

Operating Systems  
Spring 2018

---

Operating Systems Project

---

Professor : Philippe Cudré-Mauroux  
Assistant : Ines Arous

---

Submitted by Sylvain Julmy, Michael Papinutto, Sami Veillard

---

May 25, 2018

## **Introduction**

### **Chosen approach**

We have to take care of various aspect when choosing the data structure to store the key-value entry : maximal number of entry stored in the database, extension of the data structure, number of simultaneous access on the server and how to synchronize the threads.

A lock-free hashset data structure offers solutions to all of those challenges. We have implements our own data structure in C based on the one created by Herliry in [Her06] in Java.

### **Challenges encountered**

### **Conclusion**

# Bibliography

- [Her06] Maurice Herlihy. “The art of multiprocessor programming”. In: *Proceedings of the twenty-fifth annual ACM symposium on Principles of distributed computing - PODC '06*. 2006. ISBN: 1595933840. DOI: [10.1145/1146381.1146382](https://doi.org/10.1145/1146381.1146382).