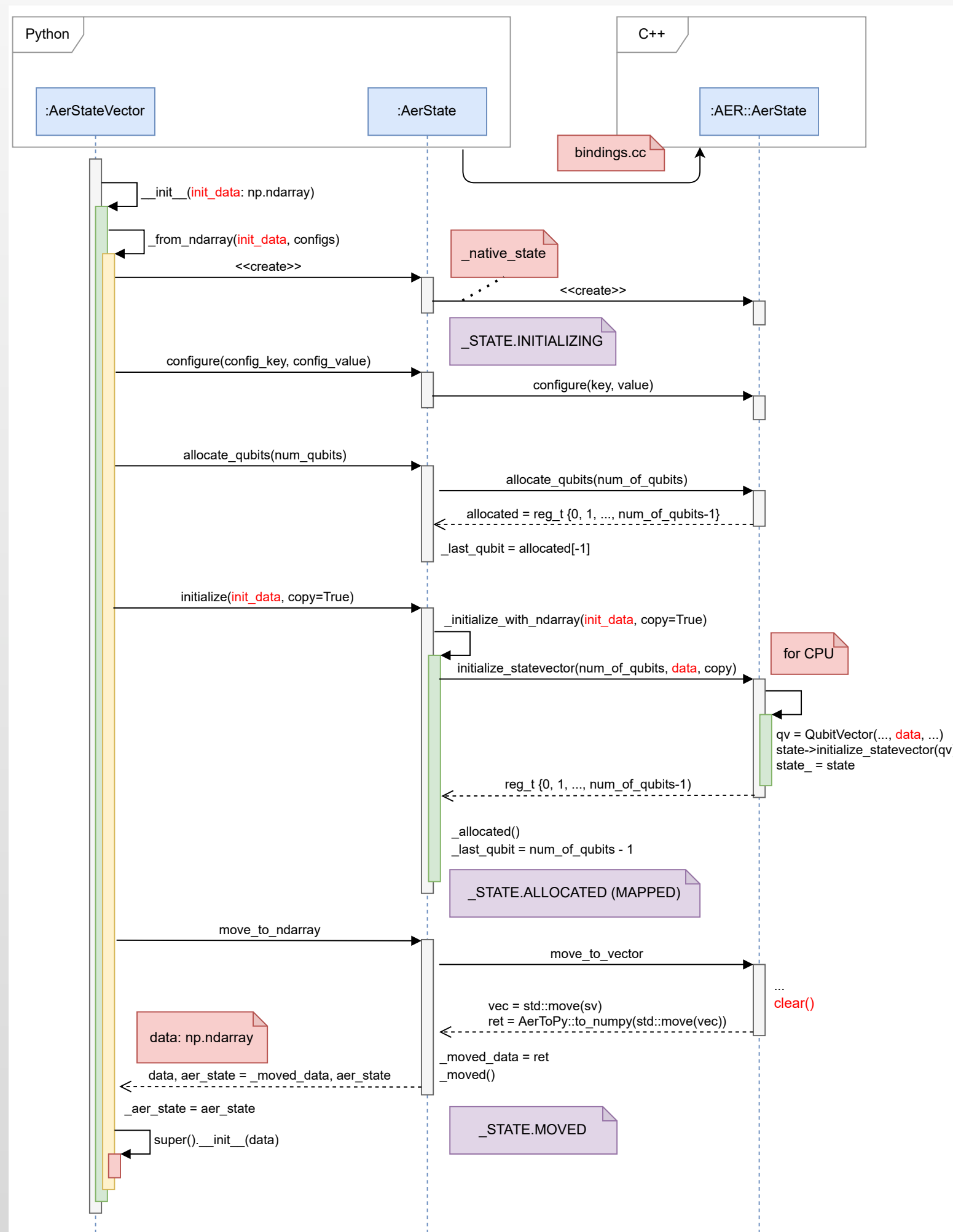


# Enhancement of Aer-based quantum\_info

Improve performance of quantum\_info with optimized runtime of Qiskit-Aer



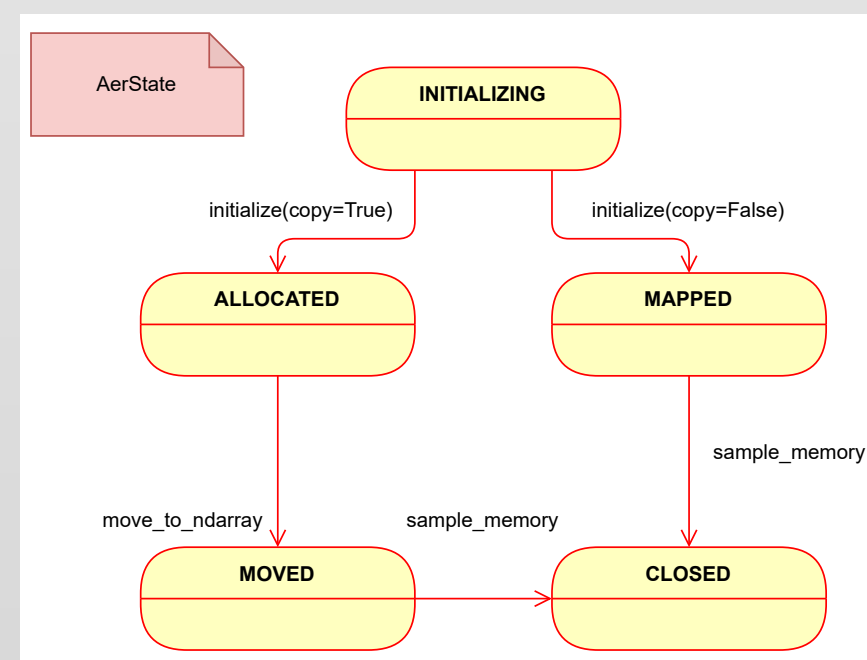
initialization sequence in AerStatevector

**Background:** AerStatevector has been released in Qiskit-Aer 0.11

- Implements API of Statevector in quantum\_info
- Provided x3 or more performance

**Goal:** Implement **AerDensityMatrix**

- Implement API of DensityMatrix with the same methodology of AerStatevector
- Test AerDensitymatrix with Terra's unittests
- Measure performance (if possible)



transition of AerState

Team:

Mentee: Shunsuke Sotobayashi 

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