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ROB303-R

Managing robot fleets: How to optimize robotics automation

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Agenda

Enterprise business drivers for automation

Benefits of multi-robot fleet orchestration

Why multi-robot fleet orchestration is difficult today

How AWS IoT RoboRunner plans to solve these challenges

Customer use case discussion

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Business drivers for automation



Scale



Customer experience



Standardization



Cost improvement

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Challenges for highly automated operations

Realizing the **full value** of automation requires optimization at a system level

Operators lack system-wide process flow **visibility** and **tools**

In highly automated operations, retrofitting is **costly** and **disruptive**

Substantial **investment** is required to deploy automation

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Benefits of multi-robot fleet orchestration



Increased operational efficiency



Reduced CAPEX and OPEX



Supply chain diversity



Unified system view

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Why fleet orchestration is difficult today

It’s **challenging** to integrate different robot systems

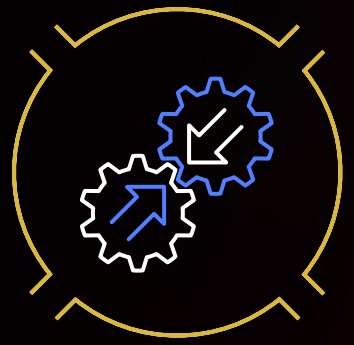
Deploying robotics requires **complex** software integration work

Each system integration requires **customization** effort

User-facing applications require integration with **multiple** robot and management systems

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How AWS IoT RoboRunner addresses these challenges



- Central data repositories to **standardize** robot control software and data
- Prebuilt integrations with vendors for **easier** deployment of automation
- Sample **applications** for common interoperability use cases
- **APIs** to build user applications on top of the central data repositories

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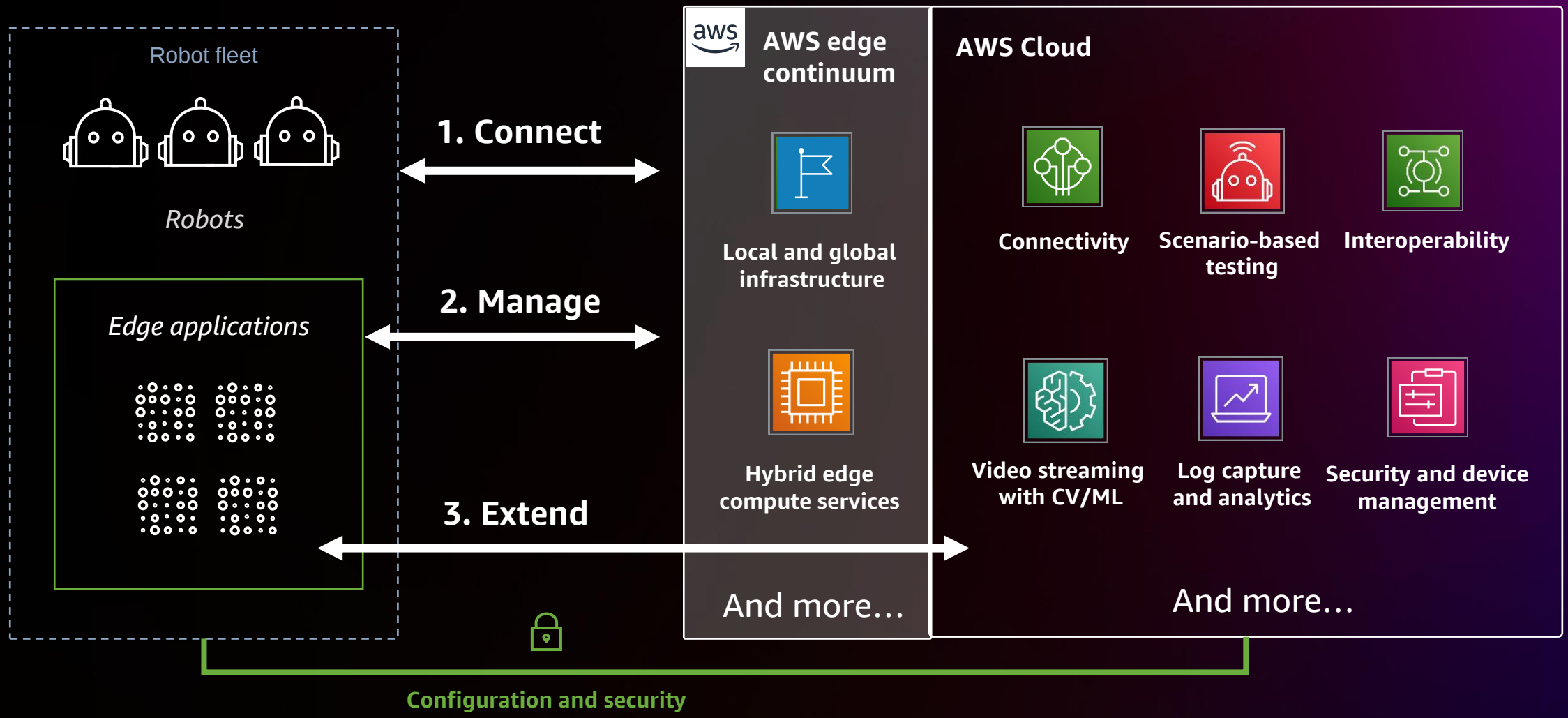
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Customer use cases: Material movement

- Use robots to move material from pickup to drop-off
- Ability to visualize robots on a map
- Coordinate robots in shared spaces

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Advancing current generation robots with AWS



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How to get started with AWS IoT RoboRunner

1. Developer guide
   https://docs.aws.amazon.com/iotroborunner/latest/dev/iotroborunner-welcome.html
2. Tutorials with sample code
   https://docs.aws.amazon.com/iotroborunner/latest/dev/gettingstarted-tutorials.html
3. Contact us at
   https://aws.amazon.com/contact-us/?pg=ln&cp=bn
   or via the **Contact service team** button in the console

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Thank you!

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