



MARGO VISION

Interoperable orchestration at
scale of edge applications and
devices for industrial automation
ecosystems



ABOUT MARGO

The Margo initiative defines mechanisms for interoperable orchestration at scale of edge applications/workloads and devices. It will deliver the interoperability promise through an open standard, a reference implementation and comprehensive compliance testing toolkit. Margo unlocks barriers to innovation in complex multi-vendor environments and accelerates digital transformation for organizations of all sizes. That's why it's named after the Latin word for edge.



VISION

Margo establishes interoperability between industrial apps and devices, ensuring apps and devices compliant with Margo can be seamlessly incorporated into fleet managers that support Margo.

This enables vendors to build Margo-compliant solutions which end users may select from, to deploy, manage, and observe their fleet throughout its lifecycle, in their multi-vendor ecosystem.



These apps can run on devices from various vendors or can target particular devices while maintaining the ability to be managed at scale.



These devices can run apps from various vendors or can be purpose built to host particular apps while maintaining the ability to be managed at scale.



These fleet managers can orchestrate apps and/or devices from various vendors.

LEXICON

Words can be interpreted differently depending on the context and audience. You can find Margo's definition of used terms here <https://specification.margo.org/margo-overview/technical-lexicon/>

Below are 2 definitions that help clarify the Margo vision statement.



In Margo, a device vendor is responsible for supplying an edge device that, in addition to hardware and OS, includes the base configuration which enables the device to receive Margo compliant workloads and be managed by Margo fleet managers.



In Margo, a fleet manager can also represent the platform vendor of devices it manages

As an App Vendor

I GET...

DEVELOP

I can develop and version manage my app while allowing others to manage distribution and deployment of that app

FLEXIBLE REQUIREMENT DEFINITIONS

I expect flexibility in defining the device requirements for my app; it must be possible to choose that my app could target general purpose devices providing basic resources (CPU, RAM, storage) or more particular devices that are purpose-built for my app.

STREAMLINED APP DISTRIBUTION

I wish to streamline the way I make my app available to end users, such that no customization to the app is required to support the end user's selected fleet manager.

OBSERVABILITY WITH MINIMAL COMPLEXITY

I want to minimize complexity for end users to deploy and observe my app within their fleet of devices.

As an App Vendor

I BRING...

STANDARDIZED PACKAGE

I must package my apps according to the Margo specification

STANDARDIZED PUBLISHING

I must publish my app packages according to the Margo specification

CLEAR DEVICE REQUIREMENTS

My app packages must define the device requirements for my apps

OBSERVABILITY

I can instrument my app such that my customers can observe its health and telemetry data according to the Margo specification

As a Device Vendor

I GET...

DEVELOP

I can develop and version manage my device while allowing others to version and lifecycle manage deployment of apps onto that device

BROAD DEVICE SUPPORT

I wish to streamline the way I make my device available to end users, such that no customization to the device is required to support the end user's selected fleet manager.

FLEXIBILITY

I expect flexibility in defining the device capabilities for deployed apps; it must be possible to choose that my device could host general purpose apps by providing basic resources (CPU, RAM, storage) and/or more particular apps that are purpose-built for my device.

FREEDOM OF CHOICE

I can choose whether to allow others to select and deploy OS to that device and whether to constrain that OS deployment to one that I have responsibility for curating and version managing.

MINIMIZE COMPLEXITY

I want to minimize complexity for end users to deploy and observe apps running on my device within their fleet of devices and apps.

As a Device Vendor

I BRING...

COMPLIANCE

I must ensure my device fulfills Margo specification requirements to host Margo compliant apps

REPORT CAPABILITIES

I must report the capabilities of my hardware device (and accompanying software if applicable) according to the Margo specification

STANDARDIZED INTERFACES

I can optionally equip my device to fulfill Margo fleet management interfaces

DEVICE OBSERVABILITY

I can instrument my device such that my customers can observe its health and telemetry data according to the Margo specification

As a Fleet Manager Vendor

I GET...

EXPANSION

To expand my scope of supported apps and devices that have adopted margo specification

LIFECYCLE MANAGEMENT

The option to manage the lifecycle actions of Margo compliant device(s) while allowing device vendors and partners to develop/maintain/deploy the updates on that device.

OBSERVE

The ability to present observability data (e.g. health and telemetry) from apps and devices according to the Margo specification

MANAGE AND DEPLOY

The ability to manage the deployment lifecycle of Margo compliant app(s) while allowing app vendors to develop/maintain that app

STANDARDIZATION

A standardized way how applications can be made available to my fleet manager.

As a Fleet Manager Vendor

I BRING...

TARGET DEVICES

My fleet manager must define a fleet of devices capable of hosting Margo-conformant apps and handle deployment, related configuration, and observability of these apps for the fleet.

MANAGEMENT INTERFACE

I can implement a management interface that includes support for managing apps and devices according to the Margo specification

FLEET OBSERVABILITY

I can collect and report upon application and device health and telemetry data according to the Margo specification

DEPLOYMENT SIMPLIFICATION

My fleet manager must ingest and interpret the application requirements and device capabilities according to the Margo specification to assist users in deployment actions

REPOSITORY SUBSCRIPTION

I can subscribe to the app vendors repositories for real-time information

How Can You Contribute?

DEVELOPMENT

Help build the open-source prototypes and reference implementations by making contributions to Margo's GitHub organization: <https://github.com/margo>

SPECIFICATIONS WORK

Collaborate to create the open specification : <https://specification.margo.org/>

GOVERNANCE & STRATEGY

Set the strategic directions of the Margo initiative by representing your organization on the steering committee or and in the working groups.

<https://operations.margo.org/margo-overview/governance/>

A Unique opportunity to address your interoperability challenges and to collaboratively drive towards a common solution.

THANK YOU

WE LOOK FORWARD TO WORKING WITH YOU

Contact Us



www.margo.org



<https://discourse.margo.org/>



<https://github.com/margo>



<https://www.linkedin.com/company/margoproject/about/>