Summary of Differences

A preliminary version of this work with the title “Divide And Conquer For Fast SRLG Disjoint Routing” is published in IEEE DSN 2018. However, we have extended the conference paper significantly, and the difference between the journal version and the conference version is over 40%. Following we summarize the difference between the conference paper and journal version:

1. We have revised the whole paper, revised many parts of the algorithm designs.
2. We have added in more updated related work and discussed the differences between the related work and the proposed scheme.
3. We model the Min-Min SRLG-disjoint routing problem as an ILP (integer linear programming) problem. We have added Section IV.B to present the problem formulation.
4. We have added Section IV.C with new Fig. 4 to prove that the Min-Min SRLG-disjoint routing problem is NP-complete
5. We have provided more clear definition of SRLG Conflicting Link Set in Section V.A.
6. We have added new Section VIII to extend our routing algorithm to the scenario of the risk sharing among nodes.
7. We have performed more extensive simulations to evaluate the performance of the proposed scheme.
8. To validate that our scheme is suitable in the scenario of the risk sharing among nodes, we added a new Section IX.B to present new simulation results with 8 new Figures.
9. We have added one performance metric (Efficiency) to evaluate the proposed algorithm.
10. For the simulation results, as different topologies may result in different performance value ranges, in the journal version, for each topology, we normalize the performance value of Weight, Hop and Runtime under different algorithms according to min-max normalization [41]. We take the average of the normalized results as the final simulation results.