Aspects discussed and somehow agreed

• Leverage RSP-QL efforts to support “some kind of” CEP in RSP
  • Identify what aspects we can leverage and what is missing
  • For each missing part, try to characterize short- vs. long- term goals
• Identify what are the KEY aspects RSP-QL should handle, which would make SCEP support closer to reality
• Where is the cut-off point? (What should be in the language and what could be dealt with out of RSP-QL (for several reasons)
  – Complexity and scalability (language vs. implementation)
  – Application dependent
• Roadmap for SCEP and RSP
Key aspects identified

1. Windowing (tumbling in CEP) and time intervals
2. Managing graphs
   - Need to uniquely identify a graph to refer to it later
   - Same named graph (one event) could have unique identifier but different timestamps
3. State Management
   - Access to timestamps (e.g. for partial computation of substreams)
   - Store state of previous event
4. List of Stateful Operators
   - SEQ (need optional binding), REP
   - Clean Closure (e.g. same event with different temporal values)
   - Selection strategies (e.g. skip till next)
   - Correlations of results of sub-patterns into one query
   - MORE: property paths, nested construct queries, negation, … (longer term?)
General Idea for SCEP in RSP

- Key idea is to reduce the input at CEP level
- Need operators for summarization/aggregation
  - Can be done by enabling State Management
- Ability to feed back results into the stream (loop-back new stream?)
- Would that scale?
  - Implementation can be different than RSP-QL language specification
- Application dependent aspects (long-term)
  - Mathematical operators
  - Geospatial calculation
Roadmap for SCEP in RSP-QL

• Subwiki page within RSP-QL (and collect broader interest)
• Work on usecases to identify specific functionalities for SCEP operators)
• Identify initial set of stateful operators that can be supported without too much disruption
• Identify what is required for these operators and what can be leveraged by the RSP-QL advances
• Direct feeback to RSP-QL on what is missing for those operators (to have them included in RSP-QL)
• Implementation?
  • In specific engines?
  • In new engines?