

Experimental feed of JMA XML messages by PubSubHubbub protocol

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TCP/IP-based protocols are often classified into two categories: push protocols are initiated by TCP connection from the sender of information, while pull protocols are initiated by the receiver. It is commonly known that pull protocols are simple but polling (periodic check of updates) causes latency, while push protocols can achieve low latency but workloads of management and monitoring are proportional to the number of subscribers which cannot be reduced by load-balancing for the web (Table 1).

PubSubHubbub (<http://goo.gl/f5edD>) is a protocol to notify updates of a website by sending Atom or RSS by HTTP POST. It is getting popular in publishing blogs. The sender may choose to post only essential metadata (such as URL), to let receivers retrieve the content by HTTP GET. In that case the protocol has mixed nature of push and pull protocols. A website called "hub" can relay the posting to more subscribers, and that can reduce the cost of management while maintaining low latency (Figure 1).

On December 2012, Japan Meteorological Agency starts experimental feed of JMX (Japan disaster Mitigation and prevention information XML format; <http://xml.kishou.go.jp/>) messages using PubSubHubbub. I'd like to discuss about experiences of this work in the session.

Keywords: JMA XML, PubSubHubbub, Telecommunication Protocol

Table 1: Comparison of Protocols.

	Push Protocols (FTP PUT, HTTP POST)	PubSubHubbub (in case only metadata is notified)	Pull Protocols (HTTP GET)
Who starts TCP	Sender	Both:	Receiver
→who's responsible to management and monitoring	Sender (workload proportional to # of subscribers)	Notification: Sender (workload reduced by hub) Content: Receiver	Receiver
Polling	Unnecessary	Unnecessary	Necessary
→polling latency	No	No	Up to cycle of polling

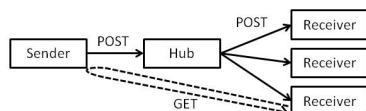


Figure 1: structure of PubSubHubbub network.