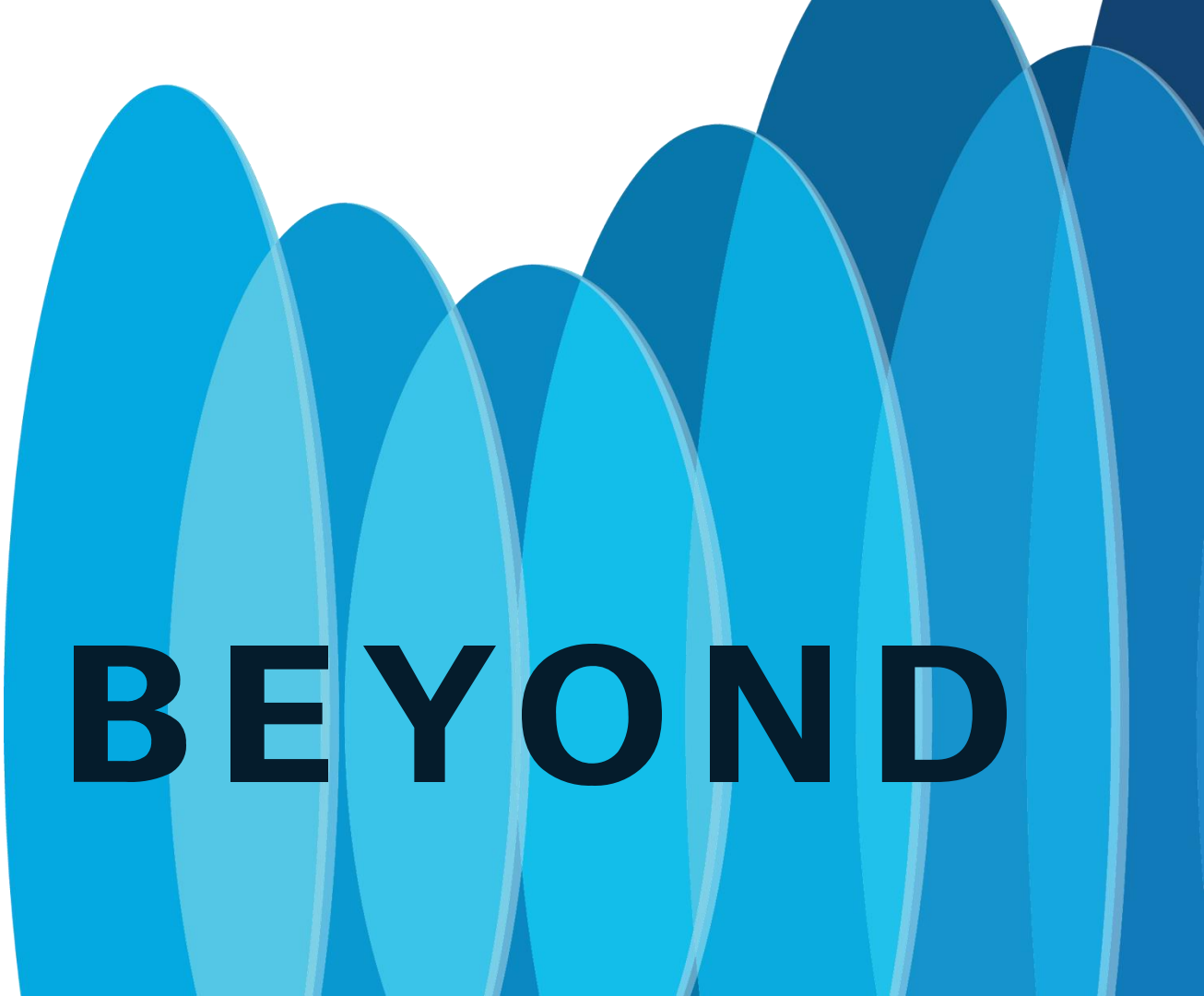
cisco Live!



GO BEYOND

Webex App

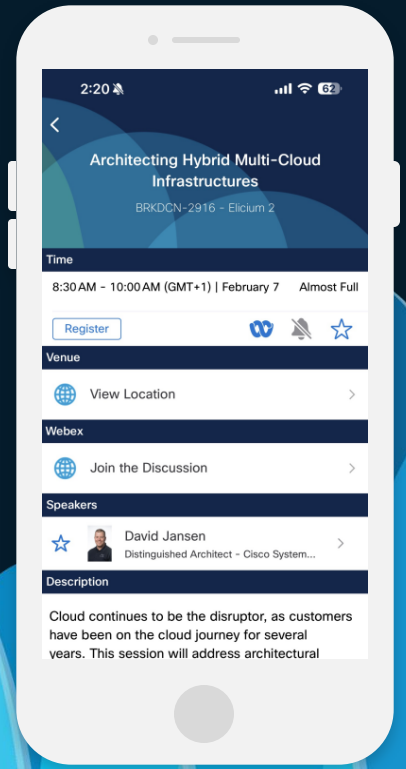
Questions?

Use the Webex app to chat with the speaker after the session

How

1. Find this session in the Cisco Events mobile app
2. Click “Join the Discussion”
3. Install the Webex app or go directly to the Webex space
4. Enter messages/questions in the Webex space

Webex spaces will be moderated by the speaker until February 2025.



© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

slido

Please download and install the
Slido app on all computers you use

How much of a programming wizard are you?

ⓘ Start presenting to display the poll results on this slide.

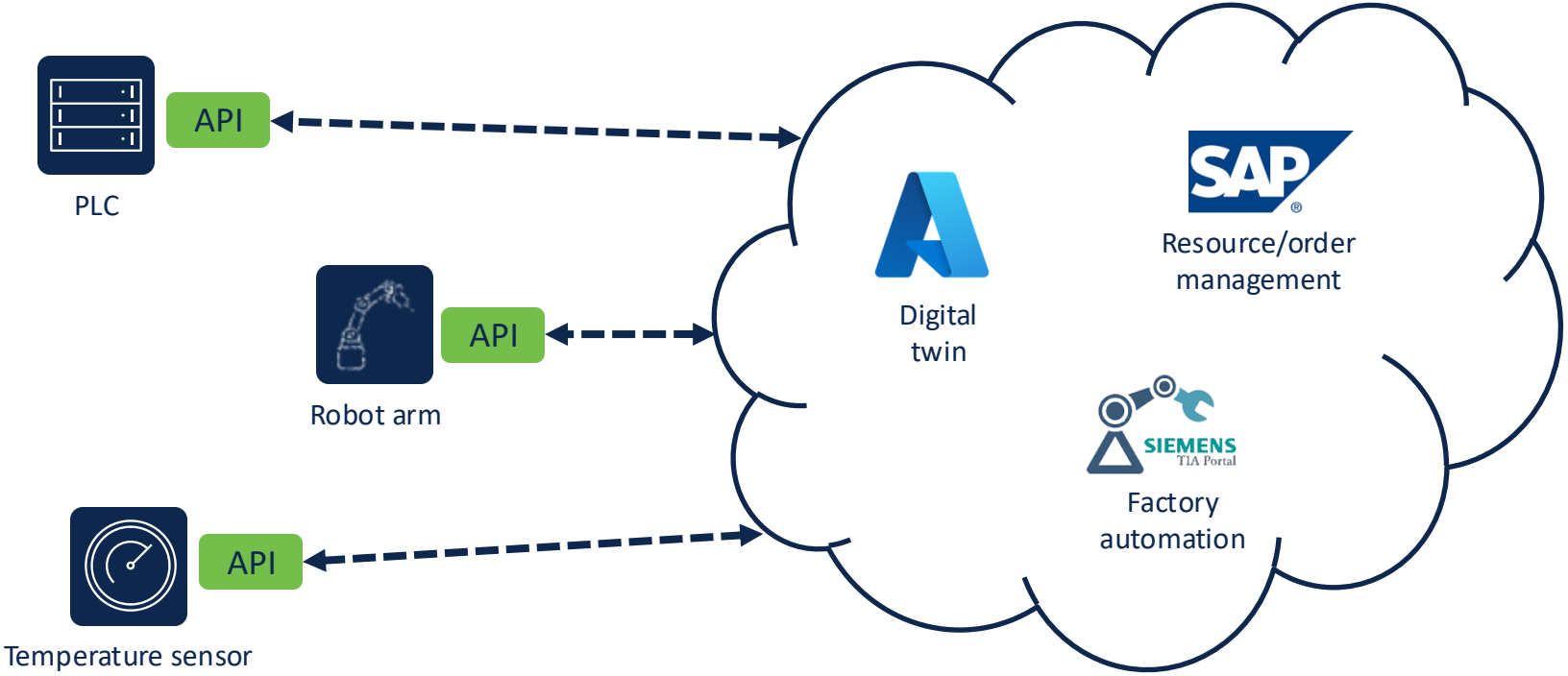
Fantastic APIs on your Factory Floor

And Where to Find Them.

Stien Vanderhallen (stienvan@cisco.com)
Industrial IoT Solutions Engineer | EMEA South
EMEA IIoT Programmability Practice Lead

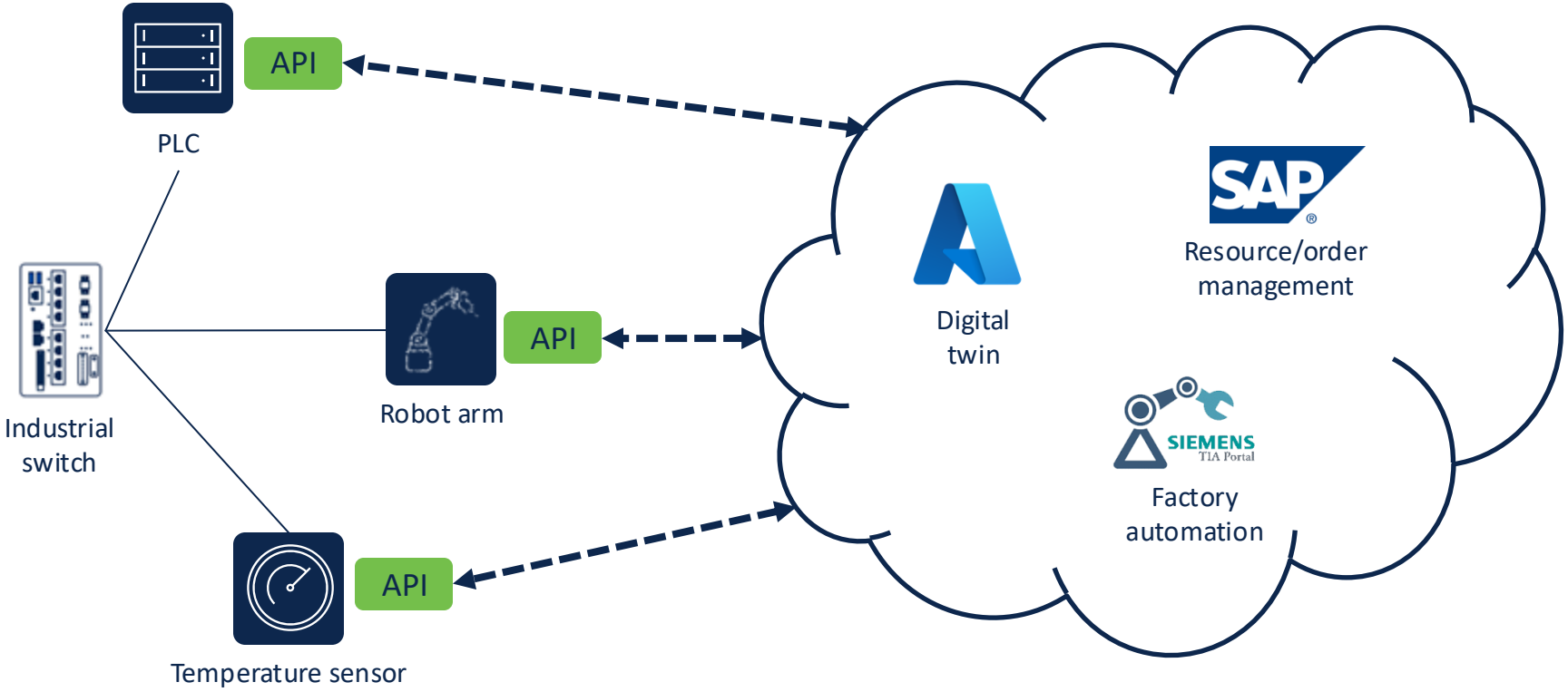
BRKIOT-1073

Through APIs, applications can talk to devices.



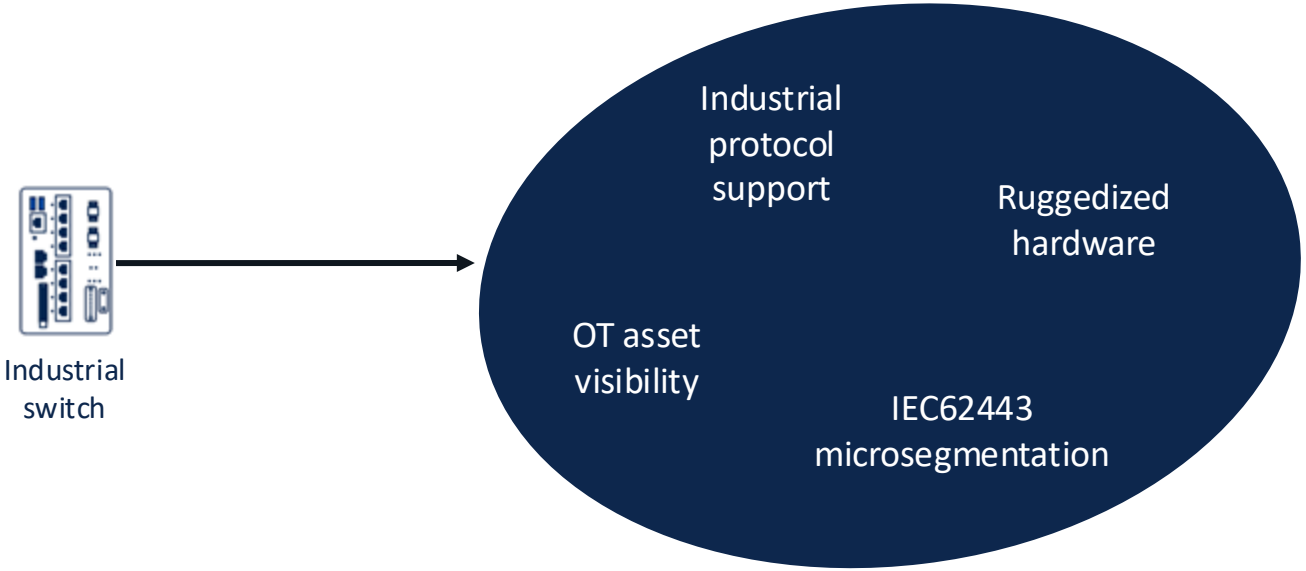
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

OK, but what about the network?



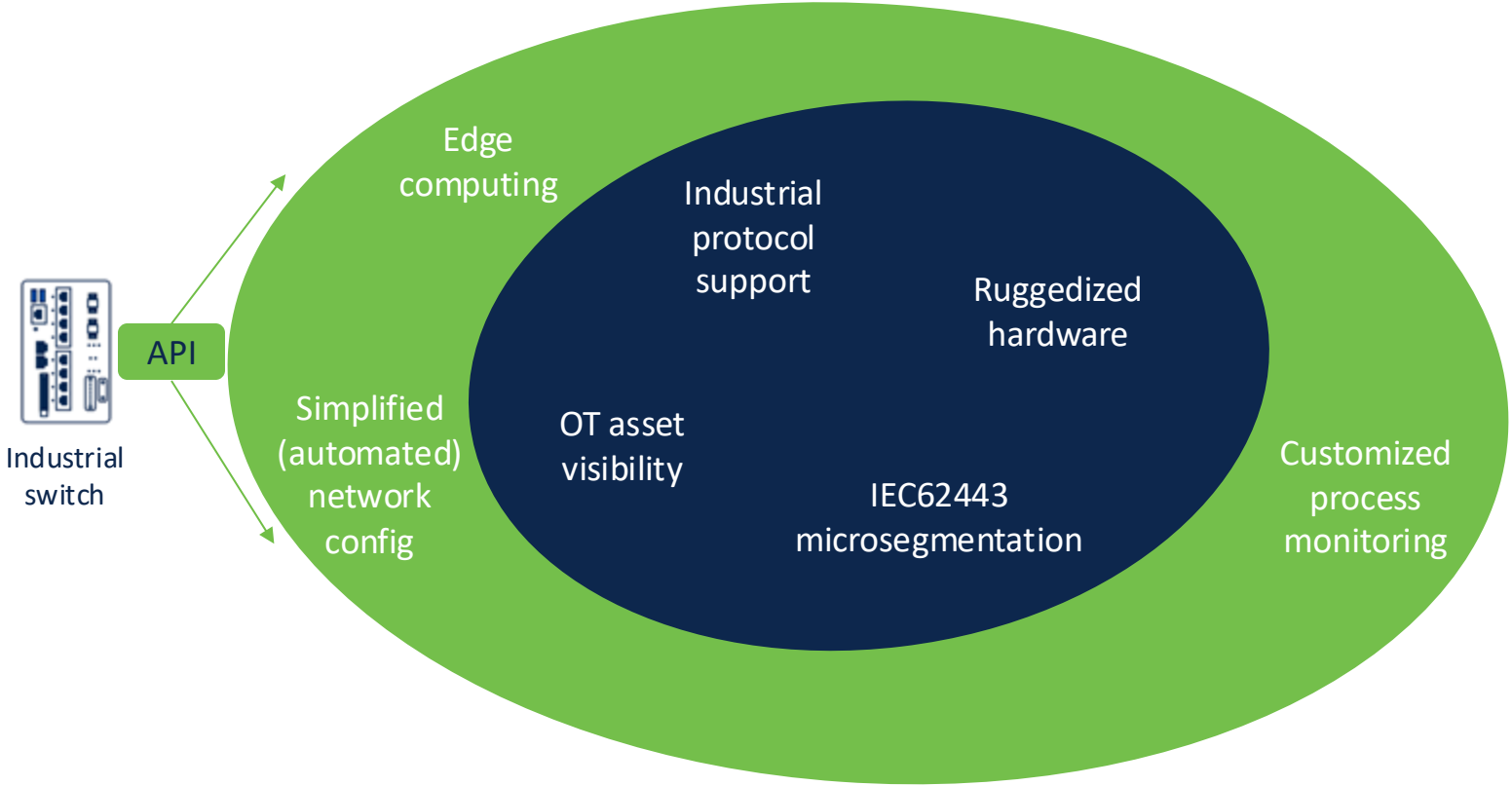
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Cisco is already at the core of the OT network…



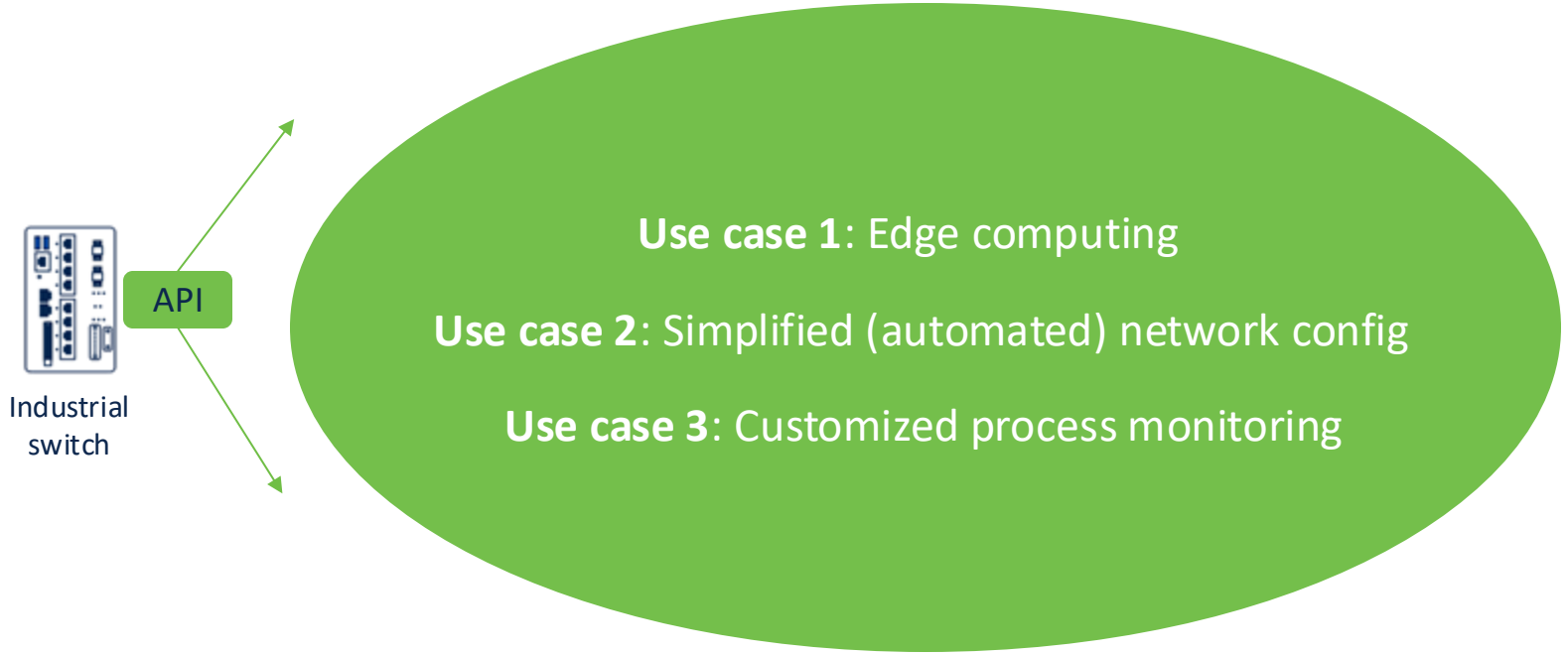
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

… and using APIs, we can go even further.



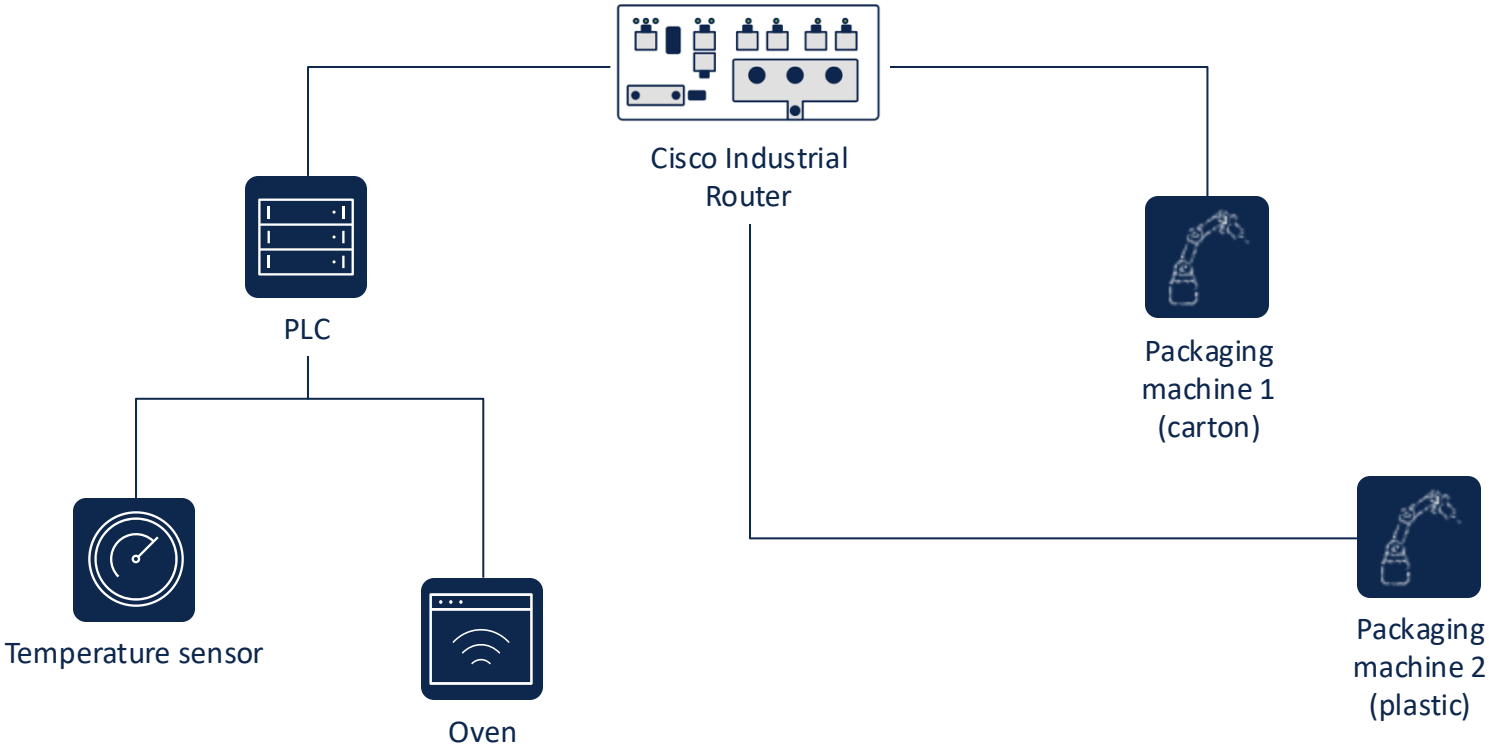
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Our agenda for today has 3 main use cases.



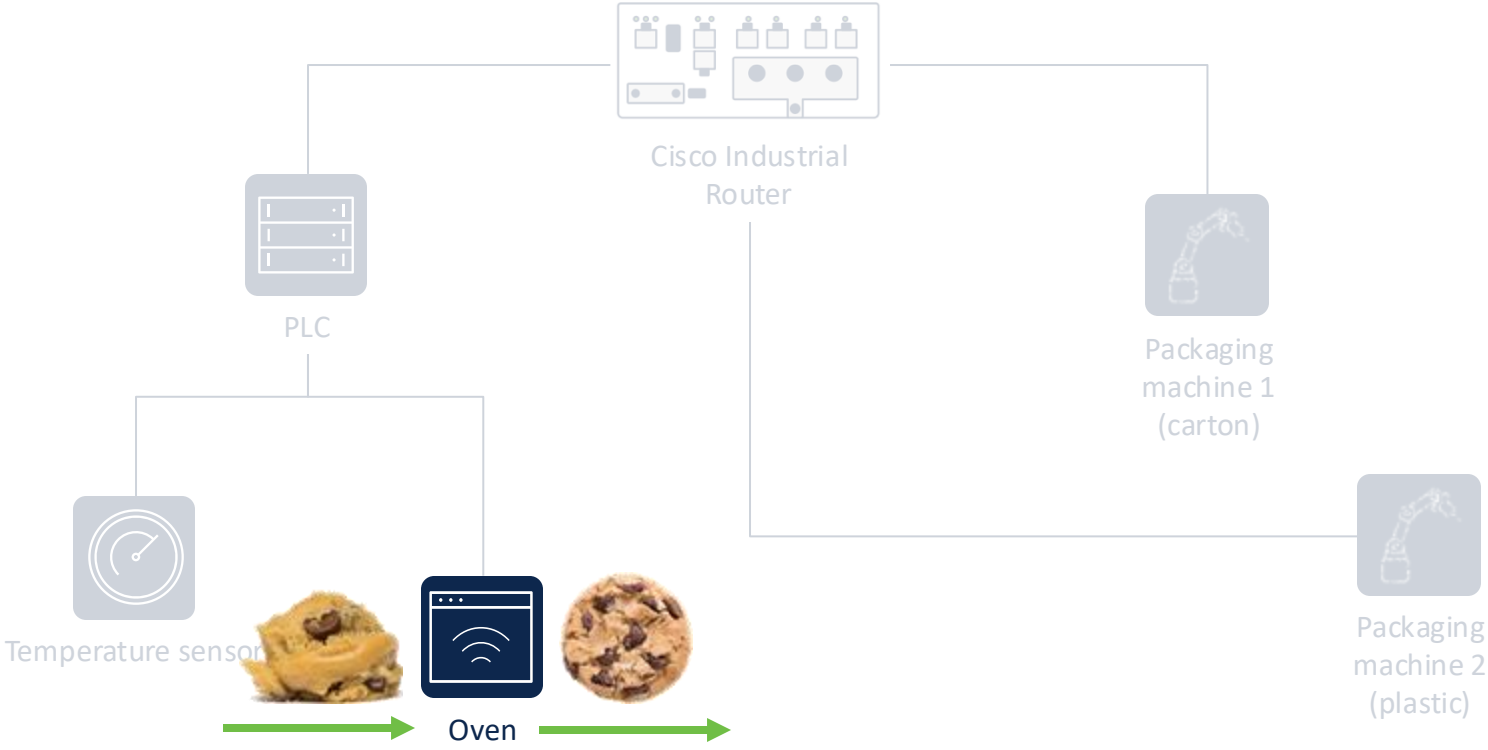
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



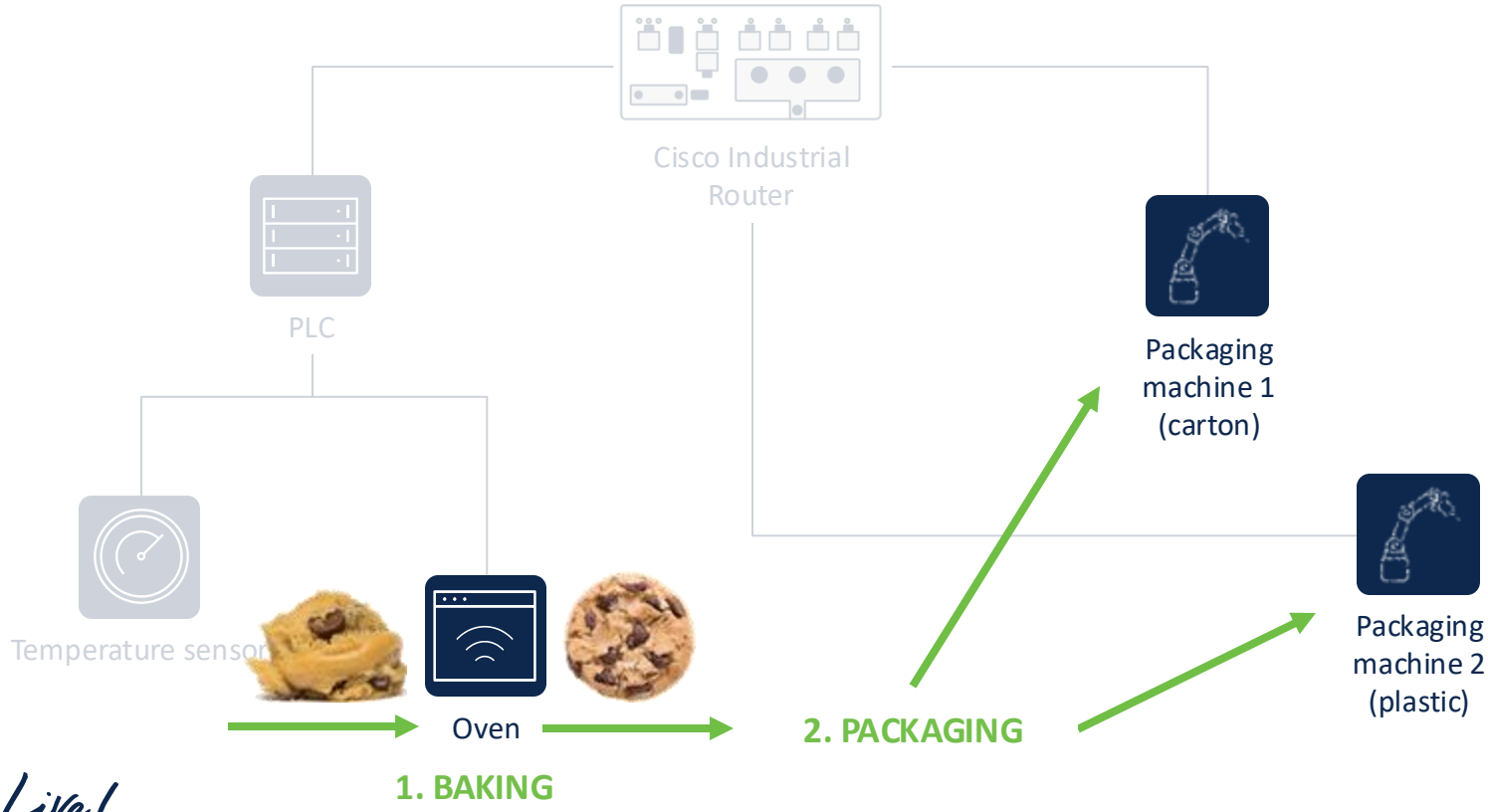
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



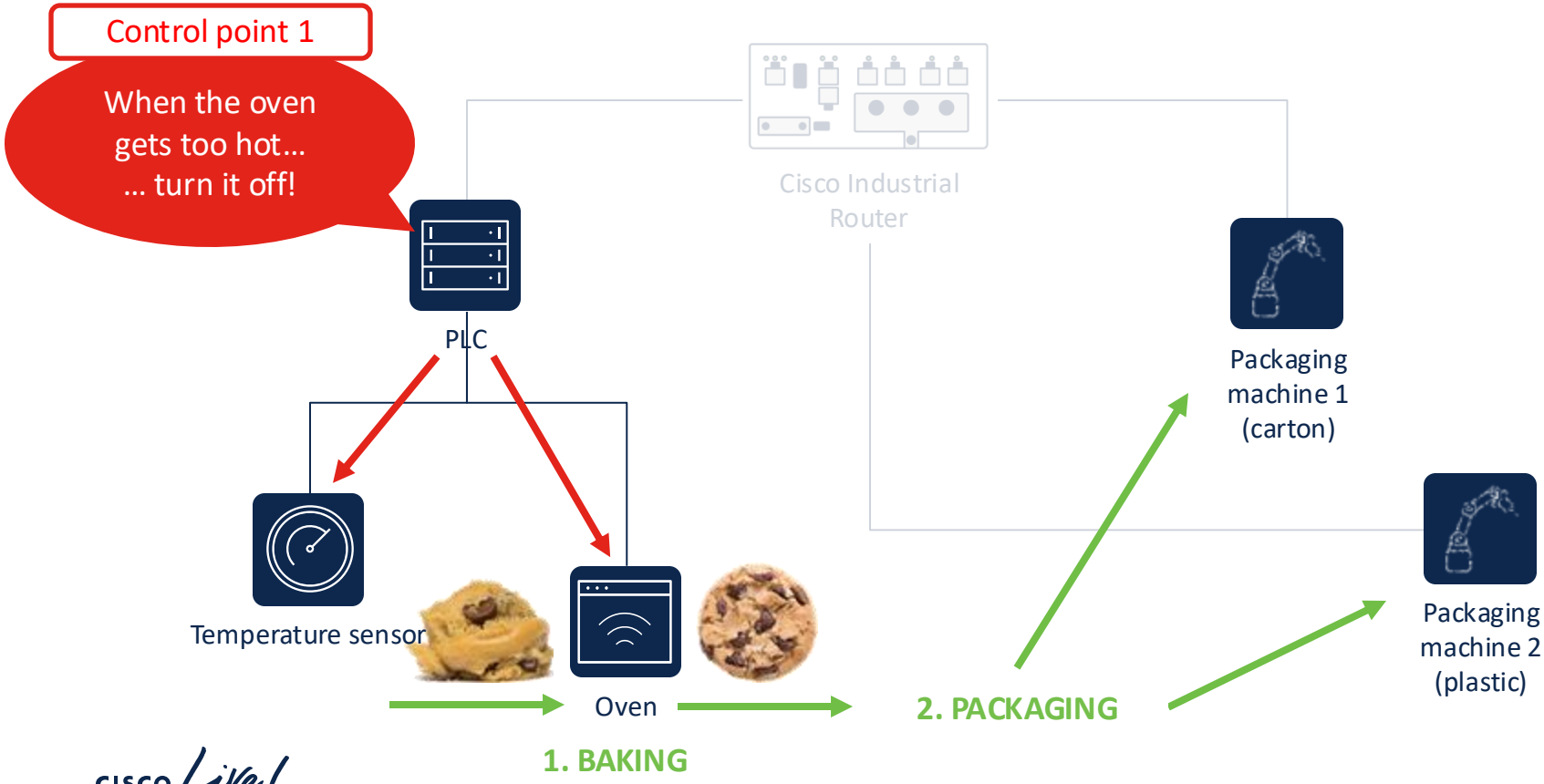
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



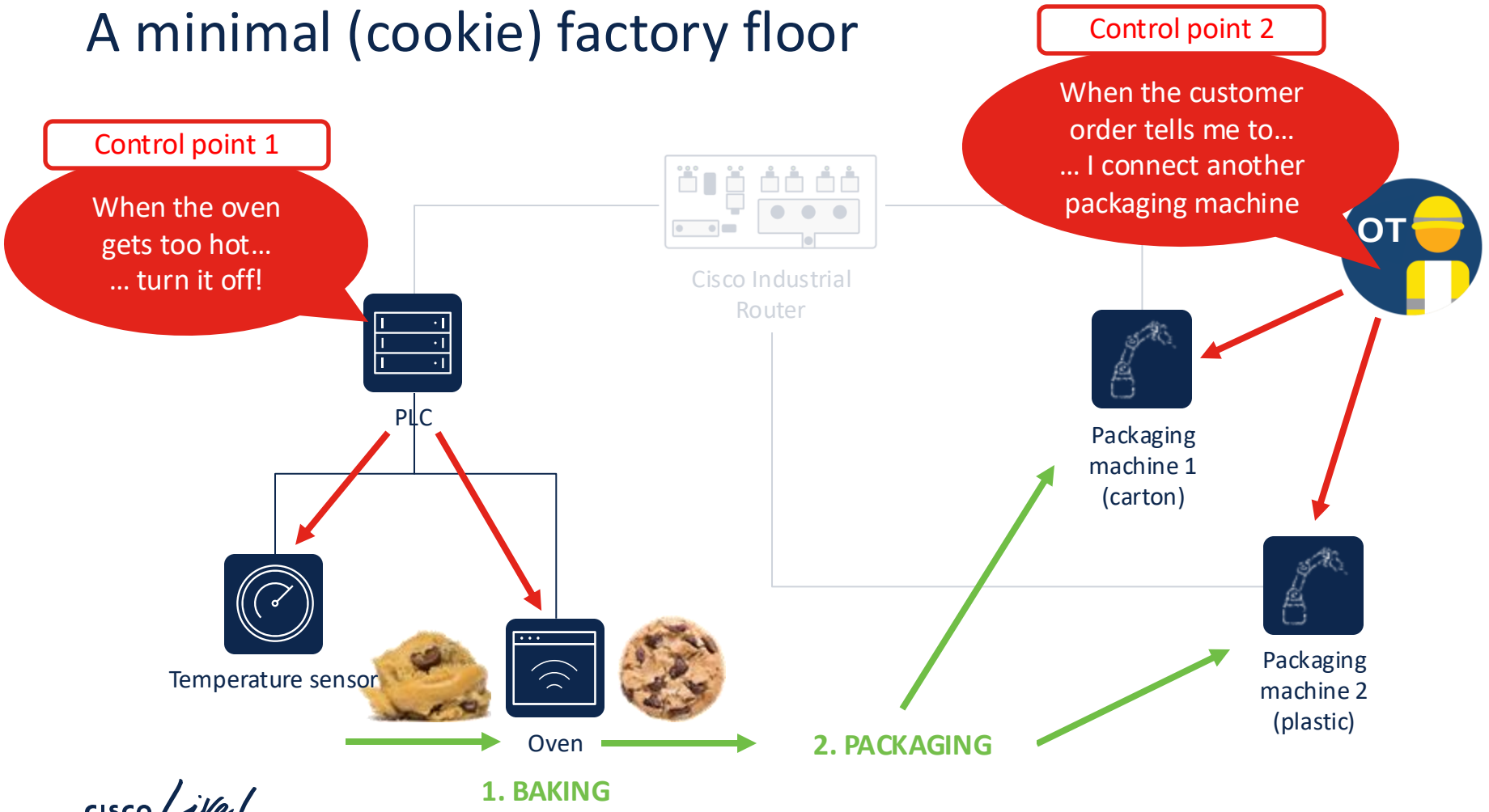
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



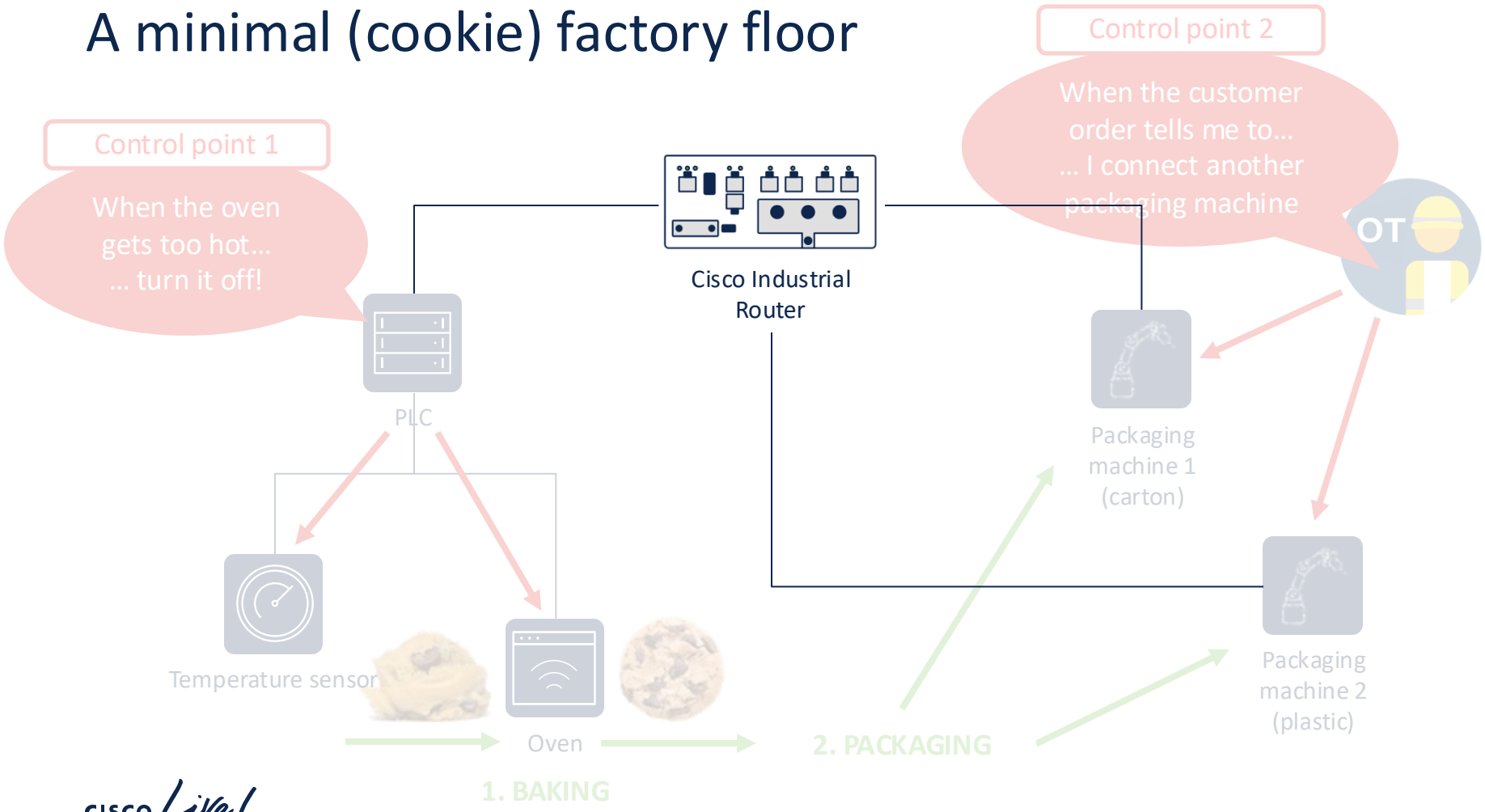
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



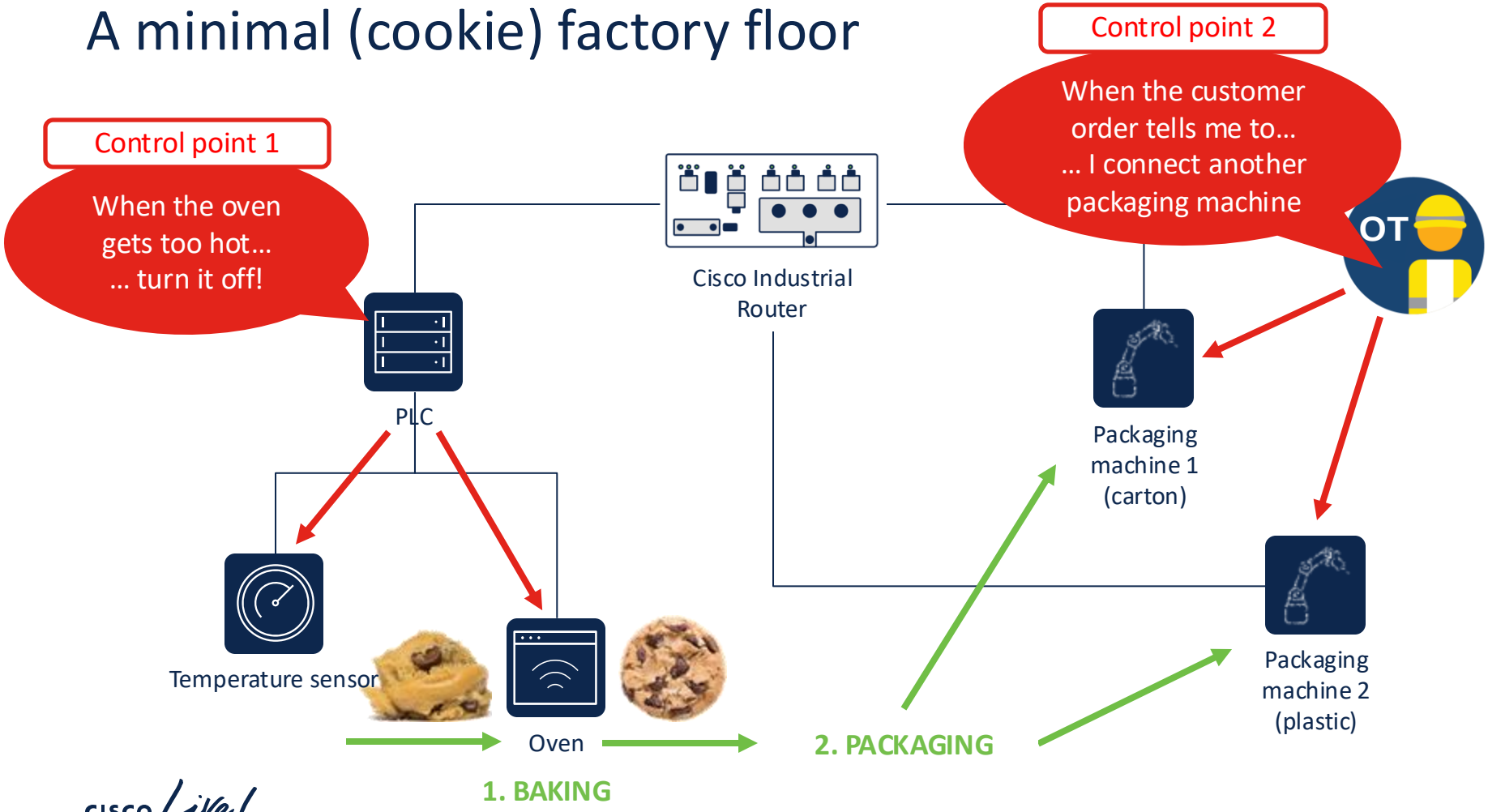
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor

Control point 1

When the oven gets too hot…
… turn it off!

Control point 2

When the customer order tells me to…
… I connect another packaging machine

OT

Let’s optimize this process using APIs!

Temperature sensor

Oven

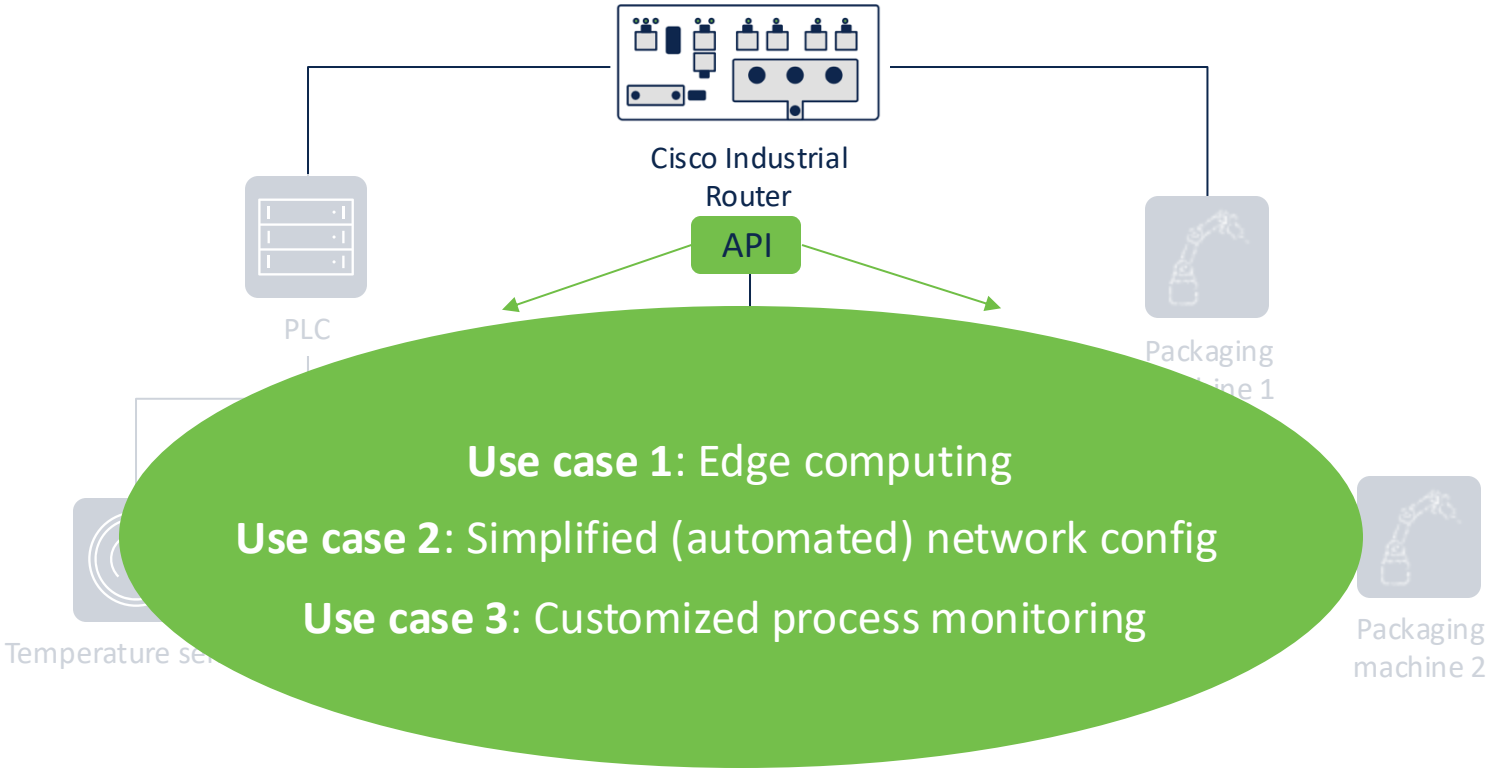
1. BAKING

2. PACKAGING

Packaging machine 2 (plastic)

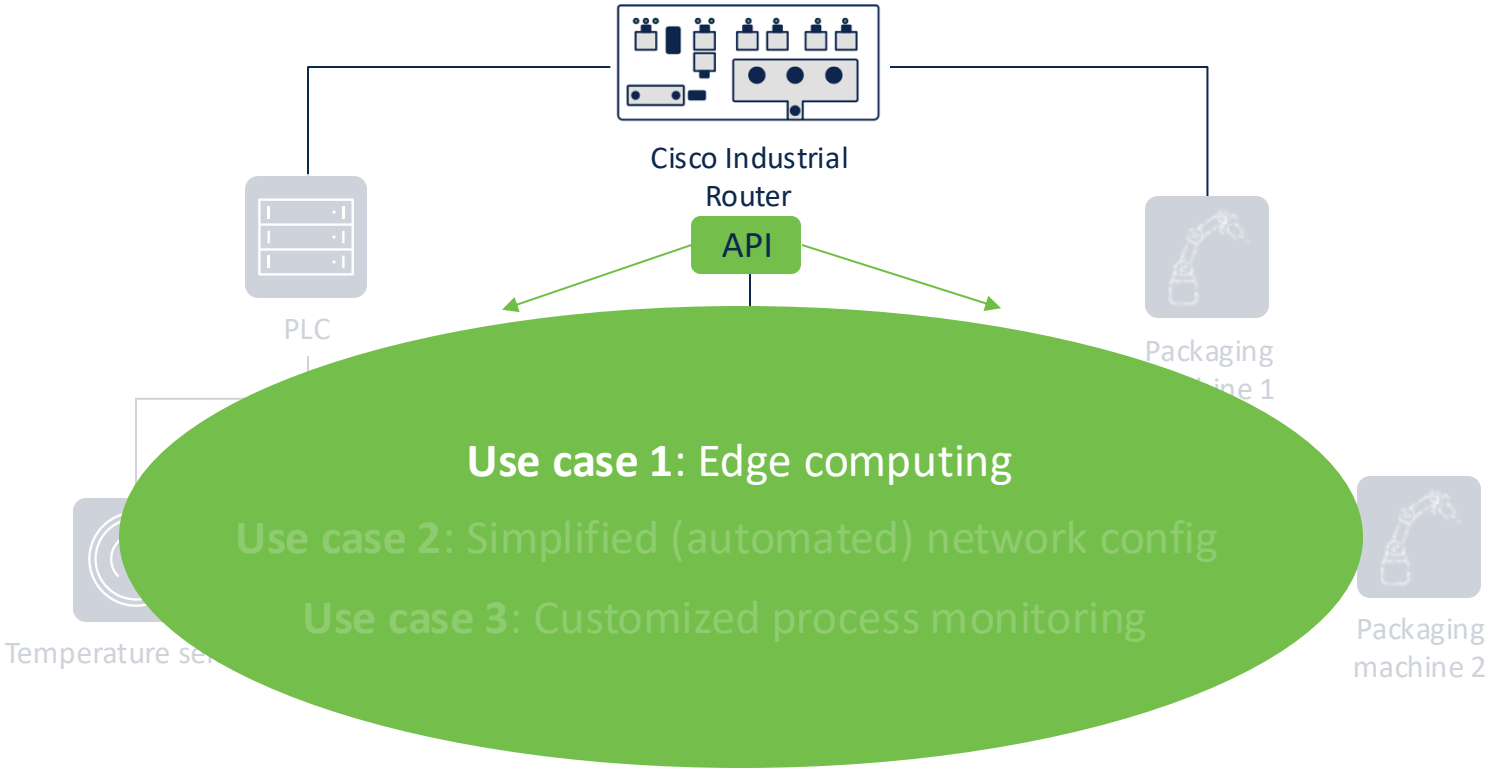
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Our agenda for today has 3 main use cases.



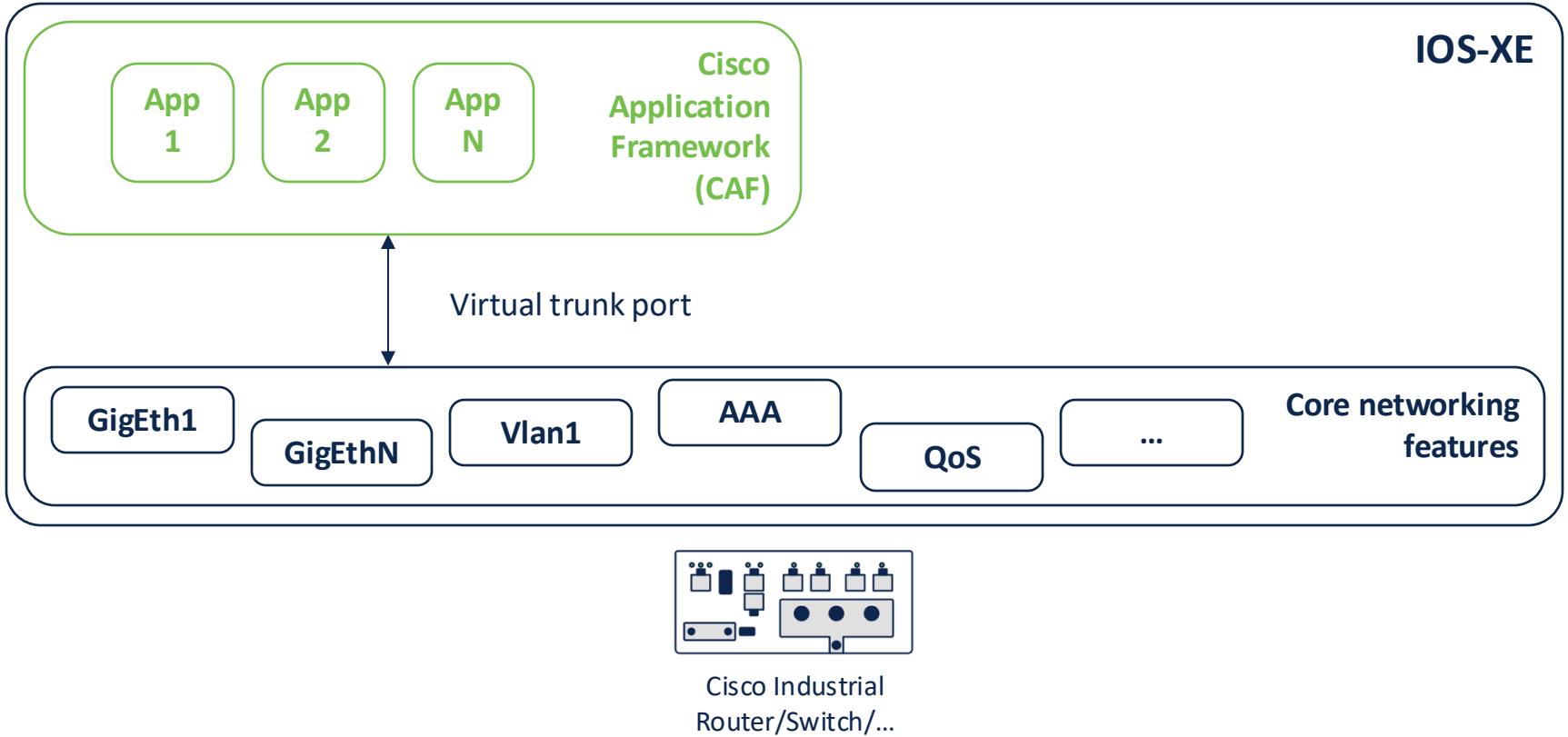
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Our agenda for today has 3 main use cases.



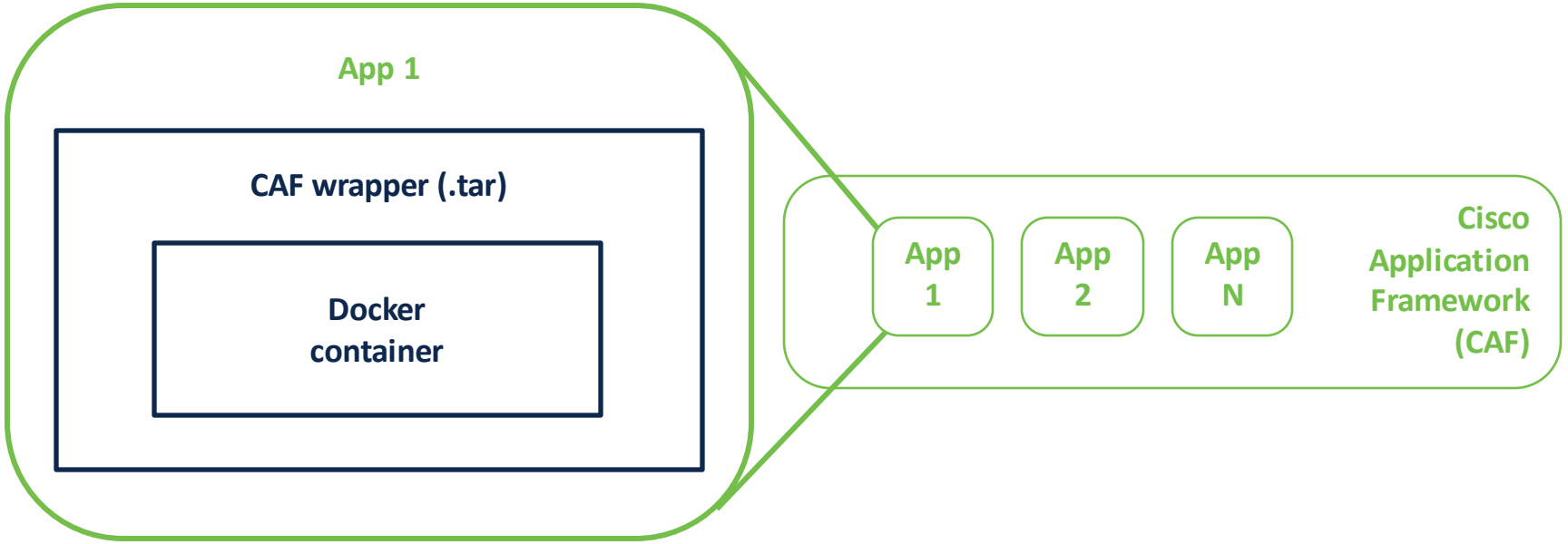
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Cisco networking software has different modules.



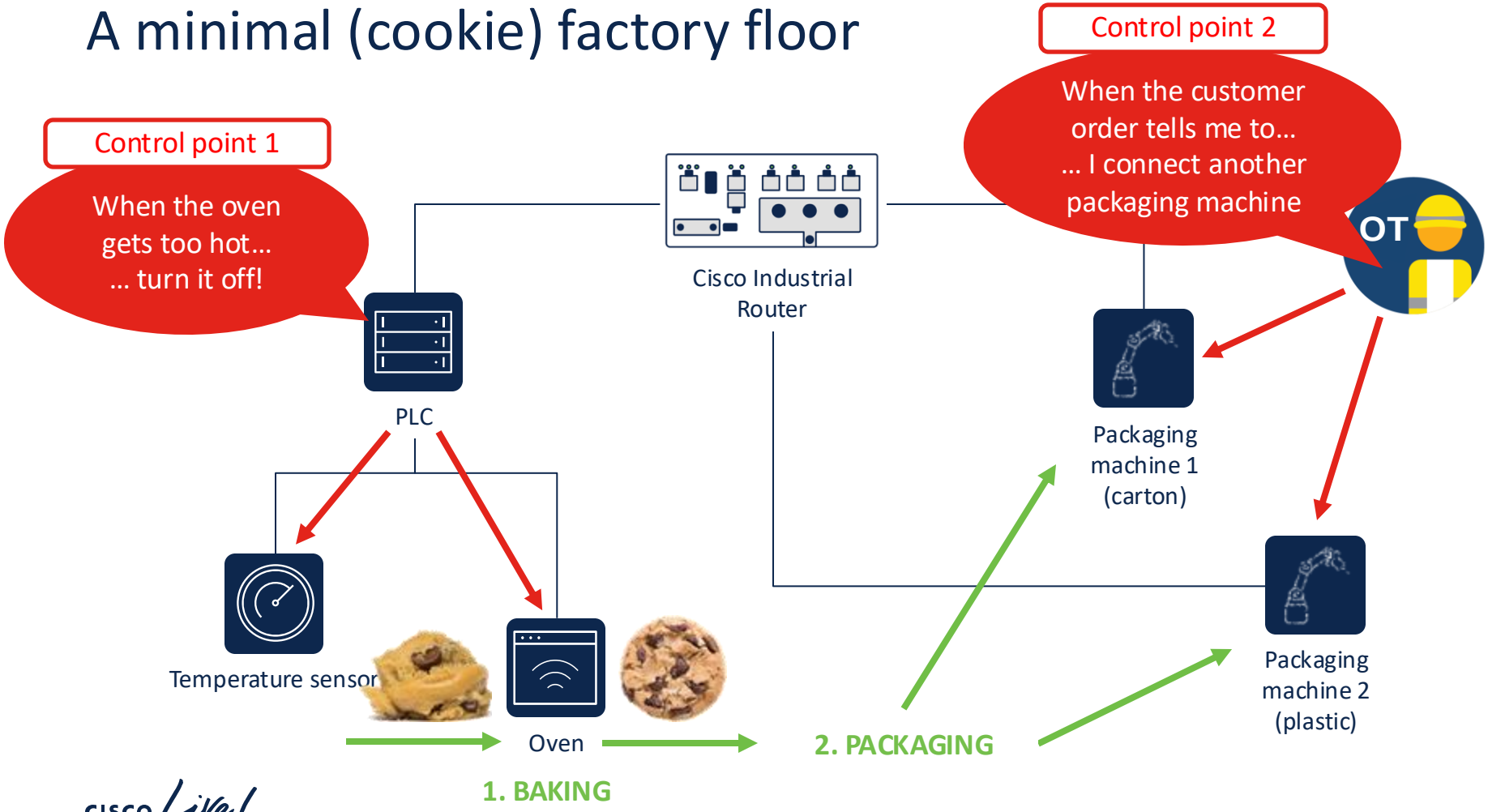
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Within an edge application, there is simply Docker.



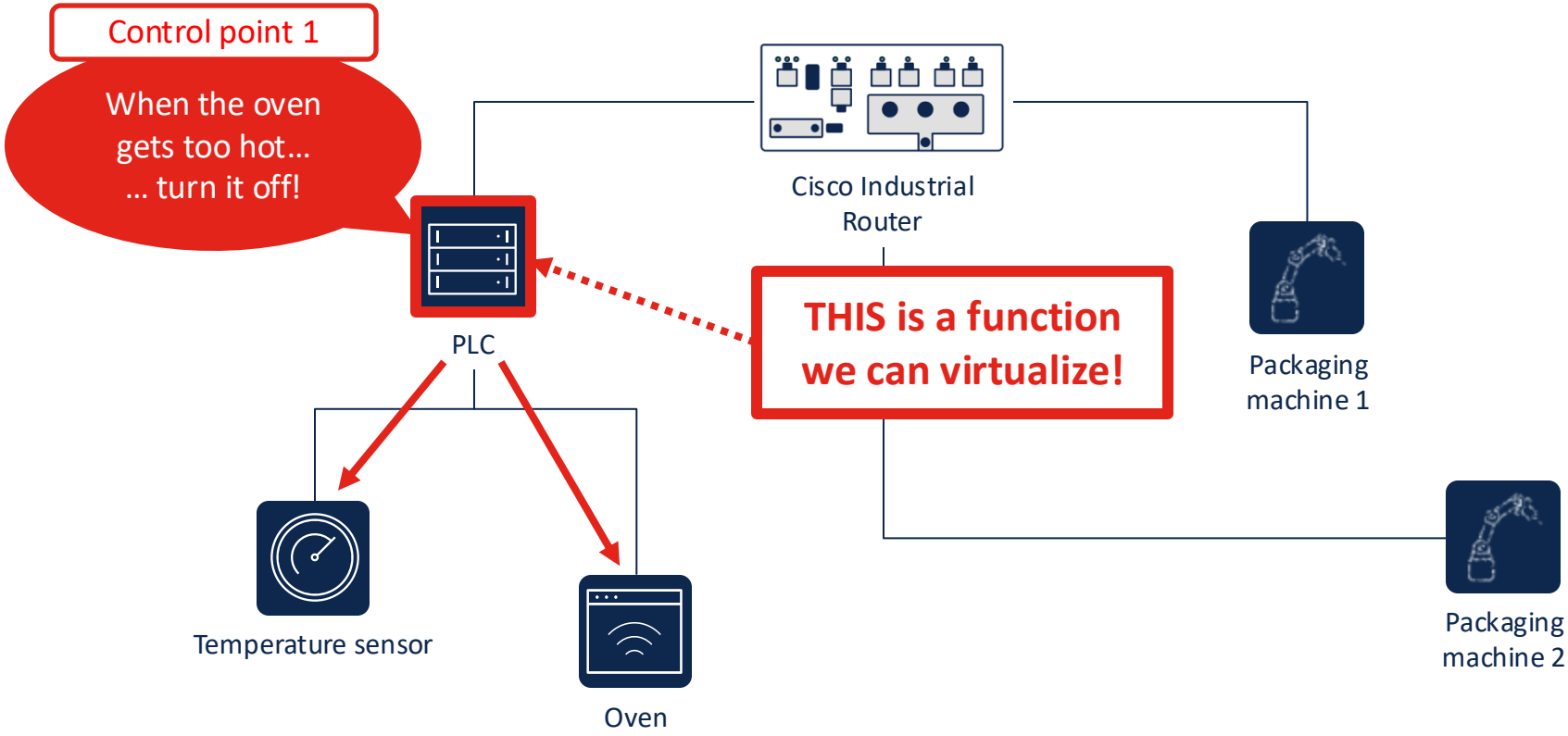
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



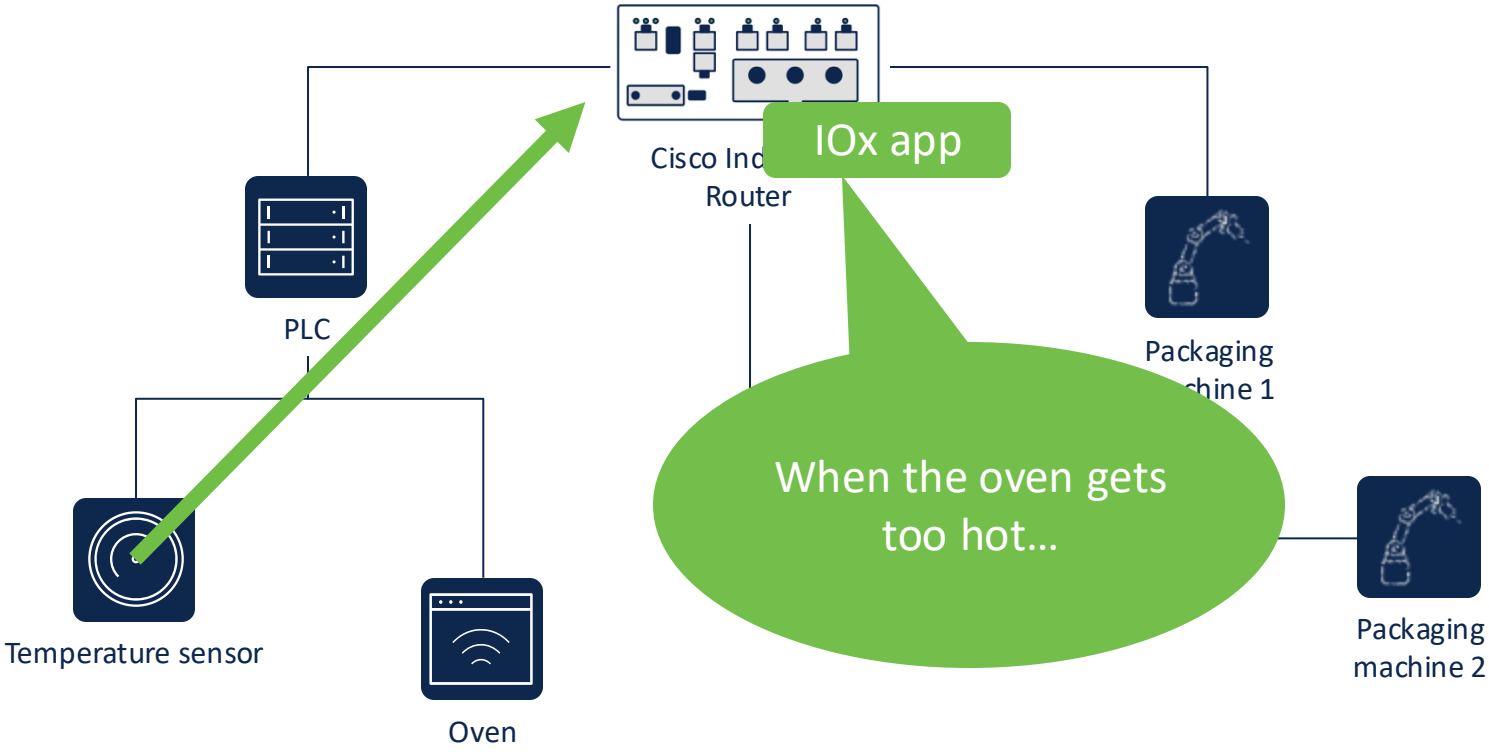
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



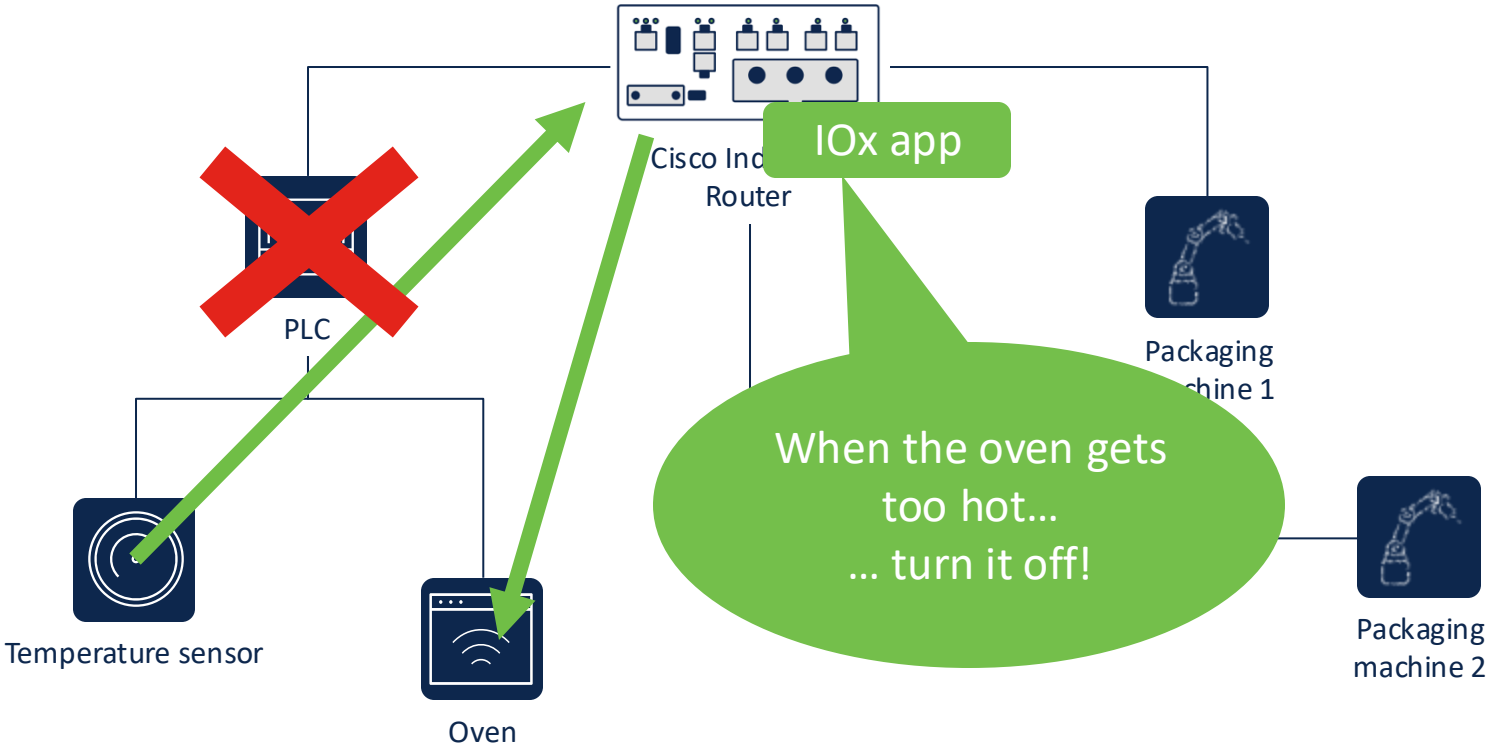
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor

© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor

Great! I no longer have to do monitoring and maintenance of this PLC hardware!

"… it's not only about installing new sensors, smart devices, and smart processes. It's also about making these factories optimal for our employees."

Audi

Read more: https://newsroom.cisco.com/c/r/newsroom/en/us/a/y2023/m11/audi-drives-the-future-of-manufacturing.html

© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Demo 1: Edge computing

If you had a magic wand…

© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

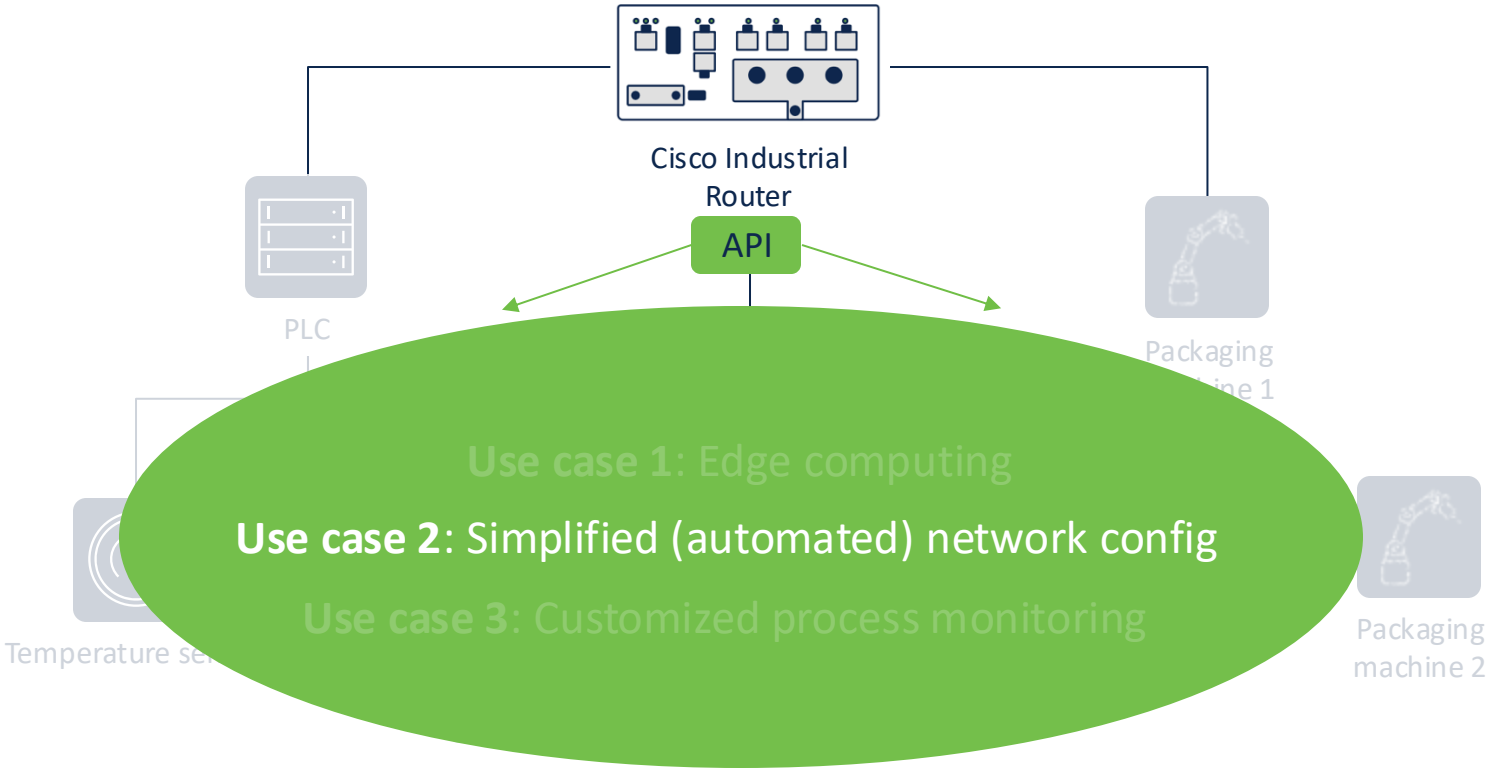
slido

Please download and install the
Slido app on all computers you use

What other use cases could benefit from edge computing?

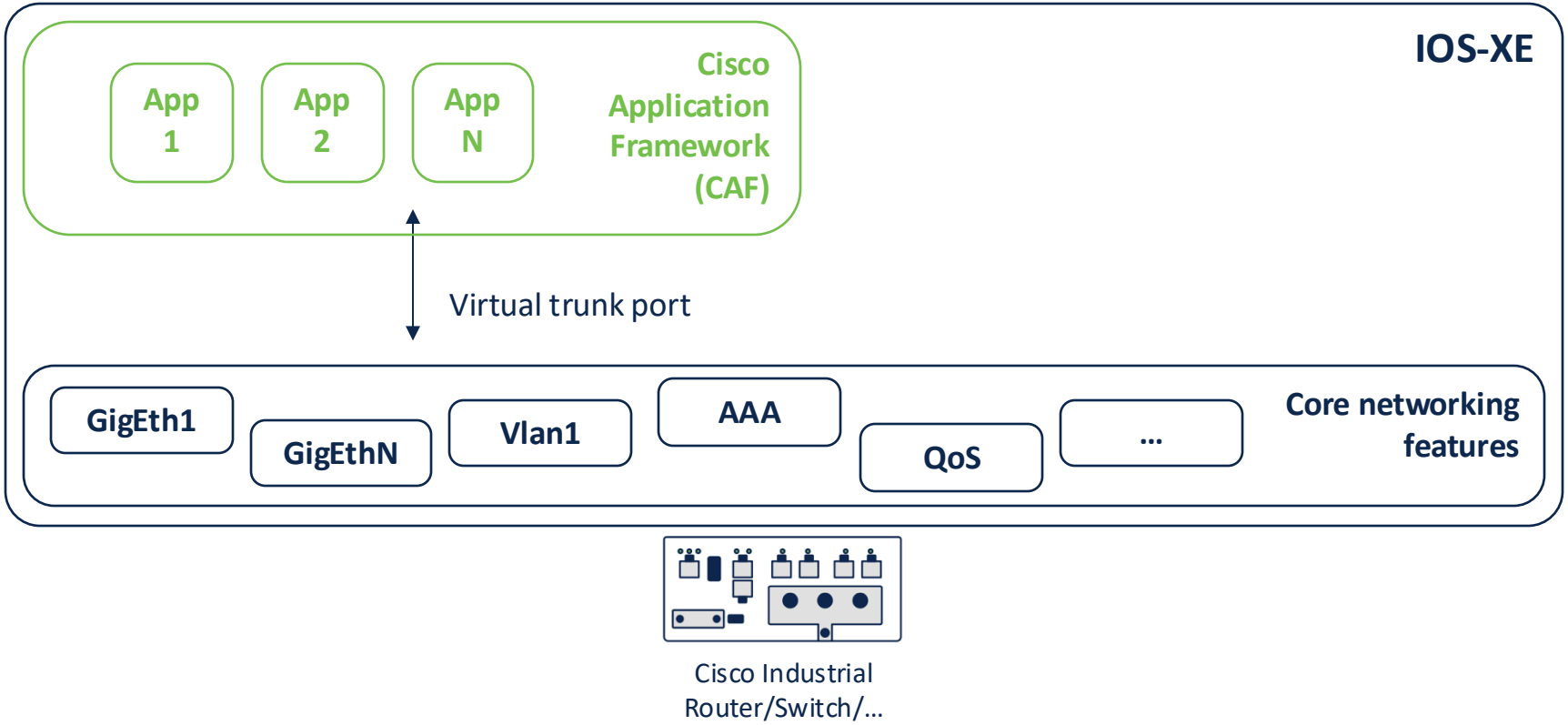
ⓘ Start presenting to display the poll results on this slide.

Our agenda for today has 3 main use cases.



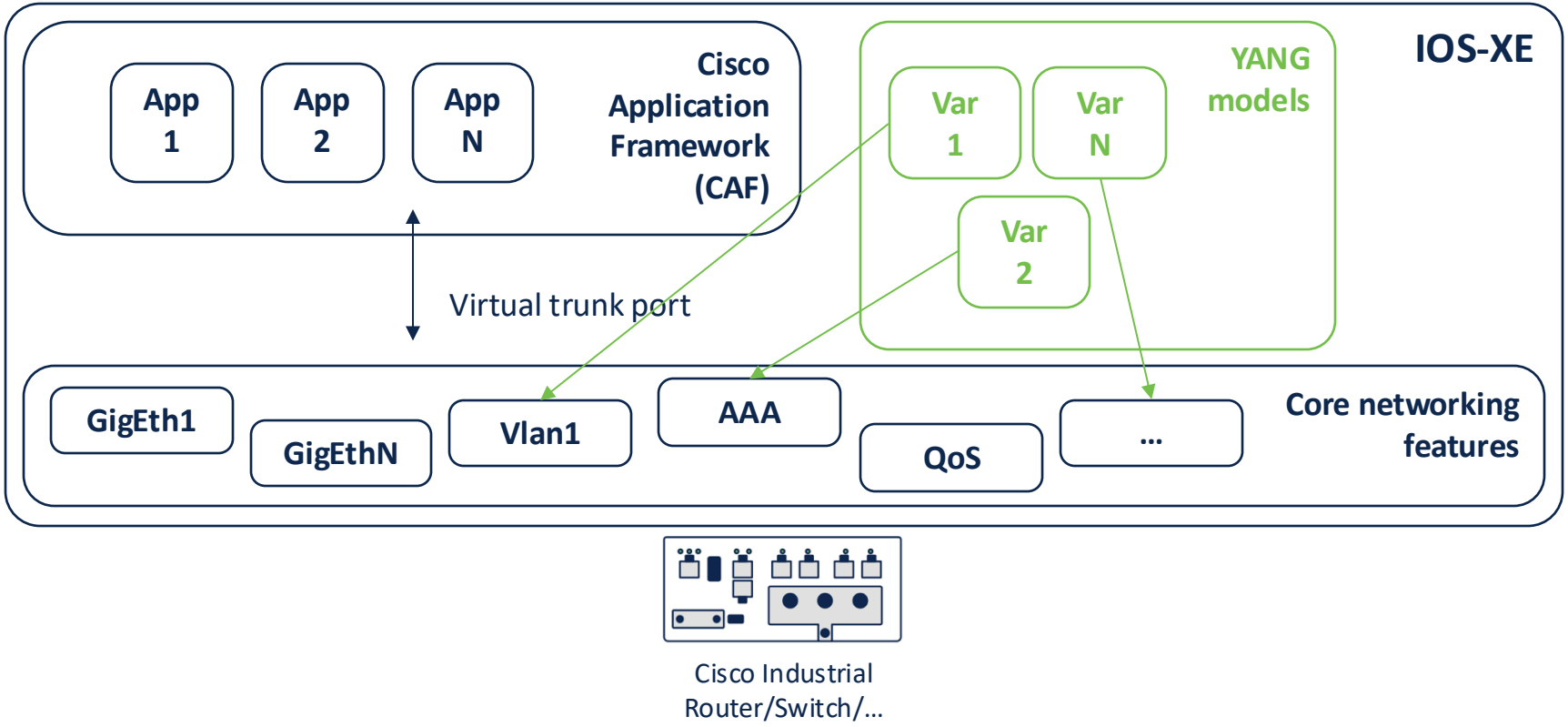
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Cisco networking software has different modules.



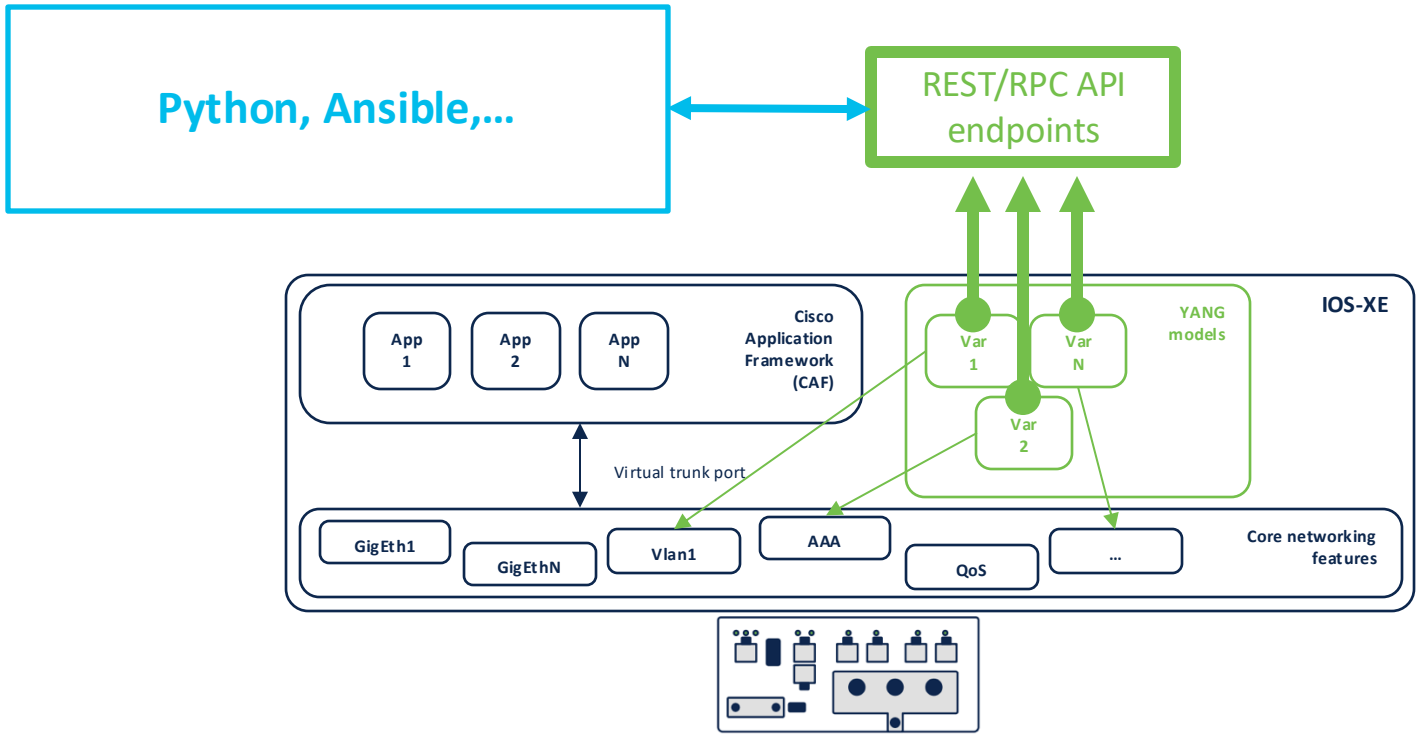
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Cisco networking software has different modules.



© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

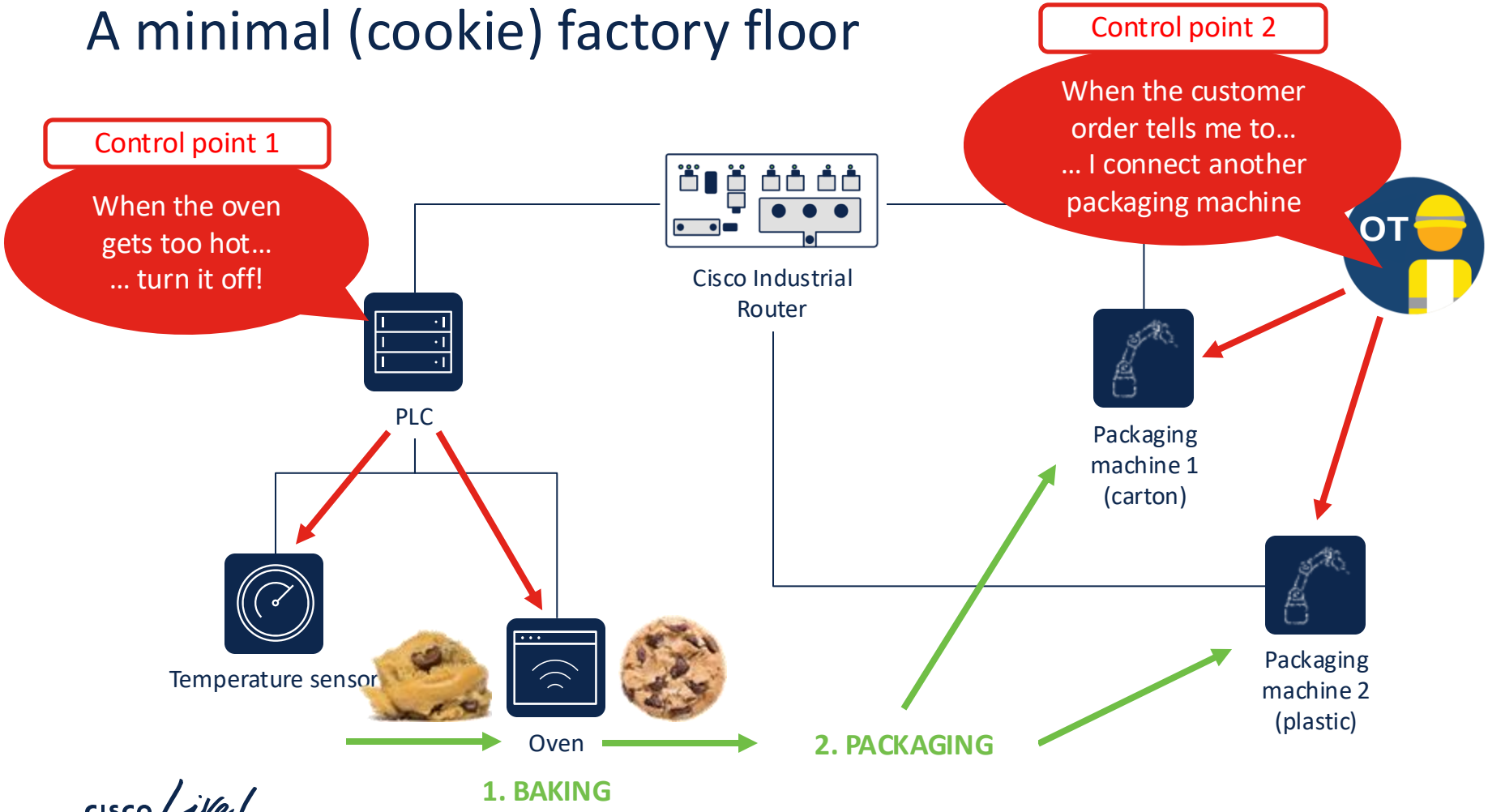
Our networking software has different modules.



Cisco Industrial Router/Switch/…

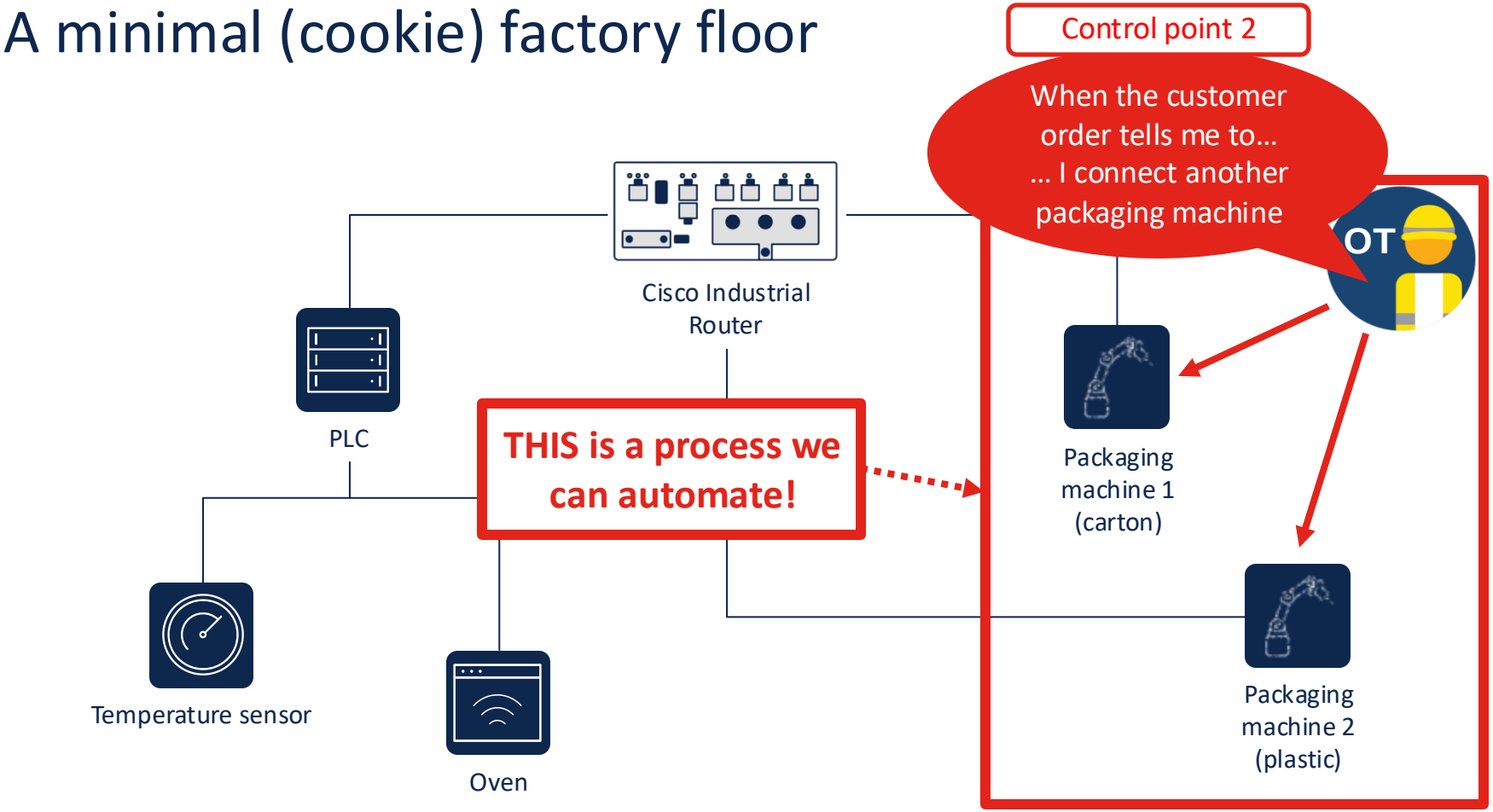
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



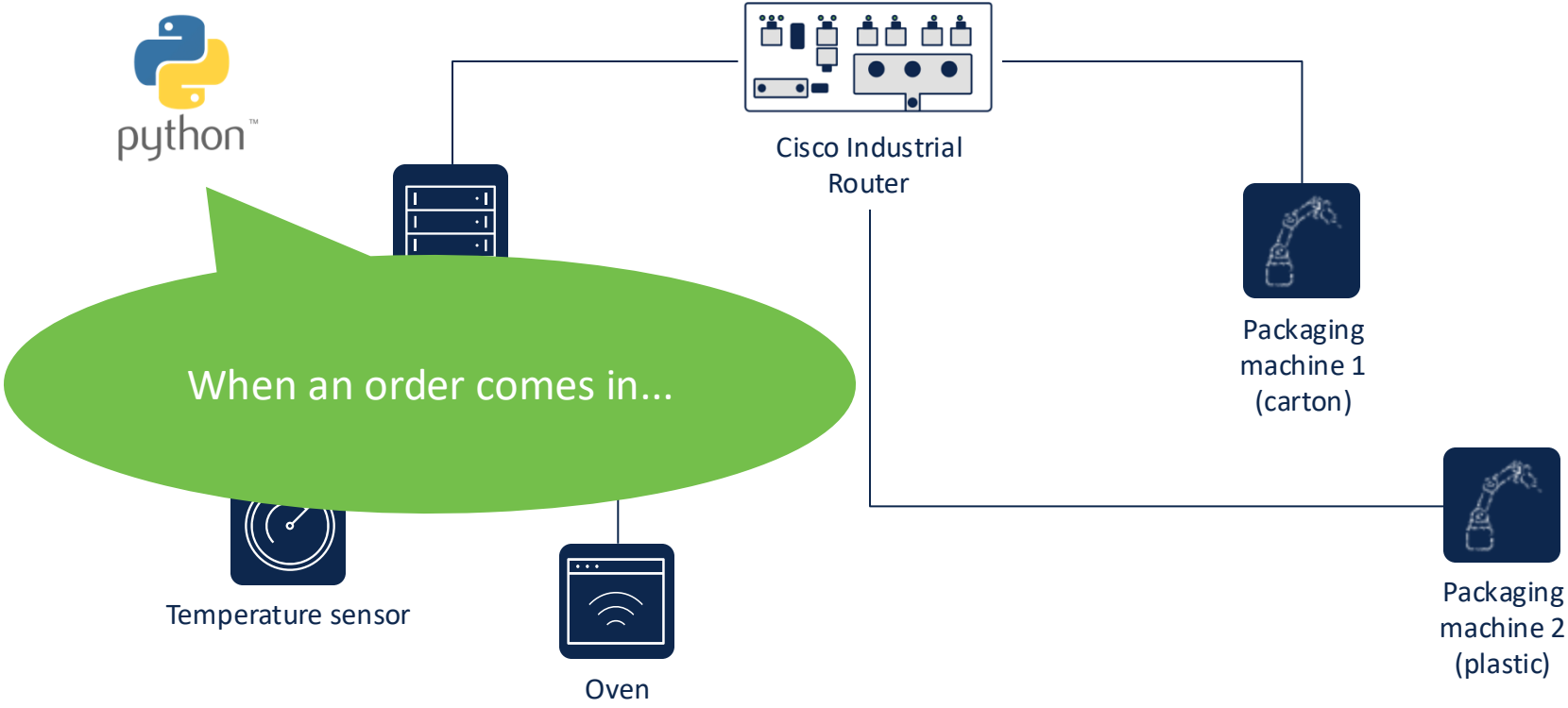
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



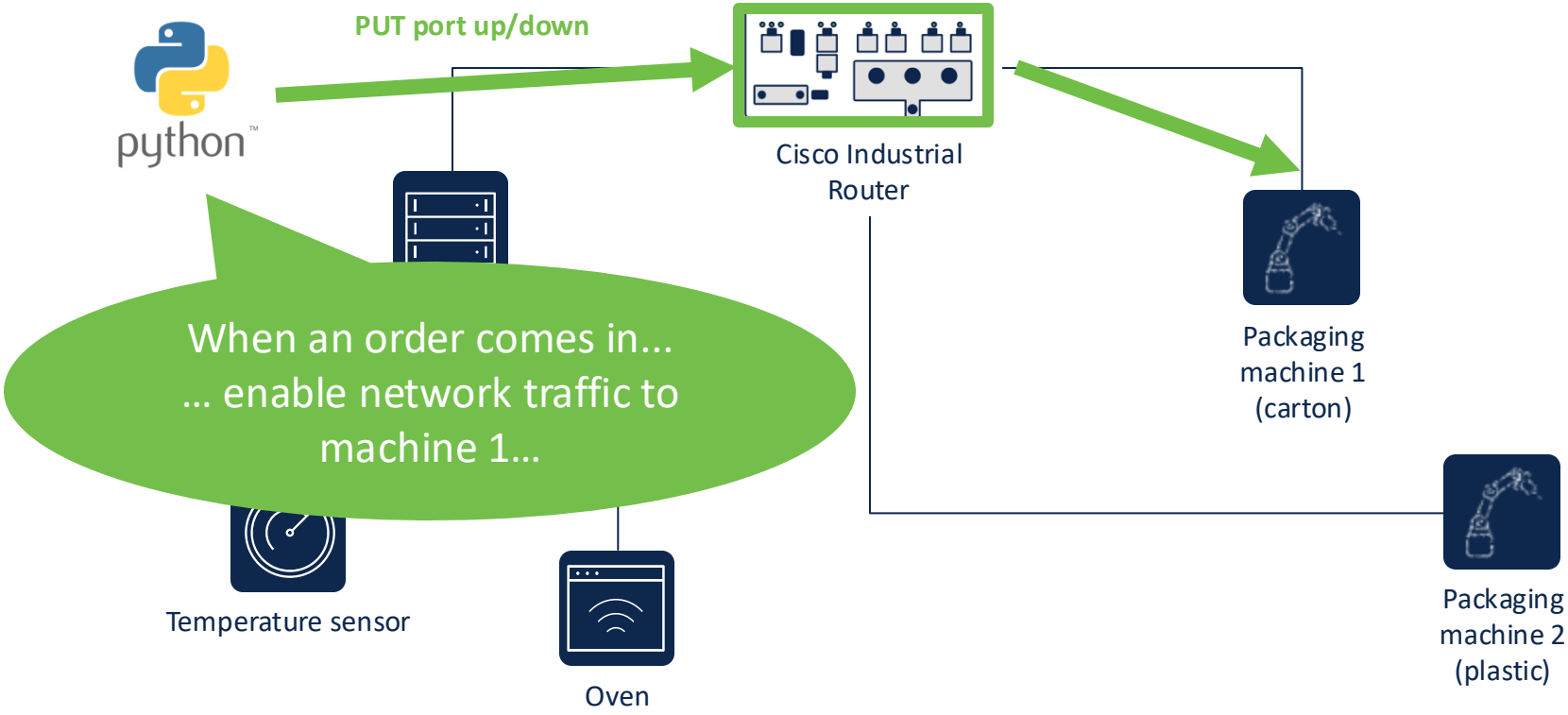
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



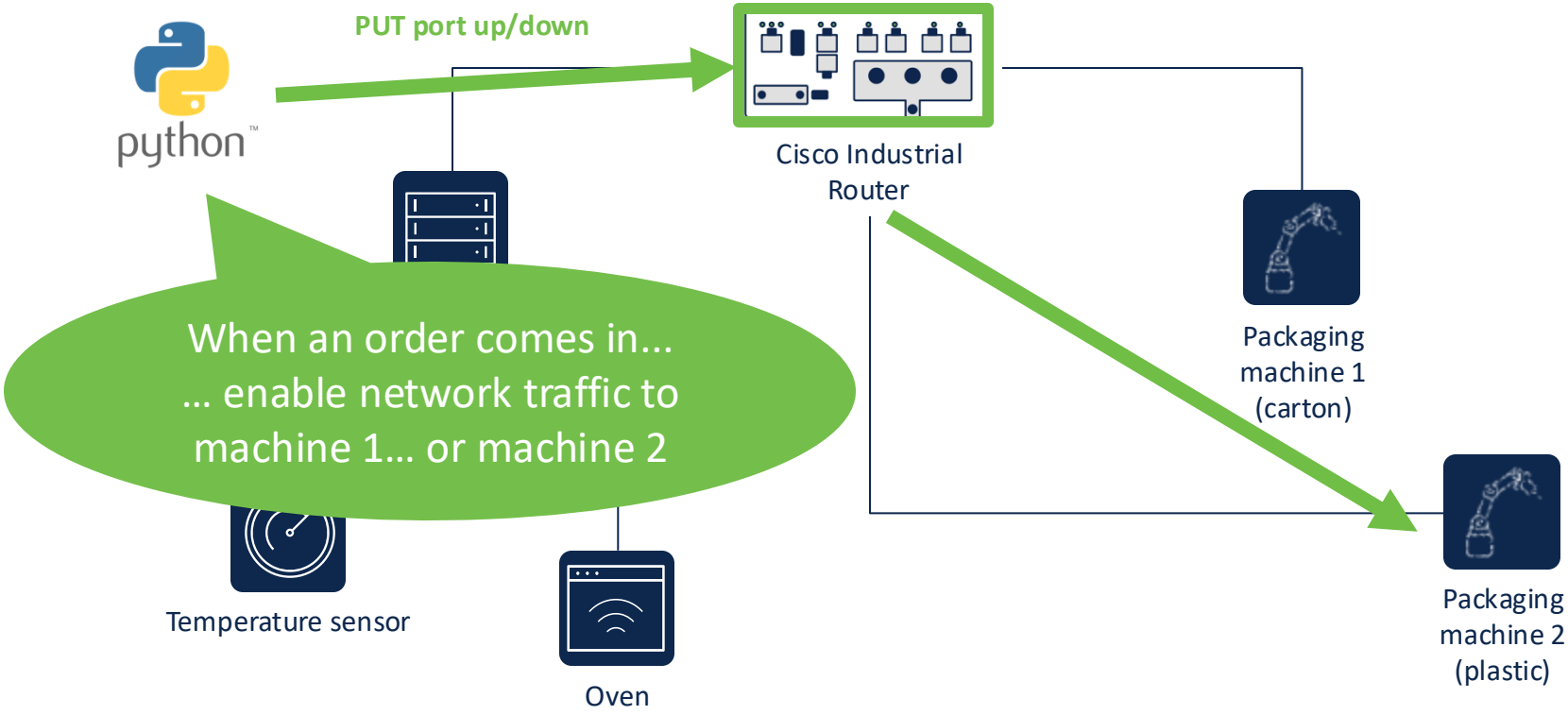
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



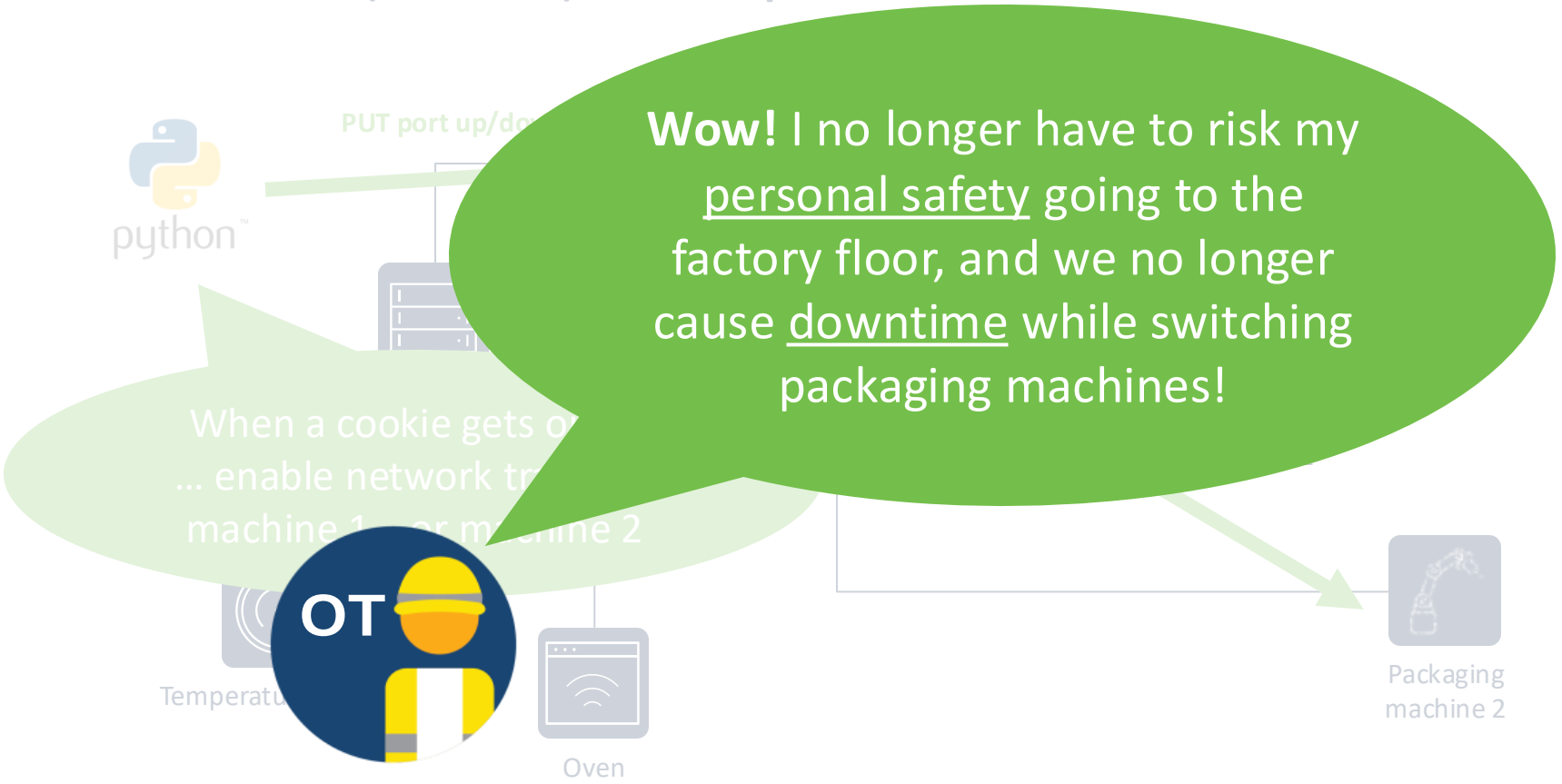
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor



© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

A minimal (cookie) factory floor

Wow! I no longer have to risk my

PUT port up/down

python™

OT

"By using open-source tools for IT automation such as Ansible, we are able to provision switches, configure Cyber Vision, and update software automatically."

GROUP 80

Packaging machine 2

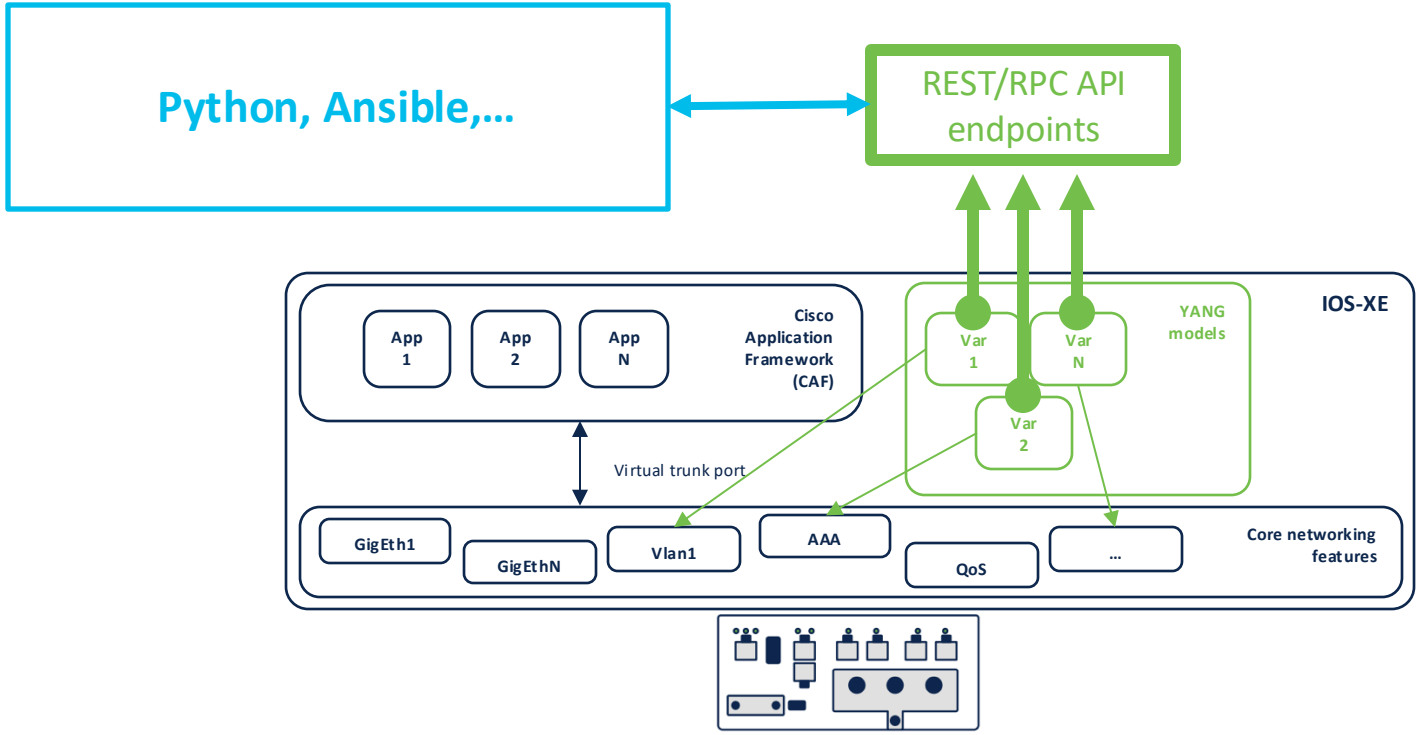
Oven

Read more: https://blogs.cisco.com/industrial-iot/e80-group-secures-its-agvs-with-cisco-industrial-solutions-and-italtel-system-integration

© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

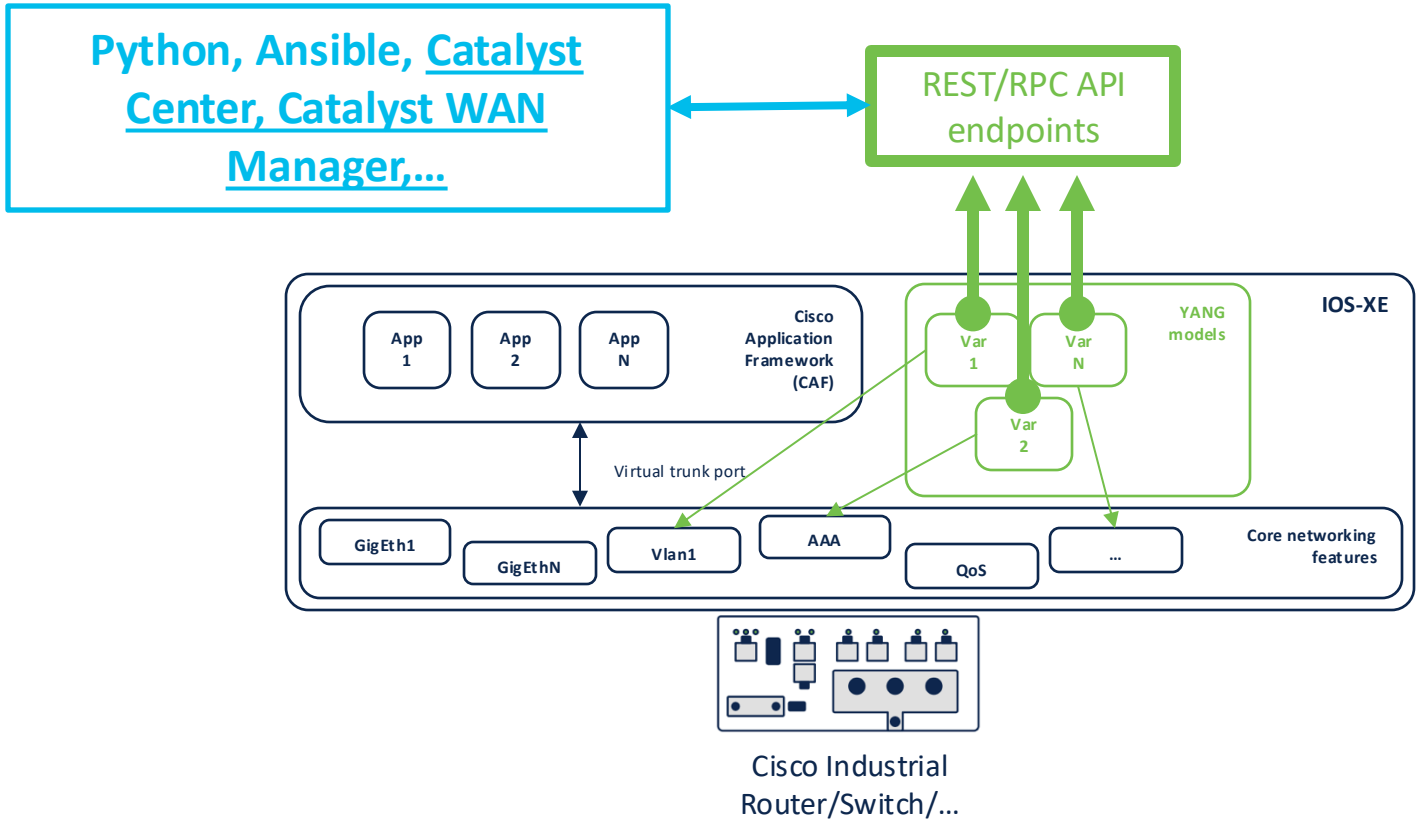
Demo 2: Device-level APIs

Cisco networking software has different modules.



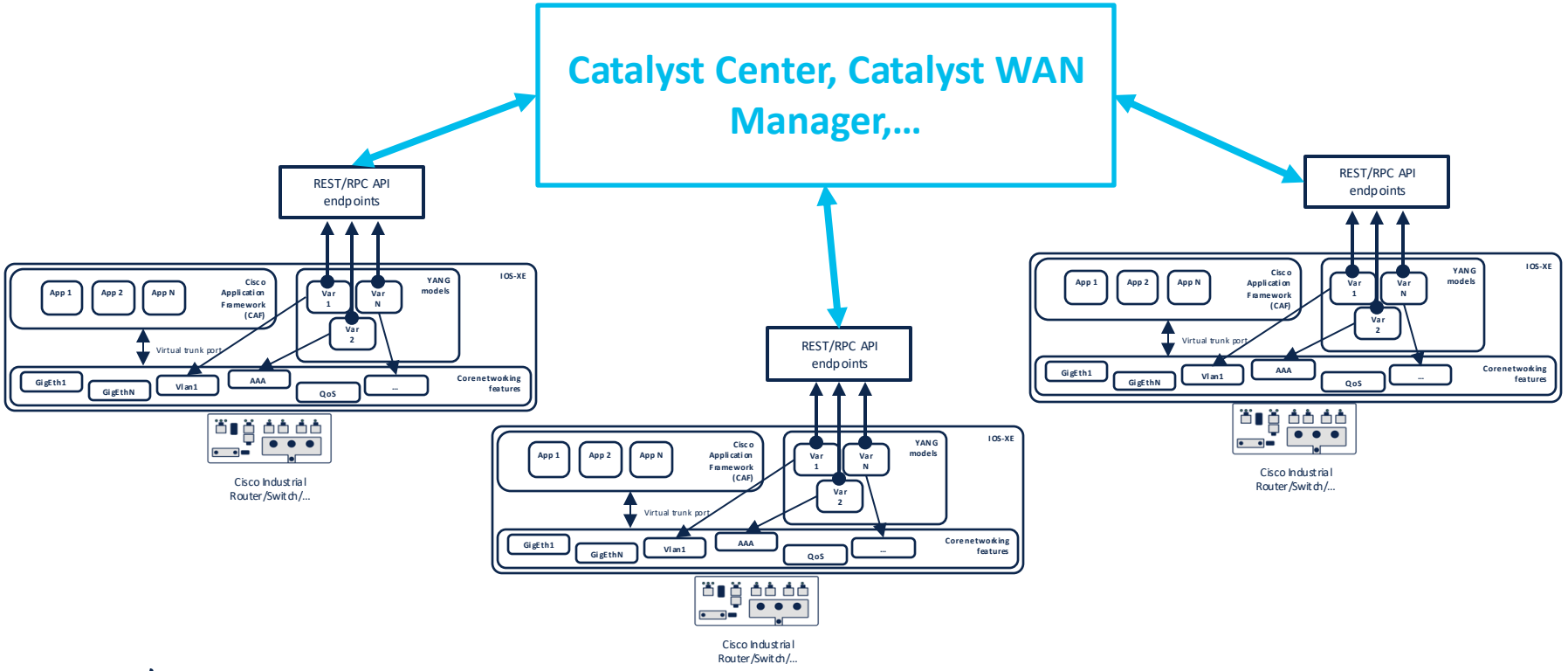
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Cisco networking software has different modules.



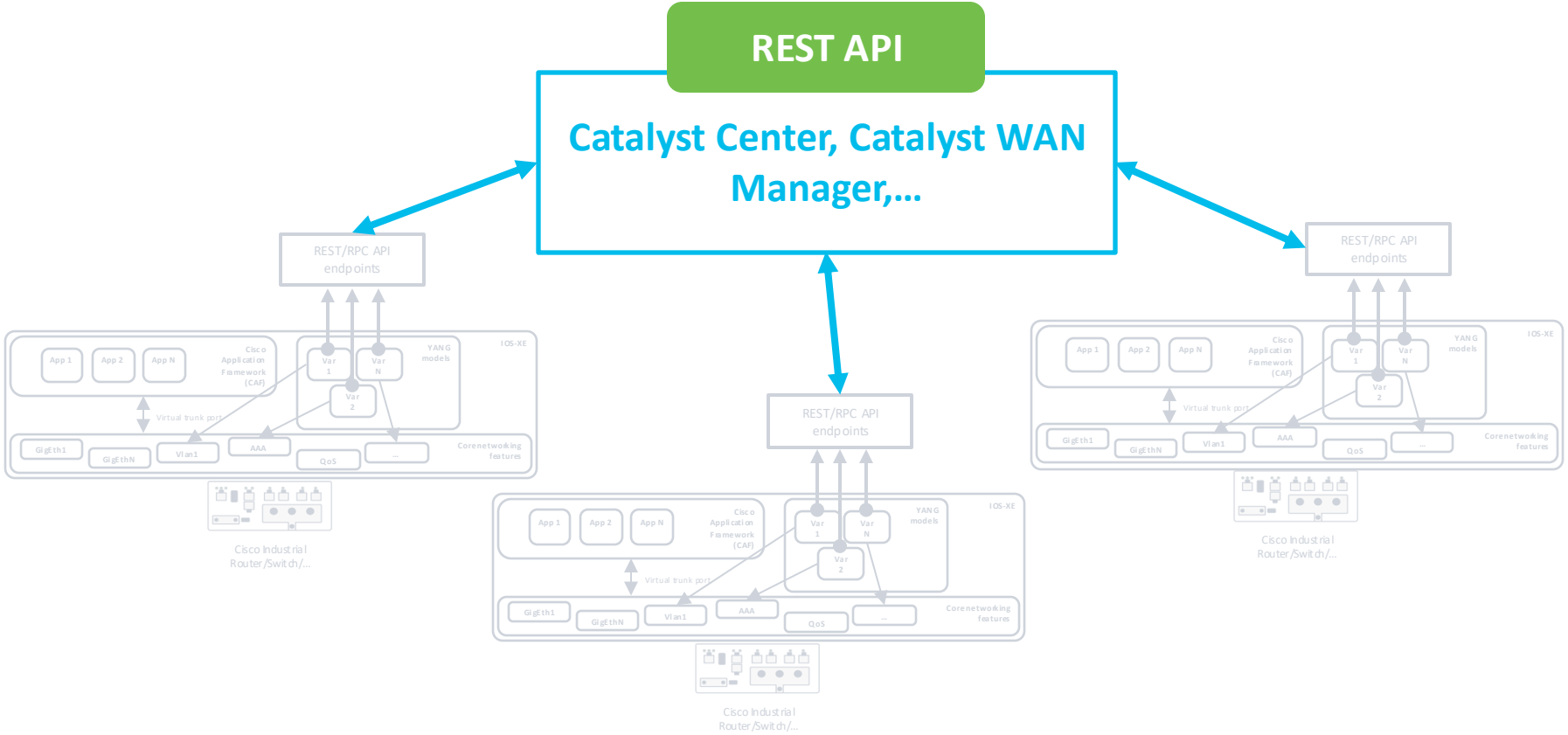
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Controllers are at the core of the network.



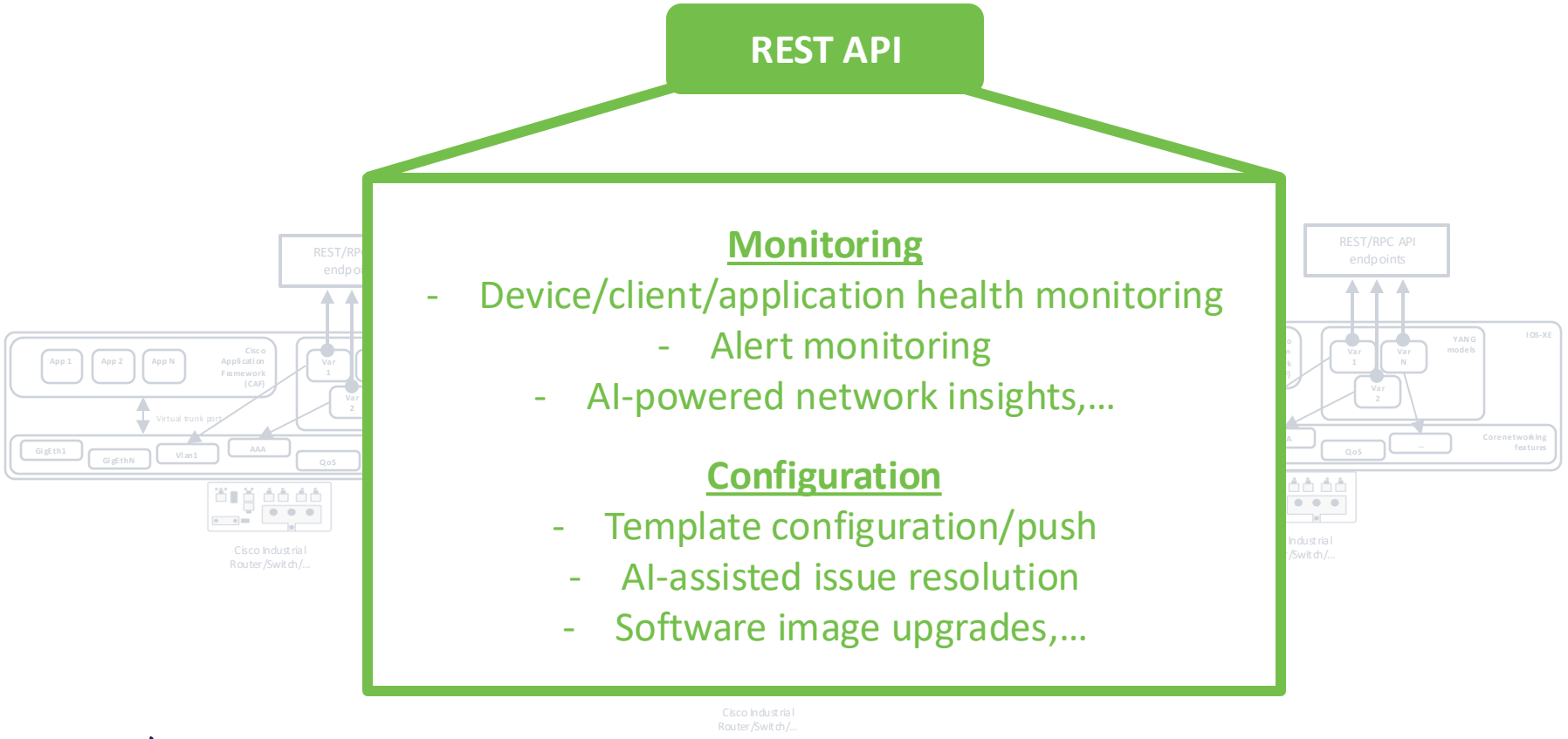
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Controller APIs are at the core of the network.



© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

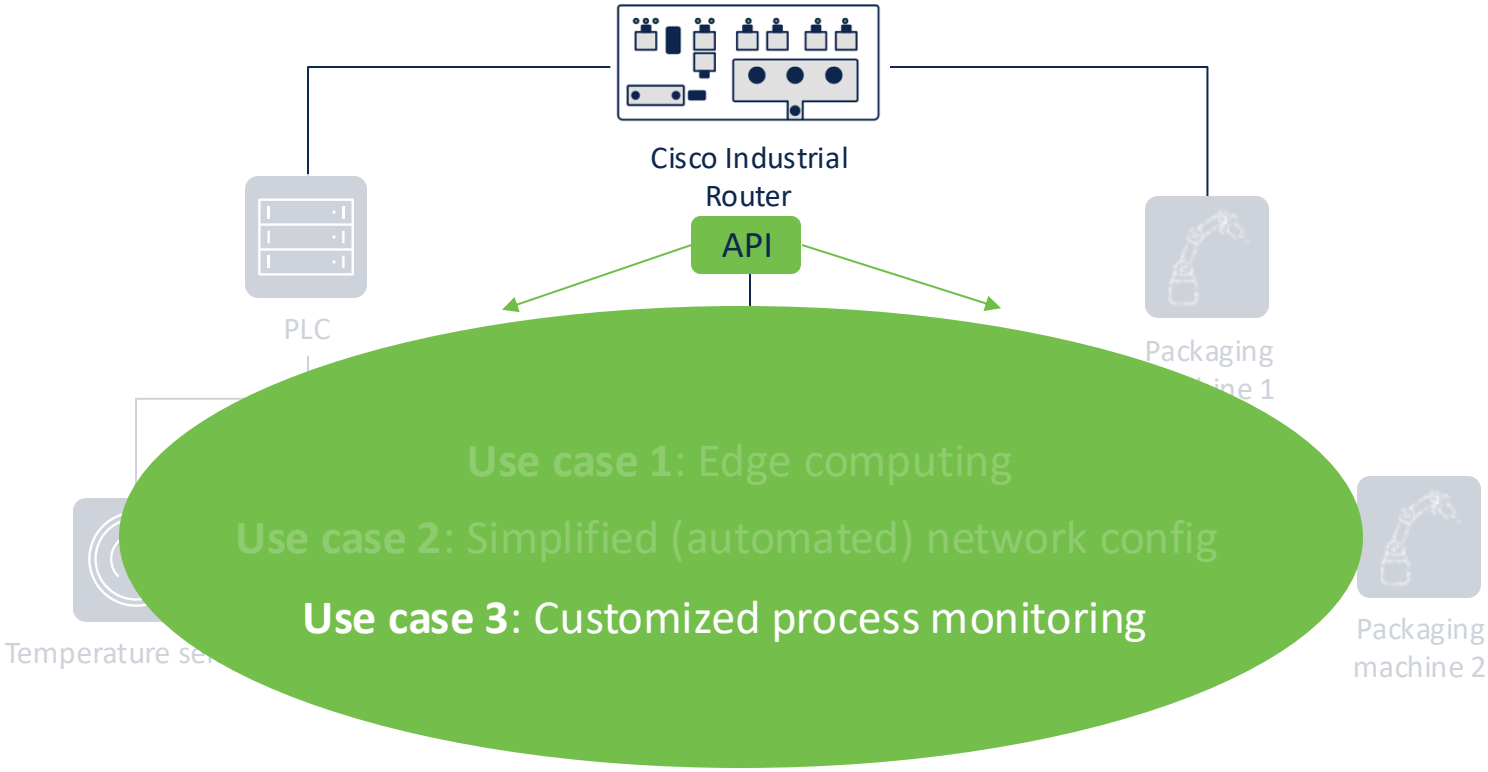
Controller APIs are at the core of the network.



© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

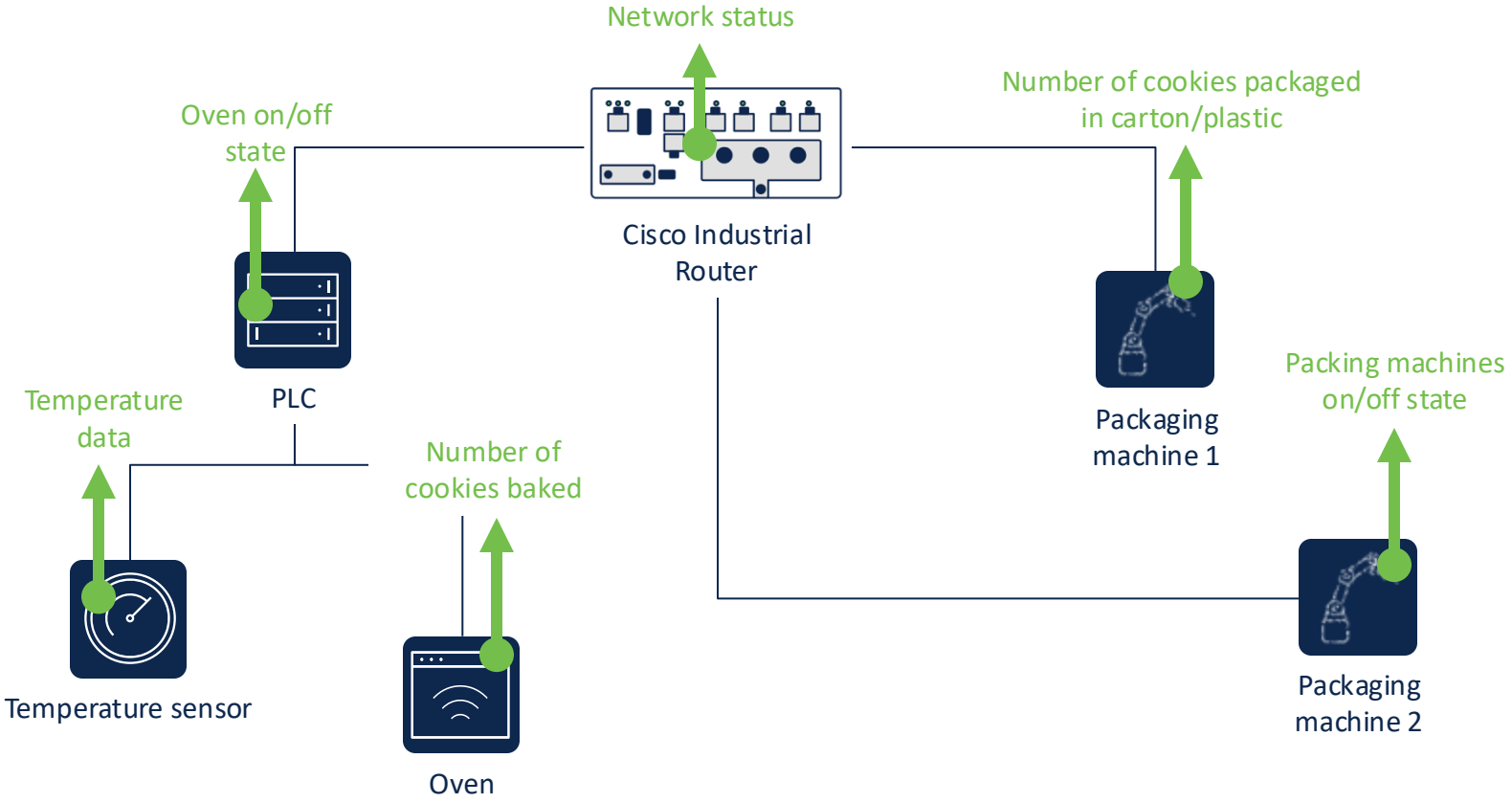
Demo 3: Controller-level APIs

Our agenda for today has 3 main use cases.



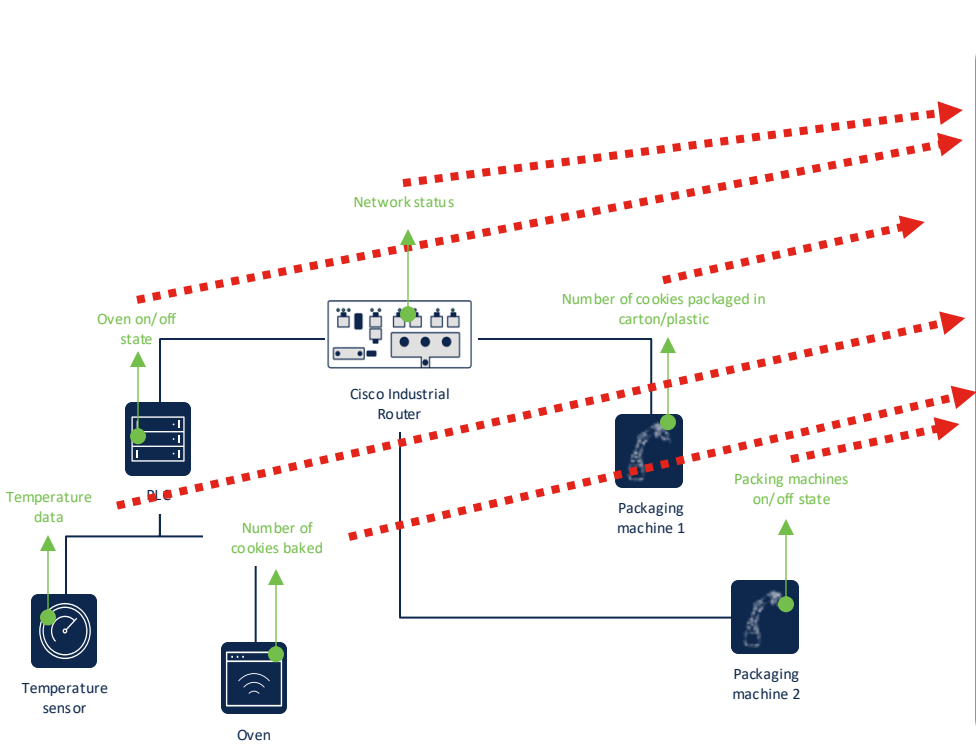
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Our factory floor has many relevant data points.



© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Our factory floor has many relevant data points



Digital twin

Resource/order management

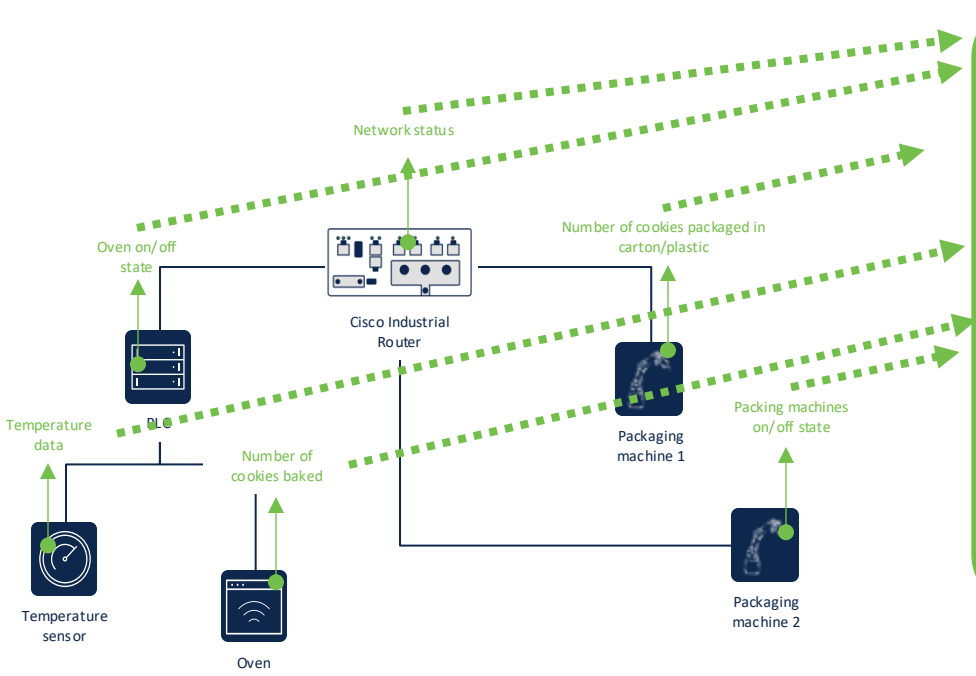
Factory automation

Network automation

SCADA workstation

© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Our factory floor has many relevant data points

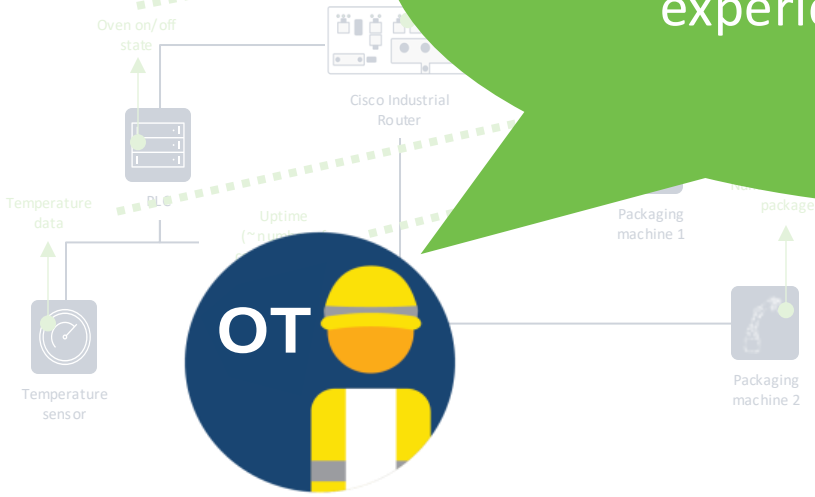


Centralized monitoring application using APIs

© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Our factory floor has many relevant data points

Amazing! I no longer have to check 5 different screens before I understand why we are experiencing downtime and mitigate it!



using APIs

© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Our factory floor has many relevant data points

Learn more: https://video.cisco.com/detail/video/6346963137112

© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Demo 4: Process monitoring

A minimal (cookie) factory floor

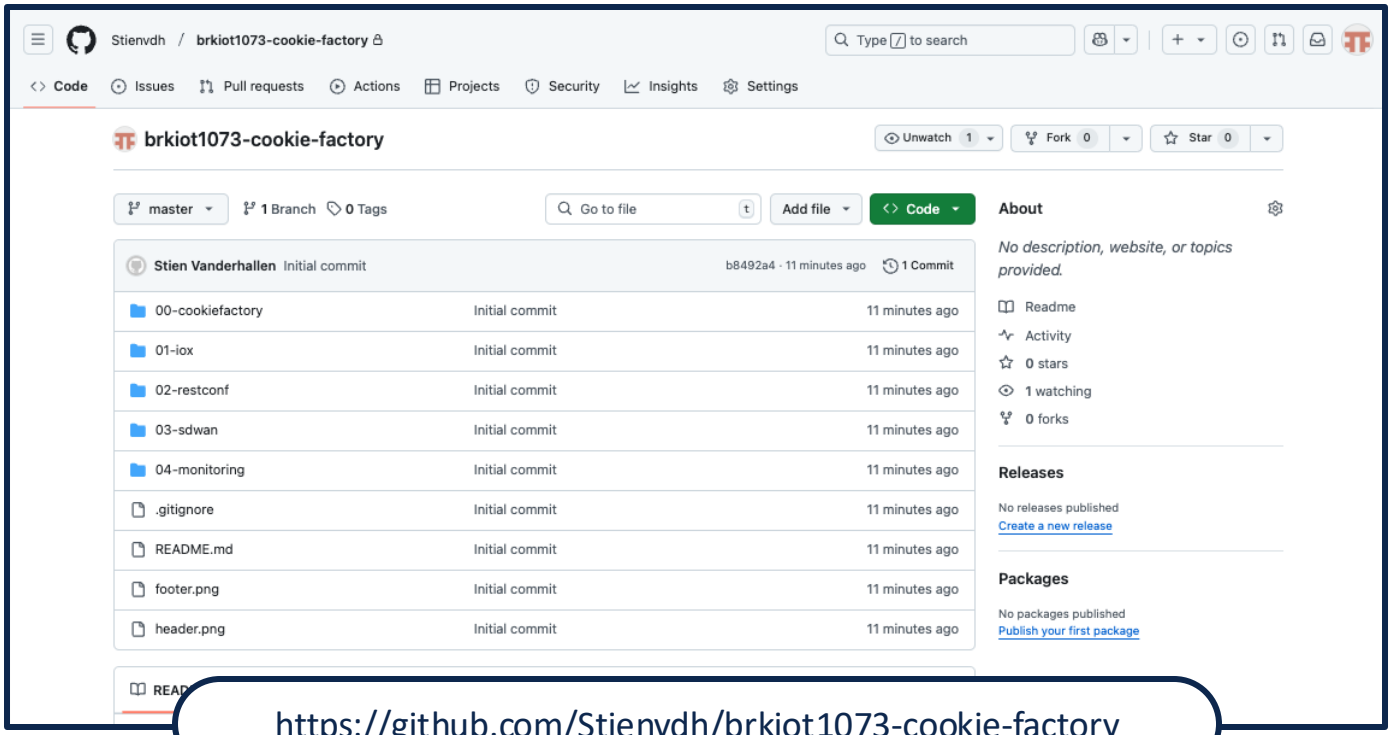
© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Key takeaways

- The industrial network can enable higher efficiency, less downtime, and increased safety on the factory floor.
- Using APIs, we can achieve those outcomes in a way that is optimal for our specific industrial processes.
- Cisco Industrial Networking solutions are built to offer:
  - edge computing for process virtualization
  - device/controller-level APIs for network configuration automation
  - device/controller-level APIs for real-time process monitoring

© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

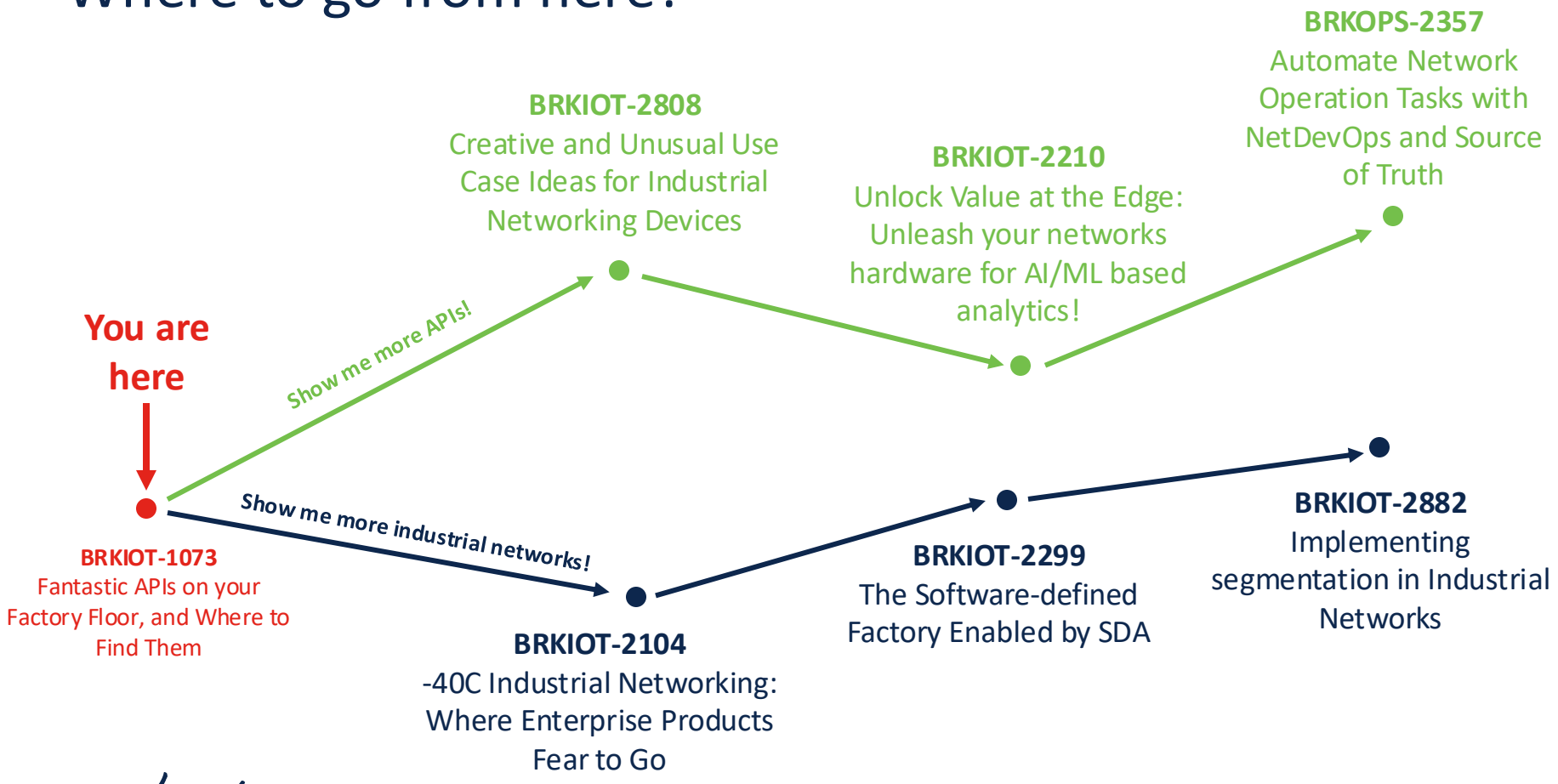
And now… it's up to you!



https://github.com/Stienvdh/brkiot1073-cookie-factory

© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Where to go from here?



© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

Fill Out Your Session Surveys

Participants who fill out a minimum of 4 session surveys and the overall event survey will get a unique Cisco Live t-shirt.

(from 11:30 on Thursday, while supplies last)

All surveys can be taken in the Cisco Events mobile app or by logging into the Session Catalog and clicking the 'Participant Dashboard' link at https://www.ciscolive.com/emea/learn/session-catalog.html.

© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

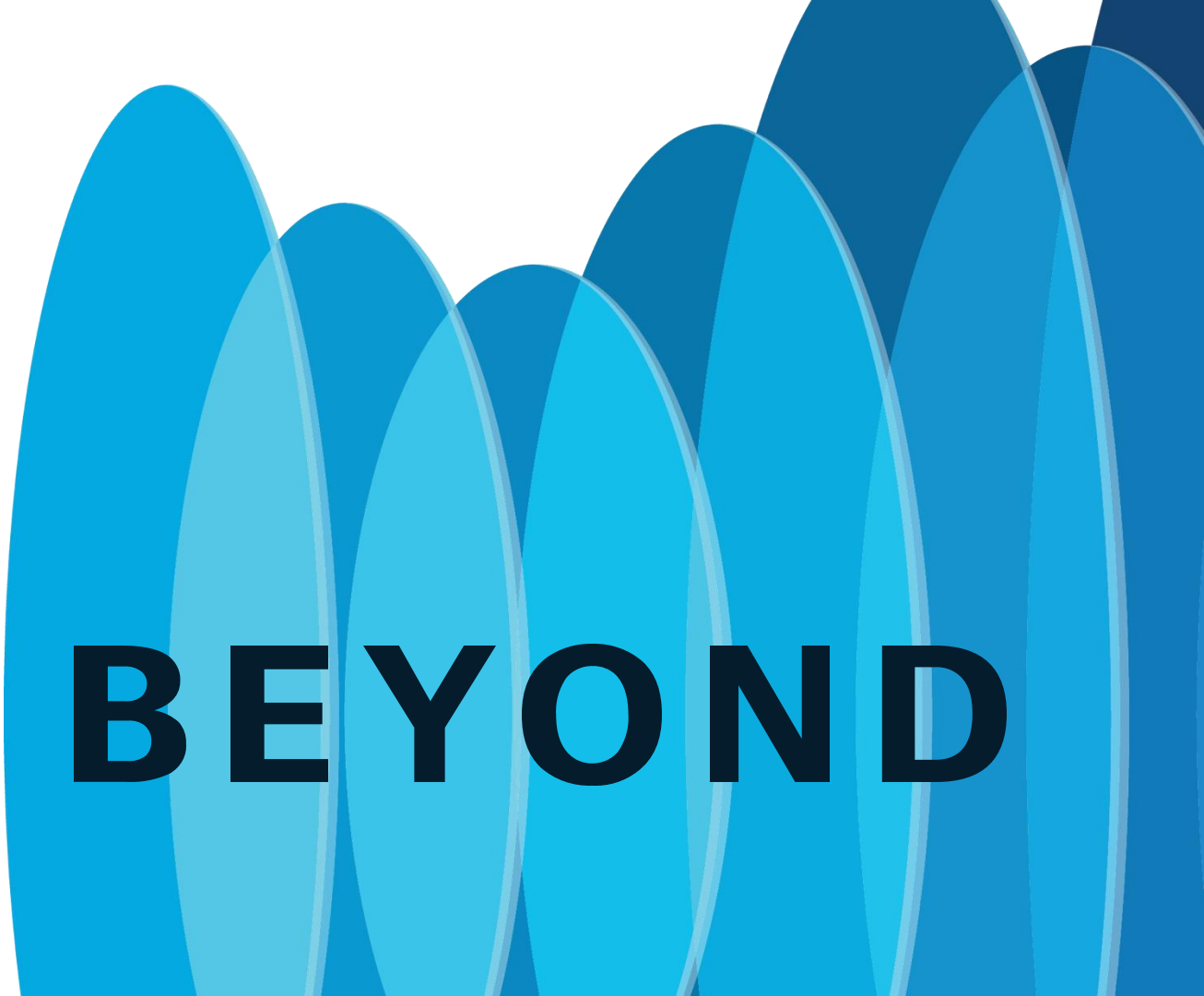
Continue your education

- Visit the Cisco Showcase for related demos
- Book your one-on-one Meet the Engineer meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
- Visit the On-Demand Library for more sessions at ciscolive.com/on-demand. Sessions from this event will be available from March 3.

© 2025 Cisco and/or its affiliates. All rights reserved. Cisco Public

cisco
Thank you
cisco Live!

cisco Live!



GO BEYOND