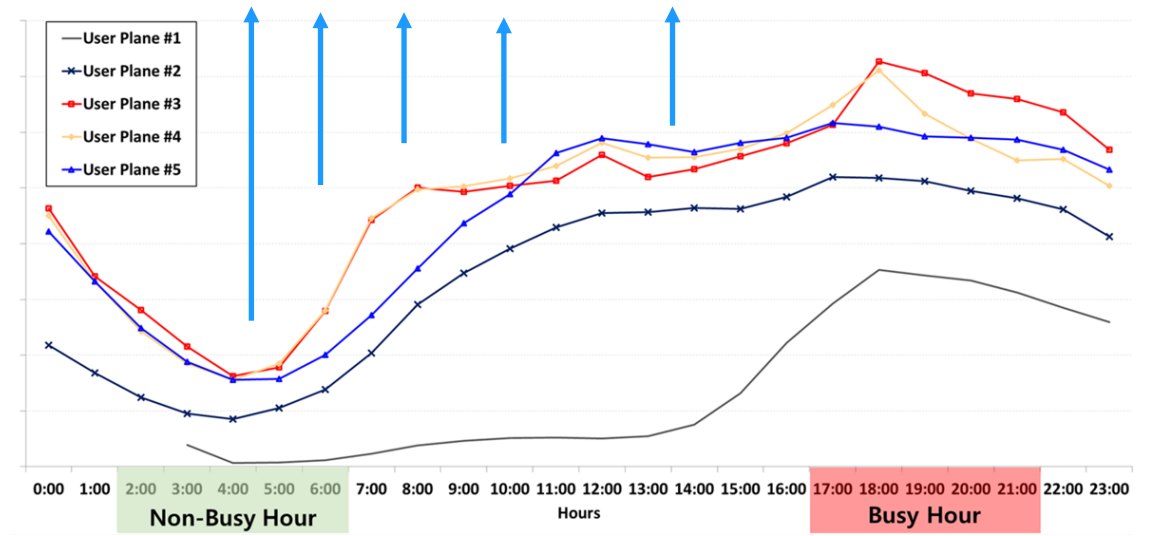
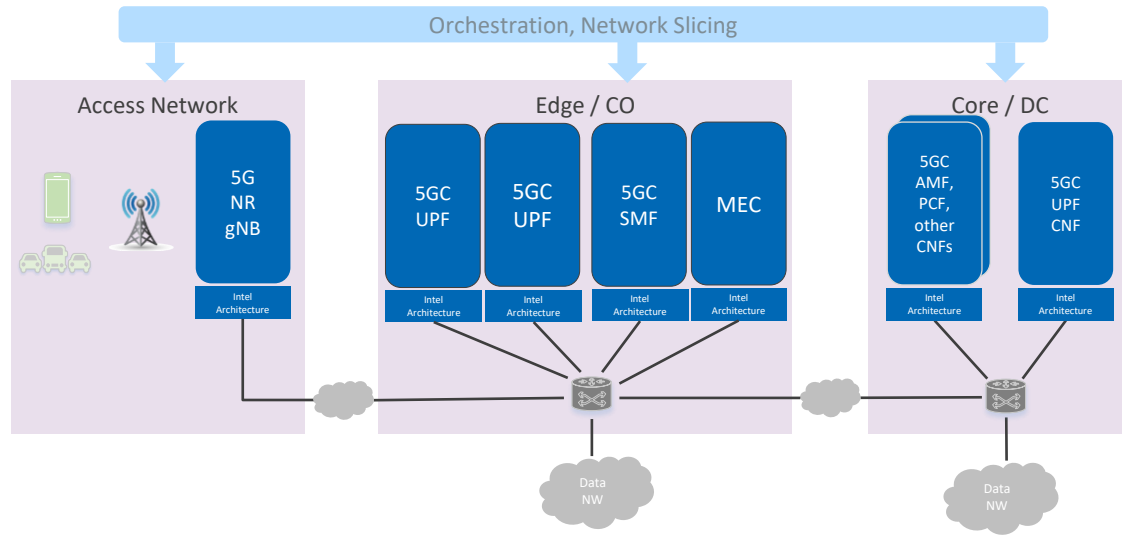


基于英特尔® 网络 AI 的中兴 5GC UPF 节能方案



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5GC Workloads Characteristics

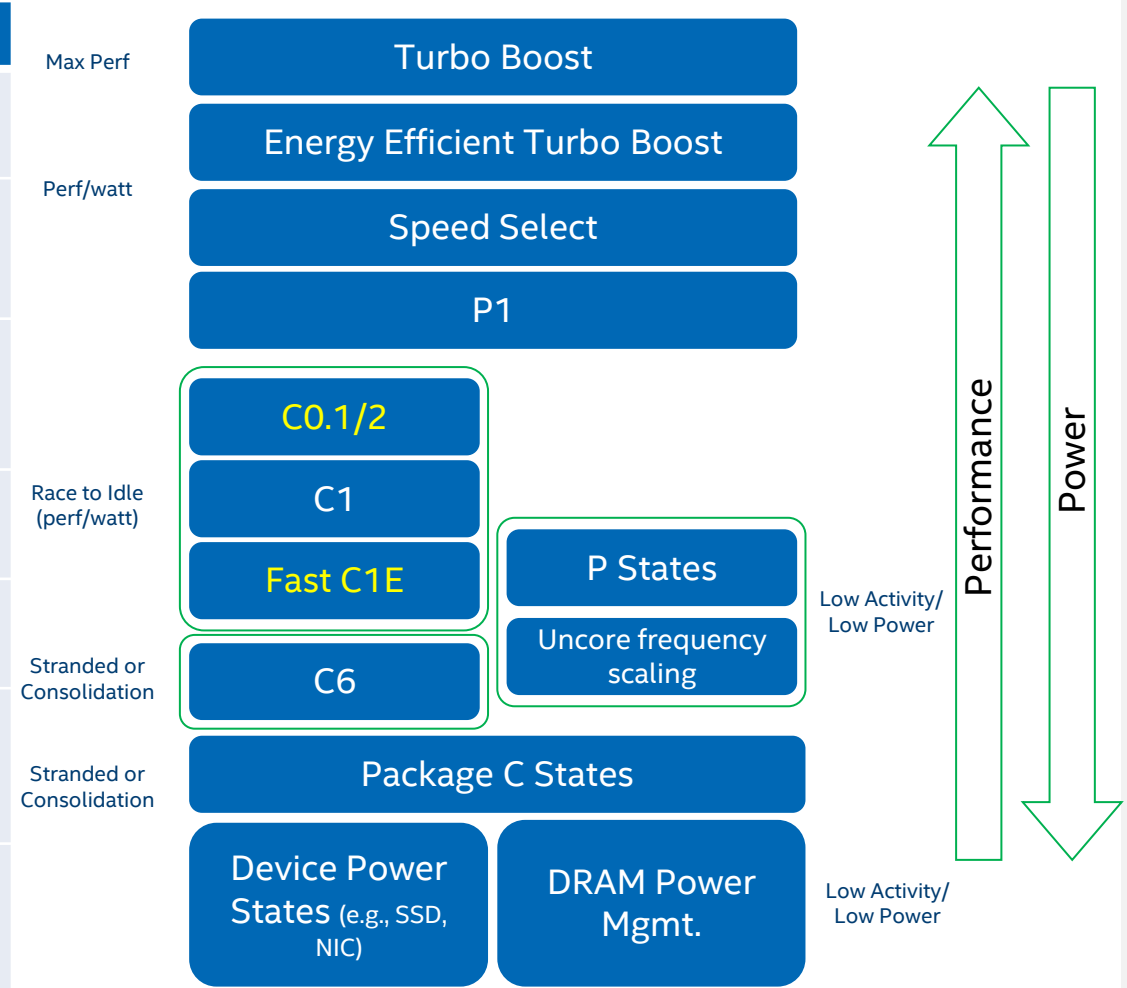


- Mobile networks have a significant periods of low traffic
- Cloud Native based environments enabling dynamic scale
- Common Architecture for all Network Functions in 5GC System

Match Power Saving Techniques to Different Workload Requirements
Significant Power Savings Opportunity

Intel Power & Performance Capabilities

Feature	Summary
Turbo Boost	Allows for exceeding base frequencies, opportunistic frequency increase. Can be controlled per core.
Energy Efficient Turbo Boost	Energy Efficient Turbo (EET) is a mode of operation where a processor's core frequency is adjusted within the turbo range based on workload.
Speed Select Technology	Control and direct base frequency to subset of cores that need higher performance relative to other cores, essentially allowing prioritize frequency for critical workloads at critical times.
Per Core P-state	Changing frequency, works per core. Execution continues.
Uncore Frequency Scaling (UFS)	Cores interconnect and L3 shared cache frequency scaling for energy efficiency.
Per Core C-state (Sleep)	Turning off execution of cores and instructions. Fast Exit(C1) and Longer Exit (C6), power saving versus exit latency. Hints from instructions used for power saving (e.g., TPAUSE, (U)MONITOR/(U)MWAIT, etc.)
Package C	A package C-state is automatically resolved by the processor depending on the processor IA core idle power states and the status of the platform components

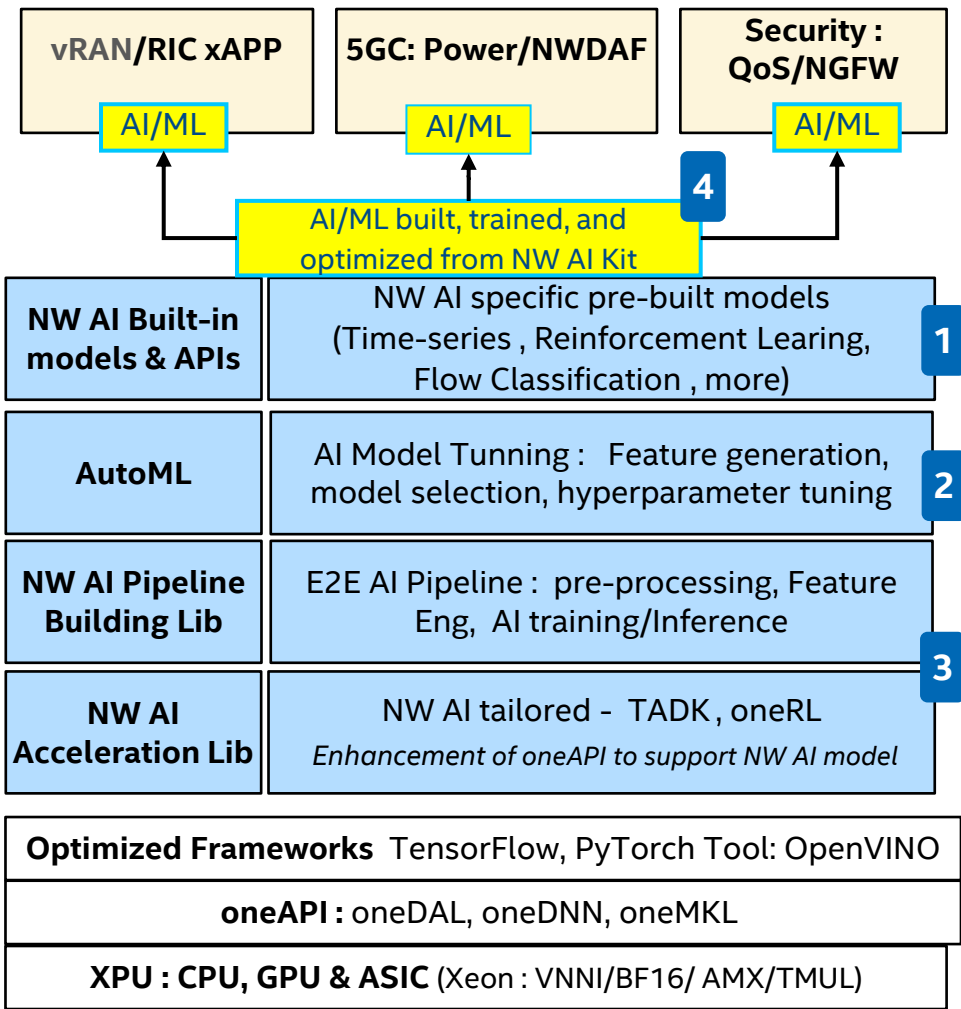


Opportunity to optimize based on use case and location

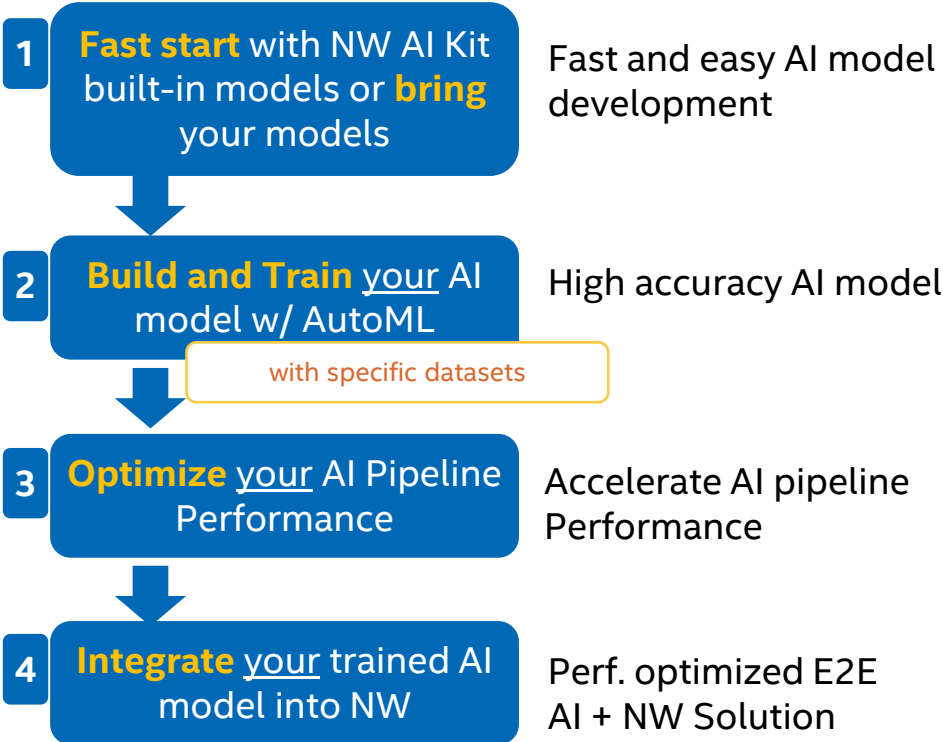
Intel Network AI Reference SW

Intel NW AI Ref. use-case

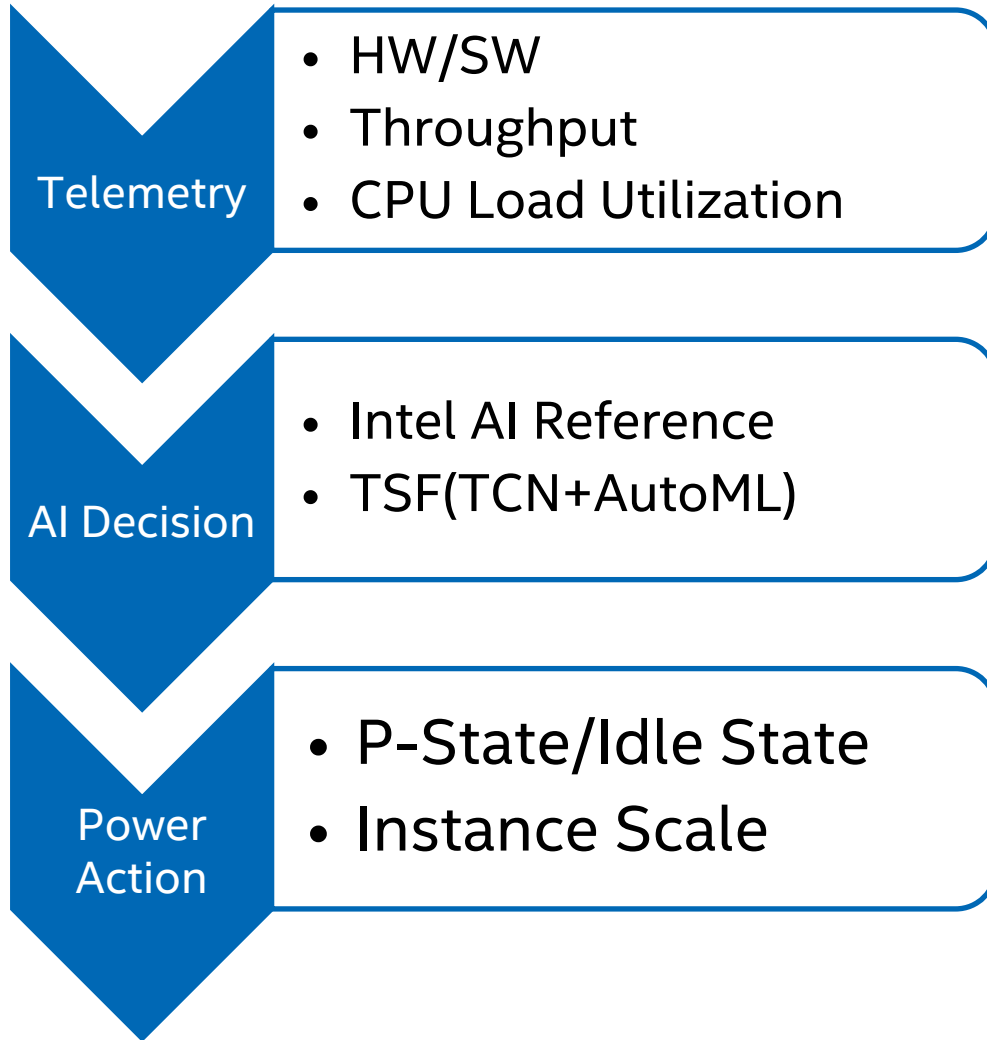
Intel Ref. use-case (E2E AI + NW)



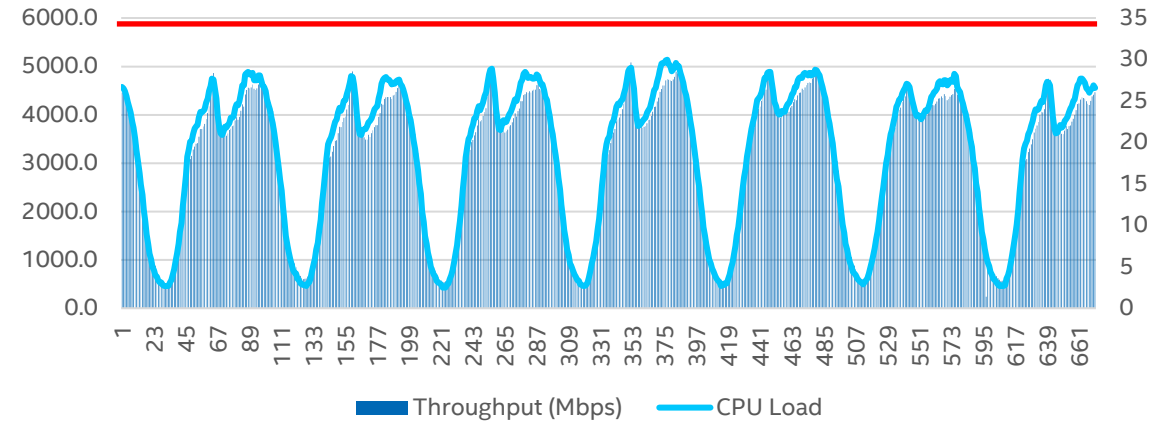
Customers benefits



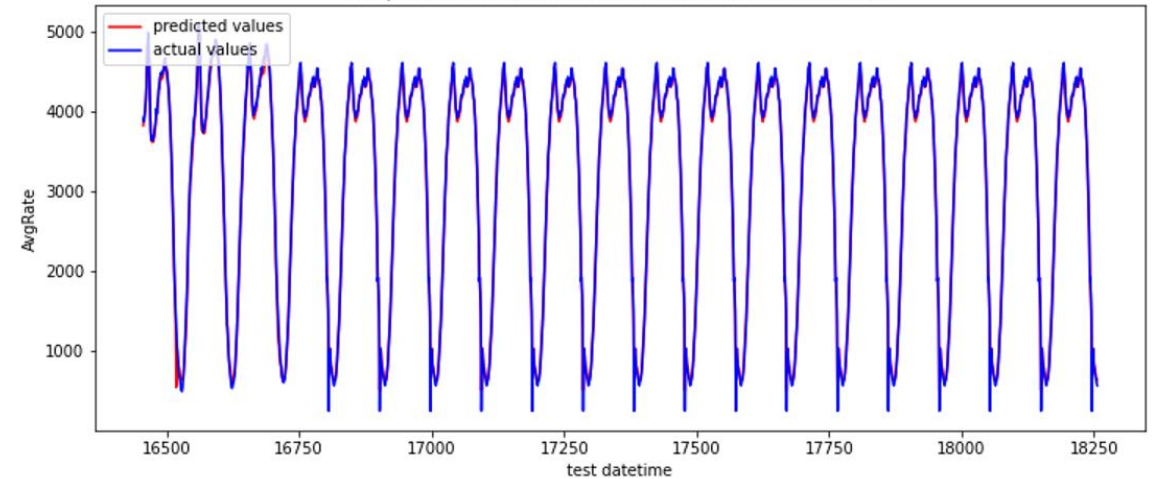
ZTE UPF/Intel AI Power Saving Solution



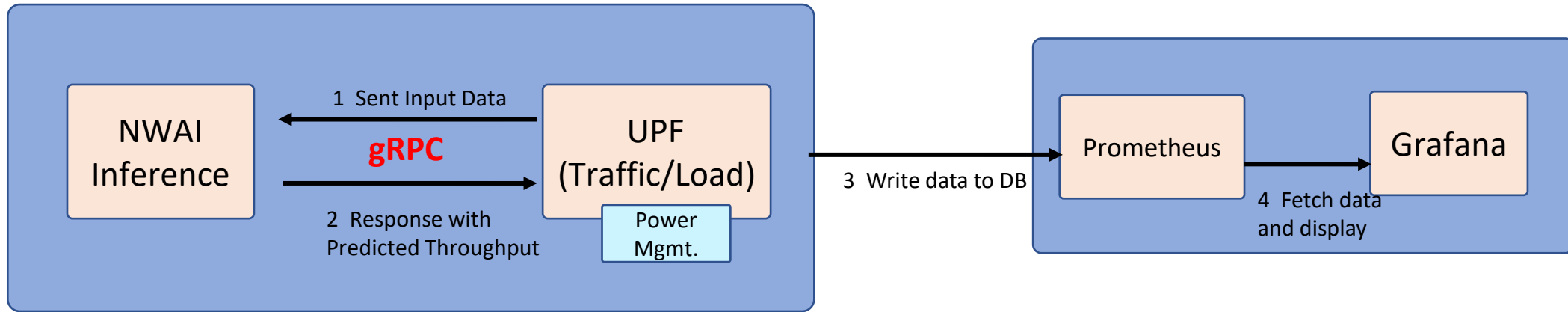
Throughput/Load (7 Days)



Predicted throughput & Actual throughput



Enhanced ZTE UPF Power Saving – 20%



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