Towards enabling SaaS for Business Rules

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Agenda

- Motivation
- The Registry Architecture
- The Client-Registry Interaction

Motivation

- Rules are becoming increasingly important in business modeling and requirements engineering
- The actual trend concerning aggregate enterprise that follows the Software as a Service (SaaS) paradigm envisions a continuous growth
- To be able to use rules in SaaS based applications one has to be able to find and access rules in a service oriented manner. This presentation is about this.

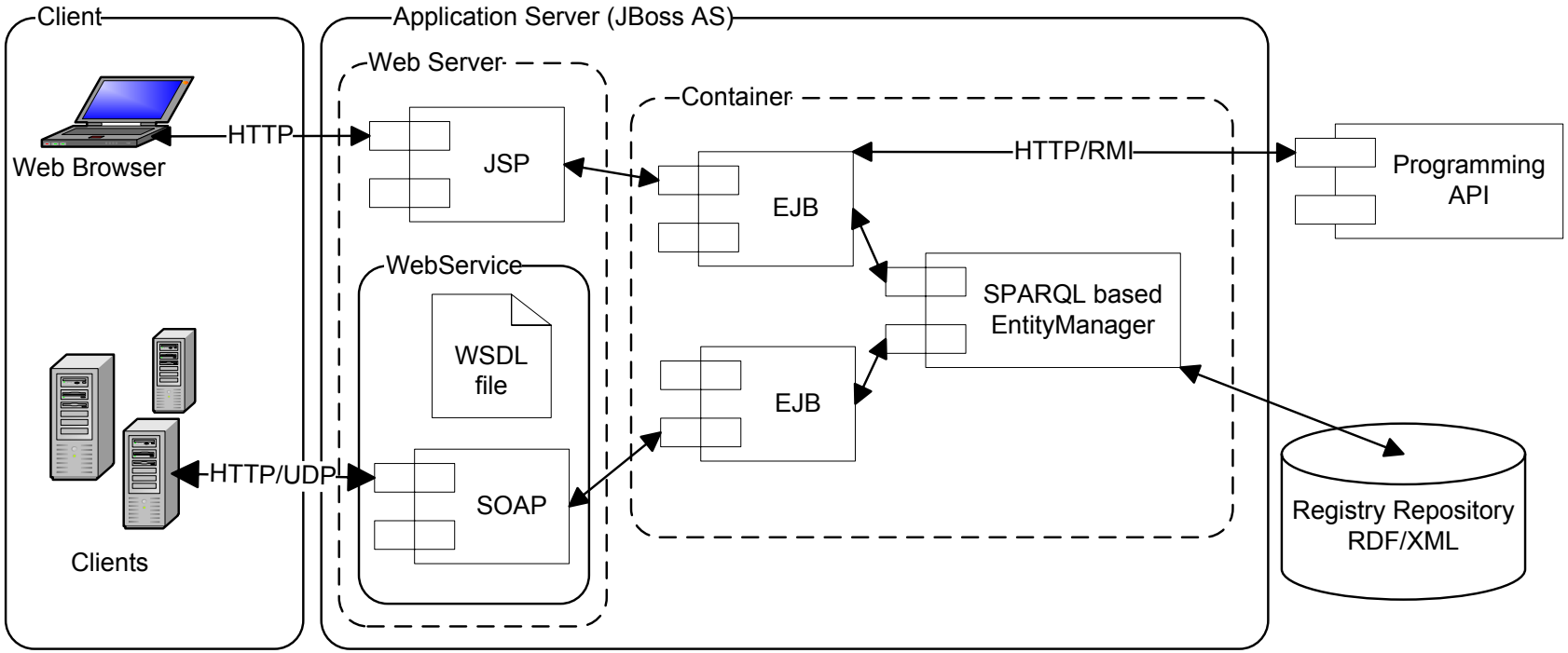
The Requirements

- *"service-based model of software is one in which services are configured to meet a specific set of requirements at a point in time" (*Bennett et al, 2000*)*
- To be capable to change software easily to meet evolving business requirements.
- To be capable to issue semantic searches.
- Flexible interoperability opportunities with other systems and engines

The Ruleset Entry

- A ruleset specifies the following information:
  - An URI reference to the specific ruleset *implementation*, encoded by using **`rulesetID`** property;
  - An URI reference to the ruleset *representation language*, encoded by using Dublin Core **`dc:type`**;
  - A literal representing the code of the ruleset *addressed business*. It is a code (e.g. Naics, UNSPSC) of the corresponding business part (**`dc:related`**);
  - An URI reference to the ruleset *format* of the representation (**`dc:format`**);
  - An URI reference to the specific vocabulary implementation, expressed by using **`vocabularyID`** property;
  - An URI reference to the vocabulary representation language (encoded with the Dublin Core **`dc:type`**);
  - An URI reference to the format of the vocabulary representation (**`dc:format`**);

Registry Architecture

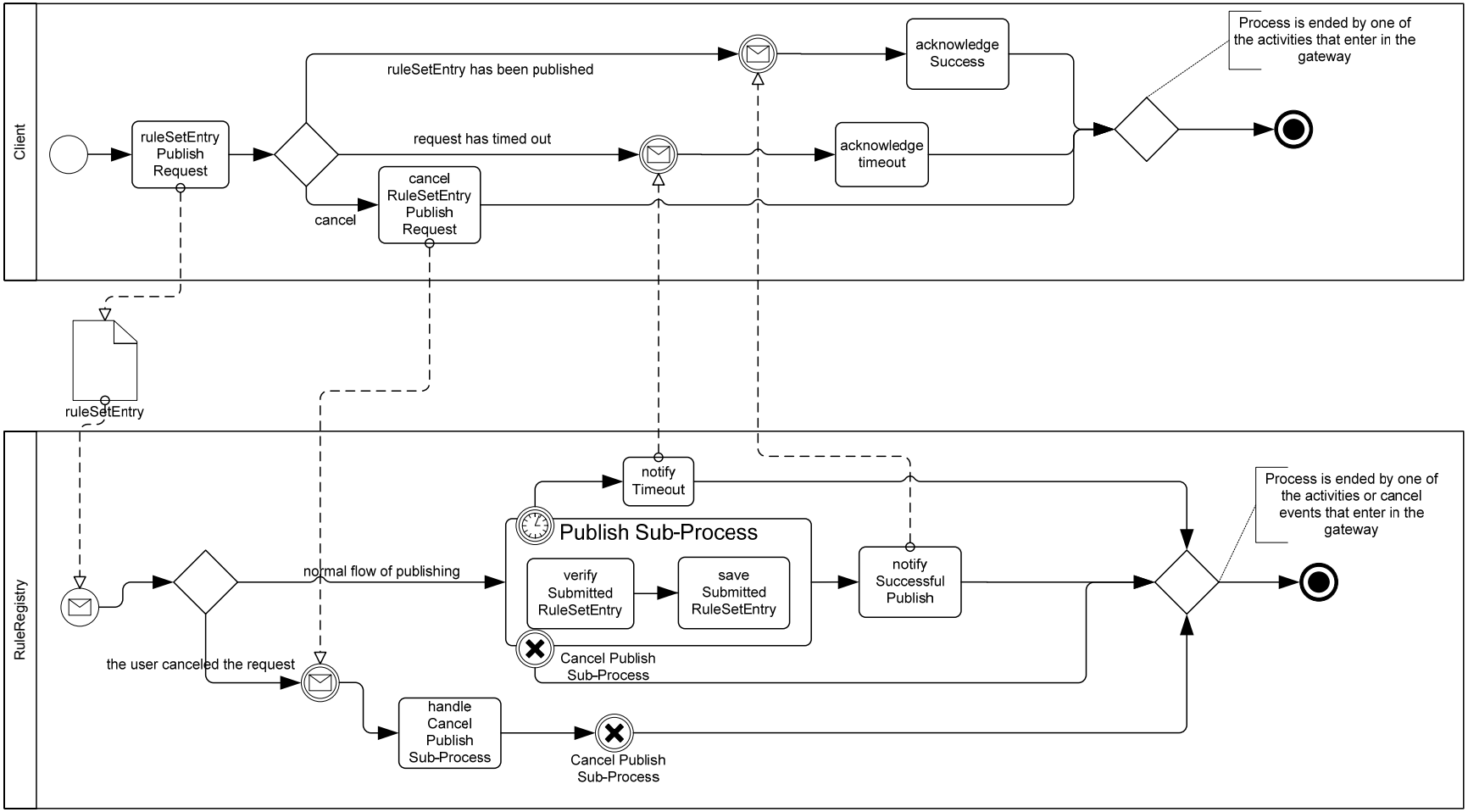


- Why JBoss?
  - JEE5 compliant; open source; one of the most used application servers
- Why SPARQL?
  - The registry entry content is semantic and SPARQL is the most used language for dealing with semantic queries
- EntityManager (SPARQL-based)
  - A sophisticated DAO manager. SQL based
  - Here since the Database is XML/RDF, this should be SPARQL

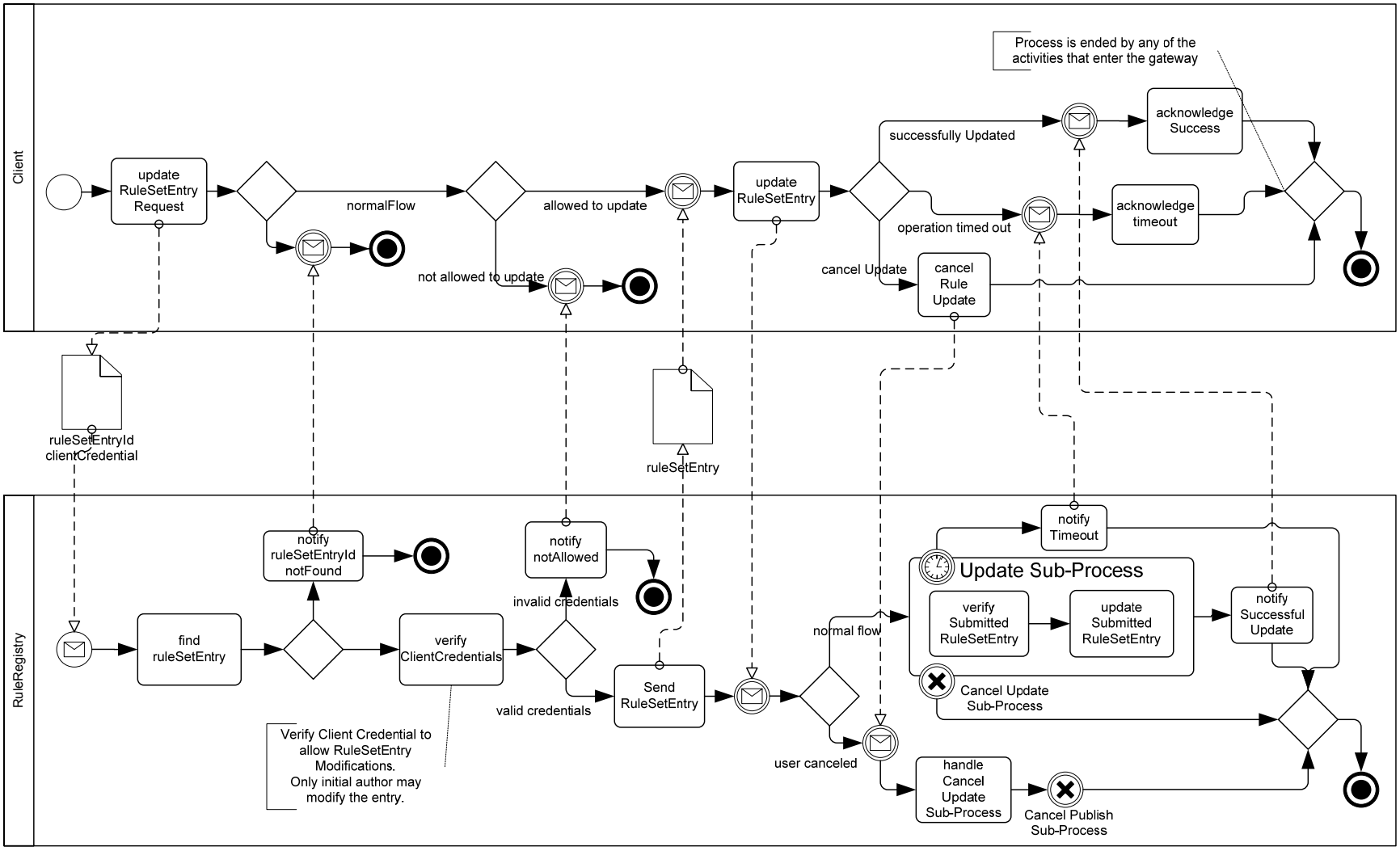
Interaction Description

- Interaction is described with BPMN
  - BPMN is de facto the leading notation for business processes and complex interactions.
  - *“a business process model consists of a set of activity models and execution constraints between them” (*Weske, 2007*)*
- Four main processes:
  - Publishing
  - Updating
  - Deleting
  - Querying

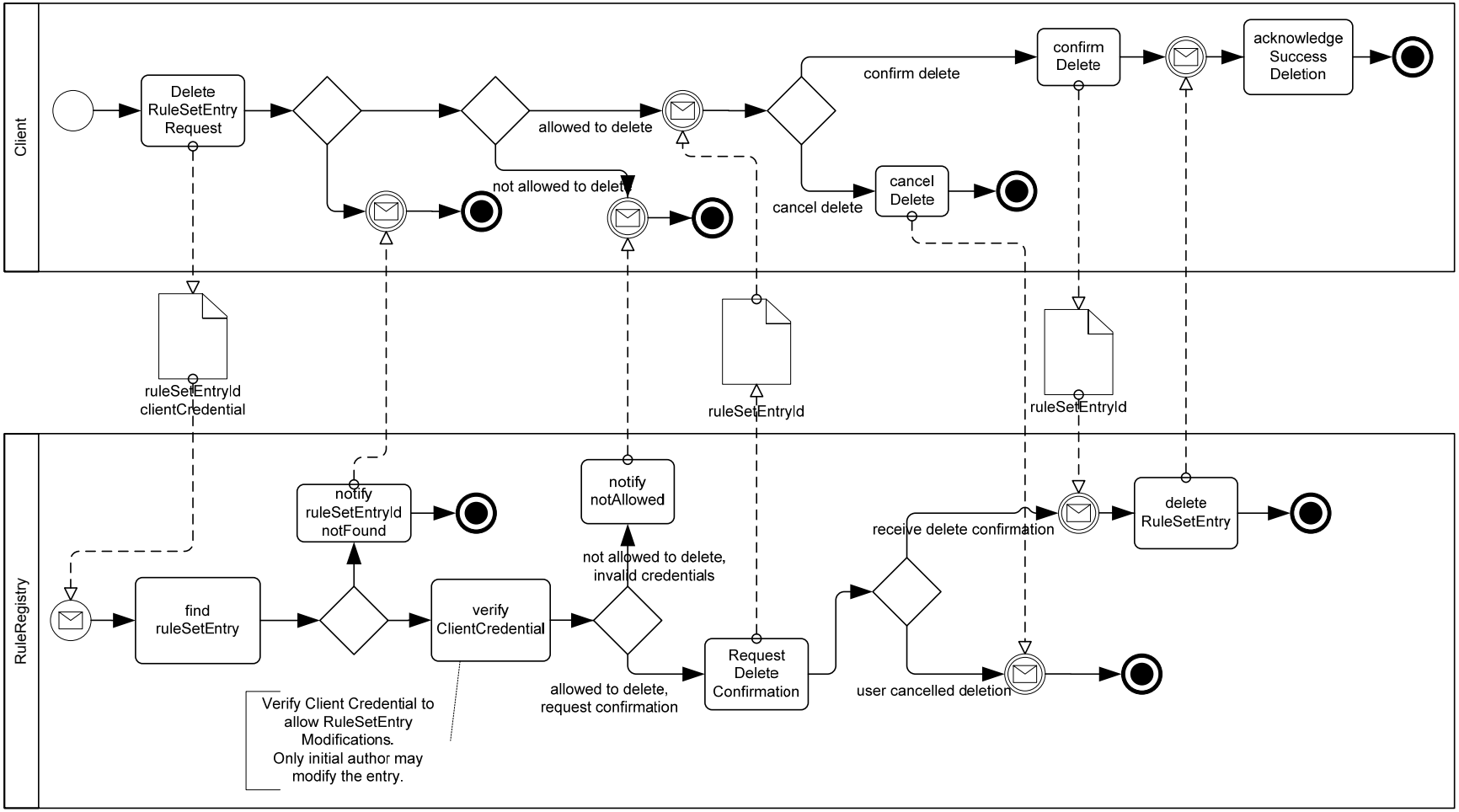
The Publish Process



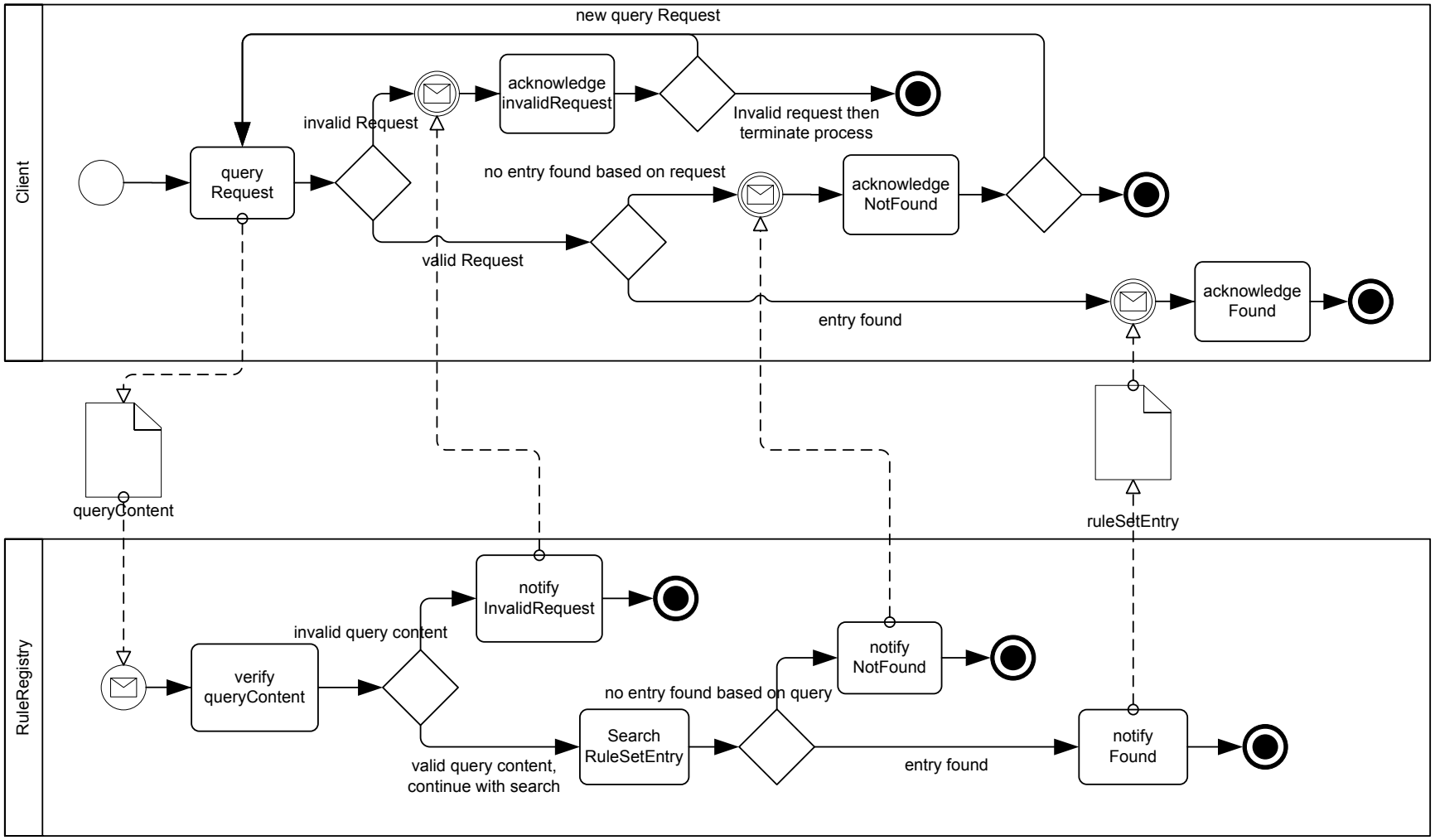
The Update Process



The Delete Process



The Query Process



Thank you!