EdgeX - Application Working Group

Napa

10/03/2023

Attendees:

Topics:
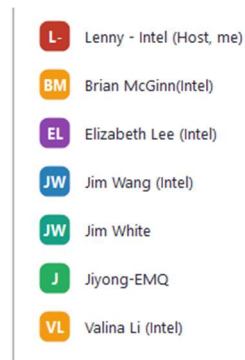
- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - Newly Complete (8) – Since last meeting
    - Add metrics for HTTP and MQTT export failures #1467
    - feat: Document new app service export error metrics #1237
    - feat: Add new export error metrics to App Service common config #4696
    - Provide ReadingClient() from interfaces.ApplicationService #1476
    - feat: Document new ReadingClient APIs #1233
    - refactor: Rework App Service Configurable documentation #1240
    - docs: Fix swagger and Postman for Start Replay #87
    - **Record and Replay** (https://github.com/orgs/edgexfoundry/projects/54)
      - Done (36)
      - In Progress (0)
      - Backlog (0)
    -
  - New Issues (0)
  - In Progress (1)
    - refactor: Rework the App Record Replay docs into new standard structure #1243
  - Release Backlog (1)
    - Add ability to set MQTT Will options for external MQTT server connections #1117 (**LOW**)
  - Napa Done (38)
  - Ice Box (7)
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - [SDK] Additional (stretch) metrics #1138 (**LOW**)
      - Store and Forward queue size
      - Message latency for received from MessageBus to hand off to Pipeline
    - Add pipeline function to send notification via Support Notifications
    - [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)
    - [App Record & Replay] Create Snap #64

- **New Jakarta Defects (0)**

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- **New Minnesota Defects (0)**
- **eKuiper update**
    - No update this week due to Holiday
- **Review SDK docs current layout**
    - Decide on new layout which is …
- **Opens**
    - None

- **Next meeting**:
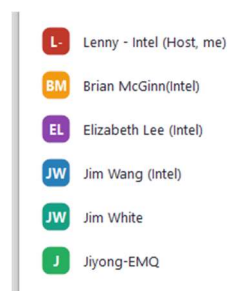   - **October 17th at 3:30PM AZ Standard**

09/19/2023

Attendees:

L-   Lenny - Intel (Host, me)

BM   Brian McGinn(Intel)

EL   Elizabeth Lee (Intel)

JW   Jim Wang (Intel)

JW   Jim White

J   Jiyong-EMQ

VL   Valina Li (Intel)

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
    - Newly Complete (5) – Since last meeting
        - build: Upgrade to go-1.21, Linter1.54.2 and Alpine 3.18
            - SDK, ASC, LLRP & Record Replay
        - build: Update to latest go-mod-bootstrap, fix unit tests
    - New Issues (2)
        - Add metrics for HTTP and MQTT export failures #1467
            - Moved to backlog
        - Provide ReadingClient() from interfaces.ApplicationService #1476
            - Moved to backlog
    - In Progress (2)
        - **Record and Replay** (https://github.com/orgs/edgexfoundry/projects/54)
            - Done (33)
            - In Progress (2)
            - Backlog (1)
    - Release Backlog (1)

- Add ability to set MQTT Will options for external MQTT server connections #1117 (**LOW**)
  - o Napa Done (29)
  - o Ice Box (6)
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - [SDK] Additional (stretch) metrics #1138 (**LOW**)
      - Store and Forward queue size
      - Message latency for received from MessageBus to hand off to Pipeline
    - Add pipeline function to send notification via Support Notifications
    - [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)

- **New Jakarta Defects (0)**
- **New Minnesota Defects (0)**
- **eKuiper update**
  - o Working on release 1.12 for November
    - https://github.com/lf-edge/ekuiper/milestone/22
- **Opens**
  - o None

- **Next meeting**:
  - o **October 3rd at 3:30PM AZ Standard**

09/5/2023

Attendees:

L-	Lenny - Intel (Host, me)
BM	Brian McGinn(Intel)
EL	Elizabeth Lee (Intel)
JW	Jim Wang (Intel)
JW	Jim White
J	Jiyong-EMQ

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - o Newly Complete (4) – Since last meeting
    - Replacement for Gorilla/MUX package #1436
    - docs: Update repo links in the readme #591

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- docs: Update repo links to point to latest docs #1471
- feat: Add structure for available application services docs #1205
  - New Issues (0)
    - None
  - In Progress (1)
    - **Record and Replay** (https://github.com/orgs/edgexfoundry/projects/54)
      - Done (33)
      - In Progress (1)
      - Backlog (2)
  - Release Backlog (1)
    - Add ability to set MQTT Will options for external MQTT server connections #1117 (**LOW**)
  - Napa Done (24)
  - Ice Box (6)
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - [SDK] Additional (stretch) metrics #1138 (**LOW**)
      - Store and Forward queue size
      - Message latency for received from MessageBus to hand off to Pipeline
    - Add pipeline function to send notification via Support Notifications
    - [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)

- **New Jakarta Defects (0)**
- **New Minnesota Defects (0)**
- **eKuiper update**
  - Enhancing docs
  - Release fix pack 1.11.1
    - https://github.com/lf-edge/ekuiper/releases/tag/1.11.1
  - Next release is 1.12 in November.
    - Just getting started on planning.
- **Demo Record Replay Docs**
  - https://docs.edgexfoundry.org/3.1/microservices/application/available/AppRecordReplay/
- **Opens**
  - None

- **Next meeting**:
  - **September 19th at 3:30PM AZ Standard**

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Attendees:

- **L-** Lenny -Intel (Host, me)
- **BM** Brian McGinn(Intel)
- **EL** Elizabeth Lee (Intel)
- **JW** Jim Wang (Intel)
- **JW** Jim White
- **J** Jiyong-EMQ

- Marc
- Valina

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - Newly Complete (2) – Since last meeting
    - HTTPRequestHeaders parameter for ASC HTTP Export #1426
    - feat: update details for http request headers #1189
  - New Issues (0)
    - None
  - In Progress (2)
    - Replacement for Gorilla/MUX package #1436 (**on-hold**)
    - **Record and Replay** (https://github.com/orgs/edgexfoundry/projects/54)
      - Done (28)
      - In Progress (0)
      - Backlog (5)
  - Release Backlog (1)
    - Add ability to set MQTT Will options for external MQTT server connections #1117 (**LOW**)
  - Napa Done (20)
  - Ice Box (6)
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - [SDK] Additional (stretch) metrics #1138 (**LOW**)
      - Store and Forward queue size
      - Message latency for received from MessageBus to hand off to Pipeline
    - Add pipeline function to send notification via Support Notifications
    - [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)

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- **New Jakarta Defects (0)**
- **New Minnesota Defects (0)**
- **eKuiper update**
  - Released 1.11 last week.
    - Napa WIP is now using 1.11
- **Record & Replay Demo**
  - Demo what is currently completed
- **Opens**
  - none

- **Next meeting**:
  - **September 5th at 3:30PM AZ Standard**

08/08/2023

Attendees:

M- Marc - intel (Host, me)

JW Jim Wang (Intel)

JW Jim White

BM Brian McGinn(Intel)

Ji Yong Hung (eKuiper)

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - Newly Complete (8) – Since last meeting
    - Add capability to Publish to MessageBus when using non-MessageBus triggers#1439
    - Add InsecureSecrets section to external-mqtt-trigger profile for testing purpose#578
    - docs: Added 3.0.1 changelog to main branch #1453 [app-functions-sdk-go]
    - docs: Added 3.0.1 changelog to main branch #581 [app-service-configurable]
    - docs: Added 3.0.1 changelog to main branch #214 [app-rfid-llrp-inventory]
    -
  - New Issues (0)
    -
  - In Progress (2)
    - **Record and Replay** (https://github.com/orgs/edgexfoundry/projects/54)
      - Done (24)

- In Progress (1)
- Backlog (5)
  - HTTPRequestHeaders parameter for ASC HTTP Export #1426
  - Replacement for Gorilla/MUX package #1436
- Release Backlog (<mark>1</mark>)
  - Add ability to set MQTT Will options for external MQTT server connections #1117 (**LOW**)
- Napa Done (<mark>13</mark>)
- Ice Box (6)
  - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
  - Use nano message IPC for ASC pluggable pipeline function
  - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
  - [SDK] Additional (stretch) metrics #1138 (**LOW**)
    - Store and Forward queue size
    - Message latency for received from MessageBus to hand off to Pipeline
  - Add pipeline function to send notification via Support Notifications
  - [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)

- **New Jakarta Defects (0)**
- **New Minnesota Defects (0)**
- **eKuiper update**
  - Working on 1.11 for Aug 23rd release
    - https://github.com/lf-edge/ekuiper/milestone/20
    - Beta Release:
      - https://github.com/lf-edge/ekuiper/releases/tag/1.11.0-beta.1
- **Opens**
  - None

- **Next meeting**:
  - **August 22nd at 3:30PM AZ Standard**

07/25/2023
Attendees:

EdgeX - Application Working Group

L- Lenny - Intel (Host, me)

J- Jiyong - EMQ (Co-host)

JW Jim Wang (Intel)

BM Brian McGinn(Intel)

MF marc-philippe fuller

VL Valina Li (Intel)

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - Newly Complete (8) – Since last meeting
    - Secure All HTTP routes when running in Secure Mode #1435
    - fix: [Napa] Remove notes about not valid with HTTP/External-MQTT trigger #1163
    - fix: [Minnesota] Remove notes about not valid with HTTP/External-MQTT trigger #1162
    - feat: Move all the common APIs into go-mod-bootstrap #1441
    - Fix logic with better error handling in go-mod-bootstrap when Common Config is missing #1443
    - docs: [SDK] Update changelog for 3.0.1 patch
    - build: [ASC] Update for patch 3.0.1 release #577
    - build: [App LLRP] Update for patch 3.0.1 release #577
  - New Issues (1)
    - Replacement for Gorilla/MUX package #1436
  - In Progress (3)
    - **Record and Replay** (https://github.com/orgs/edgexfoundry/projects/54)
      - Done (19)
      - In Progress (2)
      - Backlog (9)
    - HTTPRequestHeaders parameter for ASC HTTP Export #1426
    - Add capability to Publish to MessageBus when using non-MessageBus triggers #1439
  - Release Backlog (1)
    - Add ability to set MQTT Will options for external MQTT server connections #1117 (**LOW**)
  - Napa Done (13)
  - Ice Box (6)
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific

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- ▪ [SDK] Additional (stretch) metrics #1138 (**LOW**)
  - • Store and Forward queue size
  - • Message latency for received from MessageBus to hand off to Pipeline
- ▪ Add pipeline function to send notification via Support Notifications
- ▪ [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)

- **New Jakarta Defects (0)**
- **New Minnesota Defects (1)**
  - o Secure All HTTP routes when running in Secure Mode #1435
- **eKuiper update**
  - o Working on 1.11 for Aug 23rd release
    - ▪ https://github.com/lf-edge/ekuiper/milestone/20
      - • New Rest API to change log level
- **Opens**
  - o None

- **Next meeting**:
  - o **August 8th at 3:30PM AZ Standard**

07/11/2023
Attendees:

L- Lenny - Intel (Host, me)

BM Brian McGinn(Intel)

EL Elizabeth Lee (Intel)

JW Jim Wang (Intel)

JW Jim White

J(Jiyong (EMQ)

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - o Newly Complete (3) – Since last meeting
    - ▪ Add support for regular expressions in filters #1037
    - ▪ feat: Add API to get SDK's App Context #1431
    - ▪ build: Update to latest go-mods #1434
  - o New Issues pending (1)

- Secure All HTTP routes when running in Secure Mode #1435
  - In Progress (2)
    - **Record and Replay** (https://github.com/orgs/edgexfoundry/projects/54)
      - Done (13)
      - In Progress (1)
      - Backlog (16)
    - HTTPRequestHeaders parameter for ASC HTTP Export #1426
  - Release Backlog (1)
    - Add ability to set MQTT Will options for external MQTT server connections #1117 (**LOW**)
  - Napa Done (5)
  - Ice Box (6)
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - [SDK] Additional (stretch) metrics #1138 (**LOW**)
      - Store and Forward queue size
      - Message latency for received from MessageBus to hand off to Pipeline
    - Add pipeline function to send notification via Support Notifications
    - [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)

- **New Jakarta Defects (0)**
- **New Minnesota Defects (1)**
  - Secure All HTTP routes when running in Secure Mode #1435
- **eKuiper update**
  - Working on release 1.11
    - https://github.com/lf-edge/ekuiper/milestone/20
  - Released 1.10.2
    - https://github.com/lf-edge/ekuiper/releases/tag/1.10.2
- **Opens**
  - None

- **Next meeting**:
  - **July 25th at 3:30PM AZ Standard**

06/27/2023
Attendees:

EdgeX - Application Working Group

Participants (6)

- L- Lenny -Intel (Host, me)
- JW Jim White
- BM Brian McGinn(Intel)
- EL Elizabeth Lee (Intel)
- JW Jim Wang (Intel)
- J Jiyong@EMQ

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - o Newly Complete (0) – Since last meeting
    - ▪
  - o New Issues pending (0) – Since last meeting
  - o In Progress (3)
    - ▪ Add support for regular in filters？ #1037
    - ▪ Record and Replay (https://github.com/orgs/edgexfoundry/projects/54)
    - ▪ HTTPRequestHeaders parameter for ASC HTTP Export #1426
  - o Release Backlog (1)
    - ▪ Add ability to set MQTT Will options for external MQTT server connections #1117 (**LOW**)
  - o Napa Done (2)
  - o Ice Box (6)
    - ▪ TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - ▪ Use nano message IPC for ASC pluggable pipeline function
    - ▪ Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - ▪ [SDK] Additional (stretch) metrics #1138 (**LOW**)
      - • Store and Forward queue size
      - • Message latency for received from MessageBus to hand off to Pipeline
    - ▪ Add pipeline function to send notification via Support Notifications
    - ▪ [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)

- **New Jakarta Defects (0)**
- **New Minnesota Defects (0)**
- **eKuiper update**
  - o Working on 1.11 release (target release date is August 23rd
    - ▪ https://github.com/lf-edge/ekuiper/milestone/20
- **Opens**

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o

- **Next meeting**:
  - o **July 11th at 3:30PM AZ Standard**

06/13/2023

Attendees:

L- Lenny - Intel (Host, me)

BM Brian McGinn(Intel)

EL Elizabeth Lee (Intel)

JW Jim Wang (Intel)

JW Jim White

J Jiyong@EMQ

MF marc-philippe fuller

VL Valina Li (Intel)

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - o Newly Complete (2) – Since last meeting
    - [App SDK Docs] Rename secretName to secretValueKey and secretPath to secretName #1096
    - App-service example not working (SDK version incorrect) #1427
  - o New Issues pending (0) – Since last meeting
  - o In Progress (2)
    - Add support for regular in filters？ #1037
    - Record and Replay (https://github.com/orgs/edgexfoundry/projects/54)
  - o Release Backlog (2)
    - Add ability to set MQTT Will options for external MQTT server connections #1117 (**LOW**)
    - HTTPRequestHeaders parameter for ASC HTTP Export #1426
  - o Done (0)
  - o Ice Box (6)
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific

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- [SDK] Additional (stretch) metrics #1138 (**LOW**)
  - Store and Forward queue size
  - Message latency for received from MessageBus to hand off to Pipeline
- Add pipeline function to send notification via Support Notifications
- [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)

- **New Jakarta Defects (0)**
- **New Minnesota Defects (1)**
  - App-service example not working (SDK version incorrect) #1427
    - Low – simple work around
    - Added to known issues for Minnesota

- **eKuiper update**
  - Working on 1.11.0 for August 23rd
    - https://github.com/lf-edge/ekuiper/milestone/20
    - Released 1.11.0-alpha.0
      - https://github.com/lf-edge/ekuiper/releases/tag/1.11.0-alpha.0
  - Also working on 1.10.1
    - https://github.com/lf-edge/ekuiper/milestone/21
    - Releasing today

- **Opens**
  - None

- **Next meeting**:
  - **June 27th at 3:30PM AZ Standard**

Minnesota

05/30/2023
Attendees:

EdgeX - Application Working Group

L- Lenny - Intel (Host, me)

MF marc-philippe fuller

B Brian-Intel

EL Elizabeth Lee (Intel)

JW Jim Wang (Intel)

JW Jim White

J Jiyong@EMQ

VL Valina Li (Intel)

Version 1.10.1

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - o Newly Complete **(7)** – Since last meeting
    - Camera Mgmt Example - Auto start EVAM on new camera devices #122
    - Upgrade App Service Examples (minnesota-dev branch) to V3
    - [App LLRP] Subscribe topic for ReaderEventNotification incorrect
    - [SDK] Update changelog for 3.0
    - [ASC] Update changelog for 3.0
    - [LLRP] Update changelog for 3.0
    - App Services V3 Migration Guide
  - o New Issues pending (0) – Since last meeting
  - o In Progress (0)
  - o Release Backlog (0)
  - o Done (110)
  - o Ice Box (9)
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - Add support for regular in filters？ #1037
    - [SDK] Additional (stretch) metrics #1138 (**LOW**)
      - Store and Forward queue size
      - Message latency for received from MessageBus to hand off to Pipeline
    - Add ability to set MQTT Will options for external MQTT server connections #1117 (**LOW**)
    - Add pipeline function to send notification via Support Notifications
    - [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)
    - Support multiple triggers#1233

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- **New Jakarta Defects (0)**
- **New Levsk Defects (0)**
- **eKuiper update**
    - 1.10 released last week
        - Smoke tested with non-secure EdgeX
    - Collecting ideas for a major release
        - Nothing scheduled yet.
        - V2 late this year of early next year
    - Next release will 1.11 in August

- **Topics for Napa Planning**
    - https://github.com/orgs/edgexfoundry/projects/50/views/2
        - Napa Planning column
- **Opens**
    - none
- **Next meeting**:
    - **June 13th at 3:30PM AZ Standard**

05/16/2023
Attendees:

- L- Lenny - Intel (Host, me)
- BM Brian McGinn(Intel)
- EL Elizabeth Lee (Intel)
- JW Jim Wang (Intel)
- JW Jim White
- J Jiyong@EMQ

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
    - Newly Complete **(5+)** – Since last meeting
        - Ignore all go-mod deps
            - SDK - except go-mod-bootstrap
            - ASC & LLRP – except SDK
        - refactor!: Rename MakeItRun and MakeItStop APIs to Run and Stop
            - Consumed by ASC and LLRP
            - Documented
        - Document new RemoveAllPipelines API
        - Upgrade App Service Examples to V3 (all except Camera Mgmt)

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- - Add main branch Warnings (ASC and LLRP)
  - o New Issues pending (**0**) – Since last meeting
  - o In Progress (<mark>2</mark>)
    - App Services V3 Migration Guide
    - Camera Mgmt Example - Auto start EVAM on new camera devices #122
      - <mark>Ready for final approval and merge</mark>
  - o Release Backlog (1)
    - Record and Replay
  - o Done (<mark>99</mark>)
  - o Ice Box (9)
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - Add support for regular in filters？ #1037
    - [SDK] Additional (stretch) metrics #1138 (**LOW**)
      - Store and Forward queue size
      - Message latency for received from MessageBus to hand off to Pipeline
    - Add ability to set MQTT Will options for external MQTT server connections #1117 (**LOW**)
    - Add pipeline function to send notification via Support Notifications
    - [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)
    - Support multiple triggers#1233

- **New Jakarta Defects (0)**
- **New Levsk Defects (0)**
- **eKuiper update**
  - o Working on 1.10
    - Released 1.10.0-alpha.1
      - https://github.com/lf-edge/ekuiper/releases/tag/1.10.0-alpha.1
    - Planning on Code freeze today
    - Planning to release next week on 24th or 25th after we release our go-mods.
- **Opens**
  - o Start planning for next release – Will add to next meeting agenda

- **Next meeting**:
  - o **May 30th at 3:30PM AZ Standard**

05/02/2023
Attendees:

EdgeX - Application Working Group

- Jim White
- Elizabeth Lee
- Jim Wang
- Marc Fuller
- Brian McGinn

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - Newly Complete **(8)** – Since last meeting
    - Refactor Compression functions to use mutex to ensure thread safe for better benchmark result #1384
    - [WIP BUG] Update store and forward configuration for app-service with http-export profile got runtime error #1403
    - fix: Consume Store and Forward fix in latest SDK #555
    - Change or remove all references to v2 #1395
    - build: Ignore all go-mod deps, except go-mod-bootstrap #1407
    - build: [App LLRP] Ignore all go-mod deps, except go-mod-bootstrap #185
  - New Issues pending (**0**) – Since last meeting
  - In Progress (1)
    - Camera Mgmt Example - Auto start EVAM on new camera devices #122
  - Release Backlog (1)
    - Record and Replay
  - Done (88)
  - Ice Box (9)
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - Add support for regular in filters？ #1037
    - [SDK] Additional (stretch) metrics #1138 (**LOW**)
      - Store and Forward queue size
      - Message latency for received from MessageBus to hand off to Pipeline
    - Add ability to set MQTT Will options for external MQTT server connections #1117 (**LOW**)
    - Add pipeline function to send notification via Support Notifications
    - [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)
    - Support multiple triggers#1233

- **New Jakarta Defects (0)**
- **New Levsk Defects (0)**
- **eKuiper update**
  - No update this week

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- **Opens**
  - **none**

- **Next meeting**:
  - **May 16th at 3:30PM AZ Standard**

04/18/2023

Attendees:

- L-   Lenny - Intel (Host, me)
- BN   Bryon Nevis
- EL   Elizabeth Lee (Intel)
- JW   Jim Wang (Intel)
- JW   Jim White
- J   Jiyong@EMQ
- MF   marc-philippe fuller
- VL   Valina Li (Intel)

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - Newly Complete **(9+)** – Since last meeting
    - App Services Compression function randomly crashes. #1250
    - SDK hangs when calling docker-compose stop #500
    - Post secret API got error "SecretRequest.Path field is required"#522
    - Camera Mgmt Example - Add documentation on how to ingest EVAM results into EdgeX#123
    - [WIP BUG] Store and Forward Enabled missing from profiles #537
    - Upgrade compose to eKuiper 1.9 #360
    - Multiple PRs to back port Compression function fix to Levski and Jakarta
    - Released APP SDK and ASC patches for Levski and Jakarta
    - Fixed/confirmed multiple TAF failures are fixed

  - New Issues pending (1) – Since last meeting
    - Refactor Compression functions to use mutex to ensure thread safe for better benchmark result#1384
  - In Progress (1)
    - Camera Mgmt Example - Auto start EVAM on new camera devices#122

EdgeX - Application Working Group

- o Release Backlog (1)
  - Record and Replay
- o Done (<mark>82</mark>)
- o Ice Box (9)
  - [TensorFlow -](#) Continue to hold in Ice Box to see if we get pull for this
  - Use nano message IPC for ASC pluggable pipeline function
  - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
  - Add support for regular in filters？ #1037
  - [SDK] Additional (stretch) metrics #1138 (**LOW**)
    - Store and Forward queue size
    - Message latency for received from MessageBus to hand off to Pipeline
  - Add ability to set MQTT Will options for external MQTT server connections #1117 (**LOW**)
  - Add pipeline function to send notification via Support Notifications
  - [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)
  - Support multiple triggers#1233

- **New Jakarta Defects (0)**
- **New Levsk Defects (0)**

- **eKuiper rules cannot send commands via HTTP in Secure EdgeX 3.0**
  - o https://github.com/edgexfoundry/edgex-go/issues/4508
  - o eKuiper documented how to use Commands via External MQTT
    - https://ekuiper.org/docs/en/latest/edgex/edgex_rule_engine_command.html#create-rules
  - o We need to update our **Commands via Messaging** docs to include how to connect securely to the External MQTT connection.
- **eKuiper update**
  - o Released 1.9.1
    - https://github.com/lf-edge/ekuiper/releases/tag/1.9.1
  - o Working on 1.10 (target release with M
    - https://github.com/lf-edge/ekuiper/releases/tag/1.10.0-alpha.0
    - https://github.com/lf-edge/ekuiper/milestone/18

- **Opens**
  - o **none**

- **Next meeting**:
  - o **May 2nd at 3:30PM AZ Standard**

EdgeX - Application Working Group

Attendees:

L- Lenny - Intel (Host, me)

EL Elizabeth Lee (Intel)

JW Jim Wang (Intel)

J- Jiyong - EMQ

MF marc-philippe fuller

VL Valina Li (Intel)

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - o Newly Complete **(5)** – Since last meeting
    - SDK hangs when calling docker-compose stop#500
      - Unable to reproduce
    - [WIP BUG] Store and Forward Enabled missing from profiles#537
    - Change TargetType value from Consul didn't affect before restart service#1361
    - Update store and forward configuration got runtime error#1355
    - feat: Upgrade to eKuiper 1.9
  - o New Issues pending (**0**) – Since last meeting
  - o In Progress (4)
    - **App Services Compression function randomly crashes. #1250**
    - Post secret API got error "SecretRequest.Path field is required"#522
    - Camera Mgmt Example - Auto start EVAM on new camera devices#122
    - Camera Mgmt Example - Add documentation on how to ingest EVAM results into EdgeX#123
  - o Release Backlog (1, -4)
  - o Done (67)
  - o Ice Box (9)
    - Support Multiple Triggers
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - Add support for regular in filters？ #1037
    - SDK hangs when calling docker-compose stop #500
    - [SDK] Additional (stretch) metrics #1138 (**LOW**)
      - Store and Forward queue size

EdgeX - Application Working Group

- Message latency for received from MessageBus to hand off to Pipeline
  - Add ability to set MQTT Will options for **external MQTT** server connections #1117 (**LOW**)
  - Add pipeline function to send notification via Support Notifications
  - [LLRP] Add LLRP Inventory specific service metrics #70

- **New Jakarta Defects (1)**
  - App Services Compression function randomly crashes. #1250
- **New Levsk Defects (1)**
  - App Services Compression function randomly crashes. #1250

- **eKuiper update**
  - Working on 1.10 release
    - https://github.com/lf-edge/ekuiper/milestone/18

- **Opens**

- **Next meeting**:
  - **April 18th at 3:30PM AZ Standard**

03/21/2023

Attendees:

Participants (4)

- L- Lenny - Intel (Host, me)
- EL Elizabeth Lee (Intel)
- JW Jim White
- J Jiyong@EMQ

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - Newly Complete (5) – Since last meeting
    - App LLRP Common Config
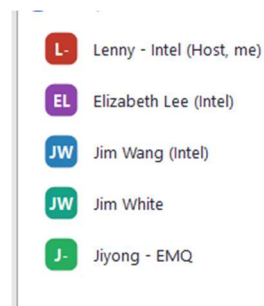
EdgeX - Application Working Group

- App LLRP internal Topics
- App SDK Consume watch common writable
- Go 1.20, Alpine 3.17 and linter v1.51.
- APP SDK YAML config file
  - New Issues pending (2) – Since last meeting
    - BUG - Change TargetType value from Consul didn't affect before restart service #1361
    - BUG - Update store and forward configuration got runtime error #1355
  - In Progress (2)
    - App LLRP YAML config file
    - ASC YAML config file
  - In Review (**0**)
  - Release Backlog (5, -2)
  - Done (62)
  - Ice Box (9)
    - Support Multiple Triggers
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - Add support for regular in filters？ #1037
    - SDK hangs when calling docker-compose stop #500
    - [SDK] Additional (stretch) metrics #1138 (**LOW**)
      - Store and Forward queue size
      - Message latency for received from MessageBus to hand off to Pipeline
    - Add ability to set MQTT Will options for **external MQTT** server connections #1117 (**LOW**)
    - Add pipeline function to send notification via Support Notifications
    - [LLRP] Add LLRP Inventory specific service metrics #70

- **New Jakarta Defects (1)**
  - App Services Compression function randomly crashes. #1250
- **New Levsk Defects (1)**
  - App Services Compression function randomly crashes. #1250

- **eKuiper update**
  - Continue to work on 1.9.0 with Release March 30th
    - https://github.com/lf-edge/ekuiper/milestone/17
    - Pre-release 1.9.0-alpha.1
      - https://github.com/lf-edge/ekuiper/releases/tag/1.9.0-alpha.1
  - Released 1.8.2 (bug fixes)

- ■ https://github.com/lf-edge/ekuiper/releases/tag/1.8.2
- **Opens**
  - ○ none

- **Next meeting**:
  - ○ **April 4th at 3:30PM AZ Standard**

03/07/2023

Attendees:
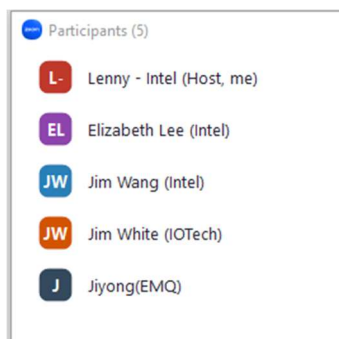
- **L-** Lenny - Intel (Host, me)
- **EL** Elizabeth Lee (Intel)
- **JW** Jim Wang (Intel)
- **JW** Jim White
- **J-** Jiyong - EMQ

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - ○ Newly Complete **(4)** – Since last meeting
    - ■ Move swagger files to V3 folder #1286
    - ■ Web server crashes due to a nil pointer error when enabling HTTPS #1315
    - ■ Core Command message bus Time out #4413
    - ■ refactor(sdk)!: Renamed secretName to secretValueKey and secretPath to secretName #1337
  - ○ New Issues pending (**0**) – Since last meeting
  - ○ In Progress (1)
    - ■ [MQTT Export] Error registering metric when MQTT Broker is reconnected #1320
  - ○ In Review (**0**)
  - ○ Release Backlog (**7, -1**)
  - ○ Done (**52**)
  - ○ Ice Box (**9, +1**)
    - ■ Support Multiple Triggers
    - ■ TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - ■ Use nano message IPC for ASC pluggable pipeline function
    - ■ Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - ■ Add support for regular in filters？ #1037

- ▪ SDK hangs when calling docker-compose stop #500
- ▪ [SDK] Additional (stretch) metrics #1138 (**LOW**)
  - Store and Forward queue size
  - Message latency for received from MessageBus to hand off to Pipeline
- ▪ Add ability to set MQTT Will options for **external MQTT** server connections #1117 (**LOW**)
- ▪ Add pipeline function to send notification via Support Notifications
- ▪ [LLRP] Add LLRP Inventory specific service metrics #70

- **New Jakarta Defects (1)**
  - o App Services Compression function randomly crashes. #1250
- **New Levsk Defects (1)**
  - o App Services Compression function randomly crashes. #1250

- **eKuiper update**
  - o 1.9.0-alpha.0 released
    - ▪ https://github.com/lf-edge/ekuiper/releases/tag/1.9.0-alpha.0
  - o 1.9.0 planned to be release March 30th
    - ▪ https://github.com/lf-edge/ekuiper/milestone/17
- **Opens**
  - o None

- **Next meeting**:
  - o **March 21ST at 3:30PM AZ Standard**

02/21/2023
Attendees:

Topics:

- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)

EdgeX - Application Working Group

- o Newly Complete (6) – Since last meeting
  - [LLRP] Update config for Trigger/MessagQueue config changes #126
  - Adjust App SDK for Common Config #1295
  - Adjust ASC for Common Config #513
  - feat!: Consume additional level in event publish topic #145
  - refactor!: Replace internal topics from config with new constants and use base topic #520
  - feat!: Prepend base topic to all topics #1313
- o New Issues pending (1) – Since last meeting
  - Core Command message bus Time out #1296
- o In Progress (2)
  - [MQTT Export] Error registering metric when MQTT Broker is reconnected #1320
- o In Review (1)
  - Web server crashes due to a nil pointer error when enabling HTTPS #1315
- o Release Backlog (8, +2)
- o Done (48)
- o Ice Box (8, +1)
  - Support Multiple Triggers
  - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
  - Use nano message IPC for ASC pluggable pipeline function
  - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
  - Add support for regular in filters? #1037
  - SDK hangs when calling docker-compose stop #500
  - [SDK] Additional (stretch) metrics #1138 (**LOW**)
    - Store and Forward queue size
    - Message latency for received from MessageBus to hand off to Pipeline
  - Add ability to set MQTT Will options for **external MQTT** server connections #1117 (**LOW**)
  - Add pipeline function to send notification via Support Notifications

- **New Jakarta Defects (1)**
  - o App Services Compression function randomly crashes. #1250
- **New Levsk Defects (1)**
  - o App Services Compression function randomly crashes. #1250

- **eKuiper update**
  - o Released 1.8.1
    - Small bug fixes and doc updates
  - o 1.9.0 plan defined and in progress

EdgeX - Application Working Group

- - Targeting last week of march
  - - https://github.com/lf-edge/ekuiper/milestone/17
- **Opens**
  - o Demo'ed the new Common Config

- **Next meeting**:
  - o **March 7th at 3:30PM AZ Standard**

02/07/2023
Attendees:

Topics:
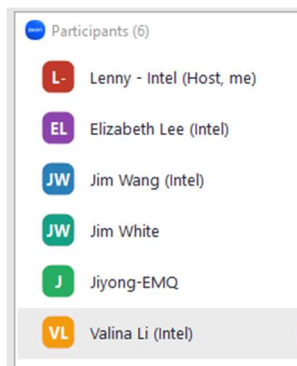
- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - o Newly Complete **(5+)** – Since last meeting
    - Remove Deprecated PushToCoreData #1279
    - refactor: Update to latest core contracts and fix tests #1275
    - [SDK] Remove old metrics collection and REST /metrics endpoint #1281
    - Refactor Target Type flags for configurable functions pipeline #1267
    - feat!: Use latest SDK for MessageBus Request API #511
  - o New Issues pending (**1**) – Since last meeting
    - Move swagger files to V3 folder #1286
  - o In Progress (0)
  - o In Review (**0**)
  - o Release Backlog (6, -1)
  - o Done (40)
  - o Ice Box (7)
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - Add support for regular in filters？ #1037

- SDK hangs when calling docker-compose stop #500
- [SDK] Additional (stretch) metrics #1138 (**LOW**)
  - Store and Forward queue size
  - Message latency for received from MessageBus to hand off to Pipeline
- Add ability to set MQTT Will options for **external MQTT** server connections #1117 (**LOW**)
- Add pipeline function to send notification via Support Notifications

- **New Jakarta Defects (1)**
  - App Services Compression function randomly crashes. #1250
- **New Levsk Defects (1)**
  - App Services Compression function randomly crashes. #1250

- **eKuiper update**
  - 1.8.0 was released in January
  - Working on 1.9.0 plan
    - https://github.com/orgs/lf-edge/projects/1
    - Targeting March release
- **Opens**
  - None

- **Next meeting**:
  - **February 21ˢᵗ at 3:30PM AZ Standard**

01/24/2023

Attendees:

L-	Lenny - Intel (Host, me)
JW	Jim Wang (Intel)
JW	Jim White
EL	Elizabeth Lee (Intel)
VL	Valina Li (Intel)

Topics:

- **Call for additional agenda items**
  - ○
- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)

EdgeX - Application Working Group

- o Newly Complete (**11+**) – Since last meeting
  - refactor!: Update config for removal of SecretStore from services' configuration file #1268
  - Unable to receive HTTPExportSize metrics #1266
  - refactor!: Rework code for refactored stand alone MessageBus Configuration #1255
  - Refactor MessageBus config to separate out of Trigger into MessageQueue like other services have #1221
  - Enable Core Command Client via Messaging #490
  - [SDK] Factory and Receiver functions for all transforms should use pointers (Breaking Change) #1131
  - refactor: change mqtt connect handler for multiple subscribe #1232
  - NewTags factory method in app functions sdk #1225
  - Remove old Secret APIs now that Secret Provider is available #1224
  - General cleanup for deprecated trigger/pipelines APIs #1227
  - Enhance MessageError to implement the Error interface #1125
- o New Issues pending (**0**) – Since last meeting
- o In Progress (1)
  - Remove Deprecated PushToCoreData #1279
- o In Review (**0**)
- o Release Backlog (7, -5)
- o Done (34)
- o Ice Box (7)
  - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
  - Use nano message IPC for ASC pluggable pipeline function
  - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
  - Add support for regular in filters？ #1037
  - SDK hangs when calling docker-compose stop #500
  - [SDK] Additional (stretch) metrics #1138 (**LOW**)
    - Store and Forward queue size
    - Message latency for received from MessageBus to hand off to Pipeline
  - Add ability to set MQTT Will options for **external MQTT** server connections #1117 (**LOW**)
  - Add pipeline function to send notification via Support Notifications

- **New Jakarta Defects (1)**
  - o App Services Compression function randomly crashes. #1250
- **New Levsk Defects (1)**
  - o App Services Compression function randomly crashes. #1250

EdgeX - Application Working Group

- **eKuiper update (<mark>no update, team is on vacation</mark>)**
  - o
- **Opens**
  - o None

- **Next meeting**:
  - o **February 7th at 3:30PM AZ Standard**

01/10/2023

Attendees:

Topics:

- **Call for additional agenda items**
  - o none
- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - o Newly Complete **(<mark>6</mark>)** – Since last meeting
    - Remove old Secret APIs now that Secret Provider is available #1224
    - General cleanup for deprecated trigger/pipelines APIs #1227
    - Use Config Stem constants from Core Contracts #1236
    - Fail to start APP service with bootstrapping failed #1239 - fixed by update to v3
    - [SDK] Remove ZMQ #1228
    - refactor!: Rename command line flags for the sake of consistency #492
  - o New Issues pending (<mark>2</mark>) – Since last meeting
    - Support multiple triggers #1233
    - App Services Compression function randomly crashes. #1250
  - o In Progress (<mark>1</mark>)
    - Refactor MessageBus config to separate out of Trigger into MessageQueue like other services have #1221
  - o In Review (**0**)
  - o Release Backlog (12)
  - o Ice Box (7)

EdgeX - Application Working Group

- ▪ <u>TensorFlow -</u> Continue to hold in Ice Box to see if we get pull for this
- ▪ Use nano message IPC for ASC pluggable pipeline function
- ▪ Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
- ▪ Add support for regular in filters❓ #1037
- ▪ SDK hangs when calling docker-compose stop #500
- ▪ [SDK] Additional (stretch) metrics #1138 (**LOW**)
  - Store and Forward queue size
  - Message latency for received from MessageBus to hand off to Pipeline
- ▪ Add ability to set MQTT Will options for **external MQTT** server connections #1117 (**LOW**)
- ▪ Add pipeline function to send notification via Support Notifications

- **New Jakarta Defects (1)**
  - ○ App Services Compression function randomly crashes. #1250
- **New Levsk Defects (1)**
  - ○ App Services Compression function randomly crashes. #1250

- **eKuiper update**
  - ○ Wrapping up 1.8.0 release
    - ▪ https://github.com/lf-edge/ekuiper/milestone/14
    - ▪ Releasing Jan 18th

- **Opens**
  - ○ Thanks Elizabeth for covering while Lenny out in December.
  - ○ eKuiper will miss next meeting

- **Next meeting**:
  - ○ **January 24th at 3:30PM AZ Standard**

12/13/2022
Attendees:

EdgeX - Application Working Group

EL Elizabeth Lee (Int... (Host, me)

J Jiyong(EMQ) (Co-host)

BM Brian McGinn(Intel)

JW Jim Wang (Intel)

JW Jim White

MF marc-philippe fuller

VL Valina Li (Intel)

Topics:

- **Call for additional agenda items**
    o none
- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
    o Newly Complete **(6)** – Since last meeting
        ▪ feat: Expose Set and Clear operation of pipelines in Application Service interface #1220
        ▪ refactor: Renamed GolangRuntime to FunctionPipelineRuntime #1229
        ▪ refactor: Remove deprecated SetFunctionsPipeline code #1231
        ▪ refactor: change mqtt subscribe for multiple sub #1232
        ▪ refactor(sdk): remove deprecated LoadConfigurablePipeline function #1234
        ▪ refactor!: update module to v3 #1241
    o New Issues pending (**3**) – Since last meeting
        ▪ Support multiple triggers #1233
        ▪ Use Config Stem constants from Core Contracts #1236
        ▪ Fail to start APP service with boostrapping failed #1239 - should be fixed by update to v3
    o In Progress (0)
    o In Review (**3**)
        ▪ refactor(sdk): remove deprecated Process code #1240
        ▪ refactor!: Use config stem from common constants #1238
        ▪ refactor(sdk): remove deprecated EncryptWithAES code #1235
    o Release Backlog (18)
    o Ice Box (7)
        ▪ TensorFlow - Continue to hold in Ice Box to see if we get pull for this
        ▪ Use nano message IPC for ASC pluggable pipeline function

EdgeX - Application Working Group

- Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
- Add support for regular in filters？ #1037
- SDK hangs when calling docker-compose stop #500
- [SDK] Additional (stretch) metrics #1138 (**LOW**)
  - Store and Forward queue size
  - Message latency for received from MessageBus to hand off to Pipeline
- Add ability to set MQTT Will options for **external MQTT** server connections #1117 (**LOW**)
- Add pipeline function to send notification via Support Notifications

- **New Jakarta Defects (0)**
- **New Kamakura Defects (0)**
- **eKuiper update**
  - 1.8.0 in progress
    - https://github.com/lf-edge/ekuiper/milestone/14
    - Alpha available.
      - https://github.com/lf-edge/ekuiper/releases/tag/1.8.0-alpha.1
      - https://github.com/lf-edge/ekuiper/releases/tag/1.8.0-alpha.2

- **Opens**
  - None
- **Next meeting**:
  - **December 27th – Cancelled**
  - **January 10th at 3:30PM AZ Standard**

11/29/2022
Attendees:

Participants (6)

LG Lenny Goodell -Intel (Host, me)

EL Elizabeth Lee (Intel)

JW Jim Wang (Intel)

JW Jim White

J- Jiyong - EMQ

VL Valina Li (Intel)

EdgeX - Application Working Group

Topics:

- **Call for additional agenda items**
  o None
- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  o Newly Complete **(0)** – Since last meeting
  o New Issues pending (0) – Since last meeting
  o In Progress (0)
  o In Review (**4**)
    ▪ feat: Expose Set and Clear operation of pipelines in Application Service interface #1220
    ▪ refactor: Renamed GolangRuntime to FunctionPipelineRuntime #1229
    ▪ refactor: Remove deprecated SetFunctionsPipeline code #1231
    ▪ change mqtt subscribe for multiple sub #1230
  o Release Backlog (18)
  o Ice Box (7)
    ▪ TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    ▪ Use nano message IPC for ASC pluggable pipeline function
    ▪ Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    ▪ Add support for regular in filters❔ #1037
    ▪ SDK hangs when calling docker-compose stop #500
    ▪ [SDK] Additional (stretch) metrics #1138 (**LOW**)
      • Store and Forward queue size
      • Message latency for received from MessageBus to hand off to Pipeline
    ▪ Add ability to set MQTT Will options for **external MQTT** server connections #1117 (**LOW**)
    ▪ Add pipeline function to send notification via Support Notifications

- **New Jakarta Defects (0)**
- **New Kamakura Defects (0)**
- **eKuiper update**
  o 1.7.1 released
    ▪ https://github.com/lf-edge/ekuiper/releases/tag/1.7.1
  o 1.7.2 & 1.7.3 patch releases
    ▪ https://github.com/lf-edge/ekuiper/releases/tag/1.7.2
    ▪ https://github.com/lf-edge/ekuiper/releases/tag/1.7.3
  o 1.8.0 in progress
    ▪ https://github.com/lf-edge/ekuiper/milestone/14
    ▪ Alpha available.
      • https://github.com/lf-edge/ekuiper/releases/tag/1.8.0-alpha.1

EdgeX - Application Working Group

- https://github.com/lf-edge/ekuiper/releases/tag/1.8.0-alpha.2

- **Opens**
  - o
- **Next meeting**:
  - o **December 13th at 3:30 AZ Standard**

Levski

11/01/2022

Attendees:

Topics:

- **Call for additional agenda items**
  - o None
- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - o Newly Complete **(1)** – Since last meeting
    - App SDK Levski change log
    - ASC Levski change log
    - App RFID LLRP Levski change log
    - Commands via MessageBus (aka N/S MessageBus) #1190
    - Client initialization breaks backward compatibility #1206 🐛
    - PipelineMessagesProcessed not report correctly #1196 🐛
    - Updated value of perTopicPipeline didn't enabled before restarting service #1187 🐛
    - Cloud Export example transform always error with "Unexpected type received" #133
  - o New Issues pending (0) – Since last meeting
  - o In Progress (0)
  - o In Review (0)
  - o Release Backlog (0)
  - o For 3.0 (10)

- [SDK] Factory and Receiver functions for all transforms should use pointers (Breaking Change) #1131
- General cleanup for deprecated trigger/pipelines APIs
- App pipeline function to send notification via Support Notifications
- Remove ZMQ
- NewTags factory method in app functions sdk
- Refactor MessageBus trigger configuration for single Host config
- Refactor MessageBus config to separate out of Trigger into MessageQueue like other services have
- Remove old Secret APIs now that Secret Provider is available
- Create limited Secret Provider interface for App and Device services
- [3.0] Remove wrapping of some SecretProvider APIs it in the SDK APIs #1163

- Ice Box (==12==)
  - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
  - Use nano message IPC for ASC pluggable pipeline function
  - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
  - Add support for regular in filters？ #1037
  - SDK hangs when calling docker-compose stop #500
  - ==Change the GolangRuntime to AppServiceRuntime #1199==
  - Camera Mgmt Example - Add documentation on how to ingest EVAM results into EdgeX #123 **(MEDIUM)**
  - Camera Mgmt Example - Auto start EVAM on new camera devices #122 **(MEDIUM)**
  - [SDK] Additional (stretch) metrics #1138 (**LOW**)
    - Store and Forward queue size
    - Message latency for received from MessageBus to hand off to Pipeline
  - Enhance MessageError to implement the Error interface #1125 (**LOW**)
  - Add ability to set MQTT Will options for **external MQTT** server connections #1117 (**LOW**)
  - [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)

- **New Jakarta Defects (1)**
  - ==Updated value of perTopicPipeline didn't enabled before restarting service #1187 🐜 (**medium**)==
    - Work around is to restart ASC
    - Bring this up in TSC for confirmation
- **New Kamakura Defects (2)**
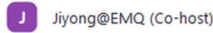 - PipelineMessagesProcessed not report correctly #1196 🐜 (**HIGH**)

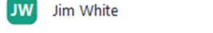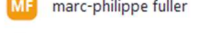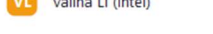- Fixed in Levski
  - Updated value of perTopicPipeline didn't enabled before restarting service #1187 🐞 (**medium**)
    - Fixed in Levski
- **eKuiper update**
  - 1.7.0 has been released
    - https://github.com/lf-edge/ekuiper/releases/tag/1.7.0
  - 1.7.1 in progress (https://github.com/lf-edge/ekuiper/milestone/13)
    - Built with testing with latest WIP modules
    - Will provide image to Lenny to test with NATs enables
    - Will be released once have release modules from Edgex
    - Includes other fixes beyond support for Levski
  - 1.8.0 is planned for January release
    - https://github.com/lf-edge/ekuiper/milestone/14
- **Opens**
  - o
- **Next meeting**:
  - **November 29th at 3:30 AZ Standard**

10/18/2022
Attendees:

Participants (6)

L- Lenny - Intel (Host, me)

J Jiyong@EMQ (Co-host)

JW Jim Wang (Intel)

JW Jim White

MF marc-philippe fuller

VL Valina Li (Intel)

Topics:

- **Call for additional agenda items**
  - none
- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - Newly Complete (<mark>1</mark>) – Since last meeting
    - ADR for Record and Replay feature #471 **(MEDIUM)**
      - https://github.com/orgs/edgexfoundry/projects/54
  - New Issues (0) – Since last meeting
  - In Progress (0)
  - In Review (0)
  - Release Backlog (<mark>8</mark>)

EdgeX - Application Working Group

- Commands via MessageBus (aka N/S MessageBus) **(MEDIUM)**
- Cloud Export example transform always error with "Unexpected type received" #133
- Camera Mgmt Example - Add documentation on how to ingest EVAM results into EdgeX #123 **(MEDIUM)**
- Camera Mgmt Example - Auto start EVAM on new camera devices #122 **(MEDIUM)**
- [SDK] Additional (stretch) metrics #1138 (**LOW**)
  - Store and Forward queue size
  - Message latency for received from MessageBus to hand off to Pipeline
- Enhance MessageError to implement the Error interface #1125 (**LOW**)
- Add ability to set MQTT Will options for **external MQTT** server connections #1117 (**LOW**)
- [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)

- For 3.0 (==10==)
  - [SDK] Factory and Receiver functions for all transforms should use pointers (Breaking Change) #1131
  - General cleanup for deprecated trigger/pipelines APIs
  - App pipeline function to send notification via Support Notifications
  - Remove ZMQ
  - NewTags factory method in app functions sdk
  - Refactor MessageBus trigger configuration for single Host config
  - ==Refactor MessageBus config to separate out of Trigger into MessageQueue like other services have==
  - Remove old Secret APIs now that Secret Provider is available
  - Create limited Secret Provider interface for App and Device services
  - [3.0] Remove wrapping of some SecretProvider APIs it in the SDK APIs #1163
- Ice Box (5)
  - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
  - Use nano message IPC for ASC pluggable pipeline function
  - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
  - Add support for regular in filters？ #1037
  - SDK hangs when calling docker-compose stop #500

- **New Jakarta Defects (0)**
- **New Kamakura Defects (0)**
- **eKuiper update**

- o 1.6.2. & 1.6.3
  - Bug fixes
  - Released
- o 1.7.0 progressing to October 26th release
  - https://github.com/lf-edge/ekuiper/milestone/12
  - Tony's issue: https://github.com/lf-edge/ekuiper/issues/973
- o Still plan on a 1.7.1 for EdgeX using released modules

- **Levki Items remaining.**
  - o Commands via MessageBus (aka N/S MessageBus) **(MEDIUM)**
    - Waiting on Command Messaging Client
  - o Cloud Export example transform always error with "Unexpected type received" #133
  - o Move remaining backlog into Ice Box for consideration for Minnesota
- **Opens**
  - o None

- **Next meeting**:
  - o **November 1st at 3:30 PST**

10/04/2022

Attendees:

L- Lenny - Intel (Host, me)

JW Jim Wang (Intel)

JW Jim White

MF marc-philippe fuller

VL Valina Li (Intel)

Topics:

- **Call for additional agenda items**
  - o None
- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - o Newly Complete **(4)** – Since last meeting
    - Put CA cert into messageBusConfig whatever the AuthMode is (except None) #1096
    - feat: Add NATS Subject for autoprovisioning streams #469
  - o New Issues (1) – Since last meeting

EdgeX - Application Working Group

- - - Cloud Export example transform always error with "Unexpected type received" #133
  - o In Progress (0)
    - ▪
  - o In Review (1)
    - ▪ ADR for Record and Replay feature #471 **(MEDIUM)**
  - o Release Backlog (7)
    - ▪ Commands via MessageBus (aka N/S MessageBus) **(MEDIUM)**
    - ▪ Camera Mgmt Example - Add documentation on how to ingest EVAM results into EdgeX #123 **(MEDIUM)**
    - ▪ Camera Mgmt Example - Auto start EVAM on new camera devices #122 **(MEDIUM)**
    - ▪ [SDK] Additional (stretch) metrics #1138 (**LOW**)
      - • Store and Forward queue size
      - • Message latency for received from MessageBus to hand off to Pipeline
    - ▪ Enhance MessageError to implement the Error interface #1125 (**LOW**)
    - ▪ Add ability to set MQTT Will options for **external MQTT** server connections #1117 (**LOW**)
    - ▪ [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)
  - o For 3.0 (9)
    - ▪ [SDK] Factory and Receiver functions for all transforms should use pointers (Breaking Change) #1131
    - ▪ General cleanup for deprecated trigger/pipelines APIs
    - ▪ App pipeline function to send notification via Support Notifications
    - ▪ Remove ZMQ
    - ▪ NewTags factory method in app functions sdk
    - ▪ Refactor MessageBus trigger configuration for single Host config
    - ▪ Remove old Secret APIs now that Secret Provider is available
    - ▪ Create limited Secret Provider interface for App and Device services
    - ▪ [3.0] Remove wrapping of some SecretProvider APIs it in the SDK APIs #1163
  - o Ice Box (5)
    - ▪ TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - ▪ Use nano message IPC for ASC pluggable pipeline function
    - ▪ Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - ▪ Add support for regular in filters？ #1037
    - ▪ SDK hangs when calling docker-compose stop #500

- **New Jakarta Defects (0)**

EdgeX - Application Working Group

- **New Kamakura Defects (0)**

- **eKuiper update**
  - No update. National holiday in China

- **Record and Replay ADR discussion**
  - CLI vs RESTful service
    - App SDK doesn't facilitate building a CLI as it does a RESTful service
    - Consensus is RESTful service is the appropriate design choice
  - In-memory storage vs more robust storage capability for crawl implementation
    - Add robust storage capability in future once have some usage and feedback
    - Consensus is in-memory storage for crawl stage called out in ADR is the appropriate design choice
- **Opens**
  - o

- **Next meeting**:
  - **October 18th at 3:30 PST**

09/20/2022
Attendees:
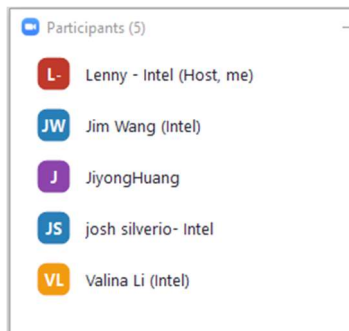
Topics:

- **Call for additional agenda items**
  - none
- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - Newly Complete **(4)** – Since last meeting
    - Secure MQTT for eKuiper #4147 **(HIGH)**
    - Expose the SecretProvider rather than wrapping it in the SDK APIs #1163
    - fix: [SDK] typo in CommandClient description #1173
    - fix: [Docs] Correct typo in CommandClient function description #862
  - New Issues (0) – Since last meeting

EdgeX - Application Working Group

- None
  - In Progress (1)
    - ADR for Record and Replay feature #471 **(MEDIUM)**
  - In Code Review (0)
    - None
  - Release Backlog (7)
    - Commands via MessageBus (aka N/S MessageBus) **(MEDIUM)**
    - Camera Mgmt Example - Add documentation on how to ingest EVAM results into EdgeX #123 **(MEDIUM)**
    - Camera Mgmt Example - Auto start EVAM on new camera devices #122 **(MEDIUM)**
    - [SDK] Additional (stretch) metrics #1138 (**LOW**)
      - Store and Forward queue size
      - Message latency for received from MessageBus to hand off to Pipeline
    - Enhance MessageError to implement the Error interface #1125 (**LOW**)
    - Add ability to set MQTT Will options for **external MQTT** server connections #1117 (**LOW**)
    - [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)
  - For 3.0 (8)
    - [SDK] Factory and Receiver functions for all transforms should use pointers (Breaking Change) #1131
    - General cleanup for deprecated trigger/pipelines APIs
    - App pipeline function to send notification via Support Notifications
    - Remove ZMQ
    - NewTags factory method in app functions sdk
    - Refactor MessageBus trigger configuration for single Host config
    - Remove old Secret APIs now that Secret Provider is available
    - Create limited Secret Provider interface for App and Device services
  - Ice Box (5)
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - Add support for regular in filters？#1037
    - SDK hangs when calling docker-compose stop #500

- **New Jakarta Defects (0)**
- **New Kamakura Defects (0)**

- **eKuiper update**

- o Working on 1.7
  - https://github.com/lf-edge/ekuiper/milestone/12
  - Targeting October 26, 20022 release date
  - Major effort is Lookup Table support

- **Overview/Feedback on Record and Replay ADR so far**
  - o **Reword description on rate multiplier**
  - o **Add type for Duration in DTO**
  - o **Add consideration that wait times between Events replayed will not be perfect**
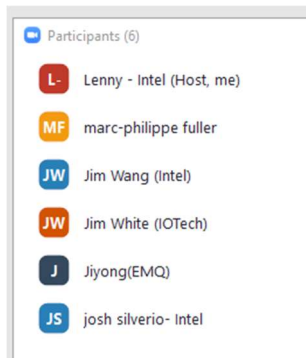
- **Opens**
  - o none

- **Next meeting**:
  - o **October 4th at 3:30 PST**

09/06/2022

Attendees:

Topics:

- **Call for additional agenda items**
  - o none
- **Review Project Board** (https://github.com/orgs/edgexfoundry/projects/50/views/2)
  - o New Issues (0) – Since last meeting
    - None
  - o Release Backlog (9)
    - Secure MQTT for eKuiper #4147 **(HIGH)**
    - Create ADR for Record and Replay feature #471 **(MEDIUM)**
    - Commands via MessageBus (aka N/S MessageBus) **(MEDIUM)**
    - Camera Mgmt Example - Add documentation on how to ingest EVAM results into EdgeX #123 **(MEDIUM)**

EdgeX - Application Working Group

- ▪ Camera Mgmt Example - Auto start EVAM on new camera devices #122 **(MEDIUM)**
- ▪ [SDK] Additional (stretch) metrics #1138 (**LOW**)
  - Store and Forward queue size
  - Message latency for received from MessageBus to hand off to Pipeline
- ▪ Enhance MessageError to implement the Error interface #1125 (**LOW**)
- ▪ Add ability to set MQTT Will options for **external MQTT** server connections #1117 (**LOW**)
- ▪ [LLRP] Add LLRP Inventory specific service metrics #70 (**LOW**)

- o In Progress (0)
  - ▪ None
- o In Code Review (0)
  - ▪ None
- o Newly Complete **(2)** – Since last meeting
  - ▪ Record and Replay - Use Case Requirements #832
  - ▪ [ASC] NATs MessageBus build option #459
- o For 3.0 (6)
  - ▪ [SDK] Factory and Receiver functions for all transforms should use pointers (Breaking Change) #1131
  - ▪ General cleanup for deprecated trigger/pipelines APIs
  - ▪ App pipeline function to send notification via Support Notifications
  - ▪ Remove ZMQ
  - ▪ NewTags factory method in app functions sdk
  - ▪ Refactor MessageBus trigger configuration for single Host config
- o Ice Box (5)
  - ▪ TensorFlow - Continue to hold in Ice Box to see if we get pull for this
  - ▪ Use nano message IPC for ASC pluggable pipeline function
  - ▪ Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
  - ▪ Add support for regular in filters？ #1037
  - ▪ SDK hangs when calling docker-compose stop #500

- - **New Jakarta Defects (0)**
- - **New Kamakura Defects (0)**

- - **eKuiper update**
  - o Added issue for NATS MessageBus support
    - ▪ Will be in 1.7.1 after EdgeX 2.3 is released
  - o 1.7.0 in progress

EdgeX - Application Working Group

- https://github.com/lf-edge/ekuiper/milestone/12
- Targeting end of October
- Support for file-based rule/stream provisioning.

- **Opens**
  - ○
- **Next meeting**:
  - ○ **September 20th at 3:30 PST**

08/23/2022

Attendees:

Topics:

- **Call for additional agenda items**
  - ○ none
- Review Project Board
  - ○ New Issues (1) – Since last meeting
    - eKuiper 1.6.0 is not backward compatible #267
  - ○ Release Backlog (9, -3)
    - Cards from Levski Planning
    - Previous new issues added
  - ○ In Progress (1)
    - [ASC] NATs MessageBus build option #459
  - ○ In Code Review (1)
    - Record and Replay - Use Case Requirements #832

EdgeX - Application Working Group

- o Newly Complete (1) – Since last meeting
  - [App SDK Docs] Document how to decrypt data from the AES256 encrypt function #784
- o For 3.0 (6)
  - [SDK] Factory and Receiver functions for all transforms should use pointers (Breaking Change) #1131
  - General cleanup for deprecated trigger/pipelines APIs
  - App pipeline function to send notification via Support Notifications
  - Remove ZMQ
  - NewTags factory method in app functions sdk
  - Refactor MessageBus trigger configuration for single Host config
- o Ice Box (5)
  - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
  - Use nano message IPC for ASC pluggable pipeline function
  - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
  - Add support for regular in filters？ #1037
  - SDK hangs when calling docker-compose stop #500

- **New Jakarta Defects (0)**
- **New Kamakura Defects (0)**
- **eKuiper update**
  - o 1.6.1 was released yesterday
    - https://github.com/lf-edge/ekuiper/milestone/11
    - Fixes issue with backwards compatibility
      - EdgeX will update to use it.
    - Enhanced plug-in support
    - Connection exception management

- **Record and Replay UCR PR**
  - o Walked thru the UCR
- **Opens**
  - o None
- Next meeting:
  - o **September 6th at 3:30 PST**

08/09/2022
Attendees:

EdgeX - Application Working Group

L- Lenny - Intel (Host, me)

JH Jiyong Huang-EMQ (Co-host)

BM Brian McGinn(Intel)

JW Jim White

Topics:

- **Call for additional agenda items**
  - o none
- Review Project Board
  - o New Issues (0) – Since last meeting
  - o Release Backlog (12)
    - Cards from Levski Planning
    - Previous new issues added
  - o In Progress (0)
  - o In Code Review (0)
  - o Newly Complete (1) – Since last meeting
    - feat(microservices): Add NATS MessageBus Overview for App Service Trigger #805
  - o For 3.0 (6)
    - [SDK] Factory and Receiver functions for all transforms should use pointers (Breaking Change) #1131
    - General cleanup for deprecated trigger/pipelines APIs
    - App pipeline function to send notification via Support Notifications
    - Remove ZMQ
    - NewTags factory method in app functions sdk
    - Refactor MessageBus trigger configuration for single Host config
  - o Ice Box (5)
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - Add support for regular in filters？ #1037
    - SDK hangs when calling docker-compose stop #500

- **New Jakarta Defects (0)**
- **New Kamakura Defects (0)**

EdgeX - Application Working Group

- **Record and Replay Use Case Discussion**
  - Need help with understanding the need for this.
    - Jim will get this information

- **eKuiper update**
  - 1.6.0 released
    - Release notes: https://github.com/lf-edge/ekuiper/releases/tag/1.6.0
  - Started 1.6.1
    - https://github.com/lf-edge/ekuiper/milestone/11
    - Plug-in from default library for Alpine versions
  - No 1.7 milestone no defined yet
- **Opens**
  - None
- Next meeting:
  - **August 23rd at 3:30 PST**

07/26/2022
Attendees:

- L- Lenny - Intel (Host, me)
- BM Brian McGinn(Intel)
- JW Jim Wang (Intel)
- JW Jim White
- JH Jiyong Huang-EMQ
- J- Josh - (Intel)
- MF marc-philippe fuller
- VL Valina Li (Intel)

Topics:

- **Call for additional agenda items**
  - none
- Review Project Board
  - New Issues (0) – Since last meeting
  - Release Backlog (12)
    - Cards from Levski Planning
    - Previous new issues added
  - In Progress (0)
  - In Code Review (1)

- feat(microservices): Add NATS MessageBus Overview for App Service Trigger #805
  - Newly Complete (2) – Since last meeting
    - Add pipeline function to wrap raw data from previous function into an Event/Reading #1149
    - feat: docs for built-in pipeline function to wrap event #799
  - For 3.0 (6)
    - [SDK] Factory and Receiver functions for all transforms should use pointers (Breaking Change) #1131
    - General cleanup for deprecated trigger/pipelines APIs
    - App pipeline function to send notification via Support Notifications
    - Remove ZMQ
    - NewTags factory method in app functions sdk
    - Refactor MessageBus trigger configuration for single Host config
  - Ice Box (5)
    - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    - Use nano message IPC for ASC pluggable pipeline function
    - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    - Add support for regular in filters？ #1037
    - SDK hangs when calling docker-compose stop #500

- **New Jakarta Defects (0)**
- **New Kamakura Defects (0)**

- **eKuiper update**
  - Release 1.6 is code complete
    - In process of creating the release.
    - https://github.com/lf-edge/ekuiper/milestone/10
    - EdgeX will update to 1.6 for Levski once it is ready
- **Opens**
  - none
- Next meeting:
  - **August 9th at 3:30 PST**

07/12/2022

Attendees:

- Lenny Goodell – Intel
- Jim White – IOTech
- Jim Wang – Intel

EdgeX - Application Working Group

- Marc Fuller – Intel
- Jiyong Huang – EMQ (eKuiper)
- Valina Li - Intel

Topics:

- **Call for additional agenda items**
    - none
- Review Project Board
    - New Issues (4) – Since last meeting
        - Camera Mgmt Example - Auto start EVAM on new camera devices #122
        - Camera Mgmt Example - Add documentation on how to ingest EVAM results into EdgeX #123
        - [App SDK Docs] Document how to decrypt data from the AES256 encrypt function #784
        - Add pipeline function to wrap raw data from previous function into an Event/Reading #1149
    - Release Backlog (9)
        - Cards from Levski Planning
        - Previous new issues
    - In Progress (0)
    - In Code Review (0)
    - Newly Complete (5) – Since last meeting
        - [Examples] Camera Management App Service #117
        - [SDK] Additional committed metrics #1116
        - [ASC] Additional metrics #432
        - [App Services Docs] Document Additional Metrics #780
        - Go 1.18 Upgrade #1145
    - For 3.0 (1)
        - [SDK] Factory and Receiver functions for all transforms should use pointers (Breaking Change) #1131
    - Ice Box (5)
        - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
        - Use nano message IPC for ASC pluggable pipeline function
        - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
        - Add support for regular in filters？ #1037
        - SDK hangs when calling docker-compose stop #500
- **New Jakarta Defects (0)**
- **New Kamakura Defects (0)**
- **eKuiper update**
    - Working on 1.6 (release targeted July 27th)

EdgeX - Application Working Group

- ▪ https://github.com/lf-edge/ekuiper/milestone/10
- **Opens**
  - o 3.0 brainstorming
    - ▪ General cleanup for deprecated trigger/pipelines APIs
    - ▪ Notifications from an App Service
      - • App pipeline function to send notification via Support Notifications
      - • Available in ASC
    - ▪ Remove ZMQ
      - • Clean out Dockerfiles adding of ZMQ libs
- Next meeting:
  - o **July 26th at 3:30 PST**

06/28/2022
Attendees:
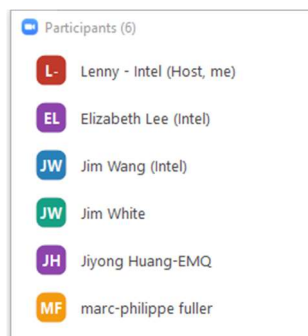
Topics:

- **Call for additional agenda items**
  - o none
- Review Project Board (New Project Board)
  - o New Issues (1) – Since last meeting
    - ▪ Enhance MessageError to implement the Error interface #1125
  - o Release Backlog (10)
    - ▪ Cards from Levski Planning
    - ▪ Previous new issues
  - o In Progress (1)
    - ▪ [SDK] Additional metrics #1116
      - • Bytes exported via MQTT
  - o Code Review (1)
    - ▪ [Examples] Camera Management App Service #117
  - o Newly Complete (5)
    - ▪ SDK] Additional metrics #1116

EdgeX - Application Working Group

- - - - - Invalid Messages Received
        - Bytes exported via HTTP
        - Pipeline Errors
      - [ASC] Profiles that have metrics must have PublishHost configuration set #429
      - [LLRP] CustomConfig setup bug #86
    - For 3.0 (1)
      - [SDK] Factory and Receiver functions for all transforms should use pointers (Breaking Change) #1131
    - Ice Box (5)
      - TensorFlow - Continue to hold in Ice Box to see if we get pull for this
      - Use nano message IPC for ASC pluggable pipeline function
      - Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
      - Add support for regular in filters？#1037
      - SDK hangs when calling docker-compose stop #500
- **New Jakarta Defects (1)**
    - [LLRP] CustomConfig setup bug #86
- **New Kamakura Defects (1)**
    - [LLRP] CustomConfig setup bug #86
- **eKuiper updat**
    - Working on 1.6
      - https://github.com/lf-edge/ekuiper/milestone/10
        - New API to upload config file to "etc" folder (use from UI)
        - New IN function for rules
        - Don't close rule when error from MessageBus

- **Opens**
    - Reviewed how Redis MessageBus handles disconnect/reconnect.
      - Spams log with errors until able to connect to Redis again. Then works as expected.
      - eKuiper need to leave rule active after error from messaging

- Next meeting:
    - **July 12th at 3:30 PST**

06/14/2022
Attendees:

EdgeX - Application Working Group

Lenny - Intel (Host, me)

JH Jiyong Huang-... (Co-host)

JW Jim Wang (Intel)

JW Jim White

Topics:

- **Call for additional agenda items**
  o none

- Review Project Board
  o New Issues (0) – Since last meeting
  o Release Backlog (12)
    ▪ Cards from Levski Planning
    ▪ Added new issues from last meeting
  o In Progress (1)
    ▪ SDK] Additional metrics #1116
      • Invalid Messages Received
  o Code Review (0)
    ▪ none
  o Newly Complete (6)

    ▪ build(deps): bump github.com/eclipse/paho.mqtt.golang from 1.3.5 to 1.4.1 #1121
  o Ice Box (5)
    ▪ TensorFlow - Continue to hold in Ice Box to see if we get pull for this
    ▪ Use nano message IPC for ASC pluggable pipeline function
    ▪ Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
    ▪ Add support for regular in filters？#1037
    ▪ SDK hangs when calling docker-compose stop #500
- **New Jakarta Defects (0)**
    ▪ none
- **New Kamakura Defects (0)**
    ▪ none
- **eKuiper update**
  o Released 1.5.1
    ▪ https://github.com/lf-edge/ekuiper/milestone/9?closed=1
    ▪ #1285 related to EdgeX for handling Object Value type

- o Working on 1.6.0 for July 20th
  - ▪ https://github.com/lf-edge/ekuiper/milestone/10
  - ▪ Issue when Redis is restarted.
- **Opens**
  - o none

- Next meeting:
  - o **June 28th at 3:30 PST**

05/31/2022

Attendees:

Topics:

- **Call for additional agenda items**
  - o none
- **Define more Metrics for App SDK**
  - o **From ADR**
    - ▪ ~~Processing time for a pipeline; latency (measure of time) an event takes to get through an application service pipeline~~
    - ▪ DB access times
    - ▪ How often are we failing export to be sent to db to be retried at a later time *(i.e. store and forward)*
    - ▪ What is the current store and forward queue size *(same as above???)*
    - ▪ How much data (size in KBs or MBs) of packaged sensor data is being sent to an endpoint (or volume) – *HTTP/MQTT Export*
    - ▪ Number of invalid messages ~~that triggered pipeline~~ received *(before sent to any pipelines)*
    - ▪ ~~Number of events processed (per pipeline)~~
    - ▪ ~~Number of messages received~~
  - o Others?
    - ▪ Number of errors that terminate a pipeline
    - ▪ Message latency for MessageBus to Pipeline

- Review Project Board
  - o New Issues (2) – Since last meeting

EdgeX - Application Working Group

- ▪ Add ability to set MQTT Will options for external MQTT server connections #1117
- ▪ [Examples] Camera Management App Service #117
- o Release Backlog (9)
  - ▪ Created cards from Levski Planning
- o In Progress (0)
  - ▪ none
- o Code Review (0)
  - ▪ none
- o Newly Complete (6)

  - ▪ fix(config): (jakarta) ignore first change notification for custom config #340
  - ▪ fix: (jakarta) Back port swagger /secret fix #1115
  - ▪ fix: (jakarta) Make deep copy of MessageBus Optional map to avoid external adds #1113
  - ▪ AppVersion and SDKVersion are not properly set #423
  - ▪ docs: Publish swagger to 2.3.0 #1112
  - ▪ build: Upgrade to latest V3 JSON Logic #1114
- o Ice Box (5)
  - ▪ TensorFlow - Continue to hold in Ice Box to see if we get pull for this
  - ▪ Use nano message IPC for ASC pluggable pipeline function
  - ▪ Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific
  - ▪ Add support for regular in filters？ #1037
  - ▪ SDK hangs when calling docker-compose stop #500
- **New Jakarta Defects (0)**
  - ▪ none
- **New Kamakura Defects (0)**
  - ▪ none
- **eKuiper update**
  - o 1.50 released on April 2.8
    - ▪ https://github.com/lf-edge/ekuiper/releases/tag/1.5.0
  - o Working on 1.5.1 for mid June
    - ▪ https://github.com/lf-edge/ekuiper/issues?q=is%3Aopen+is%3Aissue+milestone%3A1.5.1
  - o Working on 1.60 for July
    - ▪ https://github.com/lf-edge/ekuiper/issues?q=is%3Aopen+is%3Aissue+milestone%3A1.6.0
      - • Alternative way to SQL syntax to create rules. More UI friendly for creating drag and drop
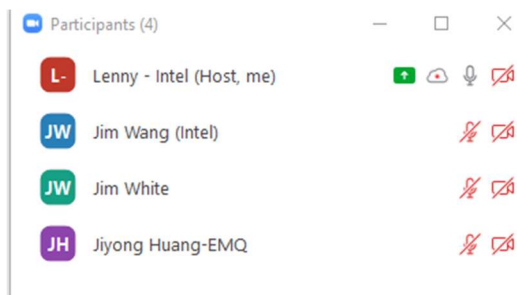- **Opens**

EdgeX - Application Working Group

○

- Next meeting:
  - ○ **June 14th at 3:30 PST**

Kamakura

04/19/2022

Attendees:

Topics:

- **Call for additional agenda items**
  - ○ none

- Review Project Board
  - ○ New Issues (0)
  - ○ Release Backlog (11)
    - ▪ Converted cards for Metrics and Delayed Start to issues
  - ○ In Progress (1)
    - ▪ [SDK] Add Metrics support #1084
  - ○ Code Review (1)
    - ▪ [Docs] Custom Trigger Example Should use Response Handler #83 (on Hold)
  - ○ Newly Complete (6)
    - ▪ [ASC] Enable Delayed Start Services #401
    - ▪ Improve the retry mechanism inside the external MQTT trigger #1069
    - ▪ [SDK] Enable basic Metrics capability #1092
    - ▪ [App SDK] Enable Delayed Start Services #1089
    - ▪ Incorrect environment variables for app-service-mqtt setup #718
    - ▪ /api/v2/config doesn't return Custom Config sections #1035
  - ○ Ice Box (3)
    - ▪ TensorFlow

EdgeX - Application Working Group

- Continue to hold in Ice Box to see if we get pull for this
- **Use nano message IPC for ASC pluggable pipeline function**
- **Examples: Cloud export examples for Azure, AWS & Google that are more Cloud specific**

- **New Jakarta Defects (0)**
  - Nothing new

- **eKuiper update**
  - 1.5.0 work in progress planned release next week
    - In progress: https://github.com/lf-edge/ekuiper/milestone/6
    - Completed: https://github.com/lf-edge/ekuiper/milestone/6?closed=1
- **Opens**
  - Will we use eKuiper 1.5.0 in Kamakura?
    - Nope, nothing new for EdgeX users.

- Next meeting:
  - **May 3rd canceled**
  - **May 17th at 3:30 PST**

04/05/2022

Attendees:

Had to cancel last minute.

Topics:

- **Call for additional agenda items**
  -

- Review Project Board
  - New Issues (3)
    - SDK Docs: Incorrect environment variables for app-service-mqtt setup
    - SDK: Improve the retry mechanism inside the external MQTT trigger
    - SDK: Swagger for /secret endpoint is missing apiVersion
    - Compose: Update eKuiper environment variables #227
  - Release Backlog (12)
    - 3 issues moved from new
    - 2 moved (1 completed and 1 in progress)
  - In Progress (1)
    - /api/v2/config doesn't return Custom Config sections #1035
  - Code Review (1)
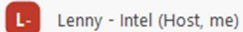   - [Docs] Custom Trigger Example Should use Response Handler #83 (on Hold)

- o Newly Complete (0)
  - ▪ none
- o Ice Box (1)
  - ▪ [TensorFlow](#)
    - • Continue to hold in Ice Box to see if we get pull for this
- **New Jakarta Defects (0)**
  - ▪ Nothing new

- **eKuiper update**
  - o **No Update**
- **Opens**
  - o

- Next meetings:
  - o **April 12th at 9am PST (Eaton's Proposal)**
  - o **April 19th at 2:30 PST (Regular App Service)**

03/22/2022

Attendees:

Topics:

- **Call for additional agenda items**
  - o

- [Review Project Board](#)
  - o New Issues (0)
  - o Release Backlog (11)
    - ▪ 5 issues moved from new since Kamakura planning
    - ▪ 6 Cards pending from Kamakura planning
  - o In Progress (1)
    - ▪ App SDK Controller tests not actually run #1031
  - o Code Review (3)
    - ▪ [Docs] Custom Trigger Example Should use Response Handler #83 (on Hold)
  - o Newly Complete (3)
    - ▪ Couple bugs from recent **Wait for Secrets via Channel** fixed and docs update

- o Ice Box (1)
    - TensorFlow
        - Continue to hold in Ice Box to see if we get pull for this
- **New Jakarta Defects (0)**
    - Nothing new

- **eKuiper update**
    - o 1.4.4 https://github.com/lf-edge/ekuiper/milestone/8
        - Targeted release on March 24th
        - Changed to using older image of tdengine and don't see issue.
            - This is a work around until tdengine team root causes and fixes
        - Other bug fixes (see link above)
            - General so EdgeX users could run into these
    - o 1.5.0 https://github.com/lf-edge/ekuiper/milestone/6
        - Targeted for April
- **Opens**
    - o

- Next meetings:
    - o **March 29th at 9am PST (Eaton's Digital Twin Service)**
    - o **April 5th at 2:30 PST (Regular App Service)**

03/08/2022
Attendees:

Missed capturing attendees

Topics:

- **Call for additional agenda items**
    - o None

- Review Project Board
    - o New Issues (0)
    - o Release Backlog (11)
        - Added the 1 new issue from last week
        - 6 Cards pending from Kamakura planning
    - o In Progress (1)
        - App SDK Controller tests not actually run #1031
    - o Code Review (3)
        - [Docs] Custom Trigger Example Should use Response Handler #83 (on Hold)

EdgeX - Application Working Group

- o Newly Complete (5)
    - Support Custom Clients for Store & Forward #1045
    - feat(microservices): Custom Store/Forward Client Registration #706
    - Improve service initialization process #1046
    - feat: Update External MQTT Trigger Docs #705
    - Not using latest Redis (regigo) module version due to bad tagging #1048
  - o Ice Box (1)
    - TensorFlow
      - Continue to hold in Ice Box to see if we get pull for this
- **New Jakarta Defects (0)**
  - Nothing new

- **eKuiper update**
  - o 1.4.3 Released
    - https://github.com/lf-edge/ekuiper/releases/tag/1.4.3
  - o 1.4.4 planned
    - Address issue with TDengine in plugin-mode
      - Only impacts rule that use the TDengine sink plug-in
      - User must change the compose-file to use slim image
  - o Working on 1.5.0 (targeting April 14th)
    - https://github.com/lf-edge/ekuiper/milestone/6

- **Opens**
  - o Metrics ADR has been approved!!!

- Next meetings:
  - o **March 15th at 9am PST (Eaton's Digital Twin Service)**
  - o **March 22^h at 2:30 PST (Regular App Service)**

02/22/2022
Attendees:

L- Lenny -Intel (Host, me)

JW Jim White

JW Jim Wang (Intel)

J Jiyong-EMQ

MF Marc Fuller - Intel

EdgeX - Application Working Group

Topics:

- Call for additional agenda items
  - None
- Review Project Board
  - New Issues (1)
    - Issue overriding AppCustom settings with environment variables #1043
  - Release Backlog (12)
    - Added the 3 new issues from last week
    - 6 Cards pending from Kamakura planning
  - In Progress (1)
    - App SDK Controller tests not actually run #1031
  - Code Review (3)
    - [Docs] Custom Trigger Example Should use Response Handler #83 (on Hold)
  - Newly Complete (4)
    - [LLRP] Use Background Publisher to send Inventory Events #56
    - [LLRP App] Update snaps for a Jakarta Release #58
    - Location of client service obtained from the registry #1032
  - Ice Box (1)
    - TensorFlow
      - Continue to hold in Ice Box to see if we get pull for this
- New Jakarta Defects (1)
  - Issue overriding AppCustom settings with environment variables #1043
    - Need to agree on severity
    - We do have work arounds (may not be pleasant)
      - Make sure override is in place when config is pushed into Consul
      - Use Consul to make the change
    - Consensus is this is a Medium

- eKuiper update
  - Working on 1.4.3 (release targeted for this week)
    - https://github.com/lf-edge/ekuiper/milestone/7
    - 4 issues with shared connection exposed by EdgeX
    - Tdengine (sync plugin) has issue using Go 1.17, moving make to Go 1.16 for now.
  - Working 1.5.0
    - https://github.com/lf-edge/ekuiper/milestone/6

- Opens
  - Metrics ADR – still not there yet

EdgeX - Application Working Group

- Next meetings:
  - o **February 29th at 9am PST (Eaton's C++ Protocol App Service)**
  - o **March 8th at 2:30 PST (Regular App Service)**

02/08/2022

Attendees:

Topics:

- Call for additional agenda items
  - o None
- Review Project Board
  - o New Issues (3)
    - Expose ConfigClient in App SDK #1030
    - /api/v2/config doesn't return Custom Config sections #1035
    - Add support for regular in filters？ #1037
  - o Release Backlog (8)
    - [LLRP App] Update snaps for a Jakarta Release #58
    - SDK hangs when calling docker-compose stop #500
    - 6 Cards pending from Kamakura planning
  - o In Progress (1)
    - App SDK Controller tests not actually run #1031
  - o Code Review (3)
    - [Docs] Custom Trigger Example Should use Response Handler #83 (on Hold)
    - [LLRP] Use Background Publisher to send Inventory Events #56
  - o Newly Complete (4)
    - [LLRP App] Add "make lint" target and add to "make test" target #59
    - Tests should run cleanly when passed the "-race" argument
    - feat: Expose the RequestTimeout configuration setting to app service #1039

- ▪ feat: Document new RequestTimeout Application Service API #689
  - o Ice Box (1)
    - ▪ TensorFlow
      - • Continue to hold in Ice Box to see if we get pull for this
- New Jakarta Defects (1)
  - o /api/v2/config doesn't return Custom Config sections #1035
    - ▪ Same for Device SDK custom configuration
    - ▪ Not critical/high (work around is to implement service' own config endpoint
- eKuiper update
  - o Just come back from Holiday
  - o Working on bug filed by Canonical when EdgeX plug-in when subscribe to the same topic on the same connection from single client.
    - ▪ Lenny will look at recreate with an app service subscribing to same topic twice
    - ▪ Also look at Receive go func lacking cancel capability
  - o Progressing on 1.5.0 development
    - ▪ https://github.com/lf-edge/ekuiper/milestone/6
    - ▪
- Opens
  - o None

- Next meetings:
  - o **February 15st at 9am PST (Eaton's C++ Protocol App Service)**
  - o **February 22th at 2:30 PST (Regular App Service)**

01/25/2022
Attendees:

Participants (4)

L- Lenny - Intel (Host, me)

J Jiyong-EMQ (Co-host)

TB Tom Brennan (Eaton)

JW Jim White

Topics:

- Call for additional agenda items
  - o None
- Review Project Board
  - o New Issues (+2)
    - ▪ [LLRP App] Update snaps for a Jakarta Release #58
    - ▪ [LLRP App] Add "make lint" target and add to "make test" target #59

EdgeX - Application Working Group

- o Release Backlog (7) (-1)
- o In Progress (0) (0)
- o Code Review (3) (+1)
  - [Docs] Custom Trigger Example Should use Response Handler #83 (on Hold)
  - [LLRP] Use Background Publisher to send Inventory Events #56
  - Tests should run cleanly when passed the "-race" argument
- o Newly Complete (3)
  - **Go 1.17**
  - [LLRP] Remove epoch-helper.go and just use time package #57
  - build: Update to using eKuiper 1.4 (unpinned to patch) #213
    - compose files
- o Ice Box (1)
  - TensorFlow
    - Continue to hold in Ice Box to see if we get pull for this
- New Jakarta Defects (0)
- eKuiper update
  - o 1.4.2 released
    - https://github.com/lf-edge/ekuiper/releases/tag/1.4.2
  - o 1.5.0 in progress (target for mid March)
    - https://github.com/lf-edge/ekuiper/milestone/6
- Opens
  - o Chinese New Year next week. eKuiper will be back for Feb 8th meeting.

- Next meetings:
  - o **February 1st at 9am PST (Eaton's C++ Protocol App Service)**
  - o **February 8th at 2:30 PST (Regular App Service)**

01/11/2022

Attendees:
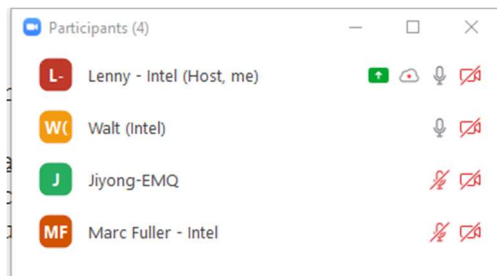
Topics:

- Call for additional agenda items

- o None
- [Review Project Board](#)
    - o New Issues (0) (-1)
    - o Release Backlog (8) (-1)
    - o In Progress (0) (-1)
    - o Code Review (2) (+1)
        - [BUG (Jakarta): LLRP App Service missing volume for inventory snap shot data #210](#)
        - [[LLRP] Migrate LLRP App service to V2 #43](#)
            - In Validation
    - o Newly Complete (1) (+1)
        - Swagger published to version 2.2.0
    - o Ice Box (1)
        - [TensorFlow](#)
            - Continue to hold in Ice Box to see if we get pull for this
- New Jakarta Defects (0)
- eKuiper update
    - o 1.4.1 Released
        - https://github.com/lf-edge/ekuiper/releases/tag/1.4.1
        - Added support for Object ValueType
    - o 1.4.2 to be released soon
        - https://github.com/lf-edge/ekuiper/milestone/5?closed=1
    - o Next will be 1.50
        - https://github.com/lf-edge/ekuiper/milestone/6
    - o Working on 2022 road map
        - https://github.com/lf-edge/ekuiper/projects/18
        - Major release each quarter
        - Welcoming comments
    - o Changing build so features are selectable
        - Allows to create smaller builds for resource limited environments
- Opens
    - o
- Next meetings:
    - o **January 18th at 9am PST (Eaton's C++ Protocol App Service)**
    - o **January 25th at 2:30 PST (Regular App Service)**

12/14/2021

Attendees:

Topics:

EdgeX - Application Working Group

- Call for additional agenda items
    - None
- Review Project Board
    - New Issues (1)
        - LLRP App Service missing volume for inventory snapshot data
    - Release Backlog (9) (no changes)
    - In Progress (0)
    - Code Review (1)
        - Migrate LLRP App service
        - Trigger Refactoring
    - Newly Complete (0)
    - Ice Box (3)
        - TensorFlow
            - Continue to hold in Ice Box to see if we get pull for this

- New Jakarta Defects (1)
    - LLRP App Service missing volume for inventory snapshot data
- eKuiper update
    - 1.4.0 released (https://github.com/lf-edge/ekuiper/releases/tag/1.4.0)
    - Demo day on Tuesday next week.
    - 1.4.1 to be release on Dec 29
        - https://github.com/lf-edge/ekuiper/milestone/4
        - Fixing Redis KV storage in secure mode
        - Provide new Docker image with Python included
            - Allows use of plug-in written in Python
        - Performance Tuning in conjunction with Siemens for large data in 1 rule
    - Roadmap planning on Friday
        - https://github.com/lf-edge/ekuiper/projects/17
- Opens
    - None
- Next meeting is **January 4th at 9am PST (Eaton's C++ App/Device Service)**

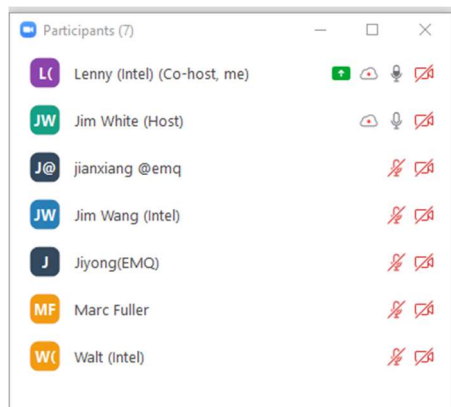## 11/30/2021
Attendees:

EdgeX - Application Working Group

Topics:

- Call for additional agenda items
  - None
- Review Project Board
  - New Issues (0)
  - Kamakura Release Backlog (9)
  - In Progress (0)
  - Code Review (1)
    - Migrate LLRP App service
  - Newly Complete (2)
    - ASC & SDK updates for latest go-mod-messaging w/o ZMQ on Windows
    - App Service examples update to using Jakarta 2.1.0 SDK
  - Ice Box (3)
    - TensorFlow
      - Continue to hold in Ice Box to see if we get pull for this

- New Kamakura Defects (0)
- eKuiper update
  - Finalizing 1.4.0 release for Dec 2nd
    - https://github.com/lf-edge/ekuiper/milestone/3?closed=1
  - Will add documentation on how to upgrade Jakarta compose file to use 1.4.0
- Opens
  -
- Next meeting is **December 7th at 8am PST (Eaton's C++ App/Device Service)**

Jakarta

11/17/2021

Attendees:

Topics:

EdgeX - Application Working Group

- Call for additional agenda items
    - None
- [Review Project Board](#)
    - New Issues (0)
    - Jakarta Backlog (0)
    - Kamakura Release Backlog (9)
        - Quick review of items planned
    - In Progress (0)
    - Code Review (1)
        - [Migrate LLRP App service](#)
    - Newly Complete (0)
    - Ice Box (3)
        - [TensorFlow](#)
            - Continue to hold in Ice Box to see if we get pull for this
        - [Fork Pipeline](#)
            - Will close as `wontfix` after Jakarta release
        - [Cloud Events](#)
            - Will close as `wontfix` after Jakarta release

- New Ireland Defects (0)
    - CVE for Encryption function ready and will be published once Jakarta is released.
- eKuiper update
    - Working on release of 1.4 on Dec 2nd
    - https://github.com/lf-edge/ekuiper/milestone/3
    - https://github.com/lf-edge/ekuiper/milestone/3?closed=1
- Opens
    -
- Next meeting is **November 30th at 2:30 PST**
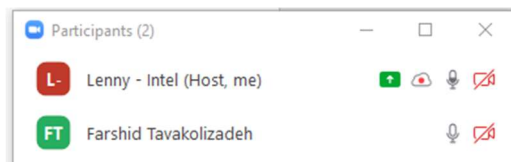

11/09/2021
Attendees:

Topics:

- Call for additional agenda items
    - None

EdgeX - Application Working Group

- [Review Project Board](#)
  - New Issues (0)
  - Release Backlog (0)
  - **Kamakura Release Backlog (9)**
  - In Progress (0)
  - Code Review (1)
    - [Migrate LLRP App service](#)
  - **Newly Complete**
    - Cleaned up ASC readme
    - Fixed bug in SDK for configurable Encrypt with aes256 algo
      - Initvector not require or used.
    - Fixed bug in ASC for sample ase256 key incorrect
    - New AES256 Encrypt function and documentation
      - Deprecated old function
    - Fixed MQTT Store and Forward bug
    - Custom trigger rework for multi-pipelines
    - CORS support added to SDK and ASC
  - Ice Box (2)
    - Fork the pipeline will be closed (won't fix) once Jakarta is released.
    - Keeping TensorFlow issue for now

- New Ireland Defects (1)
  - MQTT Store and Forward bug
  - CVE for Encryption function WIP. Will publish once 2.1 released with new function.
- Kamakura
  - Create the **Kamakura Release Backlog** and populated it with items for planning meetings.
- Opens
  - None
- Next meeting is **November 16th at 2:30 PST**

10/26/2021

Attendees:

Topics:

- Call for additional agenda items

- o None
- [Review Project Board](#)
  - o New Issues (1)
    - 1 new question (answered, waiting on final response)
    - 2 others moved to Ice Box to deal with in Kamakura
  - o Backlog (0)
  - o In Progress (2)
    - [Migrate LLRP App service](#)
  - o Code Review (1)
    - [New Encryption function](#)
  - o Newly Complete
    - CORS support
    - [TAF test for external MQTT](#)
    - [New IsEventData option for Batch](#)
  - o Ice Box (8)

- New Ireland Defects (0)
  - o CVE for Encryption function. Will work Bryon once 2.1 released with new function.
- eKuiper
  - o Created PRs in edgex-go and edgex-compose for injecting credentials into connections file.
  - o Canonical is looking at separating out eKuiper into its own snap
- Opens
  - o None
- Topics for Kamakura Planning?
  - o
- Next meeting is **November 9th at 9am PDT**
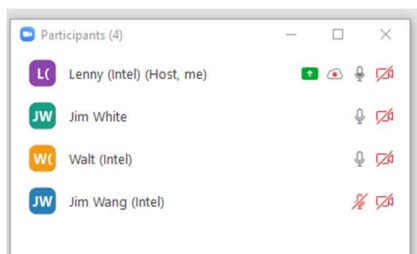
10/19/2021

Attendees:
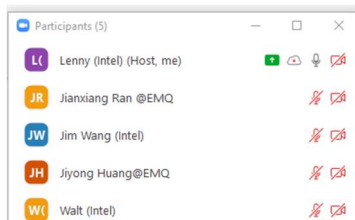
Topics:

- Call for additional agenda items
  - o None
- [Review Project Board](#)

- o New Issues (2)
    - ▪ 2 remaining in new are waiting on response
- o Backlog (1)
    - ▪ [Migrate LLRP App service](#)
- o In Progress (2)
    - ▪ [TAF test for external MQTT](#)
    - ▪ [New Encryption function](#)
- o Code Review (1)
    - ▪ [New IsEventData option for Batch](#)
- o Ice Box (6)
    - ▪ Moved here - Tests should run cleanly when passed the "-race" argument #209
- New Ireland Defects (0)
    - o CVE for Encryption function? Will revisit this with Bryon.
- eKuiper Update
    - o Update status on 1.4.0 release on approx. Nov 12th
    - o New shared connection configuration (Demoed)
    - o Need to enhance Secret Store Setup to also write this new Connections configuration in order to support this in Jakarta for the future.
- Opens
    - o None
- Topics for Kamakura Planning?
    - o Reviewed the ICE box items. No one has any new items
    - o Will revisit this next meeting
- Next meeting is **October 26st at 9am PDT**

10/5/2021
Attendees:

Topics:

- Call for additional agenda items
    - o None
- Review Project Board
    - o New Issues (4 => 2)

- Reviewed board and accepted 2 new issues into backlog
  - Enable tags pipeline function for new generic type #959
  - Tests should run cleanly when passed the "-race" argument #209
- 2 remaining in new are waiting on response
  - Backlog (4)
    - One is for TAF
    - Another is for LLRP
    - Other two are from above
  - Dispositioned Jakarta docs to be merged column
    - All pending merges completed
- New Ireland Defects (0)
- eKuiper Update
  - None – Team is on national holiday
- Opens
  - None
- Next meeting is **October 19st at 3:30pm PDT**
  - No meeting next week

9/21/2021

Attendees:
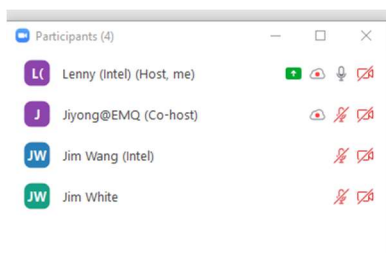
Topics:

- Call for additional agenda items
  - None
- Review Project Board
  - Waiting on response to https://github.com/orgs/edgexfoundry/projects/23 to determine if bug should be created for Mqtt Export and Store and Forward

EdgeX - Application Working Group

- o Will close <u>MaxResultCount & MaxRequestSize</u> as will not implement
- o Old issue found and put on the board. One should have already been addressed. Lenny will verify.
- New Ireland Defects (0)
- eKuiper Update
  - o Working on 1.40 (<u>https://github.com/lf-edge/ekuiper/milestones</u>)
  - o New Plugin using nano message protocol using IPC
  - o Implemented env overrides for configuration
  - o Connection Pool to share connections between Sources and Syncs (Edgex and MQTT)

- Review of EdgeX SecretStore and Vault
  - o Reviewed how to configure Security service to create tokens and seed redis password.
  - o Talk about how eKuiper could just use Vault API to get the redis password
    - ▪ Would have to have go func to keep token TTL current.
  - o Not a priority now with connect pool if EdgeX sync shares EdgeX source connection which already has redis password from config injection.
- Opens
  - o none
- Next meeting is **September 28ˢᵗ at 9am PDT**

9/14/2021

Attendees:

Topics:

- Call for additional agenda items
  - o none
- Pipeline Per Topic update
  - o Initial PR merged
    - ▪ Doc per approved. Merge on-hold
  - o Add on PR for custom triggers merged
    - ▪ Doc per approved. Merge on-hold
  - o Enhancement PR for multiple topics in review

- - - Original Doc PR updated for enhancement
- LLRP RFID Inventory app service migration to V2
- Review Project Board
  - o
- New Ireland Defects (0)
- Opens
  - o Jim White: Any items at risk for making it into Jakarta? Nope.
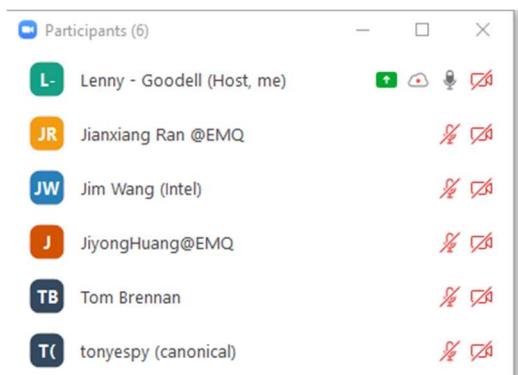- Next meeting is September 21st at 3:30pm PDT

9/7/2021
 Meeting canceled

8/31/2021
 Meeting canceled

8/24/2021

Attendees:

Topics:

- eKuiper Update
  - o Reviewed project boards
    - https://github.com/lf-edge/ekuiper/projects/16
    - Proposed enhancement to Synchronize Source and Sink to use same client
  - o 1.3.1 plan release next week
    - https://github.com/lf-edge/ekuiper/issues?q=is%3Aopen+is%3Aissue+milestone%3A1.3.1
  - o EdgeX Sink for publishing back to EdgeX MessageBus Demo
    - Will not work with Secure MessageBus yet
      - Synchronize Source and Sink would fix this
- C/C++ Application Service SDK – Tom Brennan (Eaton)
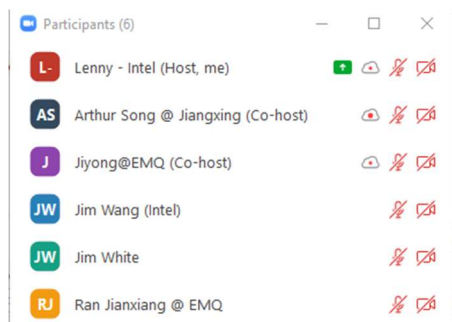
EdgeX - Application Working Group

- o Industrial
- o North side servers that talk these protocols
- o All libraires written in C/C++
- o Starting with Device Service SDK
  - ▪ Leverage existing infrastructure for MessageBus, etc.
  - ▪ Needs to listen to MesssageBus
- o Purpose is to create digital twin for all the devices on the north side for a single protocol
  - ▪ Not a general-purpose App Service SDK like we have in Go
- Pipeline Per Topic update
  - o PRs open for Docs, SDK & ASC
- LLRP RFID Inventory 1.0.0 app service released
- Opens
  - o **August 31ˢᵗ WG meeting canceled**

8/17/2021

Meeting canceled

8/10/2021

Attendees:

Topics:

- eKuiper Update
  - o New Project board for EdgeX Integration
    https://github.com/lf-edge/ekuiper/projects/16
  - o Docker Image size reduced
    - ▪ Still a little bigger than image used in Hanoi
  - o New Tutorial for EdgeX Integration

EdgeX - Application Working Group

- **AR: Jim White**

  Add link in EdgeX Docs examples to this tutorial
  - 1.3.0 planned release August 12th
- AI/ML Framework (Arthur - Jianxing Intelligence)
  - Code Name: Trueno (Spanish for Thunder)
  - ML/AI Pipeline
  - Create/configure pipeline via REST API
  - Next Steps
    - Create example of EdgeX integration in edgex-example repo
- Board Review (https://github.com/orgs/edgexfoundry/projects/23)
  - Review Bugs
    - 0 – Critical
    - 0 – High
    - 0 – Medium
    - 1 – Low (need to reproduce)
- Opens
  - None

8/3/2021

Attendees:

- Lenny Goodell
- Jim White
- Jim Wang

Topics:

- Opens
  - None
- SDK 2.0.1 and ASC 2.0.1
  - SDK and ASC release on 7/30/2021
  - Compose files update waiting for eKuiper 1.3.0
- App Functions SDK for other programing languages (C, Python) – Jim White
  - Python AI/ML shops
  - Eaton showing interest (Power equipment)
    - Talking about joining community and making contributions
    - Interested in App Functions SDK in C
    - Using EdgeX in tiered way
      - 1st Next to devices
   - 2nd Gateway collecting data from other instances

- Want to export data in standard industrial protocols (BACNet, OPC-UA, etc.)
  - Have their own C libraries for this??
    - Why not us CGO call into C libraries from existing SDK?
    - If in C, does whole SDK need to be replicated?
    - Next step is to have Eaton come to future WG meeting.

- LLRP Update:
  - One more round of validation after fix in Device LLRP
- Pipeline per Topic
  - Started prototyping
- Additional TAF Integration tests
  - Reviewed capabilities for unit test ability
  - External MQTT Trigger is only one left that need TAF integration tests

2.0.1 patch of SDK and App Service Configurable release on 7/30/2021

- [SDK] FilterByResource creates new event without required fields #922 (**CRITICAL**) (**FIXED**)
- [SDK] Call to log correlation ID in log message results in "unsupported value type" #923 (**LOW**) (**FIXED**)
- [SDK] App service panics when MQTTSerectSend AuthMode is blank #920 (**LOW**) (**FIXED**)

7/27/2021
Attendees:
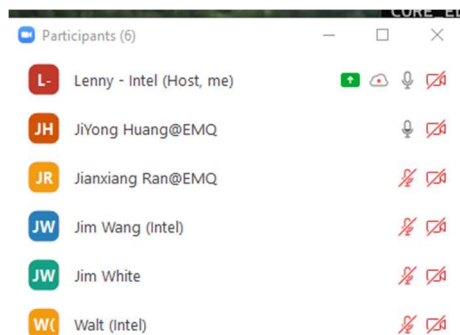
Topics:

- Opens
  - None
- Planning patch of SDK and ASC
  - Examples need to be bumped also
- Board Review (https://github.com/orgs/edgexfoundry/projects/23)
  - Review Bugs
    - 1 - Critical (triggers patch release)

EdgeX - Application Working Group

- - 0 – High
  - 0 – Medium
  - 2 - Low
- Documentation Updates
  - Examples list updated
  - Elizabeth from Intel proofread App Service docs and submitted PR for changes.
- LLRP Update:
  - Repo renamed to **app-rfid-llrp-inventory**
  - CI pipeline in place and working
  - Intel validation complete for both App and Device service.
    - V1 release pending triage of seemly unrelated error in Device service logs.
- Example migrations
  - All Complete
  - Cloud examples collapsed into one cloud-mqtt-export example
    - Have profile for AWS & Azure with just changes MQTT connection details
- Pipeline per Topic design discussion
  - From API perspective I was thinking
    - AddFunctionsPipelineByTopic(topic string, transforms ...AppFunction) error
  - Implementation wise:
    - Accepts wildcards for the topic same as our subscribe topics.
    - This should fail if Trigger not set to EdgeX MessageBus or External MQTT, i.e. if set to HTTP.
    - Store the new functions pipeline in a collection (TBD) so that we can match one or more to the incoming topic
    - For each match we simply call ProcessMessage??
  - Things to consider when multiple function pipelines get triggered from a single received message.
    - How to handle store and forward, i.e. we will need to also have an ID attached to each functions pipeline that gets saved with the data so it can restart the correct pipeline.
    - Handling of ResponseData for each functions pipeline, i.e. does the trigger need to publish the response data from each functions pipeline that has set ResponseData
    - Probably more things that haven't been consider yet...
    - What is if one pipeline fails and other doesn't. Will treat them as independent pipelines.
  - Concern is one app service with multiple pipelines not scaling like old export services.
    - Add warning in documentation to use sparingly
- eKuiper Update
  - Connecting directly to data from Core/Device (by pass app-rules) service receives AddEventRequest.
  - Enhanced to handle AddEventRequest and want to release with SDK patch
  - Reviewed Project board.

- o Worked on reducing size of docker image
  - ▪ Found that the binary being duplicated. Reduced from 74MB to 16MB
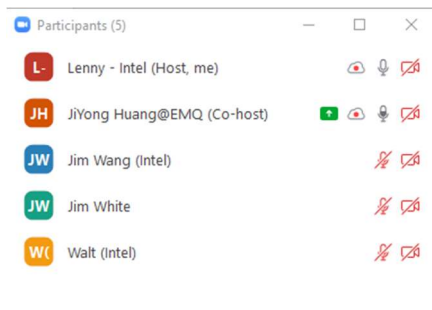- o Completed OpenYurt integhration
- o Edgex Hackathon training

7/20/2021
Attendees:

Just Lenny so meeting canceled. ☹

7/13/2021
Attendees:

Topics:

- Opens
  - o none
- Board Review (https://github.com/orgs/edgexfoundry/projects/23)
  - o Jakarta items added to new column
  - o Dispositioned all new items to appropriate columns
- Documentation Updates
  - o All complete (One PR open)
  - o Now example list needs updating
- LLRP Update:
  - o Moved out of holding
  - o CI pipeline fixes in place
  - o Repo is named **rfid-llrp-inventory-service**
    - ▪ Recommend renaming to **app-rfid-llrp-inventory**
    - ▪ Lenny will submit ticket to LF to rename
- Example migrations
  - o Mostly done
  - o Cloud examples need discussion
    - ▪ Nothing cloud specific in these examples
    - ▪ Refactor to a single example with profiles.
- eKuiper update

- o EdgeX Docs updated to change to new name and repo
- o eKuiper had their TSC kick-off meeting on 7/12/2021
- o Reviewed project board
- o TAF Performance tests see image size doubling, need to confirm.
    - Working on smaller image
   - Jim will get data for next time on July 27th

Ireland

6/29/2021

Attendees:

Topics:

- Opens
    - o none
- Board Review
    - o Reviewed
- LLRP Update:
    - o Custom **[Aliases]** config section in TOML completed
    - o Ready for TSC vote
- Documentation Updates
    - o Mostly complete.
    - o Working on ApplicationService API which will complete the updates expect for minor tweaks to links and adding **!!! edgey** notes to Context API doc.
- Next week's meeting is cancelled (Lenny on vacation)
- Kuiper update
    - o Released 1.2.1 for use in EdgeX 2.0 (Ireland)
    - o Board Review – Done and next release (1.3.0)

EdgeX - Application Working Group
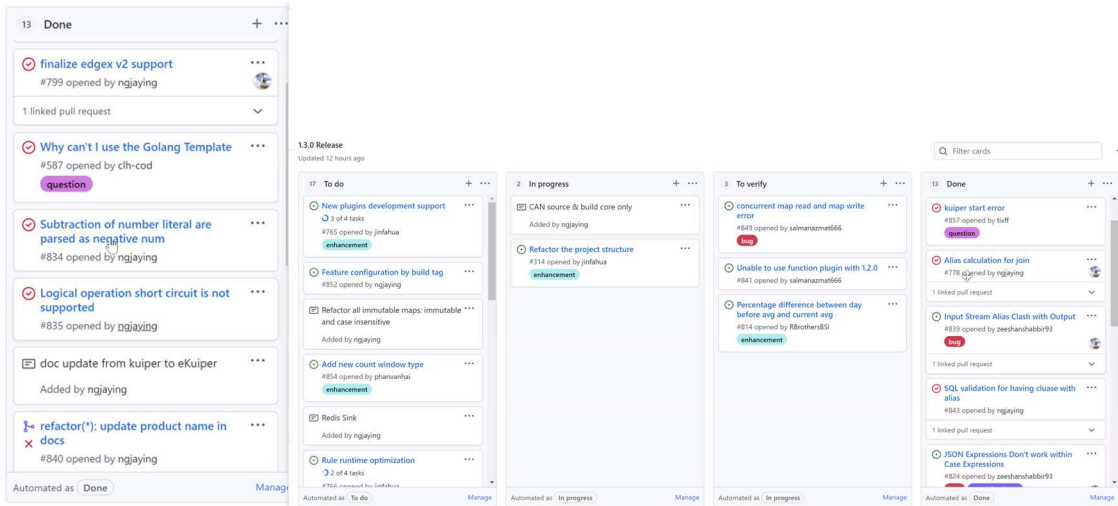
6/18/2021
Attendees:
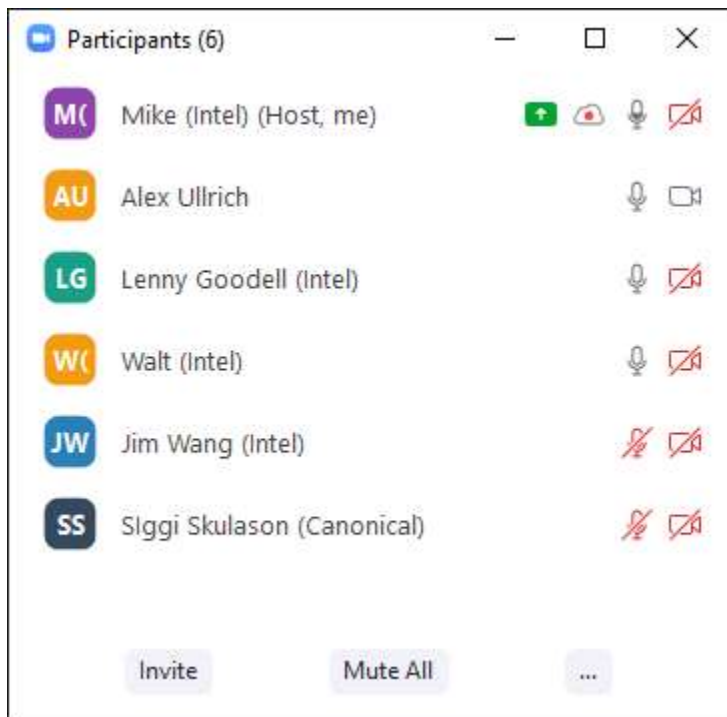
Topics:

EdgeX - Application Working Group

- No Opens
  - o Draft PRs on Changelog
- LLRP Update:
  - o Move Alias for a reader in toml file, eventually move to a custom config when migrating to 2.0

6/10/2021

Attendees:

L- Lenny - Intel (Co-host, me)

JW Jim White (Host)

JH JiYong Huang... (Co-host) ⬆

BM Brian McGinn (Intel)

JW Jim Wang (Intel)

RJ Rocky Jin

W(Walt (Intel)

Topics:
- Board Reviewed
  - o Reviewed recent completed items
  - o Backlog slim
    - Minor tech debt item
    - Issue Siemens devs working on
    - Moved other items to ICE box that will not make it for the Ireland release
  - o LLRP Inventory Service
    - Almost ready for TSC vote
    - One enhancement for adding Alias to TOML file so they can be populated from static list rather than the Consul UI.
- Kuiper update

EdgeX - Application Working Group

Status

- **Done**
  - Release 1.2.1 beta for Edgex v2 integration
  - Support Edgex binary reading
  - Bug fixes: password hidden, join problem
- **Ongoing**
  - Customer requested enhancements: shared source instance, window time functions
  - Fix any problems found for Edgex V2 integration
- **TODO**
  - New minor release 1.2.1, to be released at June
    - Finalize edgex v2 support
    - Any bug fixes
  - New release 1.3.0, to be released at June
    - New plugin system based on rpc
    - Window runtime optimization

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5/27/2021

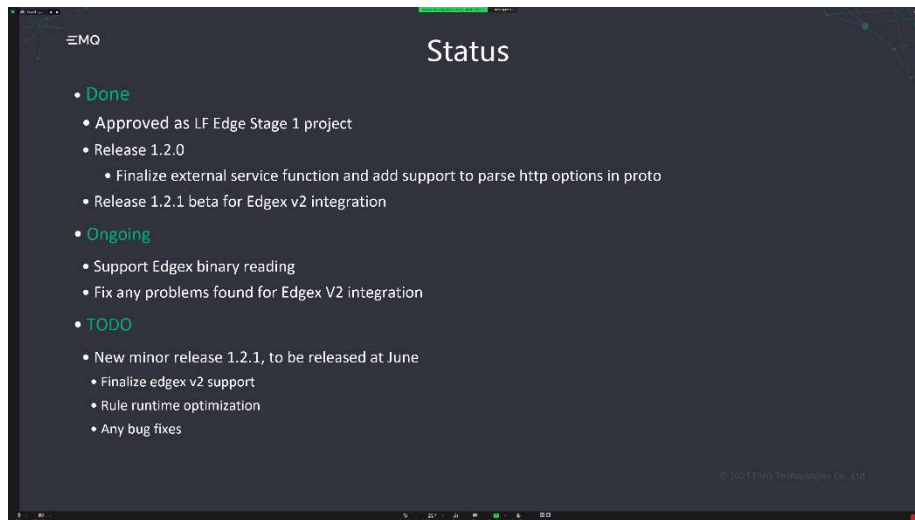Attendees:

Topics:

- Opens

- o Kuiper Integration – tested with latest compose files, testing in non-secure mode. To be done: security bootstrap needs to be written to write redis password to file that's volume mounted into Kuiper container (tbd: snap)
  - o
- Board
- Kuiper Update
-

EdgeX - Application Working Group

5/21/2021

Attendees:

Participants (5)

M(Mike (Intel) (Host, me)

LG Lenny Goodell (Intel)

JW Jim White

SS Siggi Skulason (Canonical)

W(Walt (Intel)

Topics:
- Opens
  - Any update on Multiple Exports
    - Would like MQTT topics to be a bit more dynamic
    - Suggestion for chaining for
    - HTTPExport("",true).HTTPExport("",true).HTTPExport("",false)
    - Parameters:
      - Address
      - Return Input Data
      - ContinueOnFailure
  - Kuiper integration timing
    - Dillemma was new features in 1.2.0 that could be used in Hanoi
  - LLRP Update:
    - Getting close! Hanoi target
- Board Review
  - o Ports Updated – will allocate ~20 ports for different app profiles to run along side each other (for apps running native/snap)

EdgeX - Application Working Group

EdgeX - Application Working Group

5/13/2021

Attendees:

M(Mike (intel) (Host, me)

JW Jim White (Co-host)

JW Jim Wang (Intel)

JY Ji Yong Huang@EMQ

W(Walt (Intel)

Topics:
- Opens
  - Multiple HTTP Export – Any input?
    - KISS to start – stay flexible for customer input
    -
- Board Review
- Kuiper Update

EdgeX - Application Working Group

EdgeX - Application Working Group

5/7/2021

Attendees:

Topics:
- Opens
  - Lenny on vacation next week (hopinpg for release next week)
  - Multiple Exports Feature might get started
  - Dynamic export location (placeholders in topic for example) like handlebars {{ }}
- Board Review
- Kuiper Update

EdgeX - Application Working Group

Attendees:

Topics:
- Opens
  - Security Topic: Kuiper Secrets POC is successful, this will be our path forward. Will use 1.2.0 release for validation and E2E testing of integration.
  - Timing Release for Kuiper – we will "release" modules (without dev tag) before main EdgeX Release for Kuiper and EdgeX to consume modules.
  - Propose version 1.2.1 for Kuiper, for EdgeX Release
- Board Review
- Kuiper Update
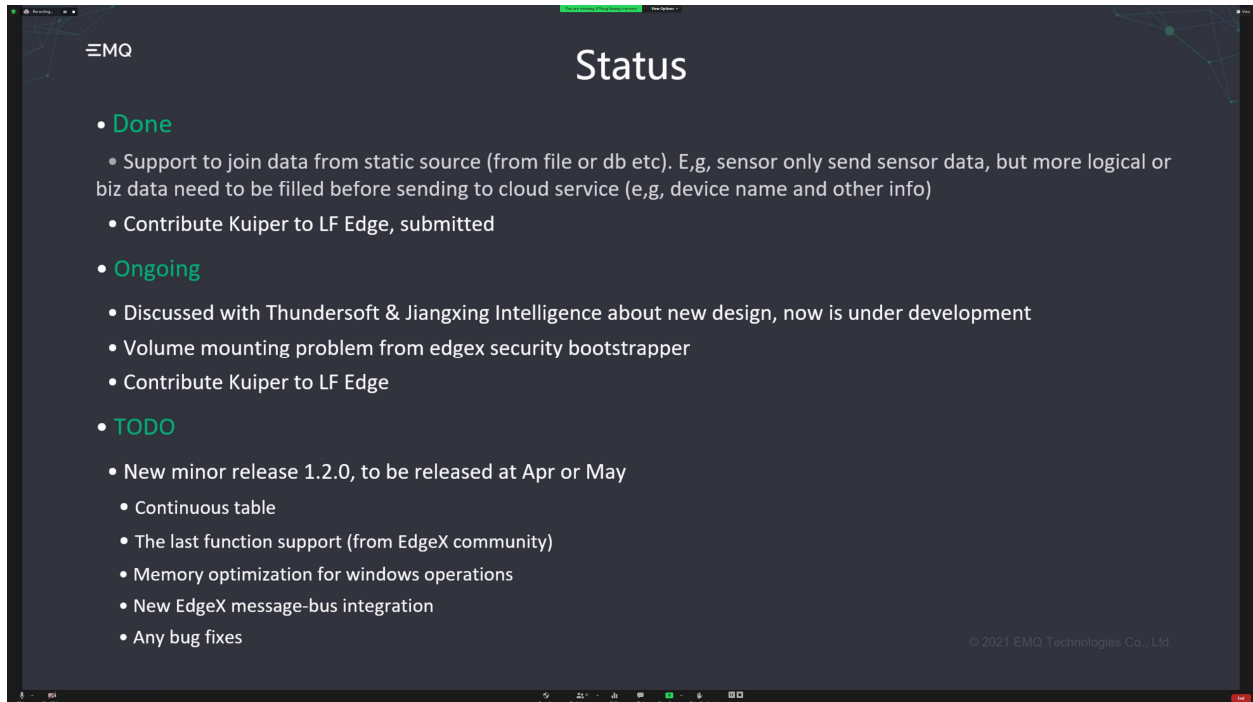
EdgeX - Application Working Group

Attendees:

Topics:

- LGTM on SDK repo (Jim's latest email)
  - Jim to place LF Ticket to add LGTM to SDK (Not App Service Configurable)
  - Now CodeQL
- Injecting MessageBus creds into Kuiper.
  - Used example as provided by Ji Yong, was able to get secrets inject use file mount
  - Successfully subscribed, but still need to see an event off of the bus to make sure it is working 100%
  - Would like to not have knowledge of Kuiper user – currently POC, need to get it a bit more robust
- Redis pub/sub topics (fixed)
  - Redis Streams vs Pub/Sub, every topic name is a stream, converted to pub/sub
  - Message Envelope now has receiver topic to know which topic and event came in on (PR to be submitted)
- Opens
- Board Review

EdgeX - Application Working Group

4/9/2021
Attendees:

Topics:

- Opens
    - Kuiper Secrets -- need to figure out how to handle both volume mounted config file and ENV variables. Currently it overwrites the file. Will work with Kuiper in next APP Wg Meeting.
    - Security Items for Consul – set profile name to app-[name], no longer mixed case
    - New Function – publishing back the response, "TriggerResponse", allow specific topic
- Github Actions
    - Change to make build instead of go build

- Board Review

EdgeX - Application Working Group

Attendees:

Topics:
- Kuiper with Secure RedisStreams
  - How can we inject the redis password into the Kuiper container?
    - Password auto-generated in secure mode for RedisStreams (but need to consider any secure authentication against any messagebus).
    - Plan is to leverage a volume mount to overwrite configuration file – Kuiper Team to provide location in container to be overwritten via email.
    - TBD: when the secret/config file is injected
- Pipeline per subscribe topic.
  - Should the optional publish topic also be per pipeline?
  - This will also give us multiple export destinations if we allow multiple pipeline per subscribe topic. i.e fork from beginning.
    - Plan: for publishing back to message bus – remove notion of publishing back, but add a new Export Transform function that accomplish the same thing that can be added to each pipeline.
- Github Actions

TODO:

EdgeX - Application Working Group

need to start working documentation

Flogo Sample

EdgeX - Application Working Group

Status

- **Done**
  - CASE statement support
  - Discussed with Thundersoft & Jiangxing Intelligence for AI function support
  - Support to join data from static source (from file or db etc). E,g, sensor only send sensor data, but more logical or biz data need to be filled before sending to cloud service (e,g, device name and other info)

- **Ongoing**
  - Discussed with Thundersoft & Jiangxing Intelligence about new design, now is under development
  - Plugin implementation optimization
  - Contribute Kuiper to LF Edge, under submission
  - New design for plugin development

- **TODO**
  - New minor release 1.2.0, to be released at Apr or May
    - The last function support (from EdgeX community)
    - Memory optimization for windows operations

  - New maintenance release 1.1.3, to be released at Mar
    - New EdgeX message–bus integration
    - Any bug fixes

EMQ

3/26/2021 - Cancelled

3/18/2021

Attendees:

Participants (5)

MJ Mike Johanson (Intel) (Host, me)

JW Jim White

R   Rocky@EMQ

JW Jim Wang (Intel)

JH Jiyong Huang (Emqx)

Topics:

- Add LGTM (security scanner) integration to app-service-configurable (LF ticket) as guinea pig

EdgeX - Application Working Group

- https://github.com/marketplace/lgtm
- Update of major Refactoring PRs
  - Merged in
- Demo of Custom Configuration prototype for App Services
- Flogo discussion
  - Any Further Discussion?
  - Put some samples together – try some examples (Aim to demonstrate understanding of EdgeX Events)
  - ZMQ triggers/activities to connect
  - Lenny and Mike to review docs from Jim
- Lenny figured out how to do custom configuration section
- TODO: need to start working documentation

-

EdgeX - Application Working Group

3/12/2021

Attendees:

MJ	Mike Johanson (Intel) (Host, me)
JW	Jim White (Co-host)
LG	Lenny Goodell (Intel)
SS	Siggi Skulason
WC	Walt (Intel)

Topics:

- Configuration migration for 2.0
  - **Bare minimum: Documentation that maps old config -> new config**
    - **Include ENV override names for ASC**
  - Explore go cli utility that inputs a old config file and spits out a new file – potentially add to edgex cli "migrate appsdk ./conffile" – Lenny to explore
  - Major changes:
    - Binding Changing to Trigger
    - Exclusive Secret Store removed
  - How are changes propagated to Consul for existing ASC – Out of scope for changes that exists on Consul that haven't been made in the TOML file.
- App Functions SDK Refactoring and impacts to custom services
  - Interfaces for App Services and Context interface, cascading changes
- Flogo discussion
  - What would the expectations look like?
- Lenny figured out how to do custom configuration section

EdgeX - Application Working Group

Attendees:

Topics:

- Rocky Update

- Opens
  - LLRP App Service PR Open
    - Review from Mike and Lenny on Friday

- Board

EdgeX - Application Working Group

2/26/2021

Attendees:

L(Lenny (Intel) (Host, me)

JW   Jim White (Co-host)

JW   Jim Wang (Intel)

SS   Siggi Skulason (Canonical)

W(Walt (Intel)

Topics:

- Status
    - Completed
        - Remove deprecated environment variables.
        - Rename MqttBroker configuration section to ExternalMqtt to match binding type name.
        - Change HTTP Export Secret key names so the value is overridable.
        - Updated ASC for SecretStore config addition of Type='vault'
        - **Fixed**: Failure in reloading Configurable Pipeline doesn't cause execute errors, thus hidden.
        - **Fixed**: V2 HTTP Trigger with invalid event returns 500
    - WIP
        - Refactor Binding configuration. Trigger coincides betters with implementation and documentation. Sub-configuration belongs under Trigger configuration.
            - **[Binding] => [Trigger]**
            - **[MessageBus] => [Trigger.EdgexMessageBus]**
            - **[ExternalMqtt] => [Trigger. ExternalMqtt]**
    - Up next
        - Refactor SDK: Add interfaces for AppSdk and AppContext so services can mock them for unit testing.
        - Lots of Documentation
        - Refactor Initialization of SDK
        - Consume core services V2 APIs via go-mod-core-contracts **(On-hold)**
            - **Waiting on V2 clients to be 100% complete**
- More configuration refactor?

EdgeX - Application Working Group

- o App Service Configurable 's Nops
    - ▪ Compression – Change to Type parameter
- o Move ApplicationSettings to writables
    - ▪ Add func to register callback when ApplicationSettings change.
- Review of LLRP App Service
    - o Need to create PR
    - o Need volunteers
        - ▪ Lenny & Siggi & Jim
- Caching of DeviceResources – Where to implement?
    - o core-contracts Client? **Yes**
    - o SDK?
- Opens
- Board

EdgeX - Application Working Group

Attendees:

- M Mike (Host, me)
- JW Jim White
- LG Lenny Goodell (Intel)
- JW Jim Wang (Intel)
- W(Walt (Intel)

Topics:

- Opens
- Board
- Rocky Update
- Ireland Status Update (Any calls on what's out?)
  - Board updated – Fork Pipeline, Topic/Pipeline is at risk/out of scope for Ireland
  - Stretch goal for Multiple Export

EdgeX - Application Working Group

Attendees:

MC Mike (Intel) (Host, me)
LG Lenny Goodell (Intel)
W(Walt (Intel)
BM Brian McGinn (Intel)
JW Jim Wang (Intel)
JW Jim White

Topics:

- Fix for handling AddEventRequest vs Event DTO and how that is now working.
    - First event from Core is correct, Event DTO is put on message bus, but next App Services in chain expecting AddEventRequest.
    - Couldn't chain App Services together
    - Added bool for expecting EventDTO in order to allow chaining of app services
    - Explore if we could do this interpretation implicitly without config (Lenny will take a look)
- Opens
- Board

EdgeX - Application Working Group

Attendees:

MJ Mike Johanson (Intel) (Co-host, me)

JW Jim White (Host)

LG Lenny Goodell (Intel)

RJ Rocky Jin@EMQ

BF Beau Frusetta (Intel)

BM Brian McGinn (Intel)

JW Jim Wang (Intel)

W(Walt (Intel)

Topics:

- Revisit template location and SDK version it uses
  - Master is using latest SDK, release/before tag/ ensure that template is using tagged SDK.
  - Add Echo statement to makefile to ensure version being used is clear
- Preview of App Service template so far
- Board
- Opens
  - Kuiper
    - Revisit implications when V2 is more complete to understand impacts to Kuiper
    - Clients modules not used, Restful call used, go-mod-messaging is used, along with models
    - 1 month-ish timeframe (2/4)
  - Decide about ValueDescriptor Name
- Kuiper Team

EdgeX - Application Working Group

Attendees:

Topics:

- Brad Corrion OpenVINO Model Serving Demo
    - TF on port 8500,8501, open vino model serving port 9000.
    - Single docker command to run open vino model serving
    - Goal: Single file go application
        - (20 min build time with go cv) – clunky experiment, min 200MB application
        - 7MB Application with single resize dependency
        - 4D Int Array, Challenge in understanding format of model (i.e BGR vs RGB), can't assume, have to research and read documentation of who created model
        - Had to rebuild and change edgex-device-camera-go
    - Discussion Item: MQTT Default for Windows, add build flags to avoid ZMQ issues on Windows when building
    - Discussion: Should we add CBOR functions to SDK? i.e Resize?
    - Biggest issue: every model has a different structure
- Docs – need to check links
- Where do we put the App Service template?
    - Examples or SDK?
    - Create an empty template for both device services and new app services, would be nice to have cli generate templates for you, but manual to start. More documentation on what, when, and how things are called.
    - Separate repo for each template
- Rules Engine Issue: https://github.com/edgexfoundry/edgex-go/issues/3009
    - Rocky will get with Gavin to check on Issue
    -
- Do we still need PushToCore? **YES**

EdgeX - Application Working Group

-
  - o Investigate LLRP service to see if this is a requirement (lenny will take a look)
- Opens
  - o
- Review Board
- Brad's Feedback:

Issues uncovered:

1. Bitten by lost time configuring and re-configuring camera device service TOML, as it was not clear I wasn't actually changing things

    1. Need to separate device service configuration from device instance configurations (e.g. cameras)

2. device-camera-go uses an edgex digest algo. It failed with Amcrest cameras, but this one worked: "github.com/xinsnake/go-http-digest-auth-client" (BSD License)

3. Links in section 3.6.1.4 are broken https://fuji-docs.edgexfoundry.org/Ch-ApplicationServices.html

4. CBOR events are not fun, can't observe contents watching the event bus

5. Developer documentation doesn't make it clear how to pass an Event onwards. I know to use the Complete() call in the App Svc SDK, but do I need to create a new Event and serialize it? Just push a payload into the byte buffer?

7. If using the MQTT as message bus, why not use a rich topic? /edgex/events/ds/device-camera-go/Camera001/onvif_snapshot -- MQTT wildcards make filtering a snap

8. Seems confusing to use a ValueDescriptor to have to know that a payload is in CBOR

    1. Prefer the CloudEvents model where data and type are identified separately

TOML file that worked for the MQTT message bus:

```TOML
[MessageBus]
Type = 'mqtt'

  [MessageBus.SubscribeHost]
  Protocol = 'tcp'
  Host = 'host.docker.internal'
  Port = 1883
```

```
[MessageBus.PublishHost]
Protocol = 'tcp'
Host = 'host.docker.internal'
Port = 1883

[MessageBus.Optional]
ClientId ="CoreData"
# Connection information
Qos        = "0" # Quality of Sevice values are 0 (At most once), 1 (At least once) or 2 (Exactly once)
KeepAlive   = "10" # Seconds (must be 2 or greater)
Retained    = "false"
AutoReconnect  = "true"
ConnectTimeout = "5" # Seconds
```

-

EdgeX - Application Working Group

EdgeX - Application Working Group

1/21/2021

Attendees:

MJ Michael Johanson (Intel) (Co-host, me)

JW Jim White (Host)

JR Jin Rocky (Co-host)

LG Lenny Goodell (Intel) (Co-host)

JW Jim Wang (Intel)

BF Beau Frusetta (Intel)

Topics:

- Rules Engine Issue: https://github.com/edgexfoundry/edgex-go/issues/3009
  - Rocky will get with Gavin to check on Issue
  -
- Do we still need PushToCore?
  - Investigate LLRP service to see if this is a requirement (lenny will take a look)
- Opens
  - FYI: Beau working on running containers as non-root (Contribution to Kuiper)
    - Kuiper team to resolve remaining issues on PR (https://github.com/emqx/kuiper/pull/689)
    - Need to update compose file in EdgeX to use next release? ~About next month
- Review Board
- Revisit Docs Conversation in a couple weeks.
  - Mike will make a PR for 2.0 Docs
  - https://github.com/edgexfoundry/edgex-docs/issues/299 (Closed)
  - https://github.com/edgexfoundry/edgex-docs/issues/298 (Open)
  - Raspberry Pi PR – Lenny to review

EdgeX - Application Working Group

Attendees:

+Jim Wang

Topics:

- Event DTO and progress…
  - Multiple Events were backed-out – going back to Single Event
- Opens
  - FYI: Beau working on running containers as non-root (Contribution to Kuiper)
  - Issue #3009 edgex-go – investigate and ping team if any issue with Kuiper or not
- Review Board
- Revisit Docs Conversation in a couple weeks.
  - Mike will make a PR for 2.0 Docs
  - https://github.com/edgexfoundry/edgex-docs/issues/299 (Closed)
  - https://github.com/edgexfoundry/edgex-docs/issues/298 (Open)
  - Raspberry Pi PR – Lenny to review

EdgeX - Application Working Group

1/7/2021

Attendees:

+ Jim Wang

Topics:

- Kuiper Dot Release for ZMQ Issue
  - For EdgeX Dot Release – Kuiper team will release 1.1.1 with updated go-mod-messaging library with ZMQ fix along with new Kuiper features.
- When do we update examples for current WIP?
  - Topic to be re-raised in core WG to tag examples so lock compatibility with a current release. No CI/CD needs to be implemented. Want to do this so that examples can be updated along with current changes for next version of EdgeX.
    - ~~DO IT! Tag examples independent of main EdgeX, include a changelog/readme that describes updated examples. Each example has readme~~
    - Branch examples at Major EdgeX Version only (ie.1.0 branch), and main becomes 2.0 compatible only
    - No Immediate Action
- Opens
- Review Board
- Revisit Docs Conversation in a couple weeks.

EdgeX - Application Working Group

Attendees:

Topics:

- Code Removal going well
- Community Contibution .Stop()
  - o Wants MakeItRun() to exit gracefully without exiting the application. Need to get more details on use case.
- https://github.com/emqx/kuiper/issues/614
- When do we update examples for current WIP?
  - o Topic to be re-raised in core WG to tag examples so lock compatibility with a current release. No CI/CD needs to be implemented. Want to do this so that examples can be updated along with current changes for next version of EdgeX.
- Review Board
- Opens

EdgeX - Application Working Group

Attendees:

EW EdgeX Working Group 1 (Host, me)

LG Lenny Goodell (Intel)

JW Jim Wang (Intel)

JW Jim White

W(Walt (Intel)

Topics:

- When do we update examples for current WIP?
  - Topic to be re-raised in core WG to tag examples so lock compatability with a current release. No CI/CD needs to be implemented. Want to do this so that examples can be updated along with current changes for next version of EdgeX.
- Review Board
- Opens

EdgeX - Application Working Group

Attendees:

MJ Michael Johanson (Intel) (Host, me)

A(Anthony (Intel) (Co-host)

LG Lenny Goodell (Intel)

A Anthony

JW Jim Wang (Intel)

JW Jim White

RS Rex St. John

W(Walt (Intel)

Topics:

- LLRP RFID App Service – Anthony Casagrande
- Review Board
- Opens

EdgeX - Application Working Group

Hanoi

11/06/2020

Attendees:

Topics:

- https://github.com/edgexfoundry/app-service-configurable/issues/131
- Review Board
- Opens

EdgeX - Application Working Group

Attendees:

Jim White

Lenny Goodell

Mike Johanson

Rocky Jin

Jim Wang

Beau Frusetta

Topics:

- Anything for code freeze?
- Do we have anything else that's outstanding for this release?
  - No, all good for release!
- Review Board
- Opens

EdgeX - Application Working Group

Attendees:

Jim

Lenny

Mike

Topics:

- Do we have anything else that's outstanding for this release?
  - No, we're all good!
- Review Board
- Opens

EdgeX - Application Working Group

10/15/2020

Attendees:
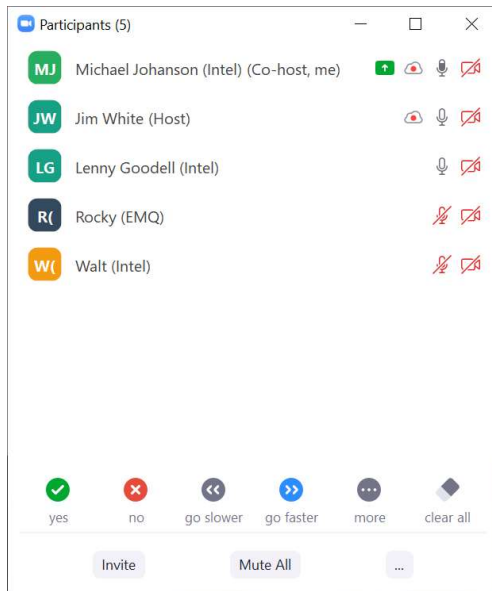
Topics:

- Scaling App Services
  - "Shared Subscriptions" – MQTT
    - "$$share/group1/edgex/events" – Round Robin
    - Lenny to update Cloud on method.
  - Store and Forward should be tested for behavior when scaled.
  - Batch recommended for time
  - Service Key Generation needs to be done for dynamic scaling, requires manual keys for scaling at this point.--> maybe?
- Refactoring for Ireland
  - Unit tests of main, because SDK it is not an interface. Implment as interface.
  - Naming of SDK
- Review Board
- Opens

EdgeX - Application Working Group

Attendees:

Topics:

- HTTP PUT:
  https://edgexfoundry.slack.com/archives/CE48UTVQ9/p1601550691017100?thread_ts=1600968004.005800&cid=CE48UTVQ9
  - o Will Create a separate HTTPPut function alongside HTTPPost
- Review Board
- Opens

EdgeX - Application Working Group

EdgeX - Application Working Group

9/17/2020

Attendees:

M	Mike (Me)
	Jim White (Host)
	Haresh Kainth
LG	Lenny Goodell (Intel)
JW	Jim Wang (Intel)
W(	Walt (Intel)

Topics:

- Topics for Ireland
    - V2 API Consumption
        - New Event DTO on the bus
    - App Service leverage notification/alert service (Reference Design for Intel Loss Prevention)
        - Subscription added to client APIs
    - Implementation of DS to App Services via Message Bus
    - Tech Debt:
        - Handley Array of types w/ JSON Logic?
        - Filter based on value type (such as int)
    - Within the same app service
        - "Conditionalizing/Branch" the pipeline
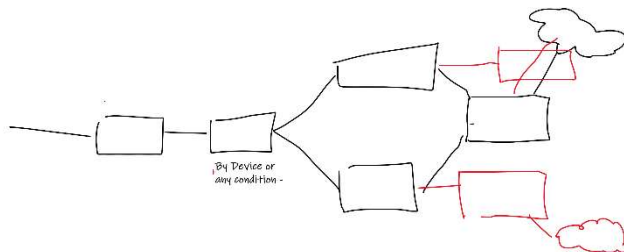
        -
        - Pipeline per topic or device
        - Multiple Export Destinations
    - Relook at TensorFlow (or others) Example
        - Predictive Analysis (Temp, Vibration Data, Combination)
    - Data Streaming support?
    - Media Streaming (Audio/Video) Support
        - Recommend for Device Service integration to retrieve inference data (media streaming outside of edgex)
        - Transform to monitor object in stream (Object Recognition inference data)
    - Integrate w/ OpenVINO
        - Send commands to control device for streaming
    - Plugin for App Services to integrate/leverage Accelerators?
        - OpenVINO can handle this directly

- o Output aggregator/multiplexor? Something to think about ---
- Review Board
- Opens

EdgeX - Application Working Group

9/17/2020

Attendees:

Topics:
- Store Secret w/o path issue
  - IOTech has been testing V2, can't add a secret with a blank path – this is because base path is not accessible due to permissions. Need to require that a path be there
  - Provide error/warning message when blank path has been specified – needs to be enforced sooner (detect configuration)
    - Not forced for configuration
    - V1 Shouldn't be a breaking change
    - V2 won't be a breaking change
  - The name "path" is frowned upon, should be "namespace" or something similar? – do this for V2? – Address as part of Secret Provider ADR for abstraction – no immediate changes for now

- MQTT Trigger design/requirements
  - Lenny has started initial impl
  - Name to be internal/external
  - Detect cbor/json
- Conventional Commits update
  - Remove "improvement" and "chore" type
  - Scopes proposal:
    - - config
      - Remove configuration
    - - security (rather than secrets)
    - Internal
    - util
- Go 1.15.2 update
  - **Done**
- s
- Rules Engine Update - Rocky

M Mike (Me)

Jim White (Host)

BN Bryon Nevis (Intel)

BM Brian McGinn (Intel)

JW Jim Wang (Intel)

JR Jin Rocky

LG Lenny Goodell (Intel)

Malini Bhandaru

W(Walt (Intel)
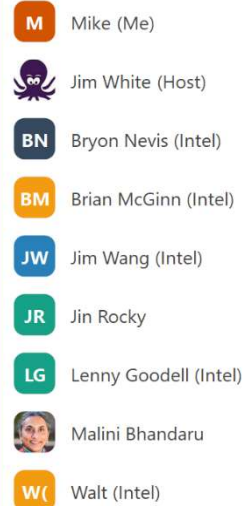
EdgeX - Application Working Group

9/11/2020

EdgeX - Application Working Group

9/3/2020

Attendees:

Topics:

- Tag EdgeX Examples Repository for each release?
  - Start adding examples that require new features of the current release that aren't in previous releases
  - Could we add a read me/change log of when examples are added and what version of EdgeX they are compatible with
  - **Propose topic for TSC Level – Architects meeting (Jim to add to Agenda)**

- Review Board
- Opens
- Rules Engine Update - Rocky

M   Mike (Me)

Jim White (Host)

LG   Lenny Goodell (Intel)

RJ   Rocky Jin - EMQ

W(Walt (Intel)

BM   Brian McGinn (Intel)

Haresh Kainth

EdgeX - Application Working Group

8/28/2020

Attendees:

Topics:

Jim – Any update about Fledge? – Lower priority nothing for us to work

EdgeX CLI

> Thoughts on capabilities needed?
>
> Once telemetry/metrics is added to AppServices and EdgeX in general
>
> Could this be retrieved via CLI command?
>
> App Service Configurable – what about commands for managing ASC.
>
> > Turning functions on/off in a pipeline
> >
> > Deploying new App Service Configurable
> >
> > > ./edgexcli asc deploy "NewASC" ./config.toml

Review Board

Opens

Walt (Intel)

Haresh Kainth

BM Brian McGinn (Intel)

C(Charles (Chuck) Knox (Intel)

Jim White
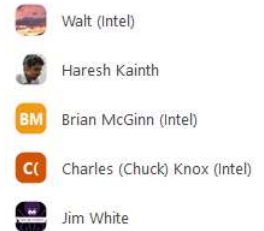
EdgeX - Application Working Group

8/20/2020

Attendees:

Topics:
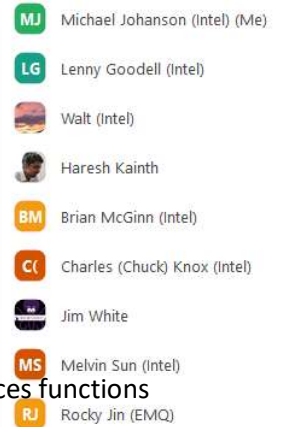
- MQTT Trigger
  - Be able to connect to a cloud based MQTT broker – to trigger App Services functions and also enabling Commands
  - Can use HTTP Trigger and Messagebus trigger as example implementations/reference for new MQTT implementation
  - Create Issue on board a "spike" and meet with Felix/Cloud to understand more detail
    - Expand Commanding Capability w/ App Services?
    - **Jim to get more detail**
- Metadata about the "gateway" or host platform
  - Tags to be added to event model/DTO
    - **Lenny to add**
  - Need to create transform that populates **(Intel team to scope)**
    - To be populated in [Writable] section of config
    - Needs to be able to be leveraged from ASC
    - Append – but don't override/ or remove duplicates
      - App Service Specific tags
      - Out of scope:
        - Core Metadata – generic tags
          - Location Hierarchy
          - Name of instance
- Fledge Transform
  - Custom App Service example to be created by Jim
    - Goal is to create connectors
  - The "other" IoT Project in LF Edge
  - No built-in transform
- Board Review

MJ Michael Johanson (Intel) (Me)

LG Lenny Goodell (Intel)

Walt (Intel)

Haresh Kainth

BM Brian McGinn (Intel)

C(Charles (Chuck) Knox (Intel)

Jim White

MS Melvin Sun (Intel)

RJ Rocky Jin (EMQ)

EdgeX - Application Working Group

MJ Michael Johanson (Me)

Haresh Kainth

LG Lenny Goodell (Intel)

CK Charles Knox (aka Chuck, Intel)

Siggi Skulason (Canonical)

8/14/2020

Attendees:

Topics:

V2 Status updates

- PR for Secrets Endpoint wrapped up – status codes misunderstanding, shouldn't be returning 207, PR open for fix – 400/500 will be used for errors, 201 is created
- V2 Wrapped up after fix for status codes, TAF Tests will be handled by QA.
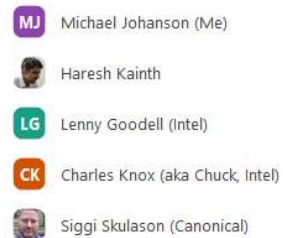
Board Review

Opens:

- Performance Concerns when Analytics start being included – should specify minimum requirements.
- Re-surface "gateway identification" in core WG meeting.
    - o Enrichment Transform – add fields to JSON/ possibly create new type
        - ▪ Gateway Name/ID
        - ▪ Location
- High Availability
    - o Configuration w/ Consul needs to be re-evaluated
    - o Health needs to be adapted for particular orchestrators
-

EdgeX - Application Working Group

8/6/2020

Topics:

- V2 Endpoint for Trigger
    - will not be implemented as "V2" with DTOs as it is to the rest of EdgeX
    - V2 will be identical to V1 – despite no changes
- Keep V1 Endpoints longer?
    - /ping, /config, /metrics – if EdgeX is sole caller why keep V1
    - Plan to revoke on same schedule as rest of EdgeX
-

EdgeX - Application Working Group

7/30/2020

Topics:

Status Updates:

- Startup duration fix in SDK PR merge soon (Merged)
- V2 Swagger complete – Complete and merged, ready to implement
- V2 Ping with any new V2 layers about to get started.
    a. Starting with this endpoint first for V2 – Standard GETs
- Individual issues created for each V2 endpoint.
    a. Will work on these after Ping

Log start-up time merged, but has issue

    Need to adjust location to accurately measure time

Opens – Add Security Endpoint integration with UI in the future

Scheduling suggestions

- Every other week – alternate between Thursday Afternoon @430PM PDT, Friday Morning @ 8AM PDT

Review Board

MJ   Michael Johanson (Me)

JW   Jim White (Host)

LG   Lenny Goodell (Intel)

     Walt (Intel)

BM   Brian McGinn (Intel)

     Gavin Lu

JW   Jim Wang (Intel)

JR   Jin Rocky

EdgeX - Application Working Group

Topics:

Application Configurable UI integration complete – woohoo!

Enhancements:

- **Team to Brainstorm Validation techniques for order**
  - Metadata for input/outputs to enforce
- Change "Download Profile" to "Download Configuration"
- Support re-ordering of functions
- Indicate when changes have been made, but not yet deployed

EMQ UI Demo

Improvement for commands:

Rocky: Need to make sure it is REST Request

Rocky to get with Sheng Qi on ways to improve UI

MJ Michael Johanson (Me)

JW JIm White (Host)

W wshengqi

LG Lenny Goodell (Intel)

Walt (Intel)

JR Jin Rocky

BM Brian McGinn (Intel)

CK Charles Knox (aka Chuck, Intel)

EU Eno Udoko

Gavin Lu

EdgeX - Application Working Group

Attendees:

Michael Johanson (Me, part

Jim White (Host)

Jin Rocky

Walt (Intel)

Bill Mahoney (Intel)

Chuck Knox (Intel)

Eno Udoko

Jim Wang (Intel)

Lenny Goodell (Intel)

Topics:

Review Bot PRs for ASC and SDK

App Functions SDK Examples "Hello World" – include in main repo?

      Breaking out go.mod per example in example repo is good enough

      Leaving in examples – not adding to main repo

Restructure App Service Config such that it can be expanded

      Want "On the fly configuration" which requires ASC components with custom function

      Low Priority/tech debt – create issue – determine if knowledge gap or missing need

Revert Mongo Removal – to be discussed at next Architects Meeting

Push Meeting to 4:30 – 5:30PM

EdgeX - Application Working Group

New Topic: Cloud control of EdgeX deployment/Device commands to be relayed to devices

Possibility: Kuiper to connect to cloud MQTT Broker to receive messages and connect to command service

Challenge: Listing of supported commands of a given EdgeX deployment reported out to cloud.

Rocky to put together proposal for a possible way to accomplish this

Board Review

7/10/2020
Attendees:

Participants (4)

MJ Michael Johanson (Me)

BM Brian McGinn (Intel)

LG Lenny Goodell (Intel)

Walt (Intel)

Topics:
- Add Restriction on scope
  - Transforms
  - secrets
  - Store-forward
  - Configuration
  - SDK
  - Triggers
  - Context
- Mike: Verbose error messages for bot to determine why
- Review PRs
- Review Board

EdgeX - Application Working Group

6/26/2020

Attendees:

MJ Michael Johanson (Me)

LG Lenny Goodell (Intel)

T tkthimma

BM Brian McGinn (Intel)

e Eno Udoko

Walt (Intel)

+Jim White

Topics:

Review Dependency Updates

Quick chat about TensorFlow.

Example service is good move to start

Core Agenda Item -

Created timestamp being omitted before broadcasting to bus

Board Review

6/19/2020

Attendees:

Michael Johans... (Me,

JW Jim White

Walt (Intel)

EdgeX - Application Working Group

Topics:

- Dependabot
  - o Mike to add bot to sdk and ASC.
- Mike to Ping Jim about getting Github Actions on Agenda for Architects meeting
- Continuing Doc Updates
  - o How to Add app service endpoint to Kong – Issue created – Assigned to Jim Wang
  - o ~~Need to add section for accessing Context when using AddRoute function~~
- Review board

EdgeX - Application Working Group

Attendees:

MJ Michael Johanson (Me)

JW Jim White

LG Lenny Goodell (Intel)

    Walt (Intel)

Topics:
- All good for .release?
  - YES!
- ASC Snap Version
  - Can we grab the tag for accurate versioning of Snapcraft.yml - currently it is hardcoded
    - Lenny to Check w/ Lisa if we can grab this from the pipeline
- Examples Config & versions
  - Update db to redis
  - Copy and move go.mod to individual examples
  - Document version compatibility for examples
- Docs Restructure
- Board Review
- Flag Parsing issue in go-mod-bootstrap
  - "=" fix for now
- (Jim) - AI/ML Exposure – TensorFlow, FogHorn, -- focus on structured sensor data first
  - Mike to explore some basics

EdgeX - Application Working Group

Attendees:

MJ	Michael Johanson (Me)
BM	Brian McGinn (Intel)
JW	Jim White
LG	Lenny Goodell (Intel)
	Walt (Intel)

Topics:

LLRP App Services

- Configuration Service
- Break-up service
- Rally the troops from Intel to present
- How do we start organizing App Services by vertical

Need a template – w/ go.mod, dockerfile, main.go for everything to scaffold an app service.

Brainstorm Batch Persistence (What do we do if the service crashes while batch is being created)

Option 1:

Do Nothing – value of data lost after few seconds – it becomes irrelevant and the data is no longer actionable – new data should be flowing when system comes up again.

Make an option/flag on whether or not persistence is turned on for batching data.

Option 2:

Rest query to core data for non-pushed data on startup – sorted by datetime -- re-running the pipeline if needing to be retried.

PreReqs: Persistence turned on and **MarkAsPushed** is being used

Query based on markaspushed and related filters(I.e. devicesfilters, valdescriptors)

Option on CoreData re-push everything on the bus after crash that hasn't been "markaspushed".

MarkAsPushed – First to update problem – What if multiple services use same data and only one successfully processed.

Thought: MarkAsPUshed per app service DB

Option 3:

Write every record to the database that is mid batch – and purge when batch is ready.

EdgeX - Application Working Group

5/15/2020

Attendees:

MJ   Michael Johanson (Me)

JW   Jim White

TC   Trevor Conn

Walt (Intel)

LG   Lenny Goodell (Intel)

Topics:

Review Board

       Check w/ Tony/Ian on #32 for a status update

       TBD - Couple weeks out: Discuss Implementation of #258, ways to store data without duplicating data in another persistent store

       Architect Meeting Topic – Gateway Identity

EdgeX - Application Working Group

Geneva

5/8/2020

Attendees:

MJ Michael Johanson (Me)

LG Lenny Goodell (Intel)

TC Trevor Conn

JW Jim White

W(Walt (Intel)

Topics:
- When *exactly* are we tagging? **5/12/2020 by EOD**
  - SDK First, then ASC
  - MQTTS Secret Manual Integration Test
- Add "Semantic PR" to App Service Configurable
  - **Mike will submit LF Ticket for Semantic PR**
  - Revisit when to roll out to rest of WG
- PR For Documentation
  - App Service Configurable update docs w/ limitations and list of support functions (mappings to SDK funcs)
  - Breakout App Functions SDK section into more logical sections
  - **Jim to bring up to TSC appropriate time to "rev" docs**
- Generate Changelog
- Check In w/ Tony for ASC Snap
- Kuiper – Documentation
  - **Jim to reach out to Rocky on documentation for Kuiper**

EdgeX - Application Working Group

5/1/2020 - Hanoi Planning

4/24/2020 - Cancelled

4/17/2020

Attendees:

MJ   Michael Johanson (Me)

LG   Lenny Goodell (Intel)

TC   Trevor Conn

e   Eno Udoko

Jim White

WM   Walt M

Topics:

Kuiper Update:

- will merge latest update of compose
- Had conversions errors – provided example on how to decode floats properly
- **Lenny to put together small demo for Hanoi Talks on EMQ X Kuiper**

Review Board

Go-mod-bootstrap update?

Going well – has reduced code in SDK startup

Will release v1.1 of SDK and subsequently the Configurable App Service once SDK has been tagged for release

EdgeX - Application Working Group

Attendees:

Topics:

Status Update:

- 2nd SecrectClient complete
  - Mike - Need to figure out whats wrong with App-service-example for Secrets
- bootstrap integration in progress.
  - Lenny needs to get with Michael Estrin – can't get compiler syntax to work for signal via channel for type when config has been updated.
  - Handlers for SDK still need to be done
- Cloud event has been completed as an example
  - CLosed out cloud event transformation issues

Review Board

New Items

      EdgeX go may need secrets to connect/authenticate w/ MQTT BRoker – need to loop in Bryan Nevis - Jim to add this to Hanoi Planning discussion. Need to get secrets into vault for authenticated broker.

      Shouldn't require exec into EMQ X Kuiper container to configure it – need more discussion on containerized version of rules engine.

EdgeX - Application Working Group

4/3/2020

Attendees:
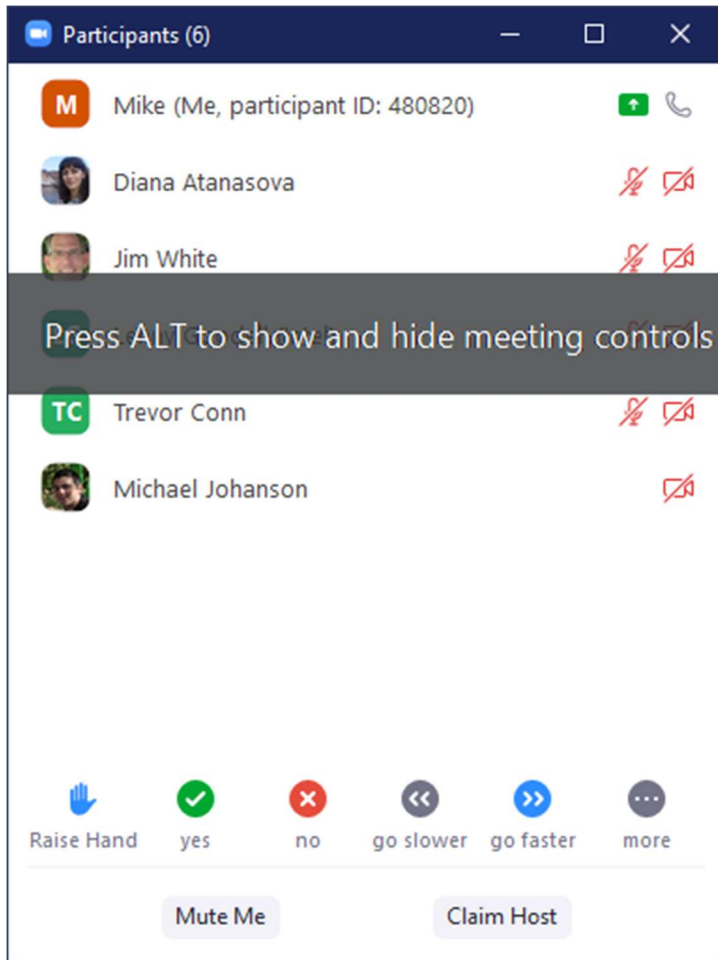
Topics:

CloudEvent Dependencies

No-Go on pulling in the cloudevent SDK into the App Func SDK

Options:

1) Create an app service example that pulls in the cloud event SDK to show how it can be leveraged

2) Conform to V1 Spec only w/out Cloud Event SDK and provide to/from transform in App SDK

3) Fugghedaboutit

MQTT

- Create option to specify type of authentication method

EdgeX - Application Working Group

-

Attendees:

M Mike (Me, participant ID: 49)

e Eno Udoko

LG Lenny Goodell (Intel)

W(Walt (Intel)

AM Adam Mitchell

Topics:

- Status Update:
    - Updating ASC w/ latest features
    - MQTT / HTTP Export w/ Secrets Support
        - MQTT Export /w secrets will be a new transform, for Geneva will have 2 MQTT Exports – one with secrets, one without, will deprecate v1 in Hanoi
- Documentation updates for Edgex Docs
    - Will move documentation from App Functions SDK repo to be over in edgex-docs exclusively
    - Need to move ASC readme to edgex-docs as well
    - Create an issue for both
- CloudEvent type can be added as TargetType for ASC after CloudEvent conversion is supported
- TAF tests – sync with QA/Test group to get this effort started – specifically for Store and Forward - Lenny to talk w/ team
- Review the Board

EdgeX - Application Working Group

Hanoi Release Planning:

Application Services / App Functions SDK / Analytics Integration

New feature(s)

- Kuiper – next release
  - Decouple from EdgeX
- Deprecate Drools rules engine
- Support Cloud Event export - will be in for Geneva
- Support additional northbound endpoints and protocol types and formats. Examples include:
  - Tencent
  - Alibaba
  - IBM Watson
  - IoTivity
  - SAP HANA
  - DDS
  - AMQP
  - Haystack
  - OPC UA
- Support enrichment functions (an EAI concept) in export services (or application services). Allow additional data or information to be added to the flow of sensor data to the northbound side. This might be information about the sensor/device that captured it or information about the commands to actuate back down on a sensor/device. - Supported w/ any custom build App Service built on top of SDK
- Integrate to edge software/agents - w/ Data Plane
  - AWS Greengrass
  - Microsoft IoT Edge
- App Service Configurable – Allow same function twice
- Fork the pipeline?
  - Allow various paths for different sensors for example
- Support multiple topics in SDK - go mod messaging- update SDK config for support of this
- Multiplexor to split out data from device services - transform that breaks down an event with multiple readings into events with single readings
- Pipeline per topic +1
- 0MQ export function

Tech Debt

- Improve binary data support
  - Local edge analytics may be fed binary data and create intelligence from it to allow for actuation at the edge based on the binary data (example: examine an image an detect the presence of a person of interest).
  - Support alternate message formats for service-to-service exchange (Protobuf, XML, etc.)

EdgeX - Application Working Group

- ~~Update SDK to use new persistence service~~

New Items:

      All Good!

3/20/2020 Cancelled

3/13/2020
Attendees:
- Lenny
- Mike
- Jim

Topics:

- Anthony completed PR to message bus in SDK.
  - Now need to use that in a new profile for ASC.
    - Update the SDK in ASC
    - Add the Profile
- Jason fixed bug where Connect wasn't called.
- Review board: https://github.com/orgs/edgexfoundry/projects/23

New Business:

- Topics for Hanoi (brainstorming ideas)
  - V2 for SDK
  - Extended Kuiper Integration?
  - App Service Configurable – Allow same function twice??
  - Fork the pipeline?
    - Allow various paths for different sensors for example
  - Support multiple topics in SDK – go mod messaging
  - Multiplexor to split out data from device services
  - Pipeline per topic

3/6/2020
Attendees:
- Lenny

- Trevor
- Mike

Topics:

Rules Engine Recap from Yesterday -

Choosing Method A as opposed to B:

Interpretation: Pre-Filtering on device is removed from "EMQ X Stream" (option B) and is assumed to happen in AppFunctions or in where clause in "EMQ X Rule". *Topics aren't a means for filtering on devices or data in the stream.*

Event Stream Example: SELECT * FROM source WHERE device in ["Device1","Device2", "Device4"] AND temperature > 30

Provisioning/Onboarding Stream Example: SELECT * FROM source WHERE device in ["Device1","Device2", "Device4"]

Would like to be able update incrementally (I.e. add a new device to list "Device 8") - need clarity on whether this possible or if whole rule needs to be updated with complete list of devices. -- For phase 1 – will manage the whole list in the provision watcher and update rule when it changes.

EdgeX - Application Working Group

Attendees:

MJ Mike Johanson (Me, p

M Marcelo Gallardo

TE tony espy

LG Lenny Goodell (Intel)

TC Trevor Conn

Topics:

Marcelo Gallardo – TIBCO – Hackathon @ End of March – Palo Alto

- Integrating big data with backend applications
- Been using export client and services pretty heavily for the last 6 months
  - very easy, and flexible before hand
- Migrating to SDK – few challenges have been uncovered
  - Really like the direction- understand the direction
  - Little bit more work
  - Want to be able to dynamically add endpoints via rest
  - Want to see what is running from an export perspective from client (Android app)
    - /Config endpoint would provide current pipeline in App Service Configurable—not available in SDK built service
    - SMA has a gap in that you must know the service key of the non-registered service to get its information (I.e. config)
  - TL;DR; - need a way to see what's running on box with 1+ services built on SDK – 1 endpoint
- Possible enhancement: Would like to have a way to query SMA for status of class of services (I.e. all device services or all app services).

Tony Espy – Snaps

- Snaps for app service configurable – disconnect on versions
- SemVer shenanigans caused versioning issues
- 1.0.0 is newer than 1.1.0-dev7 for hackathon
- Tony will update snap to be 1.0.0

Insecure Secrets and store secrets are merged

Examples being created for how to use insecure secrets and vault secrets

EdgeX - Application Working Group

Readme/documentation updated appropriately

Kanban Board Review

2/21/2020

Attendees:

LG   Lenny Goodell (Intel) (Me)

JW   Jim White

TC   Trevor Conn

+Michael

Topics:
- JSONLogic – Sneakpeak
  - https://github.com/edgexfoundry/app-functions-sdk-go/pull/292
  - http://jsonlogic.com/operations.html
  - Only support Boolean operations is good enough.
  - How app services participate in blacklisting Devices?
    - Blacklisted device on-boarded is an event
    - Need to be able to detect and take action with JsonLogic function?
      - comkick it out
      - Send notification
    - Need to update device name list dynamically
  - Need Sensor event vs Control events
- Thoughts on Rules Engine next steps from meeting yesterday
  - Went well.
  - May not be right approach to consume core-contracts.
    - Use endpoints instead.
    - Also use to understand Event/Reading model.
  - Liked that they used go-mod-messaging.
  - It is an OS effort that we could contribute to.
  - Very encouraged!!
- In progress
  - PUT for secrets
  - Batch documentation
- Kanban review
  - https://github.com/orgs/edgexfoundry/projects/23

EdgeX - Application Working Group

Attendees:

MJ Mike Johanson (Me, part

BM Brian McGinn (Intel)

Jim White

LG Lenny Goodell (Intel)

TC Trevor Conn

+ Michael Estrin

Topics:

Go-mod-bootstrap back on for Geneva

- Wait time specifications – converted 1000 to 1s in config in app sdk – bootstrap is expecting integers – when data is returned transform structure that has strings (wait durations) to ms
  - For hanoi would want to ensure this common across services
- Self seeding to bootstrap is the last thing to be accepted – Lenny helping Jim with ADR

Kanban Board Review

Eno from our team still working on handling of insecure secrets

3:30 Meeting with EMQ X Team – bi weekly meeting

2/7/2020

Attendees:

EdgeX - Application Working Group

MJ Mike Johanson (Me)

LG Lenny Goodell (Intel)

Michael Estrin

JW Jim White

TC Trevor Conn

Topics:

- go-mod-bootstrap adoption

  What would need to change in this module?

  - Self-seed for bootstrap -- needs to be integrated – Lenny has done this in a branch – need to have issue taken off hold
    - Want agreement on various bootstrap components that need to be added – don't want disconnected implementations
    - Jim will work on putting together ADR for self-seeding
  - The way we adapt how startup occurs --
    - Explore experimental – Michael E. doesn't suggest using a go routine to wrap bootstrap in order to ensure a non-breaking change to sdk
    - **Wait til Hanoi to adopt go-mod-bootstrap for breaking change**

  What would change in the SDK – specifically the surface/to the developer?

- GetSecrets() from Vault is complete

  Intel team is Working on support for insecure secrets

- Rules Engine – Next Steps
  - Guidance for Rocky?
    - **Schedule w/ Rocky a couple checkpoints to ensure keeping on path with integration**
    - **Trevor will be going a POC – will provided feedback**
  - JSON Logic
    - Mike to make decision on feasibility for implementing in this release
- Review Backlog
  -

EdgeX - Application Working Group

Attendees:

MJ Mike Johanson (

Michael Estrin

TC Trevor Conn

EU Eno Udoko

+ Jim White

Topics:

- Command Line Flag for –registry / -r

In the ADR I specified that the -r/-registry it would be removed and in its place, we would add the *Enable* field in the RegistryInfo struct.

Example:

```
[Registry]
 Host = 'localhost'
 Port = 8500
 Type = 'consul'
 Enabled = true
```

Option #1 – to support both config and command line option

Option #2 – continue supporting command line option (not in config) -- aka leave as is – this will be the decision

Lenny will update the ADR with this decision - Add context to decision section and update appropriately

Rules Engine Discussion from Demo

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- o Requests
- o Next Steps
    - Scale testing – how many rules can be supported on various hardware setups
    - CLI today, REST API will be coming
    - How is EMQ X Kuiper Integrated
        - Agree that it shouldn't be part of edgex-go
        - In general, want to be separate from EdgeX, suggest to add ZMQ connector along with MQTT/REST
        - Anti-corruption layer
        - Should find out if plugins are a part of their architecture – windows support in native environment?
        - Should be able to be containerized independently
        - Should not be in EdgeX Foundry organization in github – leave in EMQ organization
- o Is this the right path?
    - **Yes, we should continue down this path**

EdgeX - Application Working Group

Attendees:

MJ Mike Johanson (Me)

Brandon Forster

JW Jim White

LG Lenny Goodell (Intel)

TC Trevor Conn

Today's Topics:

App Service Persistence – Lenny

Need a separate service for managing the database. When you have multiple app services want to centralize db management. Problem is that multiple services accessing the same database collection – breaks microservice patterns. DB Credentials are created for a single service – In talking with Bryon Nevis, as we move to per service tokens perception was that single token wouldn't work/isn't secure.

As a counter, Each service could have its own DB and collection. Seeding credentials is the challenge.

Need to go back to Bryon N and discuss sharing tokens for each instance of app service. Or each service having its own db/collection.

Secrets Abstraction for Vault

GoModSecrets is not an abstraction around secret store – specific to vault

Need to add abstraction so can support non-secure implementation

Will us in-memory keystore when in non-secure mode

Lenny will wrap up the description and content into an ADR for decoupling from Vault

Need to determine if this necessary for Geneva – **right thing to do, however, can crawl with the way go-mod-secrets is today.** Plan is to use secretprovider similar to store n' forward, will add a new function for getsecrets() next to getdbcredentials()

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Service keys will be added to compose/env variables. **We need a dynamic token provisioning service – need to bring this up in Security WG.**

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Attendees:

MJ Mike Johanson (Me)

Michael Estrin

TC Trevor Conn

JW Jim White

Today's Topics:

Batch and Send – First Look

> Absolute or relative timer – allow for both based on configuration values – allow for different strategies

> When no data, send empty array? or nothing at all? -- consider cloud

> Higher level question – should we duplicate and store data for batch and send before transforms? After? -- BatchTransformSend or TransformBatchSend – when to store?

> Name should just be batch

EMQX Rules Engine Demo w/ EdgeX - Jan 23rd 3PM PST (Beijing Time is 7AM, Jan 24th).

> **Determine how good is the EdgeX integration – is it ready for primetime? For Geneva?**

For handling secrets – suggest to allow for put of secrets in go-mod-secrets – still should allow for storage of secrets if not in secure mode -- look at go-mod-bootstrap, put implementation in same place – Michael Estrin, use as sounding board

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Attendees:

MJ Mike Johanson (Me)

JW Jim White

TC Trevor Conn

LG Lenny Goodell (Intel)

Today's Topics:

EMQ X Kuiper Review – Jim Powerpoint Presentation

Mike to reach out to EMQ team for a demo w/ EdgeX in January

EdgeX - Application Working Group

12/13/2019

Attendees:

MJ Mike Johanson (Me)

LG Lenny Goodell (Intel)

TC Trevor Conn

JW Jim White

    Michael Estrin

Today's Topics:

- Export Services Removed – Yay!
    - But…Marcello:
        - https://edgexfoundry.slack.com/archives/CE48UTVQ9/p1571677356039900
        - https://edgexfoundry.slack.com/archives/CE6902Q6S/p1575999030074900?thread_ts=1575998734.074700&cid=CE6902Q6S
            - Get more information about use case
            - Encourage to use multiple app services
            - Encourage a contribution :)
    - How can we address multiple HTTP Endpoints
        - Scale problems – hold the line – export distro going away that is on purpose
            - Encourage multiple services if needing different endpoints
        - Only support multiple endpoints if pipeline transformations are the same.
- UI Updates – what should we encourage?
    - App Service Configurable
        - Deployment of App Services (add/remove)
        - Generate TOML files
        - Update consul
        - Designer – Drag N' Drop of built in functions
    - App Services (longer term – not now)
        - Editor for your own function?
        - Generate and deploy app services for you
        - Lots of complexity here – could be overlapped with SMA
        - Lots of deployment considerations
            - I.e Docker and images – being pushed/built
- HTTPS Support for App Functions SDK – community contribution

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- System Metrics – Not committed for Geneva -- Stretch
  - Set granularity of telemetry based on INFO, DEBUG, VERBOSE?
    - TelemetryLevel option in config
  - Timer
    - Processing time for a pipeline
      - Evaluate at Function level – Sum of functions should equal entire pipelien – only in Debug mode
    - DB access Times
  - Counter
    - How often are we failing export to be sent to db to be retried at a later time
    - Queue Size
    - How much data is being sent to an endpoint (Volume)
    - Focus on Important/Expected/Common Error Counts/Stats
      - Define what is important
    - Invalid Events – Malformed Data – Can't unmarshall
    - Number of events being received into SDK – ~~compare to Filtered?~~
      - Unmarshalled and given to pipeline
- Version Issue – App Service Configurable failing version check against core due to "master" being returned from api/version on core.
  - Need to talk to Lisa about adding a version number prefix to nightly build in CI pipeline for core related services – **Lenny**
- Can we integrate Service level testing into every PR
  - Rest APIs to be tested in Go
  - TAF tests can live in each repo if necessary
  - Leave the E2E tests to the testing team
  - Try to use the best tool for the job
  - Newman requires service to be running – run tests in IDE – leverage this same thing for unit test but run full stack application level tests instead w/ Go
    - Concern around leveraging Go environment could hinder C/C++ tests and other languages
    - No decision here in App WG – we do want community agreement
  - Need TAF or GoLang for testing something like Store and Forward – needs to be in the repo

Topics from last time:

EdgeX - Application Working Group

12/6/2019

Attendees:

MJ Mike Johanson (Me)

LG Lenny Goodell (Intel)

JW Jim White

Michael Estrin

Topics from last time:

- Rules Engine
    - Couple concerns – Size is one --Compared to Drools it is pretty small
    - Custom SQL Engine for Rules
    - Should we do a test-run of it? It is open-source - Jim will draw a preliminary comparison
    - **Thought is to pursue JsonLogic for now – encourage development and integration of EMQ X Kuiper for future – however current recommendation is not a full replacement for existing Drools Rules Engine**
    -

Today's Topics:

- Review New Issues
- Prioritize Work
    - https://github.com/orgs/edgexfoundry/projects/23

EdgeX - Application Working Group

11/22/2019

Attendees:

Topics from last time:

      Batch and Send – Saving for Lenny

      Config/Registry refactor – saved for Architects meeting

Today's Topics:

Rules Rules Rules:

- EMQ X Kuiper
  - Open Source project
  - 6 years
  - Can be deployed from Edge to cloud
  - "Messaging Middleware Software"
  - Challenges to address:
    - Constrained devices
    - Agile
    - Install/upgrade/monitors apps for large #
  - A SQL Based IoT Rule engine – custom engine
    - ~7MB package, support Linux/MacOS ARM too
    - SQL Based
    - Built in support For MQTT Source
    - Extensible
    - https://github.com/emqx/kuiper
    - Restful API for rules Management
  - Couple layers of abstraction
    - Lowlevel API - MQTT based – protocol specific, flexible, but not easy to develop streaming applications
    - Streaming API
    - SQL

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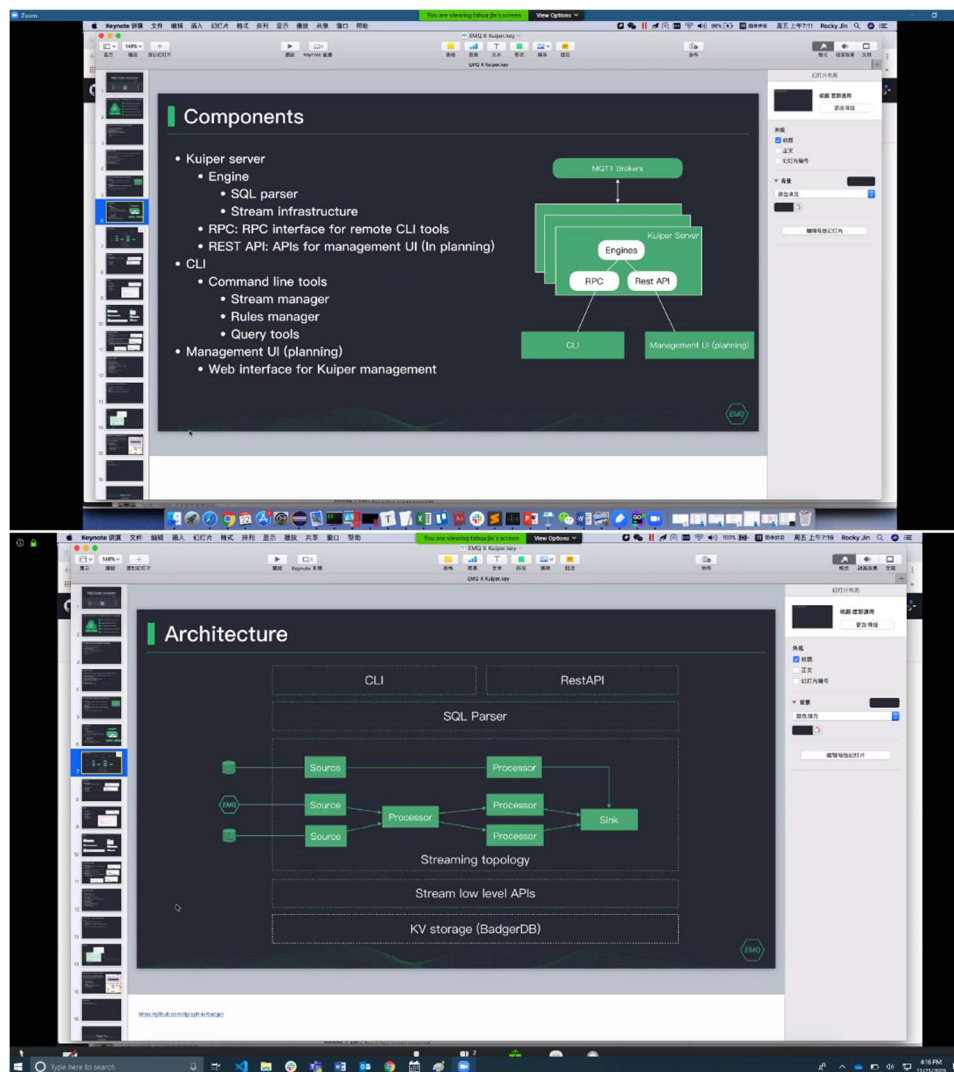
- o Source = ZMQ, MQTT, etc...
- o BadgerDB current KV storage – currently too much memory looking to replace
- o

Evaluate footprint to see what it looks like alongside EdgeX.

JsonLogic: https://github.com/edgexfoundry/app-functions-sdk-go/issues/252

- • https://github.com/jwadhams/json-logic/issues/8 -- Two implementations
- • Leaning towards https://github.com/diegoholiveira/jsonlogic
- • How would we see this being integrated into the functions pipeline/SDK?
  - • Add a route POST /rules to allow for dynamic changing of rules while running?

        { "and" : [

        {"<" : [{ "var" : "temp" }, 110]},

{"==" : [{ "var" : "pie.filling" }, "apple"] }

] }

- Example Pipeline:
    - FilterByDeviceName
    - ConvertToCelcius
    - TransformToJSON
    - ApplyJSONLogic
    - HTTPPost
- Storage/Persistence of rules – it is JSON, so rules.json? Specify path in TOML? Embed directly in TOML with no JSON file?
    - Stick with file in rules.json for example
- Only want one reference implementation, wouldn't want both. (Jim)

Moved all examples underneath app-service-examples in holding

Ok that history was lost, not a way to keep it

Fuji

11/15/2019

Attendees:

Today's topics

- Work Completed since last meeting
    - Vault integration for database credentials
    - Compose files updated for App Service Configurable to replace Export Srvs for Rules engine.
        - Replaced docker profiles with env var overrides for App Service Configurable
    - Moved SDK Examples into new *app-service-examples* repo in holding
    - Tagged SDK & App Service Configurable as release 1.0.0
    - Snap created for Fuji with ASC replacing Export Srvs for Rules engine

EdgeX - Application Working Group

- Added issues for Geneva items (https://github.com/orgs/edgexfoundry/projects/23)
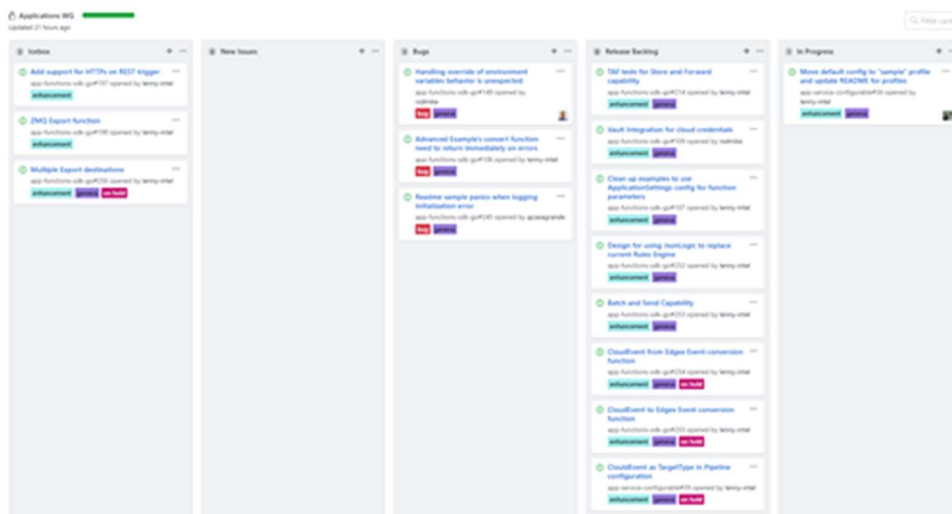
- **Detailed discussion on Batch and Send**
  - **Consensus of concept of a Batch function**
  - **Discussion of in memory vs DB and designing for future scale out**
    - Batched in memory by default. Use DB for durability (crawl). What about load balanced (Run)? Use semaphore in Redis?
    - Will require new DB interface? Or can we expand on the current one used for Store and Forward since the data persisted is just binary.
- **ZMQ export remain in Ice Box (aka long-term backlog)**
- **HTTPs for REST trigger remain in Ice Box until HTTPS for all services is solved/implemented.**
- **Multiple Export destination moved to Ice Box**
  - **Concern is this basically recreates Export Distro and its scalability issues.**
  - **Want to revisit the use case for this to better understand if it can be solved in a scalable way.**

- Review of issues in GIT Project (Geneva scope)
  - Cross cutting concerns for Geneva
    - Alt message bus
    - Event/Reading type data added
      - New models
    - API refactoring for Client used by SDK
      - Just need to latest core contracts.
    - API refactoring pattern applied in SDK?
    - Moving to TAF framework

- Generic error handling

- Design review of Refactoring Registry Design
    - The goal is to separate the responsibilities of configuration and service discovery.
    - Preliminary PR https://github.com/edgexfoundry/edgex-go/pull/2133
        - Config Provider config also in TOML?
        - Add changes for confg-seed

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11/1/2019 Cancelled

11/8/2019 Cancelled – Geneva F2F Planning

EdgeX - Application Working Group

Topics for Today:

Feature Request: Dynamic Subscription(Adding and removing) of Cloud Endpoints. This translates currently to adding/removing pipelines – which is synonymous with instances of the ASC. How do we address this?

- **Explore:** Multiple pipelines in single ASC?
- Rely on some sort of remote deployment mechanism?
- Say use the SDK and create your own endpoint to manage adding and removing HTTP endpoints?
- **Explore:** Support multiple addresses in HTTPPost?
    - Implications for S&F – add persist per endpoint?

Preparing for training of App Functions SDK and App Service Configurable

- Any particular topics we want to focus on? Any Requests?
    - Clear articulation of how this is used, ways to use it
    - Configuring custom settings in Application Service w/ SDK

Review recently completed PR's

Swagger – need to follow up on where this gets uploaded/delivered

Duration Strings – would be nice to be consistent across services – **should be brought up in core WG**

App Config Rules replacing Export Client/Distro

- PR #1992 for config-seed changes to Rules Engine properties.
- Compose files will be updated after merge
- Need to determine how this affects BlackBox Tests for rules engine, and what needs to change
-

Do we need vault integration for S&F DB creds when security is on? -- file this as bug to get included for Fuji

- Need to reach out Tingyu, leverage common implementation in core-services w/ bootstrap handler to get credentials.
- Initiate discussion to create re-usable component for retrieving credentials from Vault.
- Wait until docker-compose for secty is stable for validation of S&F

Opens:

None

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10/18/2019

Topics for Today:

- Move all examples into app-functions-examples repo in holding?
  - Move them ALL (don't leave one behind) into an example repo in holding
- Store and Forward complete!
  - Ready for Fuji! YAY!
  - Need to determine when to move edgex-taf-common repo – to main
- MQTT Tweaks
  - SkipVerify will be a flag (Currently hardcoded to true 🙁)
  - Refactoring
- Swagger generation from Code
  - Bring to Core – discuss with larger audience
  - How do we deploy this across the entire framework?
  - How do you make discovery of swagger spec seamless? Where would you go to find API documentation?
- Snap for App Service Configurable – Tony

Operations Focused:

- Changelog example
  - Add to Core agenda to demonstrate traceability and standard structure for commit messages – Create an issue in core
- PR Template

Forward Looking:
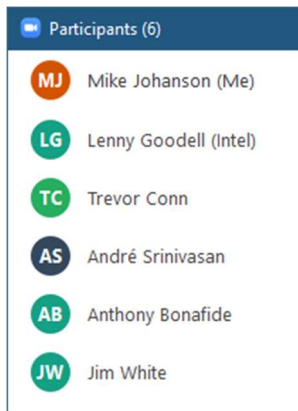
- Update all configurations to use Environment Variables to override for Docker
  - Lenny working on it
- Validate Version against Core Version (w/ option to disable)
- Blackbox tests for Store n' Forward TBD
  - Want to use TAF for this
- Geneva Items
  - Application services should provide for batch and send modes. In other words, take a collection of event/readings over time, and send on certain intervals or triggers. Store and forward based on a schedule.
  - Create a design and implement a means for application services to feed data back into core data (through a device service, via the core data API, etc.). For example, feed application services back into core data (example: aggregate readings, separate readings one per event, perform transformation from F to C on temp and return these to core) - (maybe)
    - Core Data may become more of general store of data – never meant to be long lived
    - Need to be aware of the nuances of implementing this

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10/8/2019 - Cancelled (EdgeX Open)

10/1/2019

Topics for Today:

- Store and Forward PR – open
- AWS PR - Merged
- Black Box Tests finally merged -- yay!
- EdgeX Hackathon Prep

Opens:

EdgeX - Application Working Group

9/24/2019 - Cancelled

9/17/2019

 Mike Johanson (Me)

 Lenny Goodell (Intel)

 Brandon Forster

Topics for Today:

    AWS Export – Provided some PR feedback – still WIP

    Store and Forward update – Lenny

    Brainstorm Geneva Ideas:

Opens:

EdgeX - Application Working Group

Topics for Today:

- AWS Export – WIP – Alex
- Store N Forward Update
  - DB Updates – Brandon
    - For persistence, want to not have leaky abstraction. Leverage the pattern used in edgex-go.
    - DB mocks – Can we use Mockery? Stub the interface, not the DB implementation. CI ignores tests for db unless explicitly set
  - Scheduler Discussion – Lenny
    - Original Plan: Use scheduler - seems complicated for what we need
    - Can we just create our own "AutoEvent" to retry sending data.
  - Named return values
    - Lets be explicit for now, consider switching in future

- General Updates
  - Attribution file
  - Clients Added (Notification, Command, Scheduler, etc...)
    - https://github.com/edgexfoundry/app-functions-sdk-go/issues/124
  - Push to Core merged

Opens:

Examples for AWS and Azure

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EdgeX - Application Working Group

9/3/2019

MJ Mike Johanson (Me)

DM Doug Migliori

JW Jim White

LG Lenny Goodell (Intel)

RH Rodney Hess

TC Trevor Conn

Brandon Forster

Michael Estrin

SO Steve Osselton

Topics for today:
- AWS Updates
  - Contact Mainflux for AWS & Azure account credentials for LF
- Store N' Forward Updates
  - DB updates from Dell (Brandon)
    - Started - WIP
  - How is SNF integrated with CoreData - concern around having separate DBs - CD is pipe for raw data events - Data Structure is different thus it can't be in same collection
    - Microservice architecture encourages separate db per service
      - Not necessarily separate physical dbs - but separate collections or logical DBs
      - Goal is to eliminate hidden DB dependencies
- "Push to Core"
  - Intel use cases require this for Fuji
  - ValueDescriptor changes would affect this
  - Add a splitter to breakout readings from a single into multiple individual events with a single reading

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- **Messaging needs to be a topic at pre-f2f on the 9th** - especially around pub/sub
- Annotate as Experimental - Not guaranteed to stay around
- Ideas for a generic Restful service?
- Telemetry data - should this be a device service? What about a telegraf device service that supports all the telegraf plugins?
- WebServer Exposure
  - Want to give developer ability to add their own endpoint.
    - Consequence: Developer would spin up their own - requiring a second webserver be setup
    - Kong Implications?
  - sdk.AddEndpoint('/myendpoint', myHandler, 'GET');

- Progress Updates
  - Combed Configuration to ensure proper usage
  - Error return on HTTP Trigger
- ZMQ - Separate bus - raw connection to bus - without wrapper
  - Need to include this for Fuji - Requirement from Industrial Team from Intel
- Any update from Mainflux about XMPP?
  - Lost in space - OK not to bring over

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8/26/2019

Topics for today:

Mainly Status Updates for today:

- Cloud Exports
  - Azure - PR Merged! W00t! https://github.com/edgexfoundry-holding/app-functions-azure
  - AWS - Alex C.
    - PR by Thursday
- Store and Forward
  - Kickoff has begun, db layer has started - Thanks Brandon!
  - Should mark as handled is stored?
    - Not for crawl
  - Need to extend mongo-init for the Store.
  - Good with batch not for Fuji.
- Bug Fixes:
  - Fixed a bunch of unused configuration values in the SDK (i.e. Timeout)

Anbody know anything about XMPP? It exists in the export services, is this something we want to copy over to the SDK? Do we have a pulse on any customers using it? Might be an opportunity to leave behind, thoughts?

- Jim is somewhat familiar.
- Out of scope for now?
- Jim will ping Mainflux

"Push To Core" Request from #applications - Marcelo

Brad from Commerce Working Group, Internal Intel teams.

Could be implemented with something like:

```
PushToCore(deviceName string, valueDescriptorName string, value interface{})
```

I think we have enough folks asking for this?

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- Is this really needed for Fuji?
- Brad come to next week's meeting to discuss priority?

Opens?

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Other Updates:

- TargetType is implemented to support custom types to be used between App Services (no longer requiring an EdgeX Event)
- Environment Variables -

Summary of Store and Forward:

Data will be stored upon error on export functions (HTTPPost, MQTTSend) enabled by a true/false flag "persistOnError". The following breaks out areas that would be affected that are exposed to the developer at a surface level. Internal workings are not detailed here (except the db)
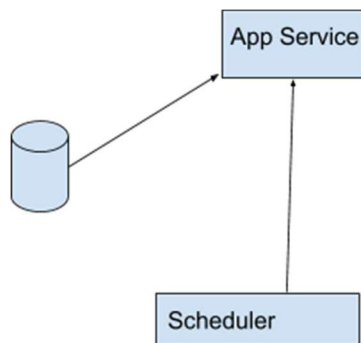
Questions/Opens:

Is batch needed? - Not for now, not related to store/forward - lets leave this on the table as stretch goal.

Do we need a flush? - Push it off?

- QoS for Mqtt how does it related to MaxRetryCount - Need to determine

How do we handle orphaned data? -- Do we care? - Do we have a TTL?

Crawl - ignored

Walk - Storage Service to manage data

- Opens: How is scheduler updated with URLs? Synced with consul?
- MarkAsPushed - handling for multiple app services than ingest the same event (how to know *all* successfully pushed) - same problem exists with export services
- Storage Service - discuss with TSC for Geneva?????

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Assumptions:

- Data will be discarded if pipeline changes
- Data is removed after success
- Remove/ColumnName Changes to persistent store requires wipe?

New Initialization Parameters:

- RetryInterval (in minutes).
    - 0 = Do Not Retry and will remove any schedules from scheduler
    - > 0 = Register this app service with scheduler
- MaxRetryCount
    - 0 = Keep Trying Forever (only deletes upon success)
    - Threshold for when to remove the data from the db after so many retries
    - Provide traceability for when data is removed (i.e. Logging)

New Endpoint Added:

- /api/v1/RetryPipeline
    - Called by scheduler based on interval.

New Context Function:

- PersistPayload(payload []byte) - the function that will call the Create/Update dbPkg to persist the data

SDK Functions to be Affected:

- HTTPPost(persistOnError=true/false)
- MQTTSend(persistOnError=true/false)

Database Implementation (Help Wanted):

- Leverage official mongo driver: https://github.com/mongodb/mongo-go-driver (License: Apache 2.0)

DB: AppServices

CollectionName: RetryDataV1?

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Columns:

- ID (uniqueId,guid) - unique identifier for this record
- AppServiceKey (string) - identifies the app service to which this data belongs
- Payload (byte[]) - the data to be exported (
- RetryCount (int) - how many times this has tried to be exported
- PipelinePosition (int) - where to pickup in the pipeline
- Version (string) - hash of the functions to know if the pipeline has changed
- CorrelationId - from EdgeX to track this individual record as it moves
- EventId/Checksum - in order to identify edgeX event from core and mark as pushed

CollectionName: SchemaVersion

Columns:

SDKVersion: schema

DB Pkg - ideally abstracted for implementation for Redis and Mongo

----

Create() - Store()

Retrieve() - RetrieveFromStore()

Update() - UpdateRetryCount()

Delete() - RemoveFromStore()

Example:

Filter

Compress - return value of this would be persisted

HttpPost

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Attendees:

MJ Mike Johanson (Me, participant ID: 16)

BC Brad Corrion (Intel)

RH Rodney Hess

Brandon Forster

BR Bryan Rodriguez

DR Dave Rensberger

EU eno u

IOTech IOTech

LG Lenny Goodell (Intel)

Malini Bhandaru

Michael Estrin

SO Steve Osselton

Topics for Today:

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- Store & Forward Goals:
  - When connectivity is lost
  - Support Batch Mode and sending Data on a schedule

Proposal

- Leverage existing reference implementations MongoDB and Redis
  - Probably best way to go to create its own connection and its own db collection
  - Can use same mongo instance or other - ensure isolated
- Add new parameter/option to Export functions (HTTPExport, MQTTSend) to persist on error
  - Persist on error would store event data to db on failed request
  - Should we consider a timeout for data persisted for it to be aged out

- Add new function - Batch(count int) - to hold messages until count is reached before outputting to next function
- Provide /endpoint for scheduler to call in order to retry previously failed requests
- Need to be clear with examples of how and when voluminous data versus occasional data can be persisted or dropped
- When processing is picked up again, its done at the export point, not the beginning of the pipeline
- Need identity of pipeline of that originated the data as well as where in the pipeline it was.
  - App Service Configurable - pipeline changes, what do you do with the data if the stage in the pipeline no longer exists
- Future consideration - Fork Pipeline based on conditions
- Example pipeline 1 (Valuable occasional data):
  - FilterByDeviceName()
  - TransformToJSON
  - Batch(50)
  - CompressWithGZIP
  - HTTPPost(persist=**true**)
  - MarkAsPushed - not called until connectivity is restored
- Example pipeline 2 (voluminous telemetry data drop it if we fail to send it out):
  - FilterByDeviceName()
  - TransformToJSON
  - HTTPPost(persist=**false**)

- Feature Requests - Brad Corrion

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8/6/2019

Topics for today:
- Update from Cloud Export Meeting this morning
  - Mike to share module for extending App Functions SDK
  - Alex will start working on AWS Export
  - Cloud will port existing implementation so that it can extend the app functions SDK
  - Brad will share feature enhancements in the Application Working group meeting
  - CloudEvent should be added as an export formatter
    - Put it in holding along with the other cloud/north bound exports
    - Defer decisions to move to main edgexrepo until popular
- Feature Requests from Commerce Working Group
  -

- App Service Configurable - Ready for TSC Approval?
  - Yes, go for TSC Approval Wed Aug 7th
  - Export to rules engine
  - BlackBox testing
  - Ci/CD pipeline needs to be in place

- Ready to close https://github.com/edgexfoundry/app-functions-sdk-go/issues/110?
  - Vault integration is captures as separate issue
  - Still waiting for module to leverage vault
- MarkAsPushed - break it out from HTTP and MQTT
  - Currently baked in,
  - Will move this into its own transform to be called manually
  - **TOPIC FOR FUTURE:** What is the thing that determines that the item is removed from the gateway. How and when?
    - Maybe its just a delete? Avoid mutability
- BlackBox Testing
  - ZMQ through HTTP Export out of scope

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7/30/2019

Topics for today:
Black Box Tests - Walkthrough for App Service Configurable

HTTPS Export -- We are at parity now(Good for Fuji) - Stretch goal to extend scope to the following:

- mTLS?
- OAuth?
- Token Based Auth for header?

Azure Export

How many services do we want to provide an example for?

- Support existing Azure IoT Hub (via MQTT)
- Create issues for other Azure services that could be helpful with "help-wanted" tag
  - Blob Storage

Refactoring of Functions

Port Allocation:

- Default is 48095 today
- Option to support ephemeral ports (OS Picks).

Any Bugs needing to be discussed?
https://github.com/edgexfoundry/go-mod-messaging/issues/31

Any Other Updates?
Still in Beta today - Will match major release of EdgeX once released.

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Edinburg
7/16/2019

Attendees:

- [Jim White](Dell)
- [Trevor Conn](Dell) (Dell)
- [Anthony Bonafide](Dell) (Dell)
- Doug Migliori (ControlBEAM)
- [Joe Pearson](OBM) (OBM)
- Michael Estrin (Dell)

Topics for today:
Export Distro ([Issue #512](#)) / go-mod-messaging ([Issue #28](#))

- Only able to recreate with core-data running in docker
- Found new issue where core-data stopped publishing events
  - No errors or crash.
  - Stopping DS(s) and restarting mongo resolved until both DSs running.
  - Dropping Events & Readings collections from Mongo resolves issue

- Lenny will merge fix and update edgex-go and retest
- Lenny will create issue for new issue where Core Data stopped publishing.
  - Lenny will take his test case to the QA/Test WG.

App-service-configurable Docker

- Profile specified from compose file 'cmd:' or docker run.
- Default run without profile will cause error.
- Will start with the following profiles:
  - rules-engine
  - mqtt-export
  - http-export
  - docker
    - Default sample (filter & xml transform)
- Current filter function need to pass-thru if filter values empty, currently none passed thru.

o   This allows more flexibility with configurable pipeline

Blackbox Testing

- First pass on existing REST API using current tooling and scripts to set config
  - Will also use REST Trigger to drive testing function pipeline
    - Post event
    - Pipeline runs
    - Result send back as HTTP response
- More Robust test once we have Robot (dependent on QA/Test WG)
  - Above race condition and previous expose that we don't have sufficient full scale integration and stress testing.
  -

Any Bugs needing to be discussed?

Any Other Updates?
- Rules engine update
  - Jim working on it to handle MessageEnvelope
  - Looking for recommendation for CBOR package for Java
- Environment variable override has been merged.

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7/9/2019

Topics for today:

- Possible Race Issue -- we good?
  - MacOS impacted for go-mod-messaging - pending PR from trevor
  - Cloud/IO tech -- error message - need to dig a little deeper here - topic is getting written twice - need to root cause for possible dot release of Edinburgh - 5 min on Toms system to reproduce
  - Lenny to reach out to schedule a debug session to diagnose.

- Pull Request Feedback https://github.com/edgexfoundry/app-functions-sdk-go/pull/123
  - Profile
  - Consul Registry Stem
- Updates on Rules Engine? - Jim
- Summary Slide of App Functions SDK for User Facing Consumption (per Keith from TSC)

Any Bugs needing to be discussed?
https://github.com/edgexfoundry/app-functions-sdk-go/issues/124

Any Other Updates?

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Topics for today:

- Dynamic Func Pipeline Updates
  - Profile for different versions
- Rules Engine Issue - Handling envelope from App Function SDK/Core Data
  - Jim to update Rules Engine - Minor Version Update to Rule Engine
  - Will handle both from Core Data (wrapped w/ Envelope) directly and from Export Services (unwrapped)
- CI/CD Pipeline updated using what Lisa demoed in DevOps working group
  -
- Repo created for "app-service-configurable" service in EdgeX-Holding

Any Bugs needing to be discussed?
Any Other Updates?
6/18/2019

Topics for today:

- Demo of Dynamic Pipeline
- Version is not 1.0 so which one do we like? 0.1? 0.5?
  - Version 0.0.1 - Work with Devops to get tagging working - reach out to Jacob/Lisa about version file - replace with pipeline job
- Need to request a repo in holding for the "app-service-configurable" service
  - Send an email to LF helpdesk - can ask James for exact process to do it.
- https://github.com/edgexfoundry/app-functions-sdk-go/projects/2

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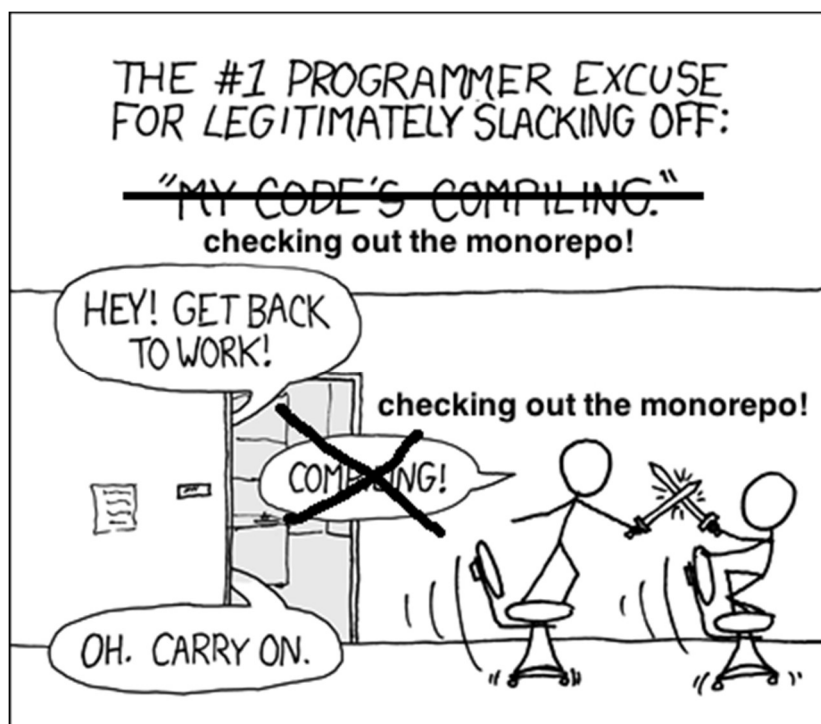
Any Bugs needing to be discussed?
Any Other Updates?

EdgeX - Application Working Group

6/11/2019

Topics for today:

- **Ideas for repos for EdgeX hosted app services**
  - Rules Engine/Configurable App Service
    - **Separate Repos: +Mike +Jim**
      - App-services-default
      - Pro: create own release strategy
    - **Single/mono Repo:**
      - app-services-examples
        - /rules-engine
        - /configurable
        - /azure
        - /aws
        - /alicloud

- Our thoughts on Configurable Pipeline Service:

```
[Pipeline]
  [Pipeline.DeviceNameFilter]
      deviceNames = [ "red", "yellow", "green" ]
  [Pipeline.ValueDescriptorFilter]
      valueDescriptors = [ "red", "yellow", "green" ]
  [Pipeline.JSONTransform]
  [Pipeline.HTTPPost]
      url = "http://"
      mimeType = "" #OPTIONAL - default application/json
```

1. Pipeline should watch for changes from registry if configuration changes (aka Dynamic Pipeline)
2. Documentation should be created
3. All Functions should match exactly the name and parameters as they are in the SDK with what is in the Configuration

Any Bugs needing to be discussed?

Any Other Updates?

Versioning to be discussed

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6/4/2019

Topics for today:

Version.go file vs Version - do we need this?

Demo of E2E CBOR - Lenny

Fuji Review !!!!

4. Prebuild App Service that looks to configuration for defining pipeline - eliminating need to for code development **- Intel - Lenny/Mike**
   a. Prepares data for Rules Engine - discuss function in sdk vs service - pre-baked service readily available to send events to rules engine. - **Jim to consult**
      i. Don't force rules engine to handle CBOR, let app functions sdk handle it and sending it as json
5. Black Box Tests **- Intel - Walt - w/ James DevOps and QA group**
   b. Document Proposal to share w/ other working groups
   c. Working w/ QA to get Test Runner up and running
   d. Prebuilt Service Perhaps to use for testing
   e. Items to test (a couple sample services):
      ii. Endpoints - SMA Config, Metrics
      iii.   HTTP Trigger
      iv.   MessageBus integration
6. Vault Integration - let Molini know that we are looking to integrate
7. Export Services Parity **- Intel**
   f. Compression
   g. Encryption
   h. HTTPS/MQTTS
   i. Cloud References/Examples
8. Store and Forward Ability

Other Items For Consideration (Stretch Goals):

- Ability to process other types of data from bus
- Add API support for notifications and Commanding
- SMA Integration, push control data - alternate use of app services.
- Other Abstractions/Implementation for go-mod-messaging? MQTT

Any Bugs needing to be addressed?

https://github.com/edgexfoundry/app-functions-sdk-go/issues/83 - Fixed, samples updated.

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Any Other Updates?

None

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5/28/2019

CODE FREEZE DAY!!!

Features from last week:

9. MarkAsPushed
10. CBOR Implementation

On Deck:

11. Documentation Updates

Any Bugs/Issues needing to be addressed:

https://github.com/edgexfoundry/app-functions-sdk-go/issues/83

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Any Other Updates?