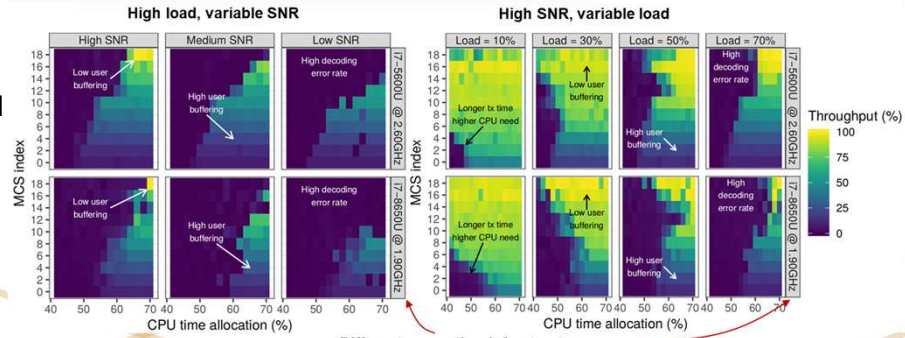
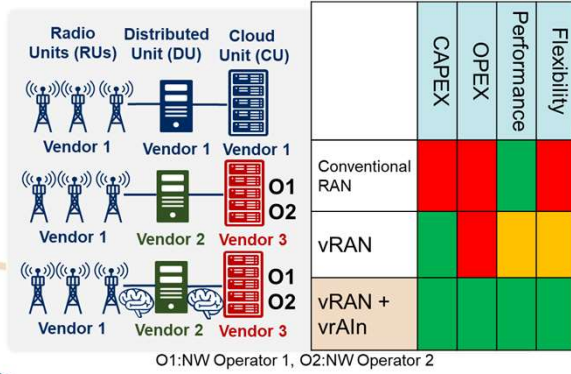


vrAI: A Deep Learning Approach for Virtualized RANs

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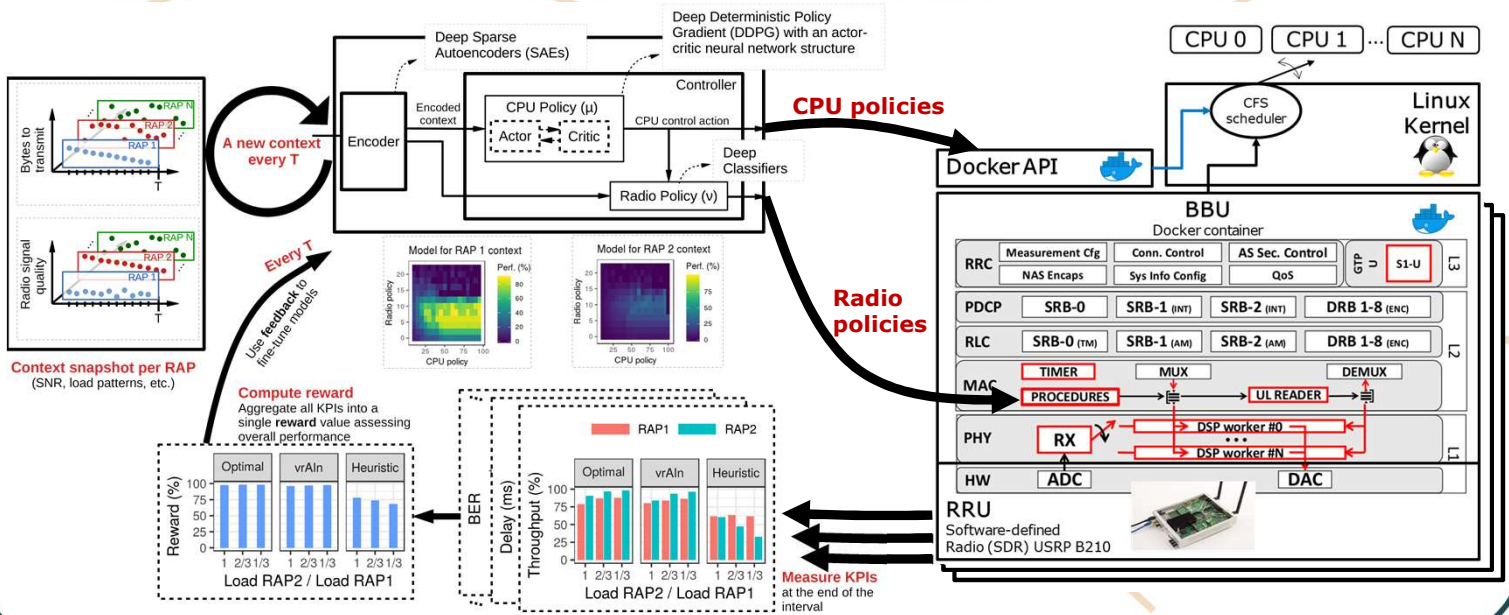
Dynamic Control of Virtualized RANs

- Native support for HW/SW upgrades
- Continuous Gradual Optimization
- AI derives optimal control policies tailored per-operator

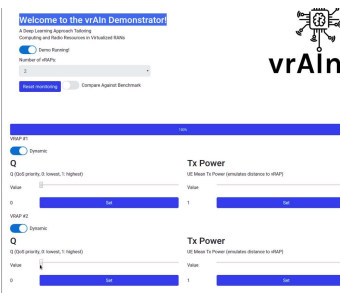


- Resource control depends on context (SNR conditions, computing platform and load) and is highly non-linear
- We need AI/ML to learn the underlying model relating radio/compute resource decisions, contexts and performance!

vrAI Design



Proof-of-Concept



Control Frontend

- QoS Criteria
- Load patterns
- Signal quality patterns

Monitoring Dashboard

System reward and system cost
 Network load and SNR
 CPU and radio policies
 Throughput, BER and CPU usage

