System Management Working Group – March 13, 2020

Attendees

Old Business

1. System Management Service

Items to Follow Up

1. CLI Review Follow Up (Alex, VMware / Mike, Intel)
   a. Alex is leaving VMware in two weeks. Malini and Diana will pick up the CLI work.
   b. Changes in flight per Mike’s review; Alex hopes to land these changes before he leaves VMware.
   c. Michael to reach out to Diana/Malini to define a path forward.
2. EdgeX-specific system-wide metrics follow-up (Jim White, IOTech)
   a. [https://github.com/edgexfoundry/edgex-docs/pull/104](https://github.com/edgexfoundry/edgex-docs/pull/104)

New Business
1. Dell Metrics and Monitoring for EdgeX using Prometheus and Grafana Presentation (Eric Cotter)
   a. Demonstration shows a way to gather metrics that does not flow through the System Management Agent.
   b. Demonstration modified mux.Router in Fuji release to capture incoming requests and
      generate events at an endpoint polled by Prometheus and visualized by Grafana.
   c. Prometheus push gateway provides an alternative way for EdgeX services to push
      metrics instead.
   d. Questions –
      i. Alerting (Akram)? Prometheus supports notifications.
      ii. Code instrumentation (Lenny)? Intel previously used go-metrics, Telegraph, and
          an Influx database. Eric did a code walkthrough.
      iii. How would we leverage this across non-core services (Jim)? Could generalize
           into a metrics golang module.
      iv. How would we capture non-generic metrics (Jim)? Would need to build this into
           golang module; relatively easy to do – new data points would be new
           Prometheus buckets/variables; possible to measure time for data to transit
           across multiple services.
      v. What is data granularity (Ike)? Data is time-based events; Graphana leverages
         pliable Prometheus queries to gather/visualize data.
      vi. Pull vs. push (Jim)? Demonstration uses pull. Push is more desirable. Changes
         to code to support push would remove endpoint for polling, add push of metrics
         events to Prometheus.
      vii. EdgeX implement Prometheus directly or via abstraction (Jim)? Abstraction
           would be preferred to provide extensibility (similar to go-mod-messaging).
   e. Next Steps
      i. Land existing ADR
      ii. Create abstraction
      iii. Get community buy in
      iv. Create referential implementation of abstraction as golang module

2. Other new business?