1. Cloud = true, gateway = 1, car = 4

Starting Autonomous Vehicle System...
Creating connector on device cloud
Creating concentration_calculator on device cloud
Creating client on device v-0-2
Creating client on device v-0-1
Creating client on device v-0-3
Creating client on device v-0-0
0.0 Submitted application Autonomous_Vehicle_System
=======================================
============= RESULTS =================
=======================================
EXECUTION TIME : 2183
=======================================
APPLICATION LOOP DELAYS
=======================================
[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
226.13005000356253
=======================================
TUPLE CPU EXECUTION DELAY
=======================================
VEHICLE_SENSOR_DATA_STATE ---> 0.18928564403826603
VEHICLE_SENSOR ---> 4.031648379696572
CONCENTRATION ---> 0.24032058091294536
_SENSOR ---> 1.1244316832979409
GLOBAL_DATA_STATE ---> 0.056000000000494765
=======================================
cloud : Energy Consumed = 1.5426640797928827E7
proxy-server : Energy Consumed = 834332.9999999987
d-0 : Energy Consumed = 834332.9999999987
v-0-0 : Energy Consumed = 874864.1184862485
v-0-1 : Energy Consumed = 873731.6723812615
v-0-2 : Energy Consumed = 874686.1008262656
v-0-3 : Energy Consumed = 874909.07909252
Cost of execution in cloud = 2986629.992000185
Total network usage = 78929.2

2. Cloud = false, gateway = 1, car = 4

Starting Autonomous Vehicle System...
Placement of operator client on device v-0-0 successful.
Placement of operator concentration_calculator on device d-0 successful.
Placement of operator client on device v-0-1 successful.
Placement of operator client on device v-0-2 successful.
Placement of operator client on device v-0-3 successful.
Creating connector on device cloud
Creating concentration_calculator on device d-0
Creating client on device v-0-0
Creating client on device v-0-1
Creating client on device v-0-2
Creating client on device v-0-3
0.0 Submitted application Autonomous_Vehicle_System
=======================================
============= RESULTS =================
=======================================
EXECUTION TIME : 2034
=======================================
APPLICATION LOOP DELAYS
=======================================
[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] ---> 33.2406905327951
=======================================
TUPLE CPU EXECUTION DELAY
=======================================
VEHICLE_SENSOR_DATA_STATE ---> 0.04821428571388727
VEHICLE_SENSOR ---> 3.524638214349867
CONCENTRATION ---> 0.4253203316292038
_SENSOR ---> 14.930569825191187
GLOBAL_DATA_STATE ---> 0.056000000000494765
=======================================
cloud : Energy Consumed = 1.3331756328571388E7
proxy-server : Energy Consumed = 834332.9999999987
d-0 : Energy Consumed = 1073200.1204400053
v-0-0 : Energy Consumed = 874602.2424400105
v-0-1 : Energy Consumed = 874609.7043800066
v-0-2 : Energy Consumed = 874171.1703400065
v-0-3 : Energy Consumed = 873813.2110000084
Cost of execution in cloud = 16667.199999979195
Total network usage = 8804.8

3. Cloud = true, gateway = 2, car = 4

Starting Autonomous Vehicle System...
Creating connector on device cloud
Creating concentration_calculator on device cloud
Creating client on device v-0-2
Creating client on device v-1-1
Creating client on device v-0-1
Creating client on device v-1-0
Creating client on device v-1-3
Creating client on device v-0-3
Creating client on device v-1-2
Creating client on device v-0-0
0.0 Submitted application Autonomous_Vehicle_System
=======================================
============= RESULTS ================
=======================================
EXECUTION TIME : 4172
=======================================
APPLICATION LOOP DELAYS
=======================================
[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
226.20357486334115
=======================================
TUPLE CPU EXECUTION DELAY
=======================================
VEHICLE_SENSOR_DATA_STATE ---> 0.43999197822863323
VEHICLE_SENSOR ---> 3.782729151316498
CONCENTRATION ---> 0.17663218393212732
_SENSOR ---> 0.6412990009737632
GLOBAL_DATA_STATE ---> 0.056000000000494765
=======================================
cloud : Energy Consumed = 1.615220415450057E7
proxy-server : Energy Consumed = 834332.9999999987
d-0 : Energy Consumed = 834332.9999999987
v-0-0 : Energy Consumed = 874880.158348776
v-0-1 : Energy Consumed = 874758.6129662711
v-0-2 : Energy Consumed = 874853.4205787728
v-0-3 : Energy Consumed = 874779.214105024
d-1 : Energy Consumed = 834332.9999999987
v-1-0 : Energy Consumed = 873180.6188012658

v-1-1 : Energy Consumed = 874812.9684400199
v-1-2 : Energy Consumed = 874827.88977502
v-1-3 : Energy Consumed = 874861.2827200198
Cost of execution in cloud = 4015276.7759997267
Total network usage = 165591.2

4. Cloud = false, gateway = 2, car = 4

Starting Autonomous Vehicle System...
Placement of operator client on device v-0-0 successful.
Placement of operator concentration_calculator on device d-0 successful.
Placement of operator client on device v-0-1 successful.
Placement of operator client on device v-0-2 successful.
Placement of operator client on device v-0-3 successful.
Placement of operator client on device v-1-0 successful.
Placement of operator concentration_calculator on device d-1 successful.
Placement of operator client on device v-1-1 successful.
Placement of operator client on device v-1-2 successful.
Placement of operator client on device v-1-3 successful.
Creating concentration_calculator on device d-1
Creating connector on device cloud
Creating client on device v-1-0
Creating concentration_calculator on device d-0
Creating client on device v-0-0
Creating client on device v-1-1
Creating client on device v-0-1
Creating client on device v-1-2
Creating client on device v-0-2
Creating client on device v-1-3
Creating client on device v-0-3
0.0 Submitted application Autonomous_Vehicle_System
==
============= RESULTS =================
==
EXECUTION TIME : 3702
==
APPLICATION LOOP DELAYS
==
[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
33.846119282630724
==
TUPLE CPU EXECUTION DELAY

```
==========================================
VEHICLE_SENSOR_DATA_STATE ---> 0.04821428571388727
VEHICLE_SENSOR ---> 3.9050853138298693
CONCENTRATION ---> 0.5335564761237818
_SENSOR ---> 14.800388154508383
GLOBAL_DATA_STATE ---> 0.056000000000494765
==========================================
cloud : Energy Consumed = 1.3339332428571435E7
proxy-server : Energy Consumed = 834332.9999999987
d-0 : Energy Consumed = 1073221.6355700064
v-0-0 : Energy Consumed = 874592.5510800107
v-0-1 : Energy Consumed = 874823.7287000064
v-0-2 : Energy Consumed = 874159.6364000076
v-0-3 : Energy Consumed = 873872.2957200075
d-1 : Energy Consumed = 1073240.7601300047
v-1-0 : Energy Consumed = 874509.0241800086
v-1-1 : Energy Consumed = 874530.7584800074
v-1-2 : Energy Consumed = 874056.3908400066
v-1-3 : Energy Consumed = 874183.8648000074
Cost of execution in cloud = 27407.999999958403
Total network usage = 16662.5
```

5. Cloud = true, gateway = 4, car = 4

```
Starting Autonomous Vehicle System...
Creating client on device v-0-2
Creating client on device v-1-1
Creating client on device v-2-0
Creating client on device v-0-1
Creating client on device v-1-0
Creating client on device v-1-3
Creating client on device v-2-2
Creating client on device v-3-1
Creating client on device v-0-3
Creating client on device v-1-2
Creating client on device v-2-1
Creating client on device v-3-0
Creating client on device v-0-0
Creating client on device v-3-3
Creating client on device v-2-3
Creating client on device v-3-2
Creating connector on device cloud
```

Creating concentration_calculator on device cloud
0.0 Submitted application Autonomous_Vehicle_System
==
============= RESULTS =================
==
EXECUTION TIME : 10037
==
APPLICATION LOOP DELAYS
==
[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
226.37331763210688
==
TUPLE CPU EXECUTION DELAY
==
VEHICLE_SENSOR_DATA_STATE ---> 1.074995231649154
VEHICLE_SENSOR ---> 3.7788962776584794
CONCENTRATION ---> 0.13266834384751328
_SENSOR ---> 0.8095801539912656
GLOBAL_DATA_STATE ---> 0.056000000000494765
==
cloud : Energy Consumed = 1.63354470583574E7
proxy-server : Energy Consumed = 834332.9999999987
d-0 : Energy Consumed = 834332.9999999987
v-0-0 : Energy Consumed = 874773.5374825272
v-0-1 : Energy Consumed = 874885.703267515
v-0-2 : Energy Consumed = 874817.2535837705
v-0-3 : Energy Consumed = 874857.0535662618
d-1 : Energy Consumed = 834332.9999999987
v-1-0 : Energy Consumed = 866520.5567650017
v-1-1 : Energy Consumed = 874340.3676662665
v-1-2 : Energy Consumed = 874241.2189200069
v-1-3 : Energy Consumed = 874903.6315200189
d-2 : Energy Consumed = 834332.9999999987
v-2-0 : Energy Consumed = 874933.011000001
v-2-1 : Energy Consumed = 874842.9281800115
v-2-2 : Energy Consumed = 874884.8290600185
v-2-3 : Energy Consumed = 874789.1809612497
d-3 : Energy Consumed = 834332.9999999987
v-3-0 : Energy Consumed = 874918.5191337671
v-3-1 : Energy Consumed = 874765.3833025163
v-3-2 : Energy Consumed = 874861.8884300083
v-3-3 : Energy Consumed = 874865.8522675066
Cost of execution in cloud = 4275064.183998902

Total network usage = 363880.1

6. Cloud = false, gateway = 4, car = 4

Starting Autonomous Vehicle System...
Placement of operator client on device v-0-0 successful.
Placement of operator concentration_calculator on device d-0 successful.
Placement of operator client on device v-0-1 successful.
Placement of operator client on device v-0-2 successful.
Placement of operator client on device v-0-3 successful.
Placement of operator client on device v-1-0 successful.
Placement of operator concentration_calculator on device d-1 successful.
Placement of operator client on device v-1-1 successful.
Placement of operator client on device v-1-2 successful.
Placement of operator client on device v-1-3 successful.
Placement of operator client on device v-2-0 successful.
Placement of operator concentration_calculator on device d-2 successful.
Placement of operator client on device v-2-1 successful.
Placement of operator client on device v-2-2 successful.
Placement of operator client on device v-2-3 successful.
Placement of operator client on device v-3-0 successful.
Placement of operator concentration_calculator on device d-3 successful.
Placement of operator client on device v-3-1 successful.
Placement of operator client on device v-3-2 successful.
Placement of operator client on device v-3-3 successful.
Creating client on device v-2-0
Creating connector on device cloud
Creating client on device v-2-1
Creating concentration_calculator on device d-0
Creating client on device v-0-0
Creating client on device v-2-2
Creating client on device v-0-1
Creating client on device v-2-3
Creating client on device v-0-2
Creating concentration_calculator on device d-3
Creating client on device v-3-0
Creating client on device v-0-3
Creating client on device v-3-1
Creating concentration_calculator on device d-1
Creating client on device v-1-0
Creating client on device v-3-2

Creating client on device v-1-1
Creating client on device v-3-3
Creating client on device v-1-2
Creating client on device v-1-3
Creating concentration_calculator on device d-2
0.0 Submitted application Autonomous_Vehicle_System
==
============= RESULTS ================
==
EXECUTION TIME : 6101
==
APPLICATION LOOP DELAYS
==
[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
33.67160405348024
==
TUPLE CPU EXECUTION DELAY
==
VEHICLE_SENSOR_DATA_STATE ---> 0.04821428571388727
VEHICLE_SENSOR ---> 3.3488578665932156
CONCENTRATION ---> 0.12873131713153307
_SENSOR ---> 14.979821570470069
GLOBAL_DATA_STATE ---> 0.056000000000494765
==
cloud : Energy Consumed = 1.3354484628571376E7
proxy-server : Energy Consumed = 834332.9999999987
d-0 : Energy Consumed = 1073246.736555008
v-0-0 : Energy Consumed = 874554.7934600114
v-0-1 : Energy Consumed = 874615.0794200071
v-0-2 : Energy Consumed = 874018.2463800047
v-0-3 : Energy Consumed = 874067.4361400096
d-1 : Energy Consumed = 1073230.0025650065
v-1-0 : Energy Consumed = 874742.3803200097
v-1-1 : Energy Consumed = 874553.1239400074
v-1-2 : Energy Consumed = 874043.0754000067
v-1-3 : Energy Consumed = 874081.2198600093
d-2 : Energy Consumed = 1073182.1911650028
v-2-0 : Energy Consumed = 874603.1382800154
v-2-1 : Energy Consumed = 874550.7723600056
v-2-2 : Energy Consumed = 874002.5895400061
v-2-3 : Energy Consumed = 874006.5801000069
d-3 : Energy Consumed = 1073169.0430300075
v-3-0 : Energy Consumed = 874553.6634800112

v-3-1 : Energy Consumed = 874704.9179200082
v-3-2 : Energy Consumed = 874197.719780006
v-3-3 : Energy Consumed = 874095.3191600059
Cost of execution in cloud = 48889.59999991681
Total network usage = 32302.1

7. **Cloud = true, gateway = 6, car = 4**

Starting Autonomous Vehicle System...
Creating connector on device cloud
Creating concentration_calculator on device cloud
Creating client on device v-0-2
Creating client on device v-1-1
Creating client on device v-2-0
Creating client on device v-0-1
Creating client on device v-1-0
Creating client on device v-1-3
Creating client on device v-2-2
Creating client on device v-3-1
Creating client on device v-4-0
Creating client on device v-0-3
Creating client on device v-1-2
Creating client on device v-2-1
Creating client on device v-3-0
Creating client on device v-0-0
Creating client on device v-3-3
Creating client on device v-4-2
Creating client on device v-5-1
Creating client on device v-2-3
Creating client on device v-3-2
Creating client on device v-4-1
Creating client on device v-5-0
Creating client on device v-5-3
Creating client on device v-4-3
Creating client on device v-5-2
0.0 Submitted application Autonomous_Vehicle_System
==
============= RESULTS =================
==
EXECUTION TIME : 17004
==
APPLICATION LOOP DELAYS
==

[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
1351.1999769341346

===

TUPLE CPU EXECUTION DELAY

===

VEHICLE_SENSOR_DATA_STATE ---> 1.1562500064399497

VEHICLE_SENSOR ---> 3.8062497149024814

CONCENTRATION ---> 0.129068078431761

_SENSOR ---> 1.3757118675834317

GLOBAL_DATA_STATE ---> 0.056000029445177284

===

cloud : Energy Consumed = 1.6356468258653989E7

proxy-server : Energy Consumed = 834332.9999999987

d-0 : Energy Consumed = 834332.9999999987

v-0-0 : Energy Consumed = 874378.0788411913

v-0-1 : Energy Consumed = 874699.4105405781

v-0-2 : Energy Consumed = 874432.521481022

v-0-3 : Energy Consumed = 874531.4100007844

d-1 : Energy Consumed = 834332.9999999987

v-1-0 : Energy Consumed = 874628.8427811086

v-1-1 : Energy Consumed = 874411.4387012265

v-1-2 : Energy Consumed = 874622.6126203521

v-1-3 : Energy Consumed = 874323.1272014367

d-2 : Energy Consumed = 834332.9999999987

v-2-0 : Energy Consumed = 874567.0400005793

v-2-1 : Energy Consumed = 874719.0477601506

v-2-2 : Energy Consumed = 874149.303701808

v-2-3 : Energy Consumed = 874429.294421

d-3 : Energy Consumed = 834332.9999999987

v-3-0 : Energy Consumed = 874798.0649202373

v-3-1 : Energy Consumed = 874285.4713818385

v-3-2 : Energy Consumed = 874629.7997007633

v-3-3 : Energy Consumed = 874270.4558813329

d-4 : Energy Consumed = 834332.9999999987

v-4-0 : Energy Consumed = 874316.6221813349

v-4-1 : Energy Consumed = 874660.5738404626

v-4-2 : Energy Consumed = 874374.6481807859

v-4-3 : Energy Consumed = 874299.9168012128

d-5 : Energy Consumed = 834332.9999999987

v-5-0 : Energy Consumed = 874664.3506203919

v-5-1 : Energy Consumed = 874372.2762412565

v-5-2 : Energy Consumed = 874586.1682206796

v-5-3 : Energy Consumed = 874405.4732209799

Cost of execution in cloud = 4304866.392013035
Total network usage = 559844.6

8. Cloud = false, gateway = 6, car = 4

Starting Autonomous Vehicle System...
Placement of operator client on device v-0-0 successful.
Placement of operator concentration_calculator on device d-0 successful.
Placement of operator client on device v-0-1 successful.
Placement of operator client on device v-0-2 successful.
Placement of operator client on device v-0-3 successful.
Placement of operator client on device v-1-0 successful.
Placement of operator concentration_calculator on device d-1 successful.
Placement of operator client on device v-1-1 successful.
Placement of operator client on device v-1-2 successful.
Placement of operator client on device v-1-3 successful.
Placement of operator client on device v-2-0 successful.
Placement of operator concentration_calculator on device d-2 successful.
Placement of operator client on device v-2-1 successful.
Placement of operator client on device v-2-2 successful.
Placement of operator client on device v-2-3 successful.
Placement of operator client on device v-3-0 successful.
Placement of operator concentration_calculator on device d-3 successful.
Placement of operator client on device v-3-1 successful.
Placement of operator client on device v-3-2 successful.
Placement of operator client on device v-3-3 successful.
Placement of operator client on device v-4-0 successful.
Placement of operator concentration_calculator on device d-4 successful.
Placement of operator client on device v-4-1 successful.
Placement of operator client on device v-4-2 successful.
Placement of operator client on device v-4-3 successful.
Placement of operator client on device v-5-0 successful.
Placement of operator concentration_calculator on device d-5 successful.
Placement of operator client on device v-5-1 successful.
Placement of operator client on device v-5-2 successful.
Placement of operator client on device v-5-3 successful.
Creating client on device v-4-2
Creating connector on device cloud
Creating client on device v-4-3

Creating concentration_calculator on device d-0
Creating client on device v-0-0
Creating concentration_calculator on device d-5
Creating client on device v-5-0
Creating client on device v-0-1
Creating client on device v-5-1
Creating client on device v-0-2
Creating client on device v-5-2
Creating client on device v-0-3
Creating client on device v-5-3
Creating concentration_calculator on device d-1
Creating client on device v-1-0
Creating client on device v-1-1
Creating client on device v-1-2
Creating client on device v-1-3
Creating concentration_calculator on device d-2
Creating client on device v-2-0
Creating client on device v-2-1
Creating client on device v-2-2
Creating client on device v-2-3
Creating concentration_calculator on device d-3
Creating client on device v-3-0
Creating client on device v-3-1
Creating client on device v-3-2
Creating client on device v-3-3
Creating concentration_calculator on device d-4
Creating client on device v-4-0
Creating client on device v-4-1
0.0 Submitted application Autonomous_Vehicle_System
===
============== RESULTS =================
===
EXECUTION TIME : 8236
===
APPLICATION LOOP DELAYS
===
[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
33.553449918745585
===
TUPLE CPU EXECUTION DELAY
===
VEHICLE_SENSOR_DATA_STATE ---> 0.04821428571388727
VEHICLE_SENSOR ---> 3.6556999673525294

CONCENTRATION ---> 0.12929908251226718
_SENSOR ---> 12.97523401715149
GLOBAL_DATA_STATE ---> 0.05131102180741881
======================================
cloud : Energy Consumed = 1.3369636828571403E7
proxy-server : Energy Consumed = 834332.9999999987
d-0 : Energy Consumed = 1073238.3695600063
v-0-0 : Energy Consumed = 874695.3181800097
v-0-1 : Energy Consumed = 874535.4209200066
v-0-2 : Energy Consumed = 873929.4564200074
v-0-3 : Energy Consumed = 874188.9751600074
d-1 : Energy Consumed = 1073118.8410600089
v-1-0 : Energy Consumed = 874470.6557600119
v-1-1 : Energy Consumed = 874757.120960009
v-1-2 : Energy Consumed = 874052.4410000052
v-1-3 : Energy Consumed = 874130.0329600092
d-2 : Energy Consumed = 1073181.521805409
v-2-0 : Energy Consumed = 874550.9352400127
v-2-1 : Energy Consumed = 874607.882160007
v-2-2 : Energy Consumed = 874088.4374800047
v-2-3 : Energy Consumed = 873997.4588200087
d-3 : Energy Consumed = 1073279.0092500017
v-3-0 : Energy Consumed = 874392.8602000105
v-3-1 : Energy Consumed = 874571.1730800061
v-3-2 : Energy Consumed = 874257.3745800056
v-3-3 : Energy Consumed = 874066.9475000083
d-4 : Energy Consumed = 1073148.1972596045
v-4-0 : Energy Consumed = 874790.5724400108
v-4-1 : Energy Consumed = 874446.0405200082
v-4-2 : Energy Consumed = 874095.8383400065
v-4-3 : Energy Consumed = 873690.5827200102
d-5 : Energy Consumed = 1073136.770335005
v-5-0 : Energy Consumed = 874258.687800012
v-5-1 : Energy Consumed = 874578.8488000067
v-5-2 : Energy Consumed = 873933.4368000078
v-5-3 : Energy Consumed = 873890.1310800097
Cost of execution in cloud = 70371.19999987521
Total network usage = 47952.7

9. **Cloud = true, gateway = 8, car = 4**

Starting Autonomous Vehicle System...

Creating connector on device cloud
Creating concentration_calculator on device cloud
Creating client on device v-0-2
Creating client on device v-1-1
Creating client on device v-2-0
Creating client on device v-0-1
Creating client on device v-1-0
Creating client on device v-1-3
Creating client on device v-2-2
Creating client on device v-3-1
Creating client on device v-4-0
Creating client on device v-0-3
Creating client on device v-1-2
Creating client on device v-2-1
Creating client on device v-3-0
Creating client on device v-0-0
Creating client on device v-7-3
Creating client on device v-6-3
Creating client on device v-7-2
Creating client on device v-3-3
Creating client on device v-4-2
Creating client on device v-5-1
Creating client on device v-6-0
Creating client on device v-2-3
Creating client on device v-3-2
Creating client on device v-4-1
Creating client on device v-5-0
Creating client on device v-5-3
Creating client on device v-6-2
Creating client on device v-7-1
Creating client on device v-4-3
Creating client on device v-5-2
Creating client on device v-6-1
Creating client on device v-7-0
0.0 Submitted application Autonomous_Vehicle_System
===
============= RESULTS =================
===
EXECUTION TIME : 18115
===
APPLICATION LOOP DELAYS
===

[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
2996.9148352959464
===
TUPLE CPU EXECUTION DELAY
===
VEHICLE_SENSOR_DATA_STATE ---> 1.5624999978470442
VEHICLE_SENSOR ---> 3.7624999952434792
CONCENTRATION ---> 0.12236725628362408
_SENSOR ---> 1.0455825082706984
GLOBAL_DATA_STATE ---> 0.055315277115917445
===
cloud : Energy Consumed = 1.6384687222314682E7
proxy-server : Energy Consumed = 834332.9999999987
d-0 : Energy Consumed = 834332.9999999987
v-0-0 : Energy Consumed = 874491.5960210625
v-0-1 : Energy Consumed = 874908.7927800057
v-0-2 : Energy Consumed = 874923.1567600829
v-0-3 : Energy Consumed = 874366.0868008703
d-1 : Energy Consumed = 834332.9999999987
v-1-0 : Energy Consumed = 874913.6995400831
v-1-1 : Energy Consumed = 874902.1045200977
v-1-2 : Energy Consumed = 874292.6788205185
v-1-3 : Energy Consumed = 874411.4896009702
d-2 : Energy Consumed = 834332.9999999987
v-2-0 : Energy Consumed = 874923.3400000233
v-2-1 : Energy Consumed = 874355.3672608493
v-2-2 : Energy Consumed = 874262.9939414337
v-2-3 : Energy Consumed = 874837.095040168
d-3 : Energy Consumed = 834332.9999999987
v-3-0 : Energy Consumed = 874380.4304208036
v-3-1 : Energy Consumed = 874297.39216101
v-3-2 : Energy Consumed = 874789.9005601298
v-3-3 : Energy Consumed = 874864.8355400212
d-4 : Energy Consumed = 834332.9999999987
v-4-0 : Energy Consumed = 874340.5146411271
v-4-1 : Energy Consumed = 874842.2562999938
v-4-2 : Energy Consumed = 874826.2635201231
v-4-3 : Energy Consumed = 874165.9989007486
d-5 : Energy Consumed = 834332.9999999987
v-5-0 : Energy Consumed = 874913.6690000199
v-5-1 : Energy Consumed = 874903.9980000203
v-5-2 : Energy Consumed = 874108.1968608202
v-5-3 : Energy Consumed = 874423.6343411545

d-6 : Energy Consumed = 834332.9999999987
v-6-0 : Energy Consumed = 874894.9072600212
v-6-1 : Energy Consumed = 874179.4568607707
v-6-2 : Energy Consumed = 874389.9996211649
v-6-3 : Energy Consumed = 874664.7476401408
d-7 : Energy Consumed = 834332.9999999987
v-7-0 : Energy Consumed = 874340.8913005461
v-7-1 : Energy Consumed = 874299.641941325
v-7-2 : Energy Consumed = 874799.571560355
v-7-3 : Energy Consumed = 874857.1292801542
Cost of execution in cloud = 4344873.024037167
Total network usage = 708101.9

10. Cloud = false, gateway = 8, car = 4

Starting Autonomous Vehicle System...
Placement of operator client on device v-0-0 successful.
Placement of operator concentration_calculator on device d-0 successful.
Placement of operator client on device v-0-1 successful.
Placement of operator client on device v-0-2 successful.
Placement of operator client on device v-0-3 successful.
Placement of operator client on device v-1-0 successful.
Placement of operator concentration_calculator on device d-1 successful.
Placement of operator client on device v-1-1 successful.
Placement of operator client on device v-1-2 successful.
Placement of operator client on device v-1-3 successful.
Placement of operator client on device v-2-0 successful.
Placement of operator concentration_calculator on device d-2 successful.
Placement of operator client on device v-2-1 successful.
Placement of operator client on device v-2-2 successful.
Placement of operator client on device v-2-3 successful.
Placement of operator client on device v-3-0 successful.
Placement of operator concentration_calculator on device d-3 successful.
Placement of operator client on device v-3-1 successful.
Placement of operator client on device v-3-2 successful.
Placement of operator client on device v-3-3 successful.
Placement of operator client on device v-4-0 successful.
Placement of operator concentration_calculator on device d-4 successful.
Placement of operator client on device v-4-1 successful.
Placement of operator client on device v-4-2 successful.
Placement of operator client on device v-4-3 successful.
Placement of operator client on device v-5-0 successful.

Placement of operator concentration_calculator on device d-5 successful.
Placement of operator client on device v-5-1 successful.
Placement of operator client on device v-5-2 successful.
Placement of operator client on device v-5-3 successful.
Placement of operator client on device v-6-0 successful.
Placement of operator concentration_calculator on device d-6 successful.
Placement of operator client on device v-6-1 successful.
Placement of operator client on device v-6-2 successful.
Placement of operator client on device v-6-3 successful.
Placement of operator client on device v-7-0 successful.
Placement of operator concentration_calculator on device d-7 successful.
Placement of operator client on device v-7-1 successful.
Placement of operator client on device v-7-2 successful.
Placement of operator client on device v-7-3 successful.
Creating client on device v-4-2
Creating connector on device cloud
Creating client on device v-4-3
Creating concentration_calculator on device d-0
Creating client on device v-0-0
Creating concentration_calculator on device d-5
Creating client on device v-5-0
Creating client on device v-0-1
Creating client on device v-5-1
Creating client on device v-0-2
Creating client on device v-5-2
Creating client on device v-0-3
Creating client on device v-5-3
Creating concentration_calculator on device d-1
Creating client on device v-1-0
Creating concentration_calculator on device d-6
Creating client on device v-6-0
Creating client on device v-1-1
Creating client on device v-6-1
Creating client on device v-1-2
Creating client on device v-6-2
Creating client on device v-1-3
Creating client on device v-6-3
Creating concentration_calculator on device d-2
Creating client on device v-2-0
Creating concentration_calculator on device d-7
Creating client on device v-7-0
Creating client on device v-2-1
Creating client on device v-7-1

Creating client on device v-2-2
Creating client on device v-7-2
Creating client on device v-2-3
Creating client on device v-7-3
Creating concentration_calculator on device d-3
Creating client on device v-3-0
Creating client on device v-3-1
Creating client on device v-3-2
Creating client on device v-3-3
Creating concentration_calculator on device d-4
Creating client on device v-4-0
Creating client on device v-4-1
0.0 Submitted application Autonomous_Vehicle_System
==
============= RESULTS ================
==
EXECUTION TIME : 9808
==
APPLICATION LOOP DELAYS
==
[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
33.515988915247775
==
TUPLE CPU EXECUTION DELAY
==
VEHICLE_SENSOR_DATA_STATE ---> 0.04821428571388727
VEHICLE_SENSOR ---> 3.789803527164555
CONCENTRATION ---> 0.12550222199363367
_SENSOR ---> 20.040645212838715
GLOBAL_DATA_STATE ---> 0.05599999999985812
==
cloud : Energy Consumed = 1.3384789028571403E7
proxy-server : Energy Consumed = 834332.9999999987
d-0 : Energy Consumed = 1073177.4100250062
v-0-0 : Energy Consumed = 874501.4299000105
v-0-1 : Energy Consumed = 874693.8828000072
v-0-2 : Energy Consumed = 873958.9377000068
v-0-3 : Energy Consumed = 874017.1062200066
d-1 : Energy Consumed = 1073208.4874350068
v-1-0 : Energy Consumed = 874669.2064800106
v-1-1 : Energy Consumed = 874503.57788001
v-1-2 : Energy Consumed = 874220.9709000066
v-1-3 : Energy Consumed = 874086.4931000058

d-2 : Energy Consumed = 1073210.878005011
v-2-0 : Energy Consumed = 874582.1573000118
v-2-1 : Energy Consumed = 874602.1406400047
v-2-2 : Energy Consumed = 873870.3615200055
v-2-3 : Energy Consumed = 874050.6696800091
d-3 : Energy Consumed = 1073251.5176950076
v-3-0 : Energy Consumed = 874696.1631200118
v-3-1 : Energy Consumed = 874491.3924200058
v-3-2 : Energy Consumed = 873963.4576200063
v-3-3 : Energy Consumed = 874035.1350000066
d-4 : Energy Consumed = 1073221.6355700048
v-4-0 : Energy Consumed = 874605.0928400102
v-4-1 : Energy Consumed = 874605.2964400083
v-4-2 : Energy Consumed = 874187.9062600053
v-4-3 : Energy Consumed = 873735.27292001
d-5 : Energy Consumed = 1073031.4418208103
v-5-0 : Energy Consumed = 874519.9575000106
v-5-1 : Energy Consumed = 874678.5415400052
v-5-2 : Energy Consumed = 874271.1074000086
v-5-3 : Energy Consumed = 873924.8856000126
d-6 : Energy Consumed = 1073238.3695600077
v-6-0 : Energy Consumed = 874598.2926000099
v-6-1 : Energy Consumed = 874582.6255800113
v-6-2 : Energy Consumed = 874157.2848200069
v-6-3 : Energy Consumed = 874113.4192000106
d-7 : Energy Consumed = 1073200.1204400053
v-7-0 : Energy Consumed = 874483.8795800147
v-7-1 : Energy Consumed = 874580.8848000093
v-7-2 : Energy Consumed = 874455.9253000094
v-7-3 : Energy Consumed = 873847.6194000124
Cost of execution in cloud = 91852.79999983363
Total network usage = 63590.7

11. Cloud = true, gateway = 10, car = 4
Starting Autonomous Vehicle System...
Creating connector on device cloud
Creating concentration_calculator on device cloud
Creating client on device v-0-2
Creating client on device v-1-1
Creating client on device v-2-0
Creating client on device v-0-1
Creating client on device v-1-0

Creating client on device v-1-3
Creating client on device v-2-2
Creating client on device v-3-1
Creating client on device v-4-0
Creating client on device v-0-3
Creating client on device v-1-2
Creating client on device v-2-1
Creating client on device v-3-0
Creating client on device v-0-0
Creating client on device v-7-3
Creating client on device v-8-2
Creating client on device v-9-1
Creating client on device v-6-3
Creating client on device v-7-2
Creating client on device v-8-1
Creating client on device v-9-0
Creating client on device v-9-3
Creating client on device v-8-3
Creating client on device v-9-2
Creating client on device v-3-3
Creating client on device v-4-2
Creating client on device v-5-1
Creating client on device v-6-0
Creating client on device v-2-3
Creating client on device v-3-2
Creating client on device v-4-1
Creating client on device v-5-0
Creating client on device v-5-3
Creating client on device v-6-2
Creating client on device v-7-1
Creating client on device v-8-0
Creating client on device v-4-3
Creating client on device v-5-2
Creating client on device v-6-1
Creating client on device v-7-0
0.0 Submitted application Autonomous_Vehicle_System
==
============= RESULTS =================
==
EXECUTION TIME : 27760
==
APPLICATION LOOP DELAYS
==

[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
3758.4785962078927

==

TUPLE CPU EXECUTION DELAY

==

VEHICLE_SENSOR_DATA_STATE ---> 1.7999999978201686

VEHICLE_SENSOR ---> 3.8999999961520757

CONCENTRATION ---> 0.14494150651166224

_SENSOR ---> 0.9635460853191347

GLOBAL_DATA_STATE ---> 0.10000000284785529

==

cloud : Energy Consumed = 1.6391571598392947E7

proxy-server : Energy Consumed = 834332.9999999987

d-0 : Energy Consumed = 834332.9999999987

v-0-0 : Energy Consumed = 874922.8615401159

v-0-1 : Energy Consumed = 874914.2798001153

v-0-2 : Energy Consumed = 874923.920260026

v-0-3 : Energy Consumed = 873424.121221508

d-1 : Energy Consumed = 834332.9999999987

v-1-0 : Energy Consumed = 874913.6995401154

v-1-1 : Energy Consumed = 874927.9210000252

v-1-2 : Energy Consumed = 873455.6588619592

v-1-3 : Energy Consumed = 873878.8109223226

d-2 : Energy Consumed = 834332.9999999987

v-2-0 : Energy Consumed = 874923.3400000252

v-2-1 : Energy Consumed = 873347.4658215442

v-2-2 : Energy Consumed = 874097.6503816744

v-2-3 : Energy Consumed = 874777.38934021

d-3 : Energy Consumed = 834332.9999999987

v-3-0 : Energy Consumed = 873449.1843815725

v-3-1 : Energy Consumed = 873801.7992223642

v-3-2 : Energy Consumed = 874830.1828200144

v-3-3 : Energy Consumed = 874717.5513001061

d-4 : Energy Consumed = 834332.9999999987

v-4-0 : Energy Consumed = 873951.5470213019

v-4-1 : Energy Consumed = 874851.4895600183

v-4-2 : Energy Consumed = 874918.2500000248

v-4-3 : Energy Consumed = 874889.2370000238

d-5 : Energy Consumed = 834332.9999999987

v-5-0 : Energy Consumed = 874841.9610800188

v-5-1 : Energy Consumed = 874933.0110000226

v-5-2 : Energy Consumed = 874884.6560000267

v-5-3 : Energy Consumed = 874913.6690000241

d-6 : Energy Consumed = 834332.9999999987
v-6-0 : Energy Consumed = 874918.2500000249
v-6-1 : Energy Consumed = 874918.2500000249
v-6-2 : Energy Consumed = 874884.6560000235
v-6-3 : Energy Consumed = 874913.6690000242
d-7 : Energy Consumed = 834332.9999999987
v-7-0 : Energy Consumed = 874869.8950000774
v-7-1 : Energy Consumed = 874905.1585200246
v-7-2 : Energy Consumed = 874894.3270000264
v-7-3 : Energy Consumed = 874913.6690000255
d-8 : Energy Consumed = 834332.9999999987
v-8-0 : Energy Consumed = 874898.9080000246
v-8-1 : Energy Consumed = 874899.4882600249
v-8-2 : Energy Consumed = 874894.9072600252
v-8-3 : Energy Consumed = 874923.3400000234
d-9 : Energy Consumed = 834332.9999999987
v-9-0 : Energy Consumed = 874903.9980000253
v-9-1 : Energy Consumed = 874877.3060400243
v-9-2 : Energy Consumed = 874885.8165200237
v-9-3 : Energy Consumed = 874923.3400000255
Cost of execution in cloud = 4354633.152146558
Total network usage = 853369.9

12. Cloud = false, gateway = 10, car = 4

Starting Autonomous Vehicle System...
Placement of operator client on device v-0-0 successful.
Placement of operator concentration_calculator on device d-0 successful.
Placement of operator client on device v-0-1 successful.
Placement of operator client on device v-0-2 successful.
Placement of operator client on device v-0-3 successful.
Placement of operator client on device v-1-0 successful.
Placement of operator concentration_calculator on device d-1 successful.
Placement of operator client on device v-1-1 successful.
Placement of operator client on device v-1-2 successful.
Placement of operator client on device v-1-3 successful.
Placement of operator client on device v-2-0 successful.
Placement of operator concentration_calculator on device d-2 successful.
Placement of operator client on device v-2-1 successful.
Placement of operator client on device v-2-2 successful.
Placement of operator client on device v-2-3 successful.
Placement of operator client on device v-3-0 successful.
Placement of operator concentration_calculator on device d-3 successful.

Placement of operator client on device v-3-1 successful.
Placement of operator client on device v-3-2 successful.
Placement of operator client on device v-3-3 successful.
Placement of operator client on device v-4-0 successful.
Placement of operator concentration_calculator on device d-4 successful.
Placement of operator client on device v-4-1 successful.
Placement of operator client on device v-4-2 successful.
Placement of operator client on device v-4-3 successful.
Placement of operator client on device v-5-0 successful.
Placement of operator concentration_calculator on device d-5 successful.
Placement of operator client on device v-5-1 successful.
Placement of operator client on device v-5-2 successful.
Placement of operator client on device v-5-3 successful.
Placement of operator client on device v-6-0 successful.
Placement of operator concentration_calculator on device d-6 successful.
Placement of operator client on device v-6-1 successful.
Placement of operator client on device v-6-2 successful.
Placement of operator client on device v-6-3 successful.
Placement of operator client on device v-7-0 successful.
Placement of operator concentration_calculator on device d-7 successful.
Placement of operator client on device v-7-1 successful.
Placement of operator client on device v-7-2 successful.
Placement of operator client on device v-7-3 successful.
Placement of operator client on device v-8-0 successful.
Placement of operator concentration_calculator on device d-8 successful.
Placement of operator client on device v-8-1 successful.
Placement of operator client on device v-8-2 successful.
Placement of operator client on device v-8-3 successful.
Placement of operator client on device v-9-0 successful.
Placement of operator concentration_calculator on device d-9 successful.
Placement of operator client on device v-9-1 successful.
Placement of operator client on device v-9-2 successful.
Placement of operator client on device v-9-3 successful.
Creating client on device v-9-2
Creating connector on device cloud
Creating client on device v-9-3
Creating concentration_calculator on device d-0
Creating client on device v-0-0
Creating client on device v-0-1
Creating client on device v-0-2
Creating client on device v-0-3
Creating concentration_calculator on device d-1
Creating client on device v-1-0

Creating client on device v-1-1
Creating client on device v-1-2
Creating client on device v-1-3
Creating concentration_calculator on device d-2
Creating client on device v-2-0
Creating client on device v-2-1
Creating client on device v-2-2
Creating client on device v-2-3
Creating concentration_calculator on device d-3
Creating client on device v-3-0
Creating client on device v-3-1
Creating client on device v-3-2
Creating client on device v-3-3
Creating concentration_calculator on device d-4
Creating client on device v-4-0
Creating client on device v-4-1
Creating client on device v-4-2
Creating client on device v-4-3
Creating concentration_calculator on device d-5
Creating client on device v-5-0
Creating client on device v-5-1
Creating client on device v-5-2
Creating client on device v-5-3
Creating concentration_calculator on device d-6
Creating client on device v-6-0
Creating client on device v-6-1
Creating client on device v-6-2
Creating client on device v-6-3
Creating concentration_calculator on device d-7
Creating client on device v-7-0
Creating client on device v-7-1
Creating client on device v-7-2
Creating client on device v-7-3
Creating concentration_calculator on device d-8
Creating client on device v-8-0
Creating client on device v-8-1
Creating client on device v-8-2
Creating client on device v-8-3
Creating concentration_calculator on device d-9
Creating client on device v-9-0
Creating client on device v-9-1
0.0 Submitted application Autonomous_Vehicle_System
==

============== RESULTS ================

==

EXECUTION TIME : 11326

==

APPLICATION LOOP DELAYS

==

[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
33.42212152311073

==

TUPLE CPU EXECUTION DELAY

==

VEHICLE_SENSOR_DATA_STATE ---> 0.04821428571388727
VEHICLE_SENSOR ---> 3.8837363261826203
CONCENTRATION ---> 0.12838782988293085
_SENSOR ---> 20.435356969038974
GLOBAL_DATA_STATE ---> 0.056000000000494765

==

cloud : Energy Consumed = 1.3399941228571368E7
proxy-server : Energy Consumed = 834332.9999999987
d-0 : Energy Consumed = 1073054.2956700048
v-0-0 : Energy Consumed = 874598.9746600094
v-0-1 : Energy Consumed = 874360.5590600079
v-0-2 : Energy Consumed = 874075.2951000067
v-0-3 : Energy Consumed = 874227.9340200108
d-1 : Energy Consumed = 1073252.712980009
v-1-0 : Energy Consumed = 874649.3453000122
v-1-1 : Energy Consumed = 874582.3201800085
v-1-2 : Energy Consumed = 873988.3884400039
v-1-3 : Energy Consumed = 874170.3559400094
d-2 : Energy Consumed = 1073171.433600006
v-2-0 : Energy Consumed = 874506.2755800125
v-2-1 : Energy Consumed = 874714.1002800063
v-2-2 : Energy Consumed = 874309.4045600045
v-2-3 : Energy Consumed = 874152.6631000072
d-3 : Energy Consumed = 1073026.8041150058
v-3-0 : Energy Consumed = 874535.5023600139
v-3-1 : Energy Consumed = 874690.4623200054
v-3-2 : Energy Consumed = 874247.3676400057
v-3-3 : Energy Consumed = 874045.457520007
d-4 : Energy Consumed = 1073230.002565003
v-4-0 : Energy Consumed = 874131.5905000131
v-4-1 : Energy Consumed = 874615.3135600061
v-4-2 : Energy Consumed = 874074.4603400035

v-4-3 : Energy Consumed = 874106.3033800119
d-5 : Energy Consumed = 1073230.0025650081
v-5-0 : Energy Consumed = 874417.5365200113
v-5-1 : Energy Consumed = 874413.5561400058
v-5-2 : Energy Consumed = 874119.7206200107
v-5-3 : Energy Consumed = 873985.7212800089
d-6 : Energy Consumed = 1073183.386450009
v-6-0 : Energy Consumed = 874765.1428000106
v-6-1 : Energy Consumed = 874456.8313200095
v-6-2 : Energy Consumed = 874035.4709400109
v-6-3 : Energy Consumed = 874133.5145200099
d-7 : Energy Consumed = 1073225.221424999
v-7-0 : Energy Consumed = 874690.0347600157
v-7-1 : Energy Consumed = 874686.8484200091
v-7-2 : Energy Consumed = 874090.9621200103
v-7-3 : Energy Consumed = 874038.9626800118
d-8 : Energy Consumed = 1073235.9789900018
v-8-0 : Energy Consumed = 874637.6383000144
v-8-1 : Energy Consumed = 874278.1112400087
v-8-2 : Energy Consumed = 874275.800380007
v-8-3 : Energy Consumed = 873632.8315800093
d-9 : Energy Consumed = 1073210.8780050098
v-9-0 : Energy Consumed = 874527.7553800123
v-9-1 : Energy Consumed = 874663.2613600104
v-9-2 : Energy Consumed = 874163.9018200058
v-9-3 : Energy Consumed = 874155.4727800114
Cost of execution in cloud = 113334.39999979205
Total network usage = 79242.5

13. Cloud = true, gateway = 12, car = 4

Starting Autonomous Vehicle System...
Creating connector on device cloud
Creating concentration_calculator on device cloud
Creating client on device v-1-1
Creating client on device v-1-0
Creating client on device v-1-3
Creating client on device v-3-1
Creating client on device v-1-2
Creating client on device v-3-0
Creating client on device v-7-3
Creating client on device v-9-1
Creating client on device v-7-2

Creating client on device v-9-0
Creating client on device v-9-3
Creating client on device v-9-2
Creating client on device v-3-3
Creating client on device v-5-1
Creating client on device v-3-2
Creating client on device v-5-0
Creating client on device v-5-3
Creating client on device v-7-1
Creating client on device v-5-2
Creating client on device v-7-0
Creating client on device v-11-0
Creating client on device v-11-2
Creating client on device v-11-1
Creating client on device v-11-3
Creating client on device v-0-2
Creating client on device v-2-0
Creating client on device v-0-1
Creating client on device v-2-2
Creating client on device v-4-0
Creating client on device v-0-3
Creating client on device v-2-1
Creating client on device v-0-0
Creating client on device v-8-2
Creating client on device v-6-3
Creating client on device v-8-1
Creating client on device v-8-3
Creating client on device v-4-2
Creating client on device v-6-0
Creating client on device v-2-3
Creating client on device v-4-1
Creating client on device v-6-2
Creating client on device v-8-0
Creating client on device v-4-3
Creating client on device v-6-1
Creating client on device v-10-1
Creating client on device v-10-0
Creating client on device v-10-3
Creating client on device v-10-2
0.0 Submitted application Autonomous_Vehicle_System
==
============== RESULTS ==================
==

EXECUTION TIME : 30176

==

APPLICATION LOOP DELAYS

==

[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
4170.8550730555135

==

TUPLE CPU EXECUTION DELAY

==

VEHICLE_SENSOR_DATA_STATE ---> 2.149999999997817
VEHICLE_SENSOR ---> 3.7718750334046223
CONCENTRATION ---> 0.13838749234710557
_SENSOR ---> 1.2142028035586356
GLOBAL_DATA_STATE ---> 0.11774999963537454

==

cloud : Energy Consumed = 1.644165597879888E7
proxy-server : Energy Consumed = 834332.9999999987
d-0 : Energy Consumed = 834332.9999999987
v-0-0 : Energy Consumed = 874752.4687001745
v-0-1 : Energy Consumed = 874851.1638000901
v-0-2 : Energy Consumed = 874933.0110000271
v-0-3 : Energy Consumed = 873817.8123602802
d-1 : Energy Consumed = 834332.9999999987
v-1-0 : Energy Consumed = 874913.6995400892
v-1-1 : Energy Consumed = 874894.0725000886
v-1-2 : Energy Consumed = 874059.9538402654
v-1-3 : Energy Consumed = 874689.892240745
d-2 : Energy Consumed = 834332.9999999987
v-2-0 : Energy Consumed = 874933.0110000272
v-2-1 : Energy Consumed = 873369.5462409257
v-2-2 : Energy Consumed = 874583.348360991
v-2-3 : Energy Consumed = 874927.921000027
d-3 : Energy Consumed = 834332.9999999987
v-3-0 : Energy Consumed = 873476.6194807863
v-3-1 : Energy Consumed = 874593.6708806255
v-3-2 : Energy Consumed = 874590.21986008
v-3-3 : Energy Consumed = 874918.2500000262
d-4 : Energy Consumed = 834332.9999999987
v-4-0 : Energy Consumed = 874525.3834408729
v-4-1 : Energy Consumed = 874933.0110000268
v-4-2 : Energy Consumed = 874923.3400000265
v-4-3 : Energy Consumed = 874141.332760251
d-5 : Energy Consumed = 834332.9999999987

v-5-0 : Energy Consumed = 874862.0360399983
v-5-1 : Energy Consumed = 874933.0110000256
v-5-2 : Energy Consumed = 874121.8686006912
v-5-3 : Energy Consumed = 874666.3662607031
d-6 : Energy Consumed = 834332.9999999987
v-6-0 : Energy Consumed = 874913.6690000251
v-6-1 : Energy Consumed = 874248.7317603374
v-6-2 : Energy Consumed = 874648.4698205431
v-6-3 : Energy Consumed = 874789.6867800193
d-7 : Energy Consumed = 834332.9999999987
v-7-0 : Energy Consumed = 873111.513780716
v-7-1 : Energy Consumed = 874719.7094603988
v-7-2 : Energy Consumed = 874903.9980000268
v-7-3 : Energy Consumed = 874923.3400000263
d-8 : Energy Consumed = 834332.9999999987
v-8-0 : Energy Consumed = 874626.9493006672
v-8-1 : Energy Consumed = 874737.9113000203
v-8-2 : Energy Consumed = 874885.8165200264
v-8-3 : Energy Consumed = 873728.330160659
d-9 : Energy Consumed = 834332.9999999987
v-9-0 : Energy Consumed = 874913.669000027
v-9-1 : Energy Consumed = 874894.3270000253
v-9-2 : Energy Consumed = 874419.4707205582
v-9-3 : Energy Consumed = 874580.2027403429
d-10 : Energy Consumed = 834332.9999999987
v-10-0 : Energy Consumed = 874812.4492600273
v-10-1 : Energy Consumed = 873649.2519205112
v-10-2 : Energy Consumed = 874637.4245206282
v-10-3 : Energy Consumed = 874792.6695201056
d-11 : Energy Consumed = 834332.9999999987
v-11-0 : Energy Consumed = 873650.1477605565
v-11-1 : Energy Consumed = 874657.0210204483
v-11-2 : Energy Consumed = 874894.9072600257
v-11-3 : Energy Consumed = 874730.642780075
Cost of execution in cloud = 4425638.856013176
Total network usage = 1002136.0

14. Cloud = false, gateway = 12, car = 4

Starting Autonomous Vehicle System...
Placement of operator client on device v-0-0 successful.
Placement of operator concentration_calculator on device d-0 successful.

Placement of operator client on device v-0-1 successful.
Placement of operator client on device v-0-2 successful.
Placement of operator client on device v-0-3 successful.
Placement of operator client on device v-1-0 successful.
Placement of operator concentration_calculator on device d-1 successful.
Placement of operator client on device v-1-1 successful.
Placement of operator client on device v-1-2 successful.
Placement of operator client on device v-1-3 successful.
Placement of operator client on device v-2-0 successful.
Placement of operator concentration_calculator on device d-2 successful.
Placement of operator client on device v-2-1 successful.
Placement of operator client on device v-2-2 successful.
Placement of operator client on device v-2-3 successful.
Placement of operator client on device v-3-0 successful.
Placement of operator concentration_calculator on device d-3 successful.
Placement of operator client on device v-3-1 successful.
Placement of operator client on device v-3-2 successful.
Placement of operator client on device v-3-3 successful.
Placement of operator client on device v-4-0 successful.
Placement of operator concentration_calculator on device d-4 successful.
Placement of operator client on device v-4-1 successful.
Placement of operator client on device v-4-2 successful.
Placement of operator client on device v-4-3 successful.
Placement of operator client on device v-5-0 successful.
Placement of operator concentration_calculator on device d-5 successful.
Placement of operator client on device v-5-1 successful.
Placement of operator client on device v-5-2 successful.
Placement of operator client on device v-5-3 successful.
Placement of operator client on device v-6-0 successful.
Placement of operator concentration_calculator on device d-6 successful.
Placement of operator client on device v-6-1 successful.
Placement of operator client on device v-6-2 successful.
Placement of operator client on device v-6-3 successful.
Placement of operator client on device v-7-0 successful.
Placement of operator concentration_calculator on device d-7 successful.
Placement of operator client on device v-7-1 successful.
Placement of operator client on device v-7-2 successful.
Placement of operator client on device v-7-3 successful.
Placement of operator client on device v-8-0 successful.
Placement of operator concentration_calculator on device d-8 successful.
Placement of operator client on device v-8-1 successful.
Placement of operator client on device v-8-2 successful.
Placement of operator client on device v-8-3 successful.

Placement of operator client on device v-9-0 successful.
Placement of operator concentration_calculator on device d-9 successful.
Placement of operator client on device v-9-1 successful.
Placement of operator client on device v-9-2 successful.
Placement of operator client on device v-9-3 successful.
Placement of operator client on device v-10-0 successful.
Placement of operator concentration_calculator on device d-10 successful.
Placement of operator client on device v-10-1 successful.
Placement of operator client on device v-10-2 successful.
Placement of operator client on device v-10-3 successful.
Placement of operator client on device v-11-0 successful.
Placement of operator concentration_calculator on device d-11 successful.
Placement of operator client on device v-11-1 successful.
Placement of operator client on device v-11-2 successful.
Placement of operator client on device v-11-3 successful.
Creating client on device v-9-2
Creating connector on device cloud
Creating client on device v-9-3
Creating concentration_calculator on device d-0
Creating client on device v-0-0
Creating concentration_calculator on device d-10
Creating client on device v-10-0
Creating client on device v-0-1
Creating client on device v-10-1
Creating client on device v-0-2
Creating client on device v-10-2
Creating client on device v-0-3
Creating client on device v-10-3
Creating concentration_calculator on device d-1
Creating client on device v-1-0
Creating concentration_calculator on device d-11
Creating client on device v-11-0
Creating client on device v-1-1
Creating client on device v-11-1
Creating client on device v-1-2
Creating client on device v-11-2
Creating client on device v-1-3
Creating client on device v-11-3
Creating concentration_calculator on device d-2
Creating client on device v-2-0
Creating client on device v-2-1
Creating client on device v-2-2
Creating client on device v-2-3

Creating concentration_calculator on device d-3
Creating client on device v-3-0
Creating client on device v-3-1
Creating client on device v-3-2
Creating client on device v-3-3
Creating concentration_calculator on device d-4
Creating client on device v-4-0
Creating client on device v-4-1
Creating client on device v-4-2
Creating client on device v-4-3
Creating concentration_calculator on device d-5
Creating client on device v-5-0
Creating client on device v-5-1
Creating client on device v-5-2
Creating client on device v-5-3
Creating concentration_calculator on device d-6
Creating client on device v-6-0
Creating client on device v-6-1
Creating client on device v-6-2
Creating client on device v-6-3
Creating concentration_calculator on device d-7
Creating client on device v-7-0
Creating client on device v-7-1
Creating client on device v-7-2
Creating client on device v-7-3
Creating concentration_calculator on device d-8
Creating client on device v-8-0
Creating client on device v-8-1
Creating client on device v-8-2
Creating client on device v-8-3
Creating concentration_calculator on device d-9
Creating client on device v-9-0
Creating client on device v-9-1
0.0 Submitted application Autonomous_Vehicle_System
==
============= RESULTS =================
==
EXECUTION TIME : 14198
==
APPLICATION LOOP DELAYS
==
[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
33.23764338529314

```
========================================
TUPLE CPU EXECUTION DELAY
========================================
VEHICLE_SENSOR_DATA_STATE ---> 0.04821428571388727
VEHICLE_SENSOR ---> 3.8001779022077296
CONCENTRATION ---> 0.1640836607597453
_SENSOR ---> 15.036592223992816
GLOBAL_DATA_STATE ---> 0.056000000000494765
========================================
cloud : Energy Consumed = 1.341509342857137E7
proxy-server : Energy Consumed = 834332.9999999987
d-0 : Energy Consumed = 1073174.3500954083
v-0-0 : Energy Consumed = 874318.6989000099
v-0-1 : Energy Consumed = 874579.6224800048
v-0-2 : Energy Consumed = 874016.760100005
v-0-3 : Energy Consumed = 873930.7085600109
d-1 : Energy Consumed = 1073265.8611150088
v-1-0 : Energy Consumed = 874368.2755000109
v-1-1 : Energy Consumed = 874600.5627400075
v-1-2 : Energy Consumed = 874376.674000008
v-1-3 : Energy Consumed = 873927.55276001
d-2 : Energy Consumed = 1073188.1675900063
v-2-0 : Energy Consumed = 874760.4498200124
v-2-1 : Energy Consumed = 874437.2042800097
v-2-2 : Energy Consumed = 874056.4519200061
v-2-3 : Energy Consumed = 874141.4345600082
d-3 : Energy Consumed = 1073067.443805005
v-3-0 : Energy Consumed = 874615.5680600102
v-3-1 : Energy Consumed = 874573.6162800073
v-3-2 : Energy Consumed = 874186.6846600054
v-3-3 : Energy Consumed = 873962.4192600048
d-4 : Energy Consumed = 1073196.3911508077
v-4-0 : Energy Consumed = 874504.4737200104
v-4-1 : Energy Consumed = 874443.8620000039
v-4-2 : Energy Consumed = 874052.1356000061
v-4-3 : Energy Consumed = 874268.0228600139
d-5 : Energy Consumed = 1073228.807280007
v-5-0 : Energy Consumed = 874640.4785200097
v-5-1 : Energy Consumed = 874631.4081400039
v-5-2 : Energy Consumed = 874174.4279400122
v-5-3 : Energy Consumed = 874091.8783200145
d-6 : Energy Consumed = 1072963.4540100084
v-6-0 : Energy Consumed = 874627.75352001
```

v-6-1 : Energy Consumed = 874522.5228600098
v-6-2 : Energy Consumed = 874251.7145000106
v-6-3 : Energy Consumed = 874188.6086800096
d-7 : Energy Consumed = 1073171.433600006
v-7-0 : Energy Consumed = 874562.6524200176
v-7-1 : Energy Consumed = 874526.7373800095
v-7-2 : Energy Consumed = 874341.7871400075
v-7-3 : Energy Consumed = 874102.6182200126
d-8 : Energy Consumed = 1073267.056400006
v-8-0 : Energy Consumed = 874570.9796600137
v-8-1 : Energy Consumed = 874469.149120009
v-8-2 : Energy Consumed = 873924.926320011
v-8-3 : Energy Consumed = 873962.4803400099
d-9 : Energy Consumed = 1073264.665830004
v-9-0 : Energy Consumed = 874591.0953400154
v-9-1 : Energy Consumed = 874666.9872400094
v-9-2 : Energy Consumed = 874059.088540009
v-9-3 : Energy Consumed = 873818.8710800103
d-10 : Energy Consumed = 1073152.3090400067
v-10-0 : Energy Consumed = 874537.2126000149
v-10-1 : Energy Consumed = 874686.1969000094
v-10-2 : Energy Consumed = 874129.1065800082
v-10-3 : Energy Consumed = 873966.8272000096
d-11 : Energy Consumed = 1073100.9117850077
v-11-0 : Energy Consumed = 874611.0176000149
v-11-1 : Energy Consumed = 874878.4767400104
v-11-2 : Energy Consumed = 874142.7681400069
v-11-3 : Energy Consumed = 873707.1455800113
Cost of execution in cloud = 134815.99999975046
Total network usage = 94868.2

15. Cloud = true, gateway = 16, car = 4
Starting Autonomous Vehicle System...
Creating connector on device cloud
Creating concentration_calculator on device cloud
Creating client on device v-1-1
Creating client on device v-1-0
Creating client on device v-1-3
Creating client on device v-3-1
Creating client on device v-1-2
Creating client on device v-3-0
Creating client on device v-7-3

Creating client on device v-9-1
Creating client on device v-7-2
Creating client on device v-9-0
Creating client on device v-9-3
Creating client on device v-9-2
Creating client on device v-3-3
Creating client on device v-5-1
Creating client on device v-3-2
Creating client on device v-5-0
Creating client on device v-5-3
Creating client on device v-7-1
Creating client on device v-5-2
Creating client on device v-7-0
Creating client on device v-11-0
Creating client on device v-11-2
Creating client on device v-13-0
Creating client on device v-11-1
Creating client on device v-13-2
Creating client on device v-15-0
Creating client on device v-11-3
Creating client on device v-13-1
Creating client on device v-15-2
Creating client on device v-13-3
Creating client on device v-15-1
Creating client on device v-15-3
Creating client on device v-0-2
Creating client on device v-2-0
Creating client on device v-0-1
Creating client on device v-2-2
Creating client on device v-4-0
Creating client on device v-0-3
Creating client on device v-2-1
Creating client on device v-0-0
Creating client on device v-8-2
Creating client on device v-6-3
Creating client on device v-8-1
Creating client on device v-8-3
Creating client on device v-4-2
Creating client on device v-6-0
Creating client on device v-2-3
Creating client on device v-4-1
Creating client on device v-6-2
Creating client on device v-8-0

Creating client on device v-4-3
Creating client on device v-6-1
Creating client on device v-10-1
Creating client on device v-10-0
Creating client on device v-10-3
Creating client on device v-12-1
Creating client on device v-10-2
Creating client on device v-12-0
Creating client on device v-12-3
Creating client on device v-14-1
Creating client on device v-12-2
Creating client on device v-14-0
Creating client on device v-14-3
Creating client on device v-14-2
0.0 Submitted application Autonomous_Vehicle_System
==
============= RESULTS =================
==
EXECUTION TIME : 48480
==
APPLICATION LOOP DELAYS
==
[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
4582.493332846126
==
TUPLE CPU EXECUTION DELAY
==
VEHICLE_SENSOR_DATA_STATE ---> 2.8999999999869033
VEHICLE_SENSOR ---> 6.162499997118516
CONCENTRATION ---> 0.161664554712295
_SENSOR ---> 1.728571939390847
GLOBAL_DATA_STATE ---> 0.05524999757376644
==
cloud : Energy Consumed = 1.6445364989284826E7
proxy-server : Energy Consumed = 834332.9999999987
d-0 : Energy Consumed = 834332.9999999987
v-0-0 : Energy Consumed = 874792.6491604311
v-0-1 : Energy Consumed = 874933.0110000274
v-0-2 : Energy Consumed = 874933.0110000286
v-0-3 : Energy Consumed = 874377.9668601251
d-1 : Energy Consumed = 834332.9999999987
v-1-0 : Energy Consumed = 874933.0110000285
v-1-1 : Energy Consumed = 874927.9210000287

v-1-2 : Energy Consumed = 873971.5507204693
v-1-3 : Energy Consumed = 874811.7061203162
d-2 : Energy Consumed = 834332.9999999987
v-2-0 : Energy Consumed = 874933.0110000272
v-2-1 : Energy Consumed = 873600.8460203431
v-2-2 : Energy Consumed = 874833.5218603215
v-2-3 : Energy Consumed = 874933.0110000276
d-3 : Energy Consumed = 834332.9999999987
v-3-0 : Energy Consumed = 873982.9726802397
v-3-1 : Energy Consumed = 874758.4341802725
v-3-2 : Energy Consumed = 874923.3400000284
v-3-3 : Energy Consumed = 874923.3400000285
d-4 : Energy Consumed = 834332.9999999987
v-4-0 : Energy Consumed = 874734.3992003574
v-4-1 : Energy Consumed = 874639.6743000284
v-4-2 : Energy Consumed = 874903.9980000282
v-4-3 : Energy Consumed = 874038.7489004624
d-5 : Energy Consumed = 834332.9999999987
v-5-0 : Energy Consumed = 874913.6690000283
v-5-1 : Energy Consumed = 874918.2500000285
v-5-2 : Energy Consumed = 874376.4398601272
v-5-3 : Energy Consumed = 874714.1511803062
d-6 : Energy Consumed = 834332.9999999987
v-6-0 : Energy Consumed = 874923.3400000276
v-6-1 : Energy Consumed = 873313.6173204276
v-6-2 : Energy Consumed = 874733.4931802381
v-6-3 : Energy Consumed = 874909.1592600287
d-7 : Energy Consumed = 834332.9999999987
v-7-0 : Energy Consumed = 873823.0652403827
v-7-1 : Energy Consumed = 874730.1846803129
v-7-2 : Energy Consumed = 874894.3270000282
v-7-3 : Energy Consumed = 874913.6690000284
d-8 : Energy Consumed = 834332.9999999987
v-8-0 : Energy Consumed = 874777.49114046
v-8-1 : Energy Consumed = 874904.5782600276
v-8-2 : Energy Consumed = 874918.2500000278
v-8-3 : Energy Consumed = 873821.3651803153
d-9 : Energy Consumed = 834332.9999999987
v-9-0 : Energy Consumed = 874913.6690000277
v-9-1 : Energy Consumed = 874903.998000028
v-9-2 : Energy Consumed = 874554.0096001686
v-9-3 : Energy Consumed = 874714.0392004708
d-10 : Energy Consumed = 834332.9999999987

v-10-0 : Energy Consumed = 874914.2492600278
v-10-1 : Energy Consumed = 874031.9486602526
v-10-2 : Energy Consumed = 874748.36616021
v-10-3 : Energy Consumed = 874860.8755200276
d-11 : Energy Consumed = 834332.9999999987
v-11-0 : Energy Consumed = 874379.8501602925
v-11-1 : Energy Consumed = 874796.9451203406
v-11-2 : Energy Consumed = 874933.0110000285
v-11-3 : Energy Consumed = 874894.3270000278
d-12 : Energy Consumed = 834332.9999999987
v-12-0 : Energy Consumed = 874874.7610400562
v-12-1 : Energy Consumed = 874773.3987800265
v-12-2 : Energy Consumed = 874913.6690000278
v-12-3 : Energy Consumed = 874131.4581603718
d-13 : Energy Consumed = 834332.9999999987
v-13-0 : Energy Consumed = 874851.2045200261
v-13-1 : Energy Consumed = 874923.3400000284
v-13-2 : Energy Consumed = 874066.8151601688
v-13-3 : Energy Consumed = 874709.570180267
d-14 : Energy Consumed = 834332.9999999987
v-14-0 : Energy Consumed = 874884.6560000286
v-14-1 : Energy Consumed = 874404.9031403395
v-14-2 : Energy Consumed = 874810.1078602382
v-14-3 : Energy Consumed = 874643.6037800488
d-15 : Energy Consumed = 834332.9999999987
v-15-0 : Energy Consumed = 873286.2840205153
v-15-1 : Energy Consumed = 874768.329140209
v-15-2 : Energy Consumed = 874865.3140000269
v-15-3 : Energy Consumed = 874923.3400000271
Cost of execution in cloud = 4430897.199991206
Total network usage = 1295110.7

16. Cloud = false, gateway = 16, car = 4
Starting Autonomous Vehicle System...
Placement of operator client on device v-0-0 successful.
Placement of operator concentration_calculator on device d-0 successful.
Placement of operator client on device v-0-1 successful.
Placement of operator client on device v-0-2 successful.
Placement of operator client on device v-0-3 successful.
Placement of operator client on device v-1-0 successful.
Placement of operator concentration_calculator on device d-1 successful.
Placement of operator client on device v-1-1 successful.
Placement of operator client on device v-1-2 successful.

Placement of operator client on device v-1-3 successful.
Placement of operator client on device v-2-0 successful.
Placement of operator concentration_calculator on device d-2 successful.
Placement of operator client on device v-2-1 successful.
Placement of operator client on device v-2-2 successful.
Placement of operator client on device v-2-3 successful.
Placement of operator client on device v-3-0 successful.
Placement of operator concentration_calculator on device d-3 successful.
Placement of operator client on device v-3-1 successful.
Placement of operator client on device v-3-2 successful.
Placement of operator client on device v-3-3 successful.
Placement of operator client on device v-4-0 successful.
Placement of operator concentration_calculator on device d-4 successful.
Placement of operator client on device v-4-1 successful.
Placement of operator client on device v-4-2 successful.
Placement of operator client on device v-4-3 successful.
Placement of operator client on device v-5-0 successful.
Placement of operator concentration_calculator on device d-5 successful.
Placement of operator client on device v-5-1 successful.
Placement of operator client on device v-5-2 successful.
Placement of operator client on device v-5-3 successful.
Placement of operator client on device v-6-0 successful.
Placement of operator concentration_calculator on device d-6 successful.
Placement of operator client on device v-6-1 successful.
Placement of operator client on device v-6-2 successful.
Placement of operator client on device v-6-3 successful.
Placement of operator client on device v-7-0 successful.
Placement of operator concentration_calculator on device d-7 successful.
Placement of operator client on device v-7-1 successful.
Placement of operator client on device v-7-2 successful.
Placement of operator client on device v-7-3 successful.
Placement of operator client on device v-8-0 successful.
Placement of operator concentration_calculator on device d-8 successful.
Placement of operator client on device v-8-1 successful.
Placement of operator client on device v-8-2 successful.
Placement of operator client on device v-8-3 successful.
Placement of operator client on device v-9-0 successful.
Placement of operator concentration_calculator on device d-9 successful.
Placement of operator client on device v-9-1 successful.
Placement of operator client on device v-9-2 successful.
Placement of operator client on device v-9-3 successful.
Placement of operator client on device v-10-0 successful.
Placement of operator concentration_calculator on device d-10 successful.

Placement of operator client on device v-10-1 successful.
Placement of operator client on device v-10-2 successful.
Placement of operator client on device v-10-3 successful.
Placement of operator client on device v-11-0 successful.
Placement of operator concentration_calculator on device d-11 successful.
Placement of operator client on device v-11-1 successful.
Placement of operator client on device v-11-2 successful.
Placement of operator client on device v-11-3 successful.
Placement of operator client on device v-12-0 successful.
Placement of operator concentration_calculator on device d-12 successful.
Placement of operator client on device v-12-1 successful.
Placement of operator client on device v-12-2 successful.
Placement of operator client on device v-12-3 successful.
Placement of operator client on device v-13-0 successful.
Placement of operator concentration_calculator on device d-13 successful.
Placement of operator client on device v-13-1 successful.
Placement of operator client on device v-13-2 successful.
Placement of operator client on device v-13-3 successful.
Placement of operator client on device v-14-0 successful.
Placement of operator concentration_calculator on device d-14 successful.
Placement of operator client on device v-14-1 successful.
Placement of operator client on device v-14-2 successful.
Placement of operator client on device v-14-3 successful.
Placement of operator client on device v-15-0 successful.
Placement of operator concentration_calculator on device d-15 successful.
Placement of operator client on device v-15-1 successful.
Placement of operator client on device v-15-2 successful.
Placement of operator client on device v-15-3 successful.
Creating client on device v-9-2
Creating connector on device cloud
Creating client on device v-9-3
Creating concentration_calculator on device d-0
Creating client on device v-0-0
Creating concentration_calculator on device d-10
Creating client on device v-10-0
Creating client on device v-0-1
Creating client on device v-10-1
Creating client on device v-0-2
Creating client on device v-10-2
Creating client on device v-0-3
Creating client on device v-10-3
Creating concentration_calculator on device d-1
Creating client on device v-1-0

Creating concentration_calculator on device d-11
Creating client on device v-11-0
Creating client on device v-1-1
Creating client on device v-11-1
Creating client on device v-1-2
Creating client on device v-11-2
Creating client on device v-1-3
Creating client on device v-11-3
Creating concentration_calculator on device d-2
Creating client on device v-2-0
Creating concentration_calculator on device d-12
Creating client on device v-12-0
Creating client on device v-2-1
Creating client on device v-12-1
Creating client on device v-2-2
Creating client on device v-12-2
Creating client on device v-2-3
Creating client on device v-12-3
Creating concentration_calculator on device d-3
Creating client on device v-3-0
Creating concentration_calculator on device d-13
Creating client on device v-13-0
Creating client on device v-3-1
Creating client on device v-13-1
Creating client on device v-3-2
Creating client on device v-13-2
Creating client on device v-3-3
Creating client on device v-13-3
Creating concentration_calculator on device d-4
Creating client on device v-4-0
Creating concentration_calculator on device d-14
Creating client on device v-14-0
Creating client on device v-4-1
Creating client on device v-14-1
Creating client on device v-4-2
Creating client on device v-14-2
Creating client on device v-4-3
Creating client on device v-14-3
Creating concentration_calculator on device d-5
Creating client on device v-5-0
Creating concentration_calculator on device d-15
Creating client on device v-15-0
Creating client on device v-5-1

Creating client on device v-15-1
Creating client on device v-5-2
Creating client on device v-15-2
Creating client on device v-5-3
Creating client on device v-15-3
Creating concentration_calculator on device d-6
Creating client on device v-6-0
Creating client on device v-6-1
Creating client on device v-6-2
Creating client on device v-6-3
Creating concentration_calculator on device d-7
Creating client on device v-7-0
Creating client on device v-7-1
Creating client on device v-7-2
Creating client on device v-7-3
Creating concentration_calculator on device d-8
Creating client on device v-8-0
Creating client on device v-8-1
Creating client on device v-8-2
Creating client on device v-8-3
Creating concentration_calculator on device d-9
Creating client on device v-9-0
Creating client on device v-9-1
0.0 Submitted application Autonomous_Vehicle_System
==
============= RESULTS =================
==
EXECUTION TIME : 21300
==
APPLICATION LOOP DELAYS
==
[VEHICLE_SENSOR,client, concentration_calculator, client, DISPLAY] --->
33.334481083336556
==
TUPLE CPU EXECUTION DELAY
==
VEHICLE_SENSOR_DATA_STATE ---> 0.04821428571388727
VEHICLE_SENSOR ---> 3.8823148462152757
CONCENTRATION ---> 0.12800000108983517
_SENSOR ---> 17.40659120804325
GLOBAL_DATA_STATE ---> 0.056000000000494765
==
cloud : Energy Consumed = 1.3445397828571405E7

proxy-server : Energy Consumed = 834332.9999999987
d-0 : Energy Consumed = 1073158.2854650056
v-0-0 : Energy Consumed = 874587.9904400109
v-0-1 : Energy Consumed = 874421.5881600048
v-0-2 : Energy Consumed = 874087.8979400059
v-0-3 : Energy Consumed = 874172.5751800071
d-1 : Energy Consumed = 1073195.3393000045
v-1-0 : Energy Consumed = 874415.7753800107
v-1-1 : Energy Consumed = 874707.2186000086
v-1-2 : Energy Consumed = 873997.1636000061
v-1-3 : Energy Consumed = 874051.8811000064
d-2 : Energy Consumed = 1073186.9723050133
v-2-0 : Energy Consumed = 874607.0474000119
v-2-1 : Energy Consumed = 874732.6584200063
v-2-2 : Energy Consumed = 874174.7333400098
v-2-3 : Energy Consumed = 874250.4929000086
d-3 : Energy Consumed = 1073250.3224100098
v-3-0 : Energy Consumed = 874653.7736000117
v-3-1 : Energy Consumed = 874471.5007000071
v-3-2 : Energy Consumed = 874340.9931000058
v-3-3 : Energy Consumed = 874118.0409200069
d-4 : Energy Consumed = 1073080.5919400027
v-4-0 : Energy Consumed = 874731.6098800094
v-4-1 : Energy Consumed = 874601.4585800061
v-4-2 : Energy Consumed = 874238.3583400064
v-4-3 : Energy Consumed = 874257.8835800118
d-5 : Energy Consumed = 1073267.582325407
v-5-0 : Energy Consumed = 874527.8164600091
v-5-1 : Energy Consumed = 874708.2976800072
v-5-2 : Energy Consumed = 874336.5037200114
v-5-3 : Energy Consumed = 873927.0335800115
d-6 : Energy Consumed = 1073171.433600003
v-6-0 : Energy Consumed = 874602.8532400096
v-6-1 : Energy Consumed = 874464.3848800111
v-6-2 : Energy Consumed = 873930.6678400094
v-6-3 : Energy Consumed = 873998.2325000108
d-7 : Energy Consumed = 1073216.8544300045
v-7-0 : Energy Consumed = 874490.3846000135
v-7-1 : Energy Consumed = 874696.8960800132
v-7-2 : Energy Consumed = 874185.6259400084
v-7-3 : Energy Consumed = 873849.5434200073
d-8 : Energy Consumed = 1073179.8005950083
v-8-0 : Energy Consumed = 874505.6953200146

v-8-1 : Energy Consumed = 874561.7362200116
v-8-2 : Energy Consumed = 874148.7132600099
v-8-3 : Energy Consumed = 873977.5162000102
d-9 : Energy Consumed = 1073131.989195008
v-9-0 : Energy Consumed = 874623.7629600139
v-9-1 : Energy Consumed = 874713.7134400095
v-9-2 : Energy Consumed = 873912.9139200078
v-9-3 : Energy Consumed = 874091.8681400107
d-10 : Energy Consumed = 1073200.1204400053
v-10-0 : Energy Consumed = 874733.9512800134
v-10-1 : Energy Consumed = 874660.3295200096
v-10-2 : Energy Consumed = 874005.012380007
v-10-3 : Energy Consumed = 874020.6285000124
d-11 : Energy Consumed = 1073190.5581600056
v-11-0 : Energy Consumed = 874483.8083200133
v-11-1 : Energy Consumed = 874575.9169600098
v-11-2 : Energy Consumed = 874177.1358200078
v-11-3 : Energy Consumed = 874147.5731000144
d-12 : Energy Consumed = 1073244.3459850124
v-12-0 : Energy Consumed = 874594.0170000158
v-12-1 : Energy Consumed = 874763.3002200066
v-12-2 : Energy Consumed = 874163.7898400071
v-12-3 : Energy Consumed = 874324.1452000121
d-13 : Energy Consumed = 1073173.8241700104
v-13-0 : Energy Consumed = 874389.7145800136
v-13-1 : Energy Consumed = 874710.5983600102
v-13-2 : Energy Consumed = 874178.3981400082
v-13-3 : Energy Consumed = 874082.7265000106
d-14 : Energy Consumed = 1073081.787225004
v-14-0 : Energy Consumed = 874587.9599000145
v-14-1 : Energy Consumed = 874617.0747000084
v-14-2 : Energy Consumed = 874079.8659200084
v-14-3 : Energy Consumed = 873786.4172400124
d-15 : Energy Consumed = 1073238.369560009
v-15-0 : Energy Consumed = 874255.8272200137
v-15-1 : Energy Consumed = 874655.4634800071
v-15-2 : Energy Consumed = 874147.4611200067
v-15-3 : Energy Consumed = 873961.1365800094
Cost of execution in cloud = 177779.19999966727
Total network usage = 126151.3

17. Cloud = true, gateway = 20, car = 4

18. Cloud = false, gateway = 20, car = 4

19. Cloud = true, gateway = 24, car = 4

20. Cloud = false, gateway = 24, car = 4

Total	1.33E+07	3497196.328	1073200.12	1.33E+07	6994728.25	2146462.396	1.34E+07	13989982.4	4292827.973	1.34E+07	20983509.15	6439102.709	1.34E+07	27978291.07	8585539.861	1.34E+07	34972951.15	10731820.72	1.34E+07	41967506.09	12878040.85	1.34E+07	55957977.05	17170968.18		

Total	1.54E+07	3498190.971	834333	16152204.15	6996954.166	1668666	1.63E+07	13981228.93	3337332	1.64E+07	20987716.05	5005998	16384687.22	27986871.84	6674664	1.64E+07	34985914.64	8343330	1.64E+07	41978281.32	10011996	1.64E+07	55976947.22	13349328