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**Requirements for Filtering of Watcher Information**  
**draft-kiss-simple-wininfo-filter-reqs-00**

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Abstract

This document defines a set of structured requirements whereby a watcher information subscriber (client) may select specific information to be received in the watcherinfo notification sent by the notifier (server). The purpose is to limit the content so that only essential information is delivered by the server.

Also the preference for full or partial state information is considered in requirements.

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## 1 Introduction

SIP event notification is described in [2]. It defines a general framework for subscriptions and notifications for SIP event packages. Concrete applications of the general event framework to a specific group of events are described in [3] (user presence) and [4] (watcher information).

The watcher information refers to the set of users subscribed to a particular resource within a particular event package. Watcher information changes dynamically as users subscribe, unsubscribe, are approved, or rejected. A client can subscribe to this information.

As the inherent usage of event packages grows, the client needs some mechanisms for controlling the event notifications at the source. Evidence of this need is found in [6].

The Internet Draft describing the watcher information template package [4] mentions the possibility for filtering. Accordingly, the SUBSCRIBE request may contain a body for filtering the watcher

information subscription. However, the definition of filtering has been left out of the scope of the Internet Draft. As an example, the body of the SUBSCRIBE request may include an indication whether the notifications should contain partial or full state information.

These mechanisms are expected to be particularly valuable to users of wireless devices. The characteristics of these devices typically include low bandwidth, low data processing capabilities, small display and limited battery power. Such devices can benefit from the ability to filter the amount of information generated at the source of the event notification.

However, it is expected that the control mechanisms for event notifications add value for all users irrespective of their device or network access characteristics.

Sections [3](#) and [4](#) of this draft propose a set of requirements whereby a client may specify which notifications it is interested in. That is, a means to specify filtering rules to be executed by the server. [Section 6](#) provides a few example applications of notification filtering.

## [2](#) Conventions used in this document

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC 2119](#) [5].

## [3](#) Requirements for Specification of Filters

The following requirements relate to the creation of filters (rules).

### [3.1](#) Common syntax

A common set of constructs MUST be defined for the creation of rules. There MUST be a common set of operations that follow a common syntax. The client MUST be possible to define different rules for different purposes using a common filtering mechanism.

### [3.2](#) Package Identification

A means is REQUIRED whereby the client may specify the package the rules apply to.

### [3.3](#) Target URI

It MUST be possible for the client to indicate the target user to which a certain filter criteria is applied.

### [3.4](#) Notification Content Limiting

This chapter presents requirements for specifying the content to be sent in the notifications.

It MUST be possible for the client to specify the watcher XML elements [\[5\]](#) to be delivered in the notification.

#### **3.4.1 Logical Expressions**

It MUST be possible to specify logical expressions based on the value of elements defined in the template-package for the purpose of determining what to send in the notification.

It MUST be possible to construct expressions that combine multiple tests.

#### **3.4.2 Status**

The client MUST be able to indicate to the server to include only those watchers in the notifications which are in a specific status.

#### **3.4.3 Event causing the transition**

The client MUST be able to indicate to the server to include only those watchers in the notifications which are transitioned in their current status because of a specific event.

#### **3.4.4 Expiration**

The client MUST be able to indicate to the server to include only those watchers in the notifications which have subscription lifetime higher than (less than) a specific amount of seconds.

#### **3.4.5 Duration of subscription**

The client MUST be able to indicate to the server to include only those watchers in the notifications which are subscribed for a duration higher than (less than) a specific amount of seconds.

#### **3.4.6 Selected watchers**

The client MUST be able to indicate to the server to include only certain watchers (e.g. watchers from a particular domain, specific watchers defined by the filters) in the notifications.

#### **3.4.7 Partial or full state**

It MUST be possible for the client to be able to select whether full or partial state of the watcher information is delivered.

### **4 Requirements for uploading rules (Operational Rules)**

It MUST be possible for the client to upload the rules to the server and know the status - accepted or rejected.

#### **4.1 SUBSCRIBE method**

Placing filtering rules in the body of the subscription MUST be supported.



#### **4.1.1 Retention of filter settings**

The server MUST retain the uploaded filter setting for the duration of the subscription.

#### **4.1.2 Changing filter settings**

It MUST be possible to change the filter settings during a subscription.

It MUST be possible for the client to reset the filter settings to the service (server) defined default.

#### **4.2 Server does not support filters**

If the server does not support filters (the content type) then it MUST be able to indicate so in a response.

#### **4.3 Server does not support filter settings**

If the server does not support or understand the filter settings, it MUST explicitly indicate so in a response to the SUBSCRIBE request or in the NOTIFY request.

The server MAY indicate the general reason the request is not supported or understood, e.g. by returning a specific reason value for the event.

#### **4.4 Server can no longer support filter settings**

The server MUST be able to terminate the subscription if the active filter is no longer applicable due to a policy in the server.

### **5 Security considerations**

Further security requirements over [3] have not yet been identified.

### **6 Example Applications for Notification Filtering**

- \* A presentity wishes to see who has subscribed to their presence. The presentity only wishes to see information for subscribers who are co-workers.
- \* A presentity makes subscription to get information about active watchers.
- \* A presentity makes subscription to get information about defined, new or unauthorised watchers.

- \* A presentity requests history information of watchers.
- \* A user requests full state information every time something changes.

## **7 Acknowledgements**

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## **8 Normative References**

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