Wendi Feng

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Education

University of Minnesota – Twin Cities — Minneapolis, USA
CSC-supported Co-advised Ph.D. Student in SDN/NFV, 2018–Current
Advisor: Zhi-Li Zhang (IEEE Fellow)

Beijing University of Posts and Telecommunications — Beijing, China
Ph.D. Candidate in Mobile Data Protection – Successive Master-Doctor Program 2017–Current
Advisor: Junliang Chen (CAS/CAE Fellow)

Beijing University of Posts and Telecommunications — Beijing, China
M.S. Student in Mobile Data Protection, 2016–2017
Advisor: Junliang Chen (CAS/CAE Fellow)

Halmstad University — Halmstad, Sweden
Lecture in FAT File System, Instructor: Mattias Wecksten 2014

Beijing Information Science and Technology University — Beijing, China
B.E. in Computer Science and Engineering, GPA:3.73/4.00 2012–2016
Thesis: *A Design and Implementation of the O2O Car Post-sales Service Platform*, Advisor: Wei Zhang
- Ranked as the first in the major, and graduate with the highest distinction.

Skills

- **Programming Langugage:** C/C++, Python, Java, JavaScript, Golang, Shell Script
- **Platform:** DPDK, RoCE, Docker, Linux, Android
- **Tools:** Git, Intel VTune Profiler, GDB

Languages

- **Language: English** Fluent
- **Language: Chinese (Mandarin)** Native Speaker
- **Language: Chinese (Cantonese)** Intermediate

Projects

- **Profiling NFV Systems:** The first empirical study of NFV system performances on multi-core commodity servers processing packets at 100Gbps or above line-rate speed. Identifying the memory system can potentially bottleneck the performance.

- **Traffic and State Abstractions for NFV:** The first abstraction dedicated to NFV systems to handle their two key inputs (*i.e.*, traffic and states), which makes NFs scalable, correct, and high-performance by guaranteeing that each NF traffic flows are disjoint, and different states are independent.

- **Software-based Multi-path RDMA Network:** The first software approach that leverages the rich paths in data center networks that achieves considerable decreased Flow Completion Time (FCT).

- **Security Concern in Incremental SDN Deployment:** Traditional networks are gradually evolving with SDN technology. When vulnerabilities are shared in the same or similar SDN switches or controllers, exploiting the shared vulnerability can compromise all these devices. We improve security by deploying multiple types of SDN devices that have little implementation similarity.

- **Mobile Data Protection:** Protecting personal data on mobile devices without data loss, no modification on the file system, and achieves high storage utilization.

Selected Publications

[1] **Wendi Feng**, Z. Guo, C. Liu, Y. Zheng, M. Wang, B. Cheng, and J. Chen, "BAGUETTE: towards a secure and cost-effective switch upgrade in hybrid software-defined networks", in *2020 IEEE International Conference on Communications, ICC 2020, Dublin, Ireland, June 7-11, 2020*, IEEE, Jun. 2020, pp. 1–6.

[2] P. Zheng, **Wendi Feng**, A. Narayanan, and Z. Zhang, "NFV performance profiling on multi-core servers", in *2020 IFIP Networking Conference, Networking 2020, Paris, France, June 22-26, 2020*, IEEE, Jun. 2020, pp. 91–99.

[3] **Wendi Feng**, C. Liu, Z. Guo, T. Baker, G. Wang, M. Wang, B. Cheng, and J. Chen, "Mobigyges: A mobile hidden volume for preventing data loss, improving storage utilization, and avoiding device reboot", *Future Gener. Comput. Syst.*, vol. 109, pp. 158–171, Mar. 2020.

[4] **Wendi Feng**, Z. Zhang, C. Liu, and J. Chen, "Clé: Enhancing security with programmable dataplane enabled hybrid SDN", in *Proceedings of the 15th International Conference on emerging Networking EXperiments and Technologies, CoNEXT 2019, Companion Volume, Orlando, FL, USA*, ACM, Dec. 2019, pp. 76–77.

[5] **Wendi Feng**, C. Liu, Z. Guo, T. Baker, B. Cheng, and J. Chen, "Data loss prevention and storage utilization improvement of the hidden volume on mobile devices", in *2019 IEEE Symposium on Computers and Communications, ISCC 2019, Barcelona, Spain*, IEEE, Jul. 2019, pp. 1–6.

[6] Z. Guo, **Wendi Feng**, S. Liu, W. Jiang, Y. Xu, and Z. Zhang, "Retroflow: Maintaining control resiliency and flow programmability for software-defined wans", in *Proceedings of the International Symposium on Quality of Service, IWQoS 2019, Phoenix, AZ, USA*, ACM, Jun. 2019, 1:1–1:10.

[7] **Wendi Feng**, C. Liu, B. Ren, B. Cheng, and J. Chen, "Trustgyges: A hidden volume solution with cloud safe storage and TEE", in *Proceedings of the 16th Annual International Conference on Mobile Systems, Applications, and Services, MobiSys 2018, Munich, Germany*, J. Ott, F. Dressler, S. Saroiu, and P. Dutta, Eds., ACM, Jun. 2018, p. 511.

Scholarships and Awards Highlights

- China Scholarship Council (CSC) scholarships 2018–2020
- Graduate Student Scholarship, BUPT, 2016–2019
- First-prize of Bachelor Scholarship, BISTU 2013–2015
- National Scholarship (Top 1), China Ministry of Education 2013
- Third-prize of "Lan Qiao Competition", Beijing, 2014–2014
- First-prize of Math contest, BISTU 2013
- First-prize of Math modeling contest, BISTU 2013