AWS re:Invent

ROB404-R2

Robots—the ultimate edge intelligence & inference device

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AWS re:Invent

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Agenda

AWS RoboMaker Overview

AWS IoT Greengrass Overview

Amazon SageMaker Overview

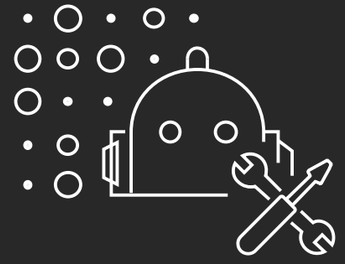
ROS Fundamentals

Build!

AWS RoboMaker



Development environment



Cloud Extensions for ROS



Simulation

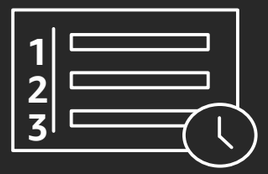


Fleet management

Amazon SageMaker



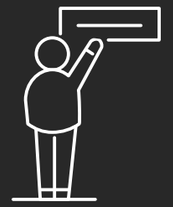
Collect and prepare training data



Choose and optimize your ML algorithm



Set up and manage environments for training



Train and tune ML Models



Deploy models in production



Scale and manage the production environment

AWS IoT Greengrass



Local Messages and Triggers

Local
Message Broker



Local Actions

Lambda
Functions



Data and State Sync

Local
Device Shadows



Security

AWS-grade
security



Local Resource Access

Lambdas Interact
with Peripherals



Machine Learning Inference

Local Execution
of ML Models



Protocol Adapters

Easy Integrations
with Local
Protocols



Over-the-Air Updates

Easily Update
AWS IoT
Greengrass Core

ROS Fundamentals

ROS: Robot Operating System

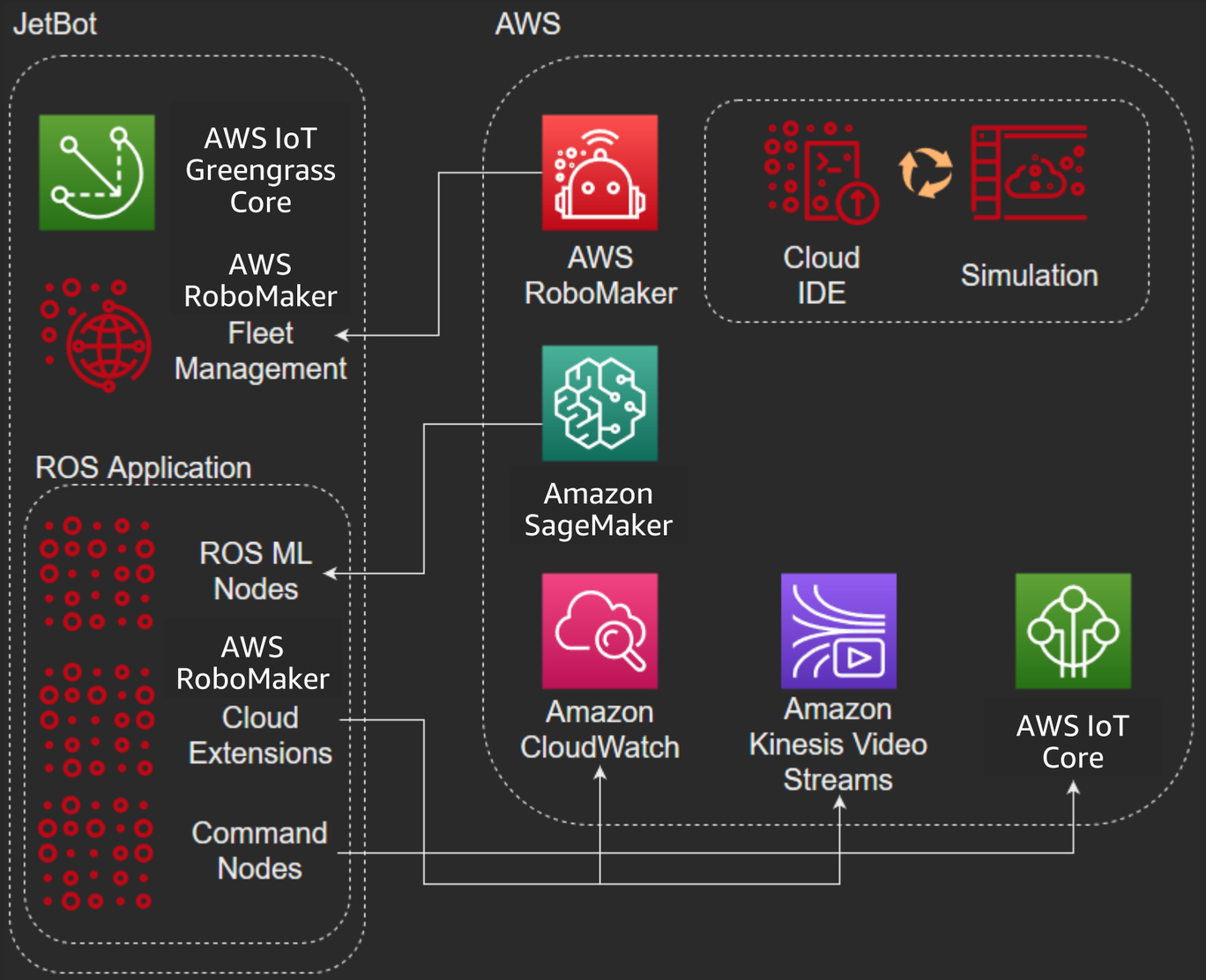
Nodes: Processes that perform distinct computation—a robot app is typically composed of multiple nodes

Messages: Data structures used to communicate between nodes

Topics: These form a transport system for routing messages between nodes with pub/sub mechanics

What we're building





Thank you!

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