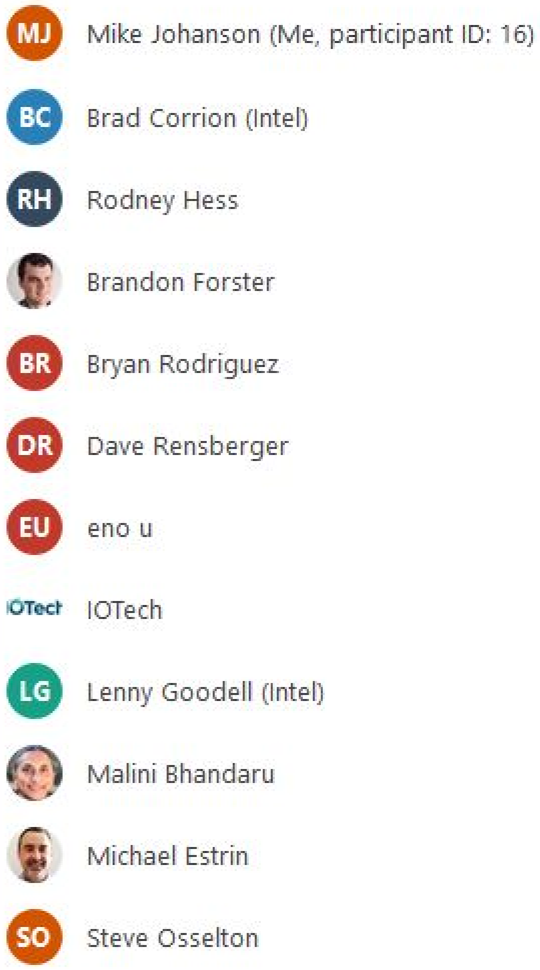
EdgeX Application Working Group 8/13/2019

Attendees:



Mike Johanson (Me, participant ID: 16)

Brad Corrion (Intel)

Rodney Hess

Brandon Forster

Bryan Rodriguez

Dave Rensberger

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IOTech

Lenny Goodell (Intel)

Malini Bhandaru

Michael Estrin

Steve Osselton

Topics for Today:

- 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

Topics from last time:

- 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
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- 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