1. 基于Ripple⽹络：总节点数N=\_\_\_\_\_\_(67,149)，总交易数\_\_\_\_\_(331,642)
2. 实验
3. rs=0。每⼀个系统参数下，固定50,000笔交易，运⾏⼗次（随机性来源于每次节点随机组成通道，注意种⼦的选取），结果计算均值与⽅差。

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| --- | --- | --- | --- | --- | --- |
|  | Success ratio | Path length | Messages | Stabilization | Fund |
| k=40, d=2 | 1.0  (0.0) | 4.8495  (6.91e-7) | 9.6990  (2.76e-6) | 2.8799e+6  (3.64e+6) | 3.0693e+18  (6.44e+18) |
| k=16, d=3 | 1.0  (0.0) | 6.4803  (4.34e-6) | 12.961  (1.74e-5) | 1.1574e+6  (1.49e+6) | 2.1516e+16  (5.14e+15) |
| k=9, d=4 | 0.99996  (8.64e-10) | 7.8591  (9.43e-6) | 15.718  (3.77e-5) | 7.3278e+5  (1.55e+5) | 1.1832e+16  (1.39e+14) |
| k=6, d=5 | 0.99983  (4.58e-9) | 9.0037  (2.58e-05) | 18.007  (0.000103) | 6.1067e+5  (7.84e+5) | 7.6720e+15  (1.13e+14) |

1. rs=0。两个⼀组，节点分布相同（最底层通道中的节点相同），系统参数不同，选取50,000笔交易，运⾏⼗次（随机性来源于每次交易的不同），结果计算均值与⽅差。

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|  |  | Success ratio | Path length | Messages | Stabilization | Fund |
| 通道数：  *k* *d* =4096 | k=16, d=3 | 0.999996  (6.40e-11) | 6.4782  (1.27e-5) | 12.956  (5.09e-5) | 1155920 | 1.8737e+16 |
| k=64, d=2 | 1.0  (0.0) | 4.8078  (4.80e-6) | 9.6156  (1.92e-5) | 1352480 | 1.6835e+16 |
| 通道数：  *k* *d* =6561 | k=9, d=4 | 0.99988  (1.18e-9) | 7.8442  (2.23e-5) | 15.688  (8.92e-5) | 734472 | 1.8590e+16 |
| k=81, d=2 | 0.99991  (5.76e-10) | 4.7435  (3.16e-6) | 9.4870  (1.26e-5) | 1206792 | 1.7005e+16 |

1. rs=0, k=16, d=3。节点分布相同，交易数增加，运⾏⼗次（随机性来源于每次交易的不同），结果计算均值与⽅差。

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| --- | --- | --- | --- | --- | --- |
| 交易数量 | 30,000 | 50,000 | 100,000 | 150,000 | 200,000 |
| Success ratio | 0.99831  2.30e-4 | 0.99822  2.20e-4 | 0.99779  1.30e-4 | 0.99738  1.20e-4 | 0.99703  1.60e-4 |

1. k=16, d=3。节点分布相同，交易数50,000，运⾏⼗次（随机性来源于每次交易的不同），结果计算均值与⽅差。

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| rs | 0 | 0.005 | 0.01 | 0.05 | 0.1 |
| Success ratio | 1.0  (0.0) | 1.0  (0.0) | 1.0  (0.0) | 1.0  (0.0) | 0.99998  (1.23e-32) |
| Path length | 6.4748  (2.60e-6) | 6.4595  (6.28e-6) | 6.4310  (1.01e-4) | 6.2980  (2.16e-5) | 6.1099  (1.36e-3) |
| Messages | 12.9496  (1.04e-5) | 12.921  (3.04e-5) | 12.865  (3.67e-4) | 12.609  (1.48e-4) | 12.253  (5.29e-3) |

第⼆次实验内容：

1. rs=0，不同的参数k和d，每个参数下同样的结构，交易数额放⼤为10^5倍，增加交易数量，每个交易数额下运⾏⼗次（随机性来源于每次交易的不同，鉴于⽅差太⼩，先运⾏⼀次）

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| --- | --- | --- | --- | --- | --- |
|  | 30,000 | 50,000 | 100,000 | 150,000 | 200,000 |
| k=16, d=3 | 0.99843 | 0.99838 | 0.99806 | 0.99779 | 0.99742 |
| k=64, d=2 | 0.99847 | 0.99822 | 0.99787 | 0.99753 | 0.99721 |
| k=9, d=4 | 0.98960 | 0.98926 | 0.98822 | 0.98733 | 0.98673 |
| k=81, d=2 | 0.99057 | 0.99030 | 0.98945 | 0.98819 | 0.98733 |