The EdgeX Open Hackathon
October 7 and 8, 2019
Chicago, Illinois

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Webinar: September 25th 2019
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Agenda

Michael Hall
• Welcome
• Purpose of the call

Introductions
• All

Jason Shepherd
• Background
• Agenda
• Use cases

Brad Corrion
• EdgeX Open judging criteria
• Prizes
• What will be there for you

Michael Hall
• The use of EdgeX Foundry
• Q&A
The EdgeX Open

October 7 – 8, 2019
Location: Tech Nexus
20 North Upper Wacker Drive, 12th Floor
Chicago, IL 60606

Brought to you by:

Registration:  https://www.lfedge.org/event/edgex-foundry-hackathon/
Training:     https://www.edgexfoundry.org/blog/2019/09/09/edgex-open-training/
Slack channel:   https://edgexfoundry.slack.com for information and prework support
Hashtag:       #edgexopen
The EdgeX Open – Day One – October 7, 2019

8:30 - 10:00AM  Registration, Breakfast and Team Set-up
10:00 - 11:00AM Welcome and Announcements
11:00AM      Hackathon begins
6:00PM     Whiskey Tasting
7:00PM     Dinner / Cocktails / EdgeX Open Mic Jam Session
10:00PM  Building closed and locked
The EdgeX Open – Day Two – October 8, 2019

7:30AM  Doors open
8:00AM  Start time
9:00AM  Order of participant presentations announced
Noon - 2:00PM  Judges meet each team - short solutions overview and Q&A*
2:00 – 4:00PM  Presentation Judging (Each team presents + Q&A)*
5:00 – 6:00 PM  Awards and Closing Ceremony

* Each team to get equal amount of time with judges and for presentation (specific time will depend on number of teams)
The EdgeX Open Use Cases

EdgeX Open Categories:

• **Advanced loss prevention**
  Leverage EdgeX to correlate computer vision events with telemetry from sensors such as RFID and transaction logs data from Point-of-Sale systems for improved loss prevention/theft detection

• **Dynamic personalized retail experience**
  Take computer vision and sensor data to drive a better in-store customer experience based on individual shopper preference

• **Inventory management**
  Use data from sensors and scanners (hand-held and/or drone-based) to improve inventory accuracy

• **Open category**
  Get creative and take your pick of a retail-centric use case! Just make sure it would be deemed valuable by end users
Judging criteria

Judging Criteria/Winner Selection:

Eligible Entries presented during the Presentation will be judged by a panel of subject matter experts (the “Judges”) selected by the Promotion Entities using the following Judging Criteria applicable to each Retail use-case. Scores and reasoning for such scores will not be made public at any time.

- **Creativity** (30 points): is the solution innovative, for example in solving the retail use-case, extent to which the “Surprise Solution Ingredient” is incorporated, etc.

- **Impact, Viability, and Usefulness** (30 points): does the solution have real, commercial and/or applicable value, for example to the retail end customer.

- **Simplicity** (30 points): is the solution intuitive, easily integrated into the retail space; has usability been taken into consideration.

- **Work Performed on Site** (5 points): how much work was done in Pre-Development versus at Hackathon; did Participants code and collaborate on Site, or was solution mostly completed prior.

- **Presentation** (5 points): effective, clear, convincing support of the retail use-case solution.
Prizes

First Prize
First-place Team will receive USD$5,000 (awarded in the form of a check, to be distributed amongst all Team members). The First place team will be invited to a future industry event to present their winning solution in the LF Edge booth (such event to be determined by Contest Host in its sole and absolute discretion; all transportation, lodging, meals and related costs and expenses are the sole responsibility of each First place team member).

Second Prize
Second-place Team will receive USD$2,500 (awarded in the form of a check, to be distributed amongst all Team members).

Third Prize
Third-place Team will receive USD$1,250 (awarded in the form of a check, to be distributed amongst all Team members).

Sponsors reserve the right not to award a prize to any Participant for any reason if doing so would not be in the spirit of the Promotion, or if it may adversely affect the business reputation or goodwill, or have a detrimental impact on Sponsors, any other Promotion Entity, this Contest, The LF Edge EdgeX Project, or any of their respective brands, products or services as determined by Sponsors in their absolute discretion. In the event any winner(s) engage in behavior that, as determined by Sponsors (or their designee) in their absolute discretion, is obnoxious or threatening, dangerous, unsafe, harmful, illegal or that is intended to annoy, abuse, threaten or harass any other person, or that may cause property damage or loss, Sponsors reserve the right to terminate the prize or other applicable experience early, in whole or in part, and if applicable to send the winner home with no further compensation. Event is subject to rain-check and cancellation policies of organizers.
Dev Team Experience – Day One – Working System

• Every team will be provided:
  • At least 1 working system imaged and running:
    • Ubuntu 18.04, Docker, etc
    • VSCode, GoLand, Golang, Git, Postman, etc
  • Monitor, keyboard, mouse, router with a private network for each team tied to the contest network
  • Instructions on how to download and install EdgeX – 1.0.1/Edinburgh
  • Instructions on how to take advantage of additional resources
  • Ongoing access to a GitHub repository with resources to accelerate team progress
• Resources and links will also be posted ahead of the event to the hackathon web site and slack channel
Installing EdgeX

- Official EdgeX Foundry Snap package
  - Snap install edgexfoundry
  - Verify that the services are all working with `snap services`
- Official EdgeX Foundry Docker images
  - Download the latest stable docker-compose.yml file
  - Docker-compose up -d
  - Verify that the services are all working with `docker-compose ps`
- Test the APIs with `http://localhost:48080/api/v1/ping`
Connecting EdgeX to a Device

- Use an **existing Device Service** that supports your device’s protocol
- Create a new Device Service
  - Use the **C or Go SDKs** to generate a new Device Service project
  - Add your specific device communication and handling
- Create a new **Device Profile** that describes your device’s data readings and control commands
- Define your **Device** in your configuration.toml
  - Schedule automatic readings with AutoEvents
- Configure your configuration.toml to **point** to your EdgeX deployment
Connecting EdgeX to an Application

- Use an **existing Export Service** that can connect to your application
- Create a new Application Function
  - Use the [Application Functions SDK](#) to generate a new Application Service project
  - Handle any custom connection or authentication your application needs
  - Add data filtering, transformation, compression or encryption
- Configure your configuration.toml to **trigger** your Application Function
- Configure your configuration.toml to **point** to your EdgeX deployment
EdgeX Open Mic
On Monday night we will host the EdgeX Open Mic community jam session!

• Musicians of all skill levels are welcome and encouraged to participate!

• A PA with several vocal mics and instrument cables will be provided

• Instruments can include acoustic and electric guitars, other stringed instruments, keyboards, brass and percussion.*

• A song list will be created on the event Wiki so you can prepare in advance but also feel free to come with your own song ideas, including original material!

*Please let us know if you need a shipping address to send your gear
Q&A