Esper Push Services

CEP-Tier to Web-Tier Data Push
Esper Push Services
What it is

- A server building block to handle...
  - Controlled data push CEP-server tier to web server tier
  - REST-Style Web Services for managing sessions and subscriptions
- Based on JMS Java Messaging Service
- Manages
  - Logical data sources (statements, metrics, statement sets)
  - Mapping of data source to transport, marshaling, un-marshaling
  - Subscribers and subscriptions, history
  - Data push according to quality-of-service level definition
Push Services Overview

- Subscription management
- Data Fan-out

High-speed high-volume real-time data streams

Event Stream connectors & adapters

Historical data access layer

Historical data

Event Processing Statements

Named Windows

Event Query & Causality Pattern Language

Push Service
REST Web Services and Data Push

Esper core container

Subscribers

Output adapters

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Push Services Configuration (1)

- No code change in your Esper application
- Started as
  - Plug-in Loader for use in an Esper configuration file
  - or API
- Build on JMS standard; Requires JMS broker
Sample configuration

```xml
<ceppushsvc-configuration>
  <subjectspaces>
    <!-- A subject space defines the logical sources of data (statements, statement sets, engine metrics) -->
    <subjectspace name="defaultSpace"/>
  </subjectspaces>

  <channels>
    <!-- Channels map subject spaces to transport and quality-of-service -->
    <channel name="defaultChannel" subjectspace="defaultSpace">
      <qos>
        <batched-service interval-msec="1000"/>
      </qos>
      <jms>
        <destination topic="esper.data.default"/>
      </jms>
    </channel>
  </channels>

  <providers>
    <!-- JMS provider configuration -->
    <provider name="defaultProvider">
      <context object-name="ConnectionFactory">
        <env name="java.naming.factory.initial" value="org.apache.activemq.jndi.ActiveMQInitialContextFactory"/>
        <env name="java.naming.provider.url" value="tcp://localhost:61616?wireFormat.maxInactivityDuration=0"/>
      </context>
    </provider>
  </providers>

  <settings>
    <!-- Data distribution service settings for session management and control bus -->
    <pushprovider provider-name="defaultProvider"/>
    <session-mgmt enabled="true" interval-msec="10000" expiry-msec="60000"/>
  </settings>
</ceppushsvc-configuration>
```
Thank you

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