OpenAMP Project Intro Standardizing Asymmetric Runtime Integration OpenAMP

OpenAMP: "Open Asymmetric Multi-Processing" Project



Runtime coexistence and collaboration
Runtime hardware resource assignment
Resource sharing and IPC between runtimes
Control mechanisms to start and stop runtimes
Typical system: Linux + RTOS on one system-on-chip

www.openampproject.org.



















OpenAMP Embedded Targets



Modern Embedded Targets integrate multiple HW resources, e.g. multiple core clusters, shared memory and peripherals

Cluster A			Cluster B		
CoreA 0	CoreA 1		CoreB 0		CoreB 1
Shared memory					
Peripheral A Peripheral B Peripheral C Peripheral D Peripheral E					

OpenAMP Embedded Runtimes



Embedded Targets have multiple Runtimes that need to collaborate

Linux + Apps

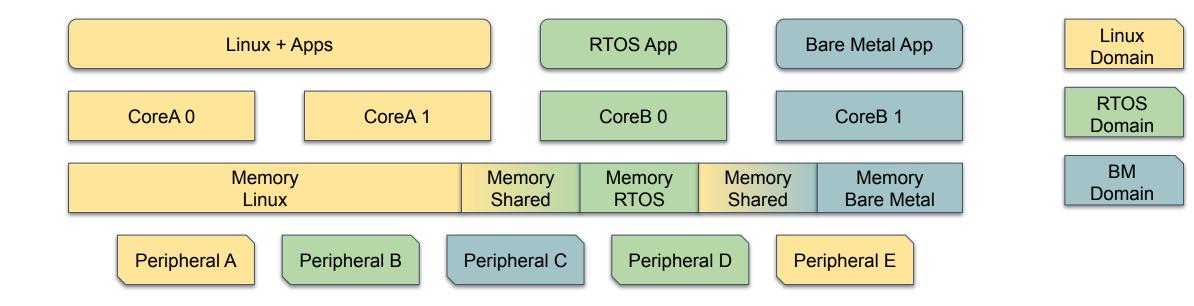
RTOS App

Bare Metal App

OpenAMP HW Assignment



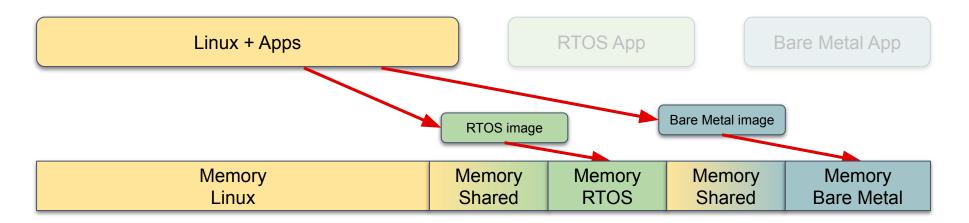
The HW resources need to be assigned into Runtime Domains



OpenAMP Runtime Control



The Runtimes need to be managed, e.g. loaded into memory and started



Linux Domain RTOS

BM

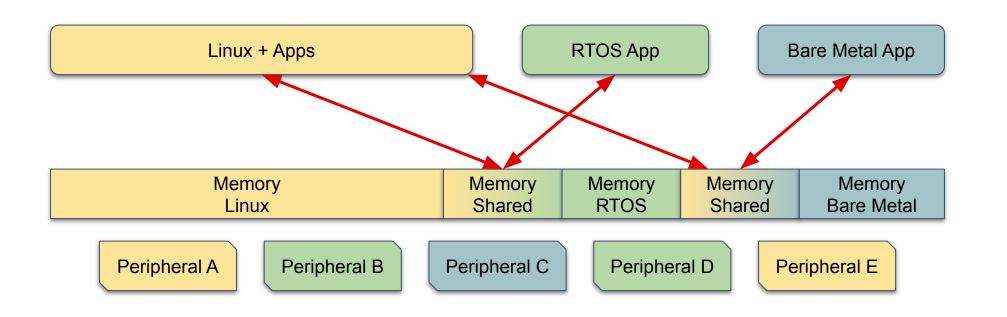
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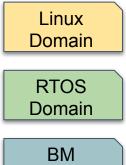
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OpenAMP Resource Sharing and IPC



The Runtimes need to share data and services



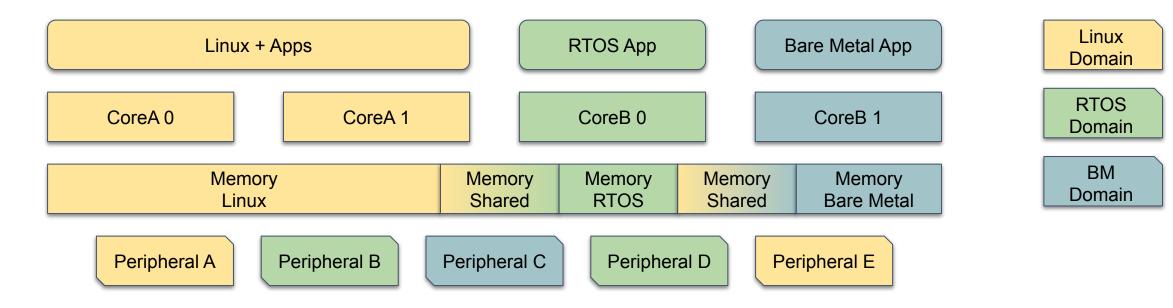


Domain

OpenAMP Mission



OpenAMP provides standards, runtime libraries and tooling built on top of existing open source projects to simplify runtime collaboration



Check it out and get involved!



Community Project Website

www.openampproject.org

Contributing companies:





















Thank You