# Graph-matching Algorithm Benchmarking

The following algorithms were run on the Everest server on random trees of several sizes. The runtimes given are the average of ten iterations for the same number of nodes. Results are given in milliseconds and graphed to see the best matching complexity category.

## pq-Gram Algorithm

|  |  |
| --- | --- |
| Number of nodes | Runtime (ms) |
| 100 | 3.940071 |
| 200 | 2.789206 |
| 300 | 4.684769 |
| 400 | 5.835544 |
| 500 | 9.549845 |
| 600 | 15.547755 |
| 700 | 21.378300 |
| 800 | 28.189339 |
| 900 | 35.959259 |
| 1000 | 44.739039 |

## 

## Similarity Matrix Algorithm

|  |  |
| --- | --- |
| Number of nodes | Runtime (ms) |
| 100 | 9.727941 |
| 200 | 67.133051 |
| 300 | 241.288532 |
| 400 | 562.802122 |
| 500 | 1210.125815 |
| 600 | 2983.610805 |
| 700 | 5557.579687 |
| 800 | 9925.665097 |
| 900 | 15098.706295 |
| 1000 | 22072.760049 |

