

Dear Editors and Reviewers:

We would like to submit the manuscript "Maintaining Predictable Traffic Engineering Performance under Controller Failures for Software-Defined WANs" for consideration for publication in the IEEE Journal on Selected Areas in Communications - Advances in Internet Routing and Addressing. Part of this paper has been presented at the ACM The Web Conference (WWW) in 2024. The conference version can be found at <https://dl.acm.org/doi/abs/10.1145/3589334.3645321>.

We would like to emphasize that there are many differences between this submission and the conference version. The key differences are summarized as follows.

- We enriched Section I by discussing why the existing coarse-grained switch-controller reassignment works may lead to poor recovery performance.
- We enriched Section II-C by analyzing why multiple controller failures should be considered and why offline flows should be reassigned immediately after controller failures.
- We also discussed controller synchronization methods in SD-WANs in Section III-A to maintain a global network view for centralized control and better TE performance.
- In Section III-B, we emphasized that different failure scenarios (*e.g.*, simultaneous failures among controllers or sequential failures) would not affect the recovery performance of our proposed solution.
- We added Section V-A to provide a rigorous proof of the NP-hardness of the formulated TPFCRFR problem.
- We added Section V-C to give the time complexity analysis of the proposed heuristic algorithm.
- For better readability, we added Table 1 to introduce the table of notations used in this paper.
- We enriched Section VI-A to improve the simulation setup by introducing network topologies, SD-WAN settings, and pre-configured path-set in detail.
- To show the generalizability of our proposed solution, we further add extensive simulation results on a service provider network (*i.e.*, Sprintlink) in Section VI-C.
- Since no measured TMs are available for the service provider network for the Sprintlink network, we also used the Modulated Gravity Model (MGM) to create spatiotemporal TMs for the network.
- We also improved the background knowledge of our paper by introducing and analyzing the following recent works.

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We hope that you will enjoy reading our new paper.

Sincerely,

Songshi Dou and Zehua Guo