

AWS
re:Invent



IOT202

What's New with AWS IoT Greengrass

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AWS

Agenda

AWS IoT Greengrass overview

What's new

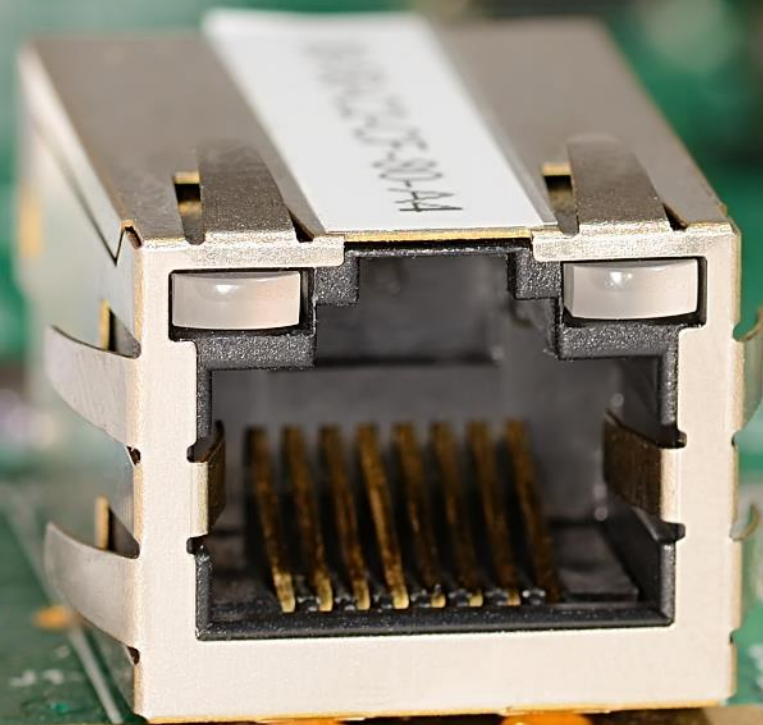
Demo

Conclusion

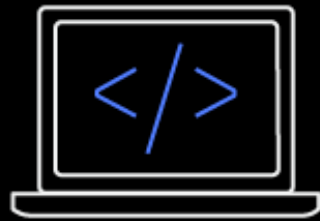
AWS IoT Greengrass overview



Let's talk about ...



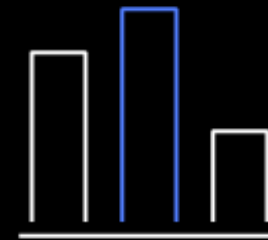
Common challenges for device software



Robust
processing
and data
management



Remote
deployments,
over-the-air
updates



Fleet
monitoring
and
management



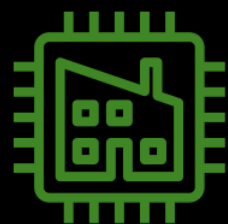
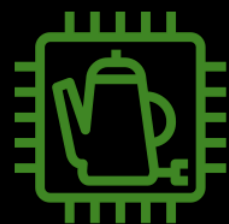
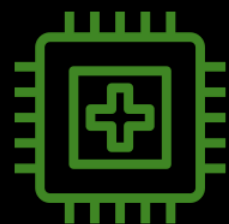
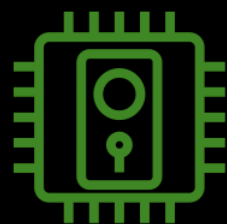
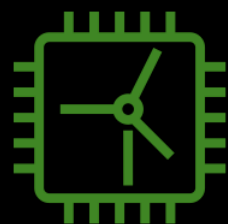
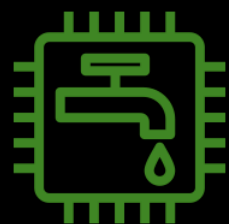
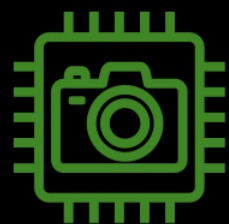
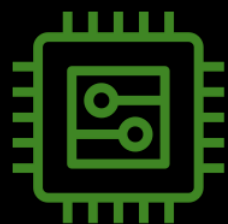




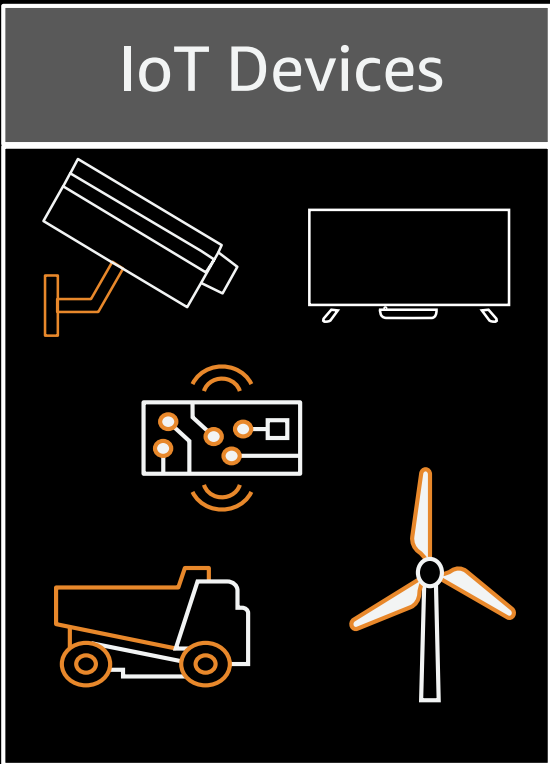
AWS IoT Greengrass



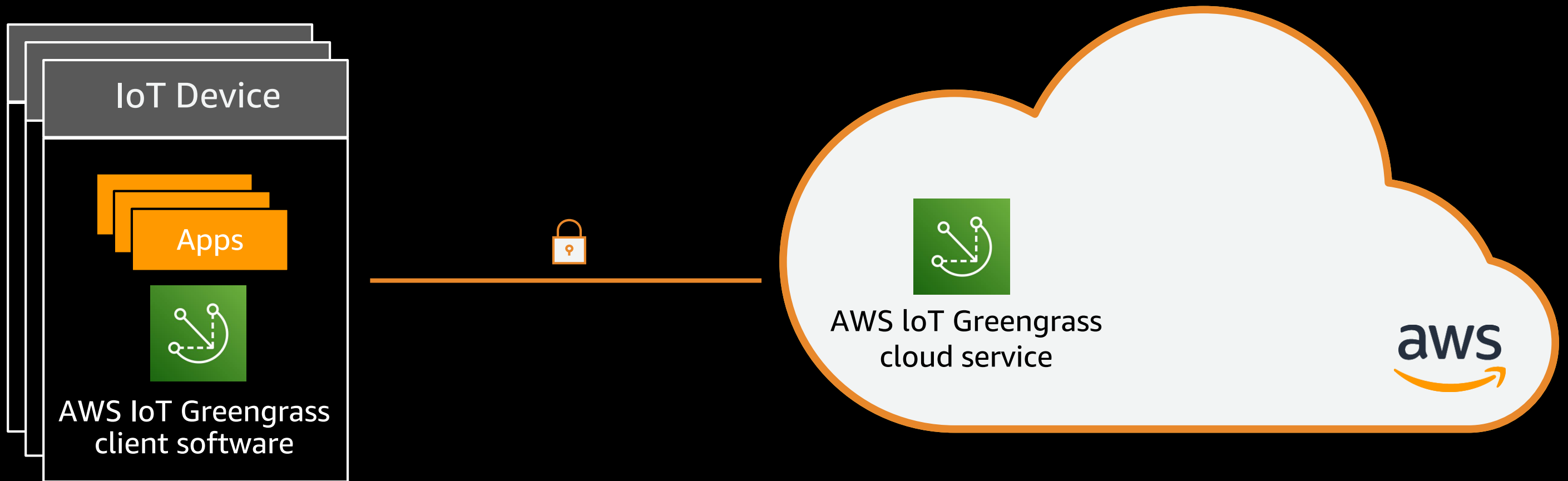
AWS IoT Greengrass helps you quickly and easily build, deploy, and manage securely connected intelligent devices



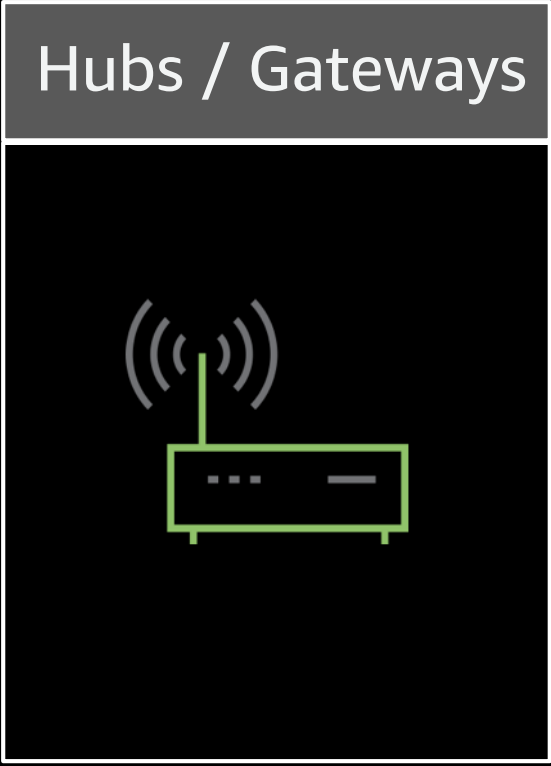
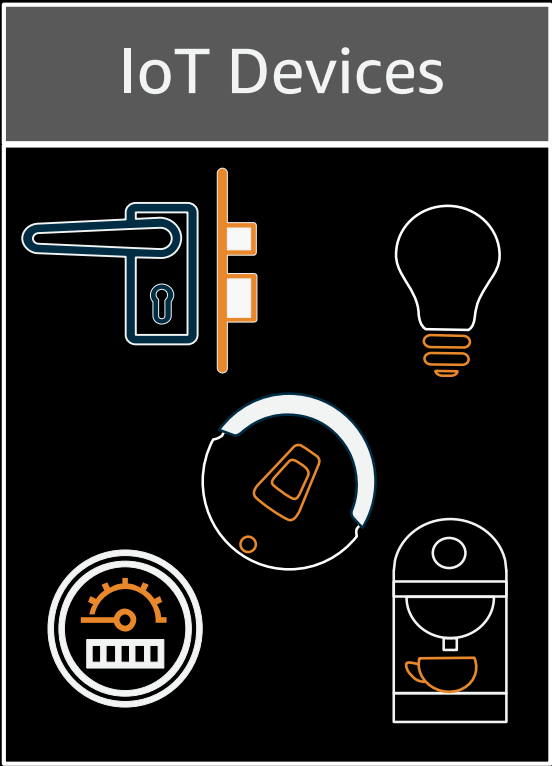
Connected IoT devices



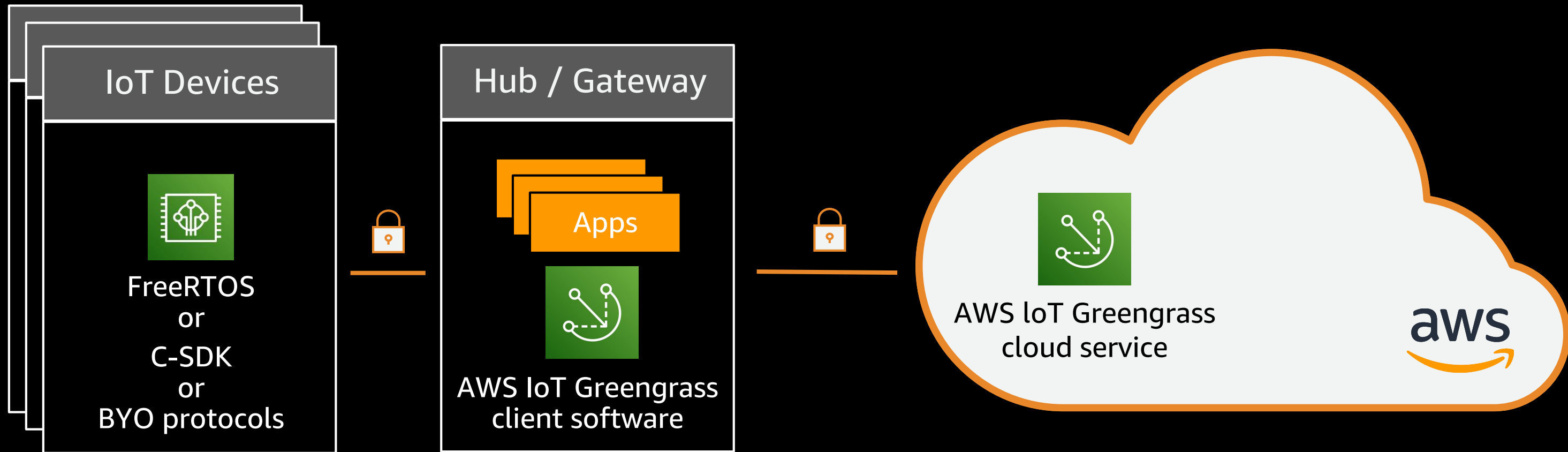
AWS IoT Greengrass on IoT devices



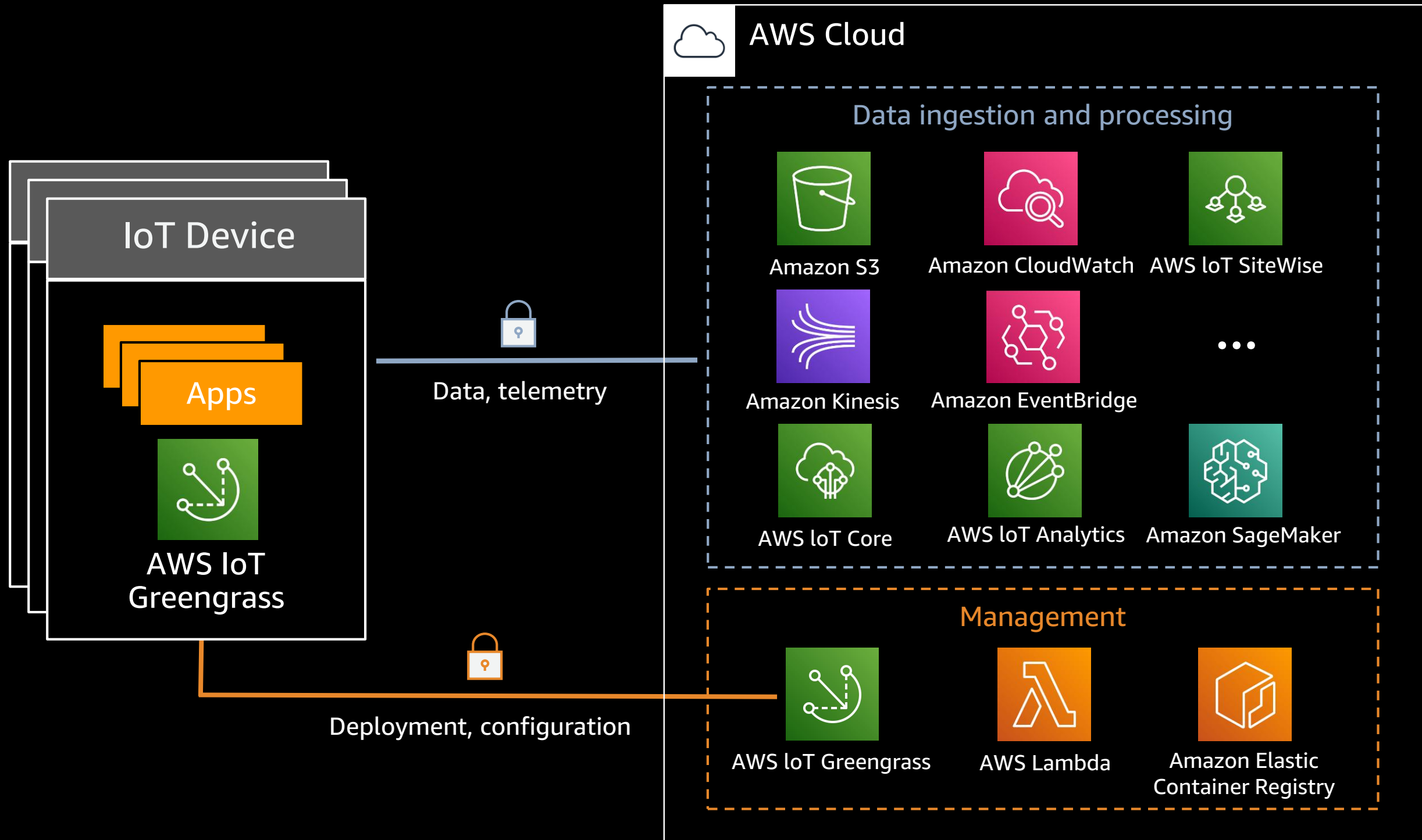
Connected IoT devices and hubs



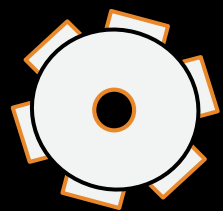
AWS IoT Greengrass on hubs



Pre-integrated with cloud services



AWS IoT Greengrass capabilities



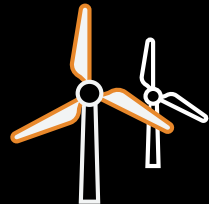
**Local
messaging**



**Local
actions**



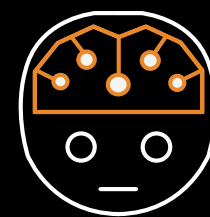
**Container
support**



**Data and
state sync**



**Stream
manager**



**ML
inference**



**Secrets
manager**



**Over the air
updates**



Security

What customers are doing with AWS IoT Greengrass



Connected home hub



Home healthcare



Connected home appliances



Smart gym hub



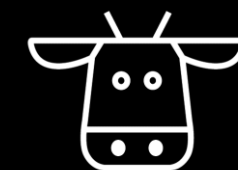
Smart pub



Smart transportation



Smart factory



Smart agriculture

What's new

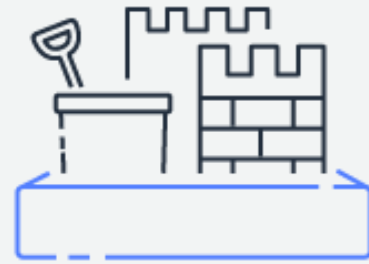


AWS IoT Greengrass 2.0 release

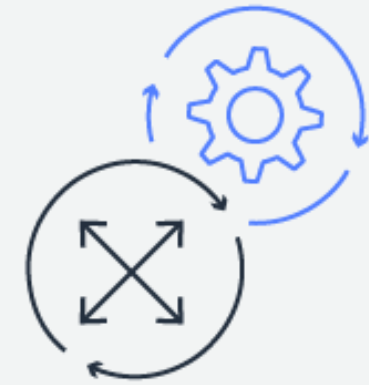
More open, more modular, more interoperable



Open



Modular



Interoperable

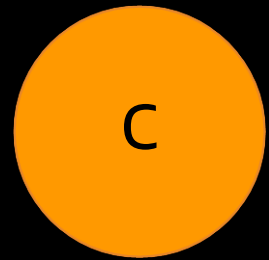
AWS IoT Greengrass 2.0 release

AWS IoT Greengrass 2.0 edge runtime is now open source

<https://github.com/aws-greengrass>

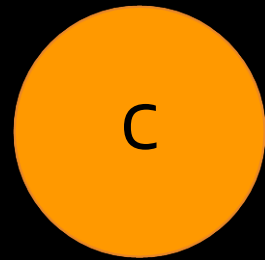


Structure and terminology

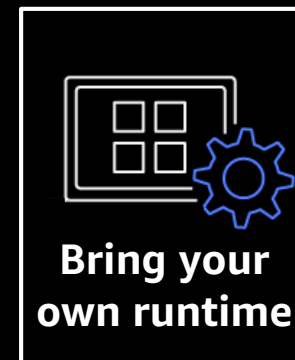
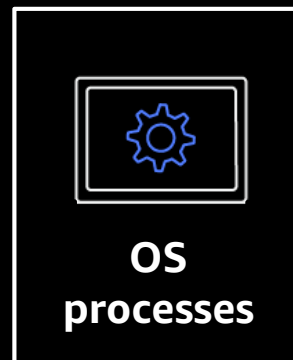


Component

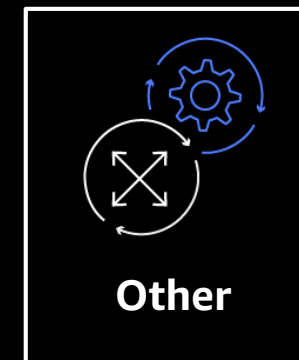
Structure and terminology



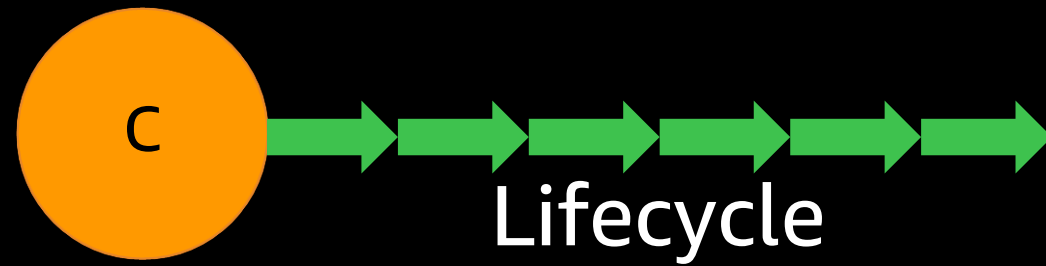
Components are the atomic unit of management



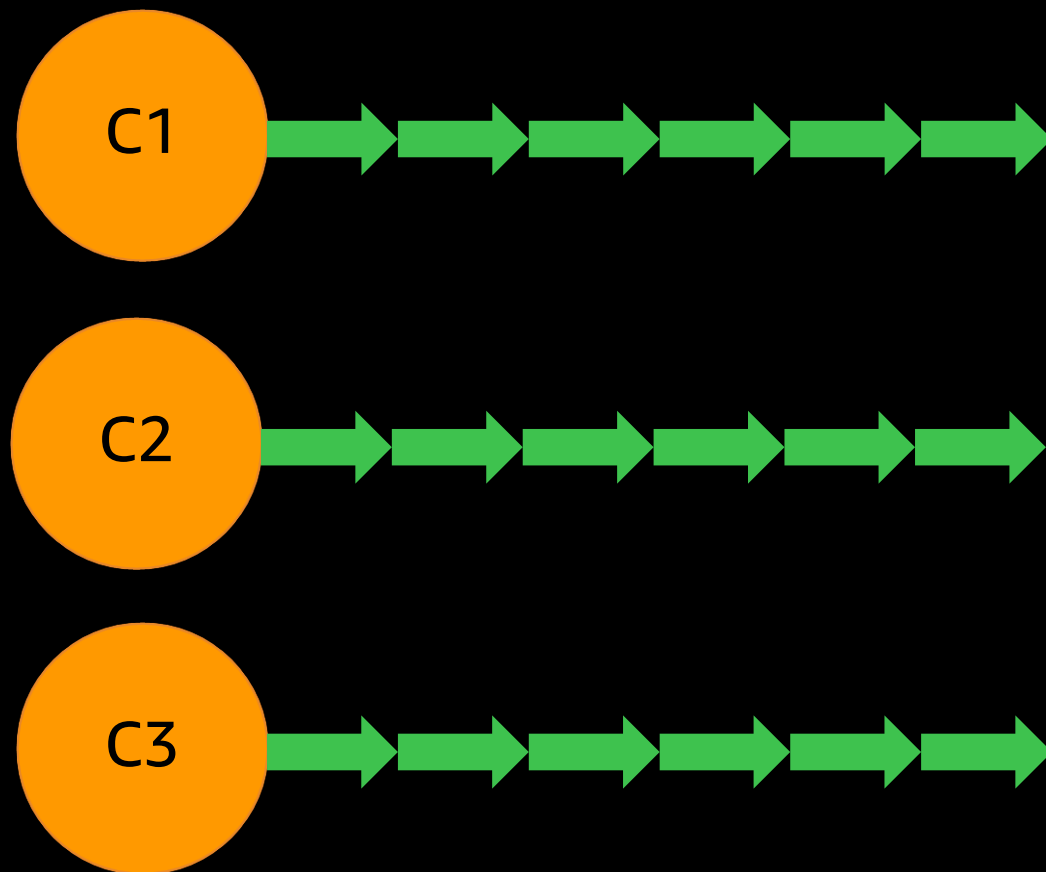
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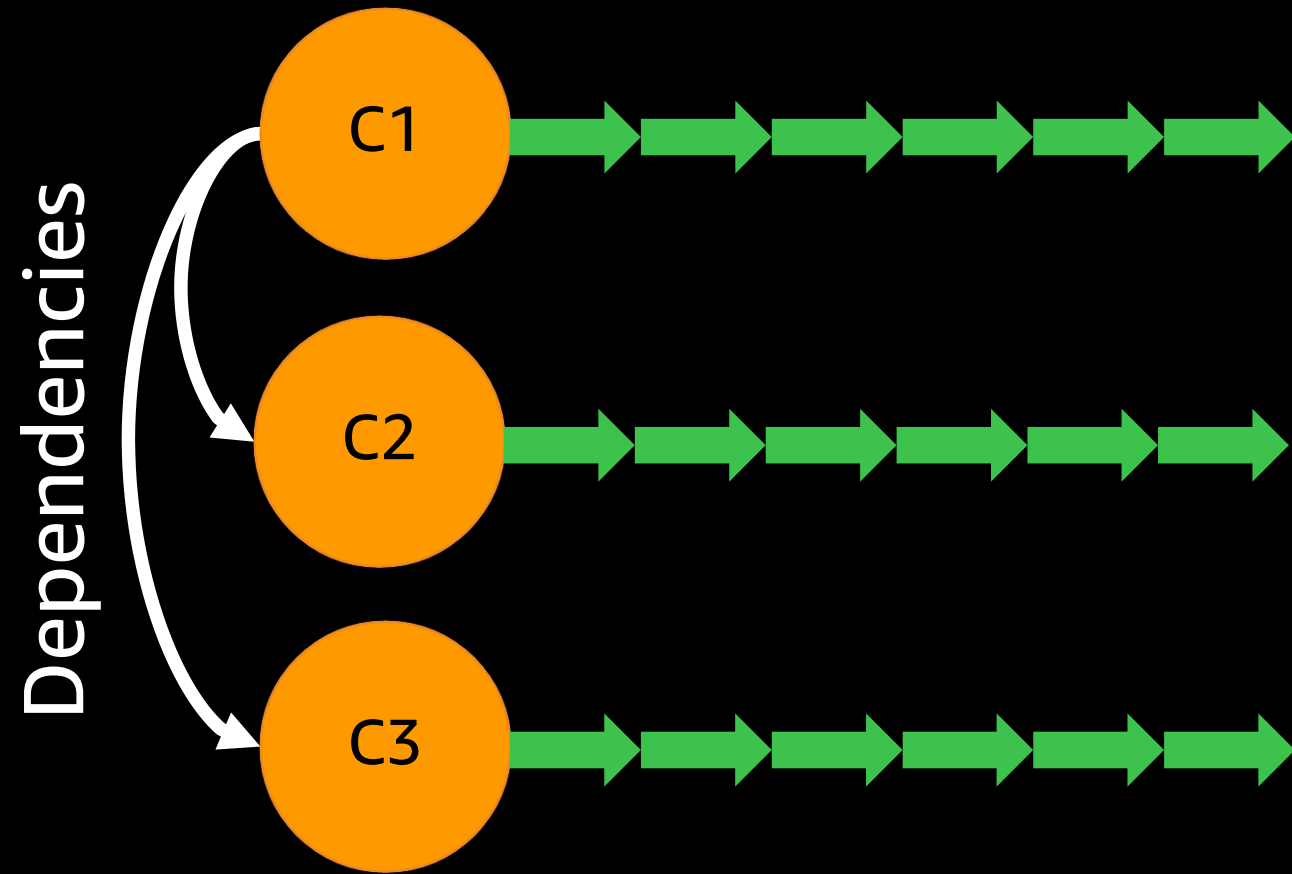
Structure and terminology



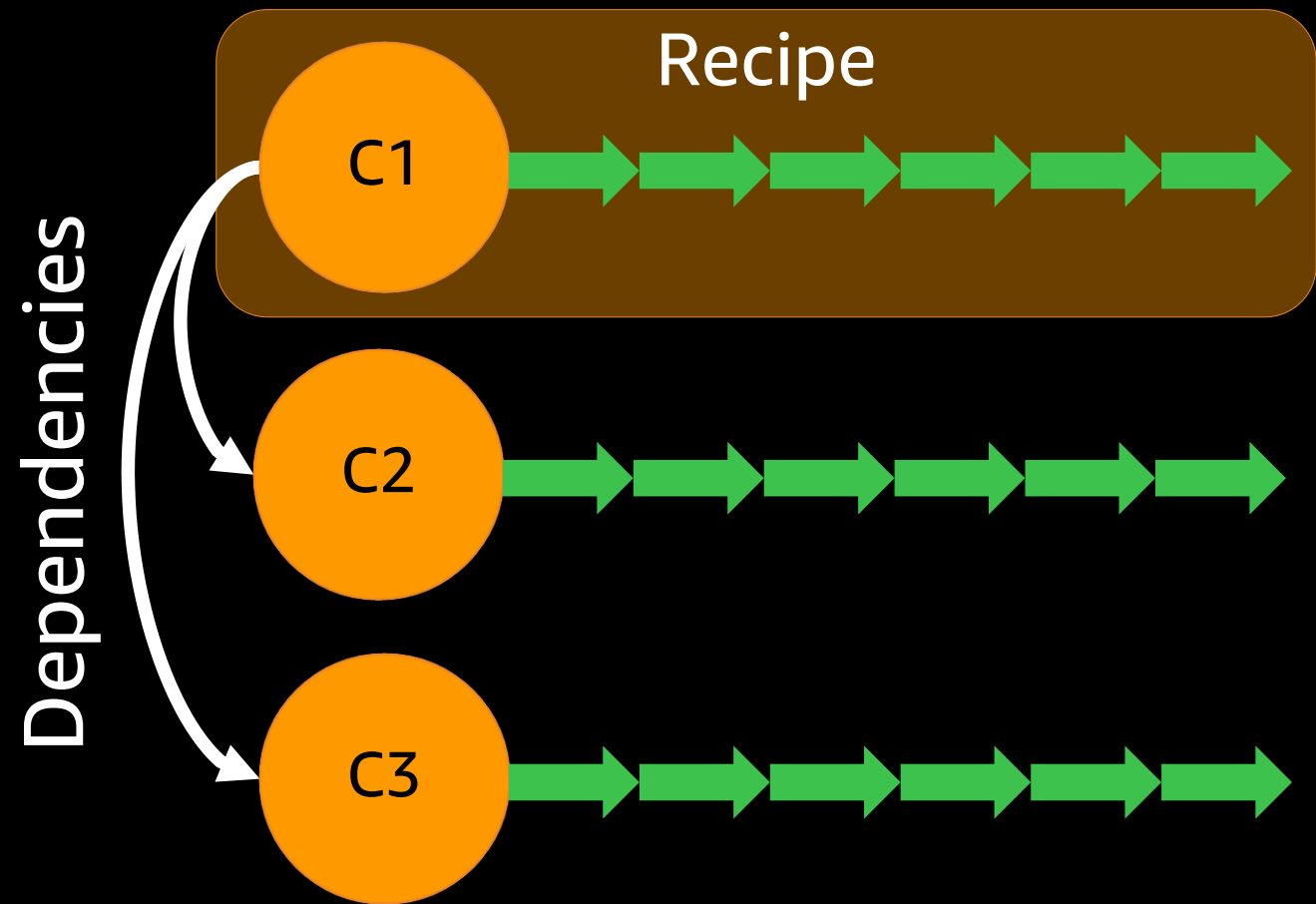
Structure and terminology



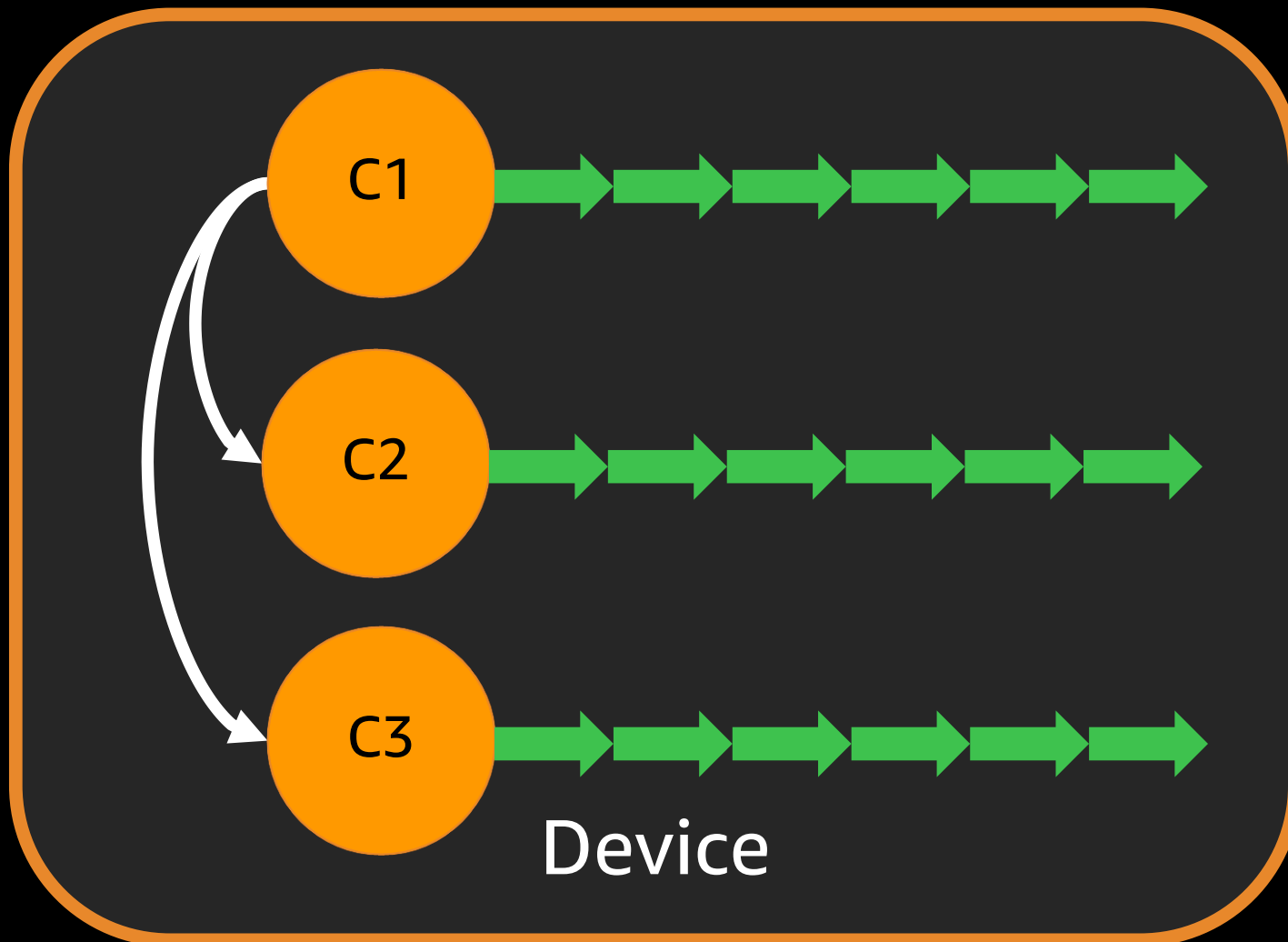
Structure and terminology



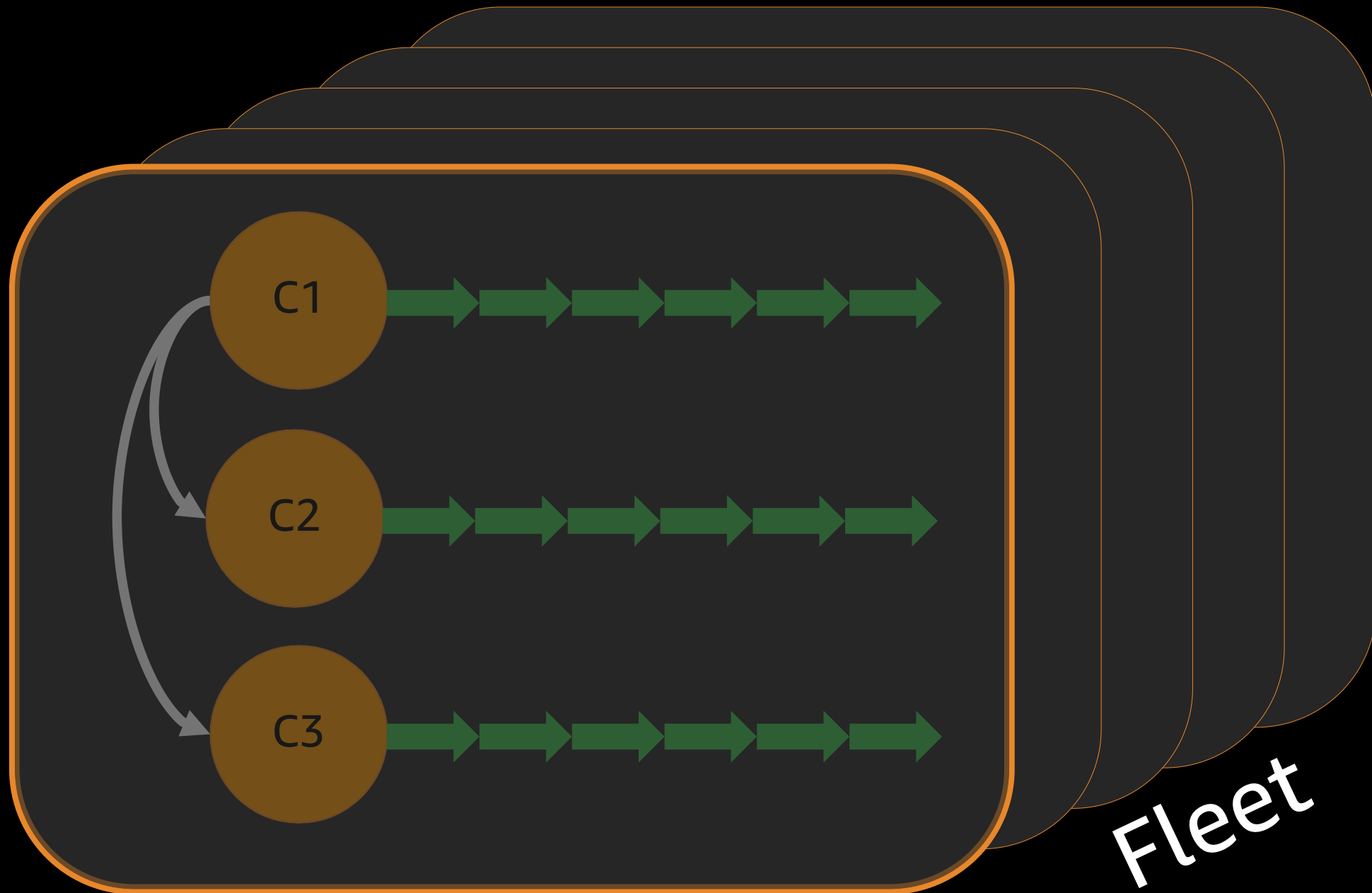
Structure and terminology



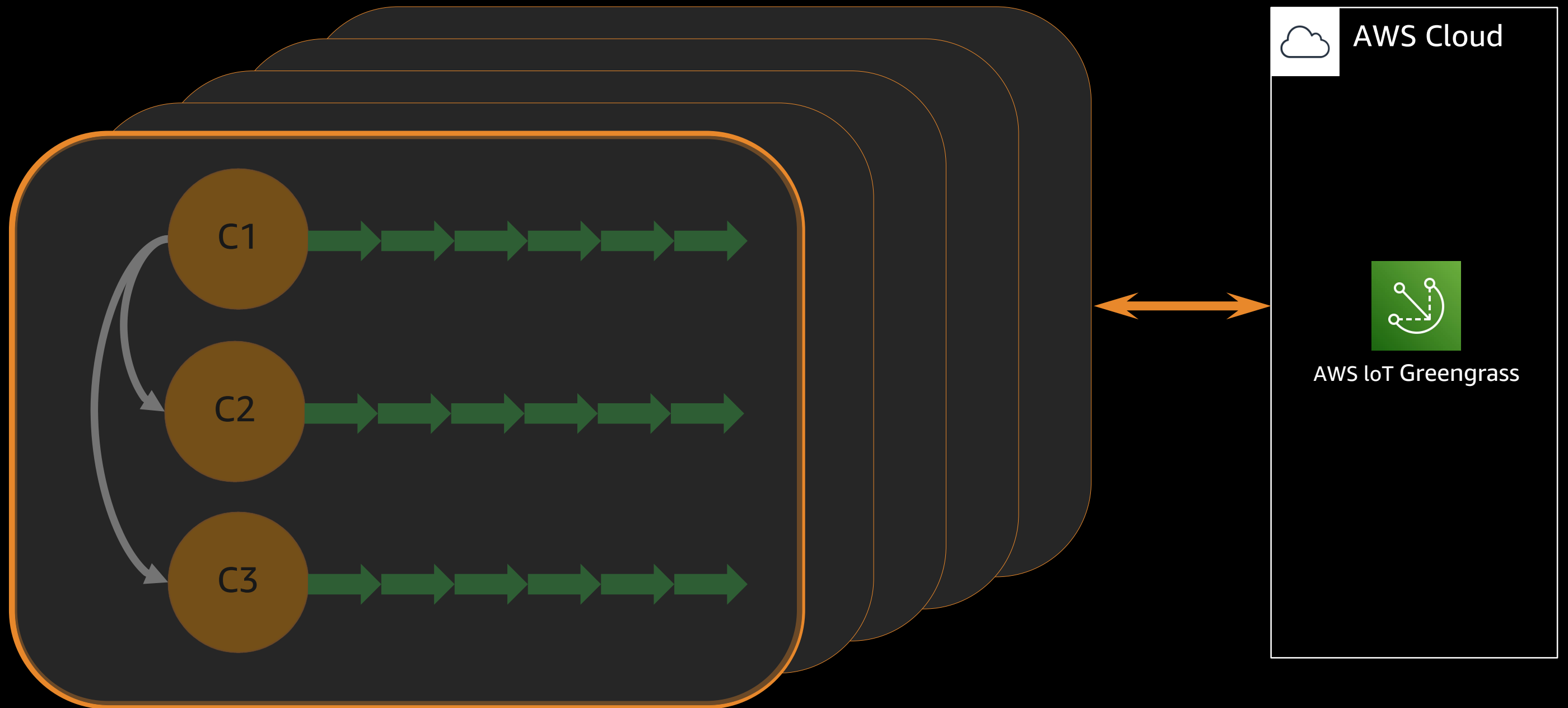
Structure and terminology



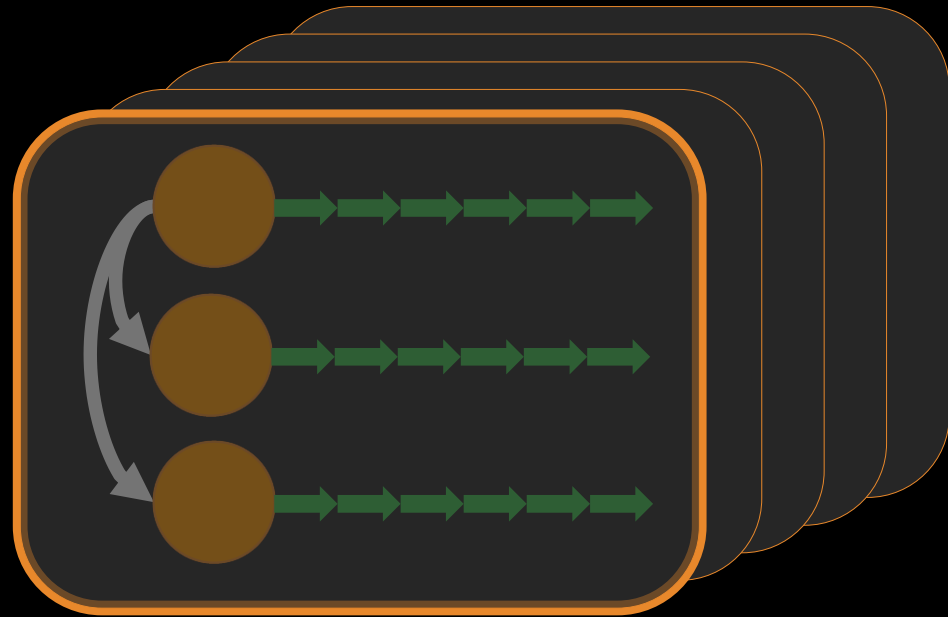
Structure and terminology



Structure and terminology

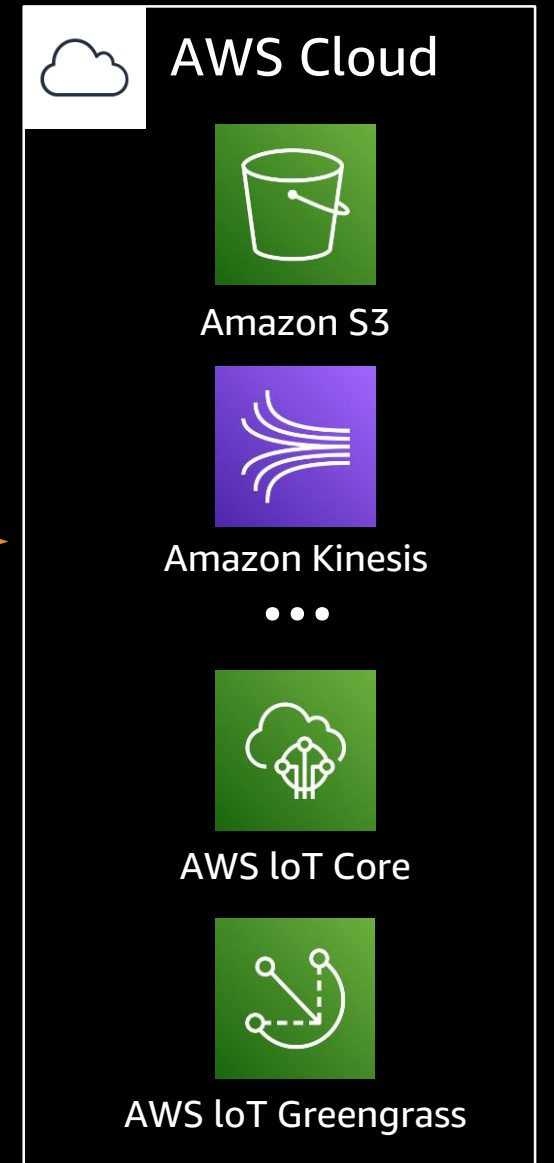


Structure and terminology



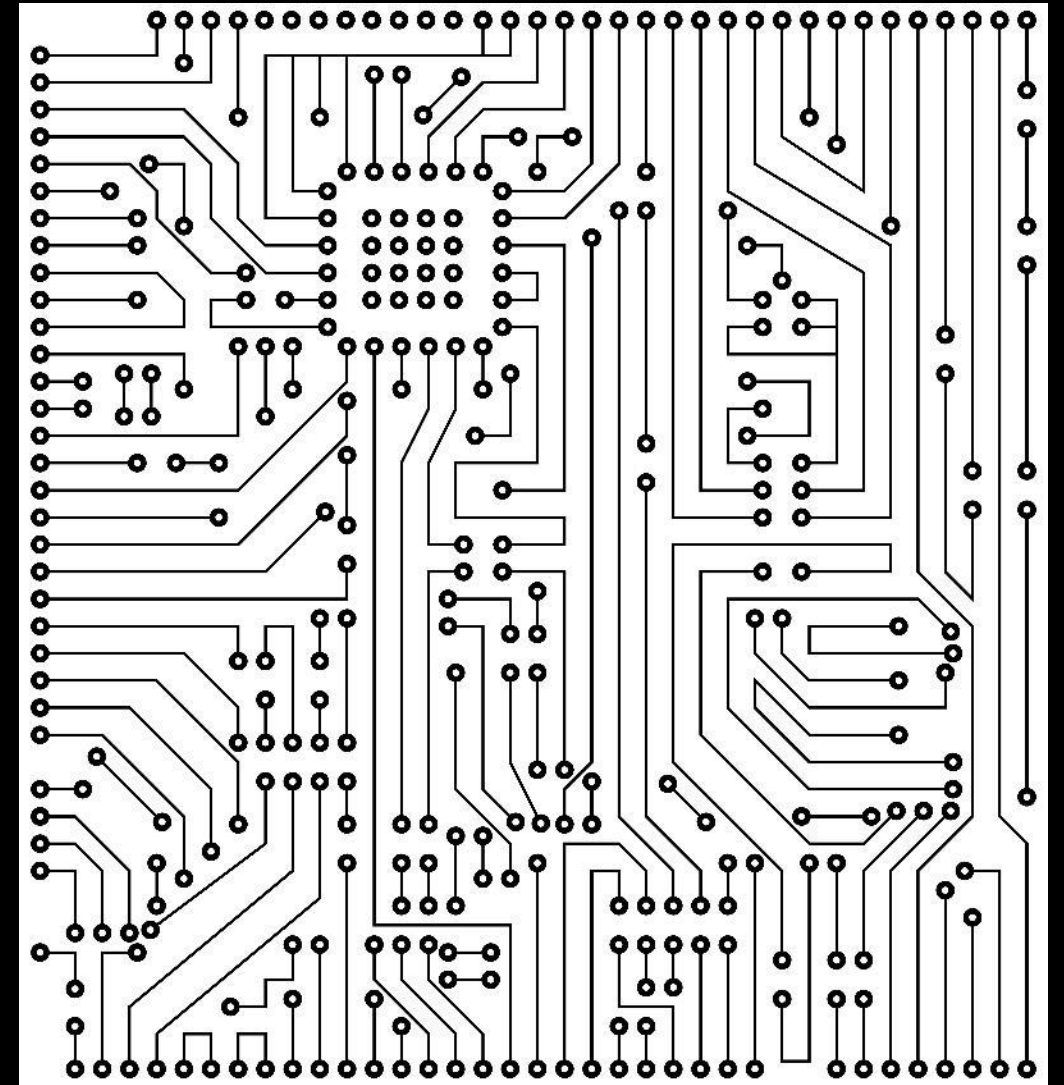
Network link

Many protocols
Many transports
Flakey is normal
⇒ Stream manager



Design principles

- Coordination and management of on-device apps
- Ruggedly self-sufficient
- Flexible, not prescriptive
- Embraces diversity
- Minimalist core
- Designed for extensibility
- Everything is a “service”



New capabilities

- Device-first development
- Composability of optional features
- Flexibility and extensibility –
 - use the execution model of your choice (Lambda, Docker, OS processes, snap, VMs)
 - use the programming language of your choice
 - use the protocols you need
 - bring in your runtimes, packages, and open-source components
- Lifecycle management
- Simplified management for your device fleets



Arthrex

Leading provider of orthopedic products, building the next generation smart hub for **operating room devices**

Uses AWS IoT Greengrass for **offline data processing** for mission critical device communication

Improved visibility into procedure statuses and **better patient outcomes**

Launch partners



NVIDIA JETSON Xavier NX



NXP S32G GoldBox

If you knew **the state of every thing** and could
reason on top of that data...

what **problems** would you solve?

how would you solve them **differently** using intelligent devices?

how can you leverage the **open, modular, and interoperable**
AWS IoT Greengrass software?

<https://console.aws.amazon.com/greengrass>



Resources

Learn how to bring intelligent capabilities to your IoT devices

<https://aws.amazon.com/greengrass>

AWS Partner Device Catalog with pre-qualified hardware

<https://devices.amazonaws.com>

AWS IoT Device Tester

<https://aws.amazon.com/greengrass/device-tester>

AWS IoT Greengrass client software on GitHub

<https://github.com/aws-greengrass>

Thank you!





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