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18655 Homework 12

Result And Screen Shot

1. The key of solution is to find the best fit for service. There are three component service cluster, SC1, SC2 and SC3. The QoS solution for this lab is to find the best combination of routes and its fitness value.

2. The fitness function I select is

    1 + (-0.35 * cost + 0.15 * reliability - 0.3 * time + 0.2 * availability)

in this function,

cost = min(SC1 -> SC2, SC1 -> SC2 -> S3)

reliability = max(SC1 -> SC2, SC1 -> SC2 -> S3)

time = min(SC1 -> SC2, SC1 -> SC2 -> S3)

availability = max(SC1 -> SC2, SC1 -> SC2 -> S3)

With this function, we give negative coefficient to time and cost, positive to reliability and availability so I can find a reliable routes with less time delay and cost. The constants 1 is added because evaluate interface of FitnessFunction of JGAP does not allow return a negative value.

The final output is