



Institute of Computer Science Chair of Communication Networks Prof. Dr. Tobias Hoßfeld



Understanding the Performance of Different Packet Reception and Timestamping Methods in Linux KuVS Fachgespräch – WueWoWAS'23 – Würzburg



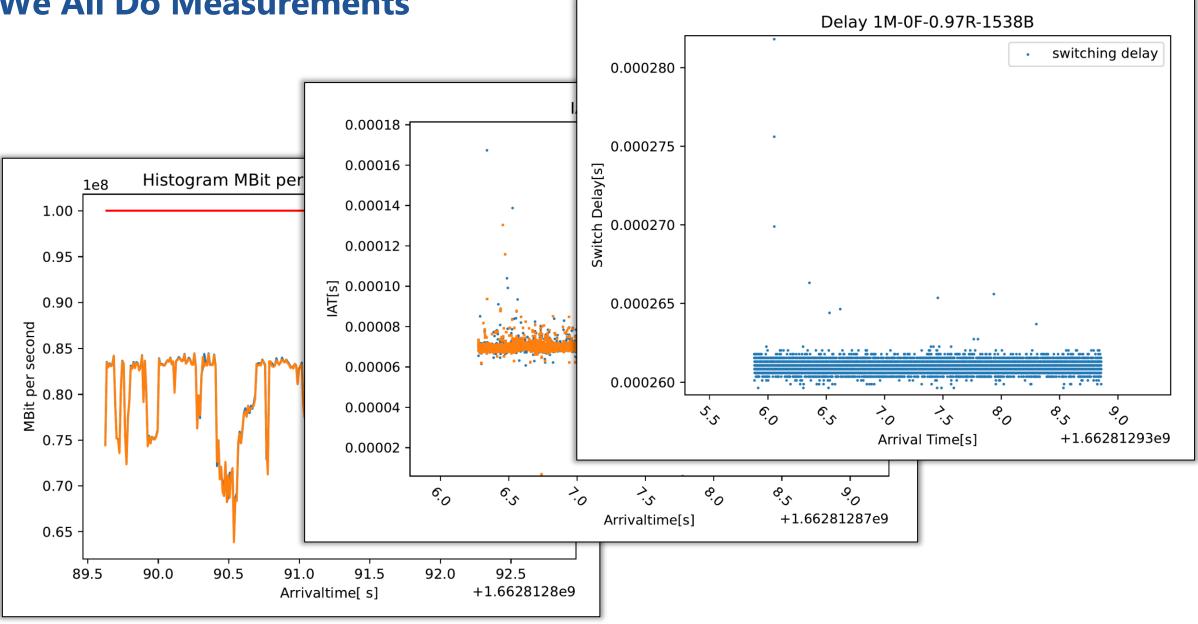
<u>Alexej Grigorjew</u>, Lukas Kilian Schumann, Philip Diederich, Tobias Hoßfeld, Wolfgang Kellerer

alexej.grigorjew@uni-wuerzburg.de





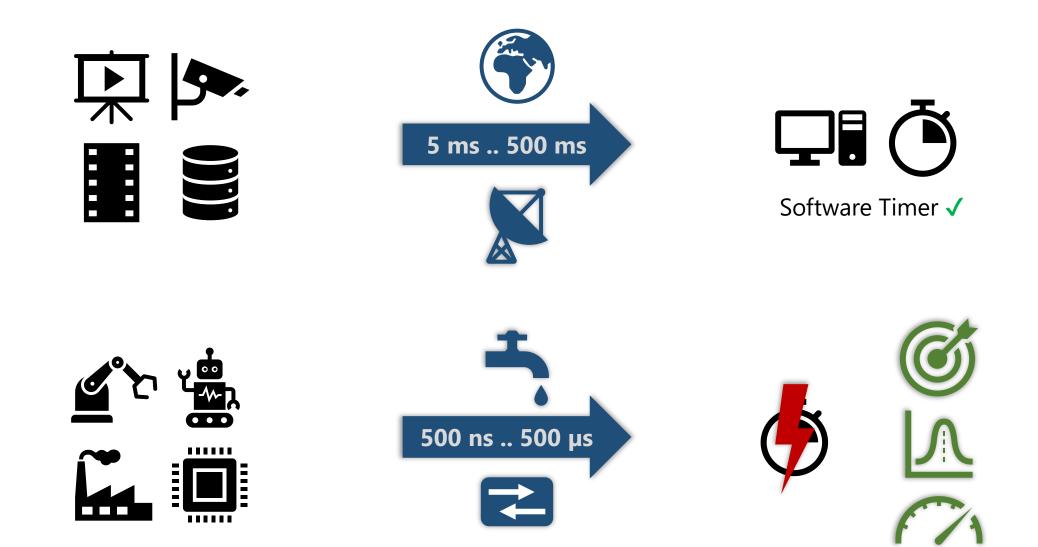
We All Do Measurements



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What Do We Need From Our Measurements?



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Measurement Equipment & Software can be Expensive





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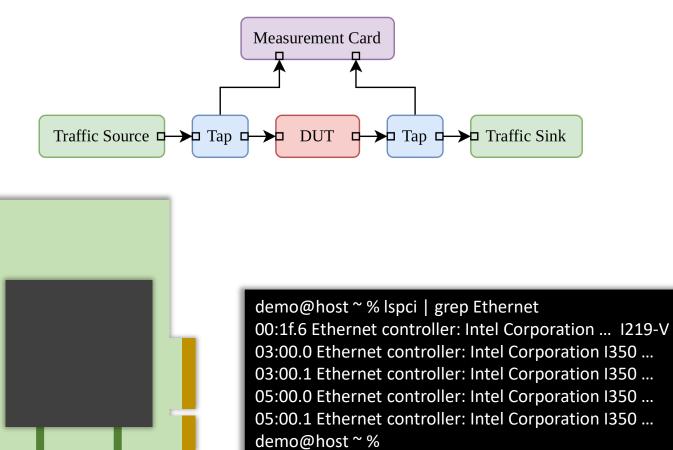
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Affordable Alternative: Hardware Timestamping with Commodity NICs



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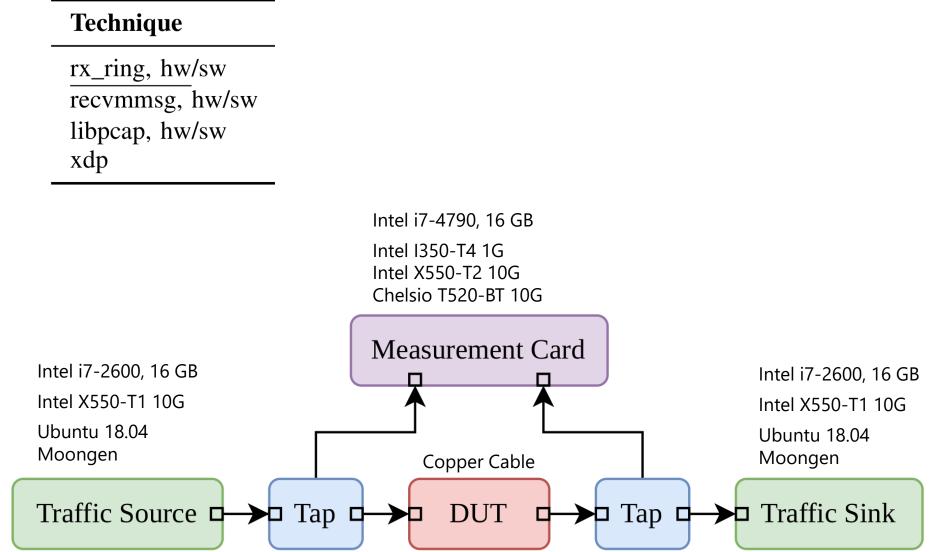


Understanding the Performance of Different Packet Reception and Timestamping Methods in Linux



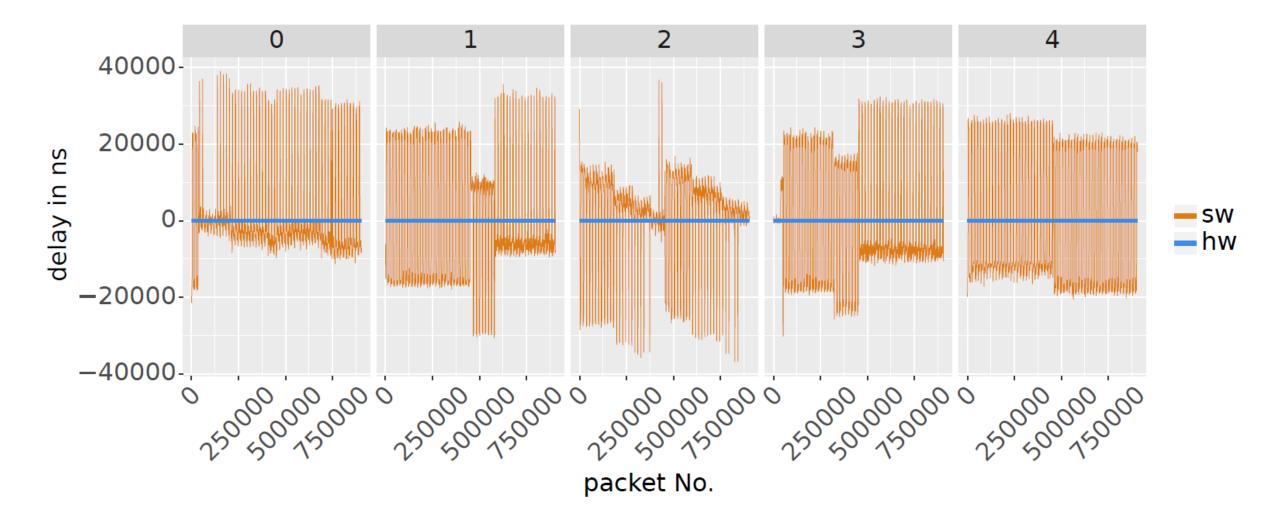
How Good Is It? Measurement Setup & Parameters





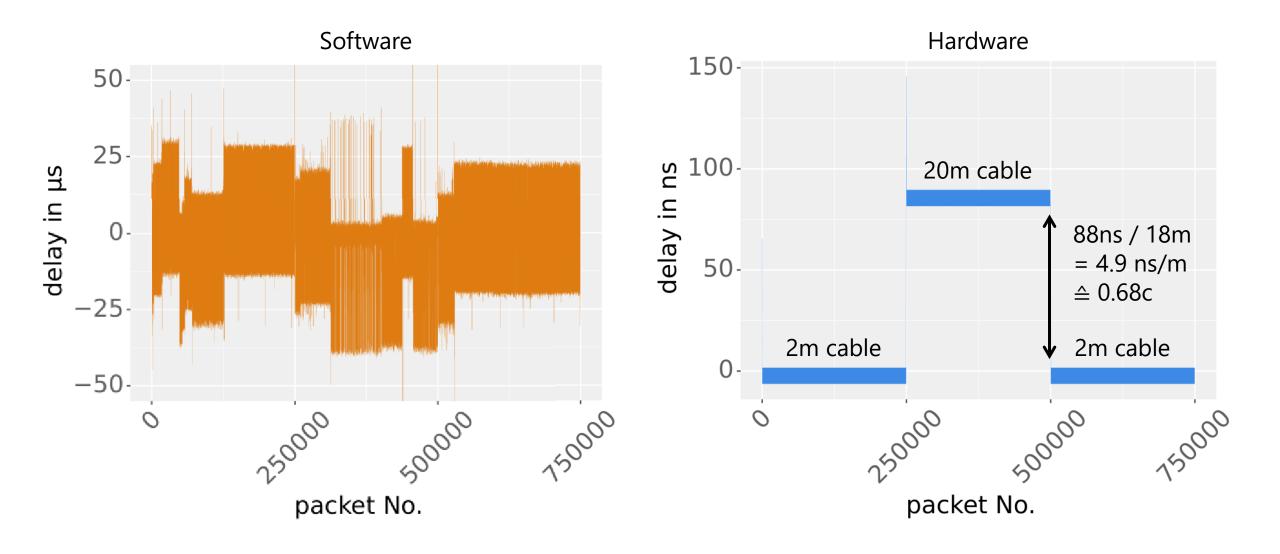


Time Series Plots – Software vs. Hardware Timestamps





Artificial, Stable Source of Delay: Varying Cable Lengths

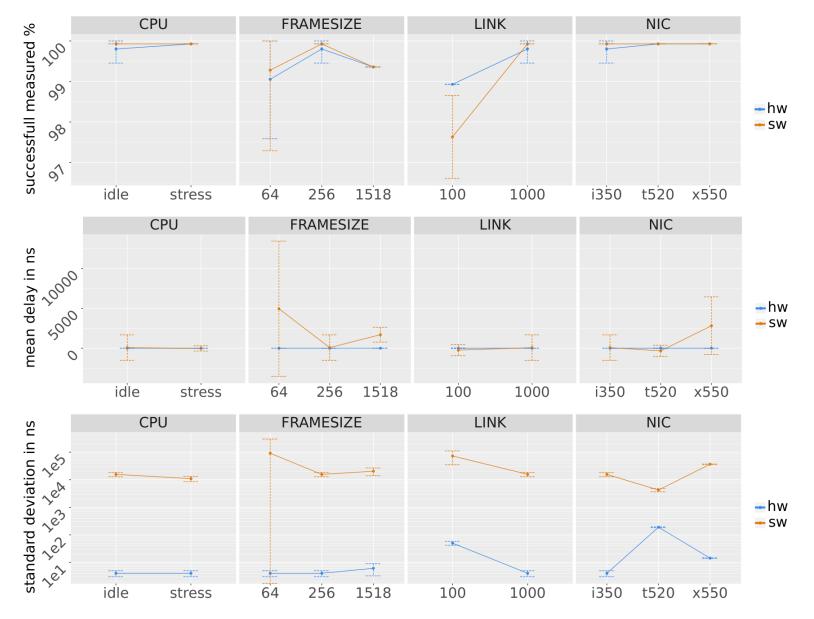


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Main Effects

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Standard Deviations

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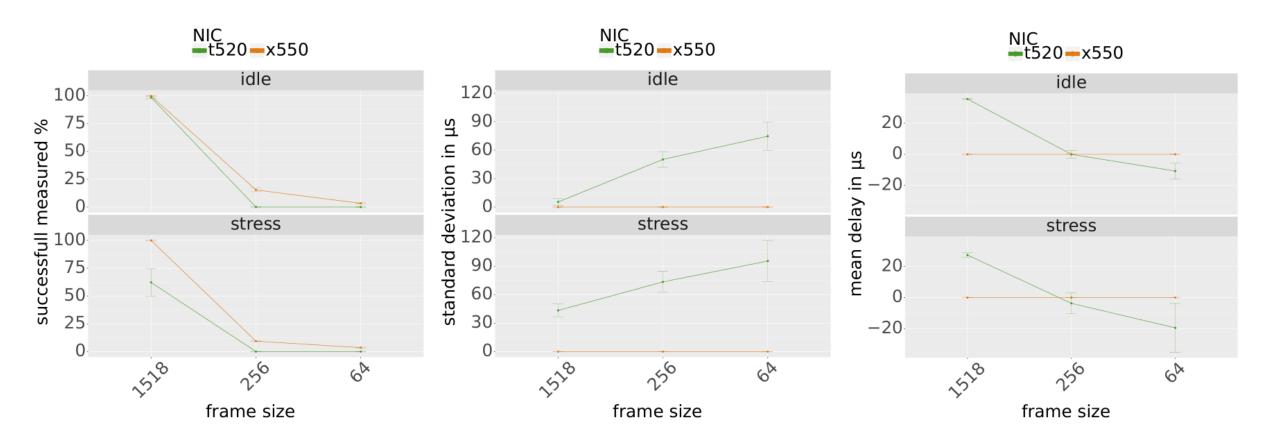
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Throughput Comparison

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What's Missing? → 10G Performance

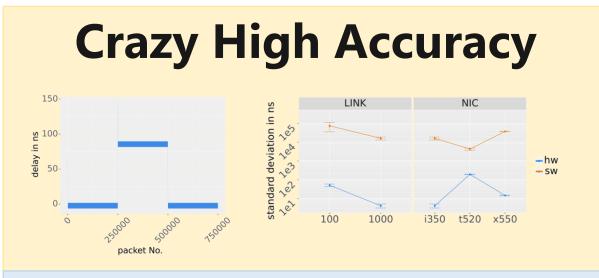


What's Coming Next? → Demo Testbed

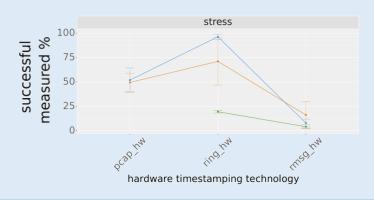
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Conclusion

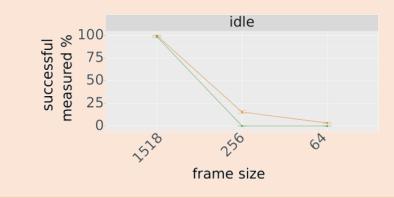


Avoid Many SysCalls





10G Needs Work





THANK YOU!

Questions, comments, suggestions?



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