

plot(u(1:11),S(1:11),'-.\* r','LineWidth',1.5,'MarkerSize',6)

plot(u(1:11),X(1:11),'-+ m','LineWidth',1.5,'MarkerSize',6)

plot(u(1:11),Z(1:11),'-.s g','LineWidth',1.5,'MarkerSize',6)

grid on

legend('vMEC=14','vMEC=17','vMEC=20','vMEC=23')

xlabel('Messages arrival rate(Messages/s)')

ylabel('system drop rate(Messages/s)')

**Response time:**

clc

clear

close all;

T=[2.12E-5, 2.19E-5, 2.28E-5, 2.77E-5, 2.56E-4, 4.33E-4, 4.33E-4, 4.36E-4, 4.37E-4, 4.36E-4, 4.34E-4];

S=[2.07E-5, 2.08E-5, 2.10E-5, 2.15E-5, 2.19E-5, 2.37E-5, 2.86E-5, 2.00E-4, 3.51E-4, 3.61E-4, 3.61E-4];

X=[2.06E-5, 2.07E-5, 2.09E-5, 2.11E-5, 2.12E-5, 2.13E-5, 2.19E-5, 2.20E-5, 2.37E-5, 2.90E-5, 1.55E-4];

Z=[2.05E-5, 2.07E-5, 2.09E-5, 2.09E-5, 2.10E-5, 2.09E-5, 2.12E-5, 2.16E-5, 2.18E-5, 2.23E-5, 2.33E-5];

u=1000000:100000:2000000;

ax= subplot(1,1,1);

plot(u(1:11),T(1:11),'-o b', 'LineWidth',1.5,'MarkerSize',6)

hold on

plot(u(1:11),S(1:11),'-.\* r','LineWidth',1.5,'MarkerSize',6)

plot(u(1:11),X(1:11),'-+ m','LineWidth',1.5,'MarkerSize',6)

plot(u(1:11),Z(1:11),'-.s g','LineWidth',1.5,'MarkerSize',6)

set(gca, 'YScale','log')

grid on

legend('vMEC=14','vMEC=17','vMEC=20','vMEC=23')

xlabel('Messages arrival rate(Messages/s)')

ylabel('Mean responce time(s)')

**Waiting time:**

clc

clear

close all;

T=[2.40E-6, 6.97E-6, 2.21E-4, 4.03E-4, 4.17E-4, 4.20E-4, 4.15E-4, 4.17E-4, 4.21E-4];

S=[2.57E-7, 5.56E-7, 1.20E-6, 2.59E-6, 7.01E-6, 1.60E-4, 3.31E-4, 3.41E-4, 3.39E-4];

X=[3.19E-8, 6.76E-8, 1.64E-7, 3.28E-7, 6.33E-7, 1.21E-6, 2.90E-6, 7.71E-6, 1.60E-4];

Z=[2.86E-9, 8.01E-9, 2.09E-8, 4.50E-8, 1.05E-7, 1.88E-7, 3.54E-7, 7.34E-7, 1.39E-6];

u=1200000:100000:2000000;

ax= subplot(1,1,1);

plot(u(1:9),T(1:9),'-o b', 'LineWidth',1.5,'MarkerSize',6)

hold on

plot(u(1:9),S(1:9),'-.\* r','LineWidth',1.5,'MarkerSize',6)

plot(u(1:9),X(1:9),'-+ m','LineWidth',1.5,'MarkerSize',6)

plot(u(1:9),Z(1:9),'-.s g','LineWidth',1.5,'MarkerSize',6)

set(gca, 'YScale','log')

grid on

legend('vMEC=14','vMEC=17','vMEC=20','vMEC=23')

xlabel('Messages arrival rate(Messages/s)')

ylabel('Mean waiting time(s)')