Data Discovery

draft-mcbride-data-discovery-problem-statement
draft-mcbride-edge-data-discovery-overview

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Evolved out of EC side meetings

Gap 1: to define the mapping between any two popular machine languages

Gap 2: In order to achieve the interconnection of multiple Industrial networks that use various physical layers, an overlay is required.

Gap 3: unified information model for all kinds of verticals

Gap 4: content push in a more secure (SUIT) and efficient (multicast) way

Gap 5: Provide containers and VMs on edge computing gateways to facilitate App mobility. Sync up of states in between Edge Computing Gateways. Definition of common APIs.

Gap 6: Edge **data discovery.** Process of finding required data from edge databases and consolidating it into a single source, perhaps name, that can be evaluated

Gap 7: add the deterministic feature into wireless networks (Wifi, RF)

Gap 8: policy indications about the task division for the Edge-Cloud Orchestration

What's the problem?

- Locating distributed data in a standardized way.

- Yes, there are many proprietary ways of finding data. AWS Macie...

- Data may be cached, copied and/or stored at multiple locations in the network on route to its final destination.

- Need a standards-based solution to discover 1) where the databases exist throughout a network and 2) where specific data objects are located.

- The location of each data store is the first level discovery problem, and the details of the database's directory is the second level discovery problem.

What's data?

- Data can include a resource, program, service...

  Data: statistics, measurements, temperature, location, metadata, health, etc

  Program: applets, graphics, games, spreadsheets, database systems, browsers, etc

  Service: firewalls, load-balancers, spam filters, header manipulators, etc

  Resource: CPU, memory, etc.

What's next?

- Determine if existing protocols will work here.
- If not, target where a new standard protocol is needed.
- Maybe work on it in COIN or a new IETF BOF.

Thank you !

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