Session Initiation Protocol Response Code for Invalid Event Parameter Values
draft-petrie-sip-event-param-err-00.txt

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Abstract

This document defines a new error response code and header for SIP Events to indicate when an invalid value is provided in a SUBSCRIBE request Event header parameter. These changes update behavior defined in RFC 3265.
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1. Introduction

SIP Events [RFC3265] defines the SIP Event header to which Event Packages may add new parameters. [RFC3265] does not define a means to indicate that an event parameter has an invalid or unsupported value. This document defines a new SIP [RFC3261] response error code to indicate that an Event header parameter has an invalid value. This document also defines a new SIP header field to contain the parameter(s) and value(s) from the SUBSCRIBE request Event header which were invalid or unsupported. This mechanism is particularly useful for parameters that have a predefined set of values. A differentiation is not made between invalid or unsupported parameter values as the subscriber receiving the error indication will not likely be able to react differently between these two situation. In addition the notifier issuing the error response may not know the difference between an invalid or unsupported parameter value.

Note: for definitions of notifier and subscriber see SIP Events [RFC3265].

SIP [RFC3261] strives to be liberal in what it receives [RFC0760] by recommending that header fields and field parameters that are not known or understood be ignored. An approach to error indication for unknown or invalid Event header parameter names was rejected as this violates the liberal in what you receive policy. The rationale for this is to maintain a higher degree of backward compatibility of new subscriber implementations with older notifiers. Instead the approach of indicating invalid or unsupported Event header parameter values is defined in this document.

The error indication defined in this document does not provide a means of indicating that a Event header is invalid for a specific context. For example no mechanism is provided to indicate that a particular Event header parameter value might be valid at a different point in time or with another combination of header or parameter values. This is considered out of scope for this document as it requires definition of a specific context when the parameter value is valid and invalid. This document also does not provide a means of indicating missing Event header parameters as that is also considered out of scope.

[Should we add a Missing-Parameters header to contain the names of missing required Event header parameters?]

1.1. Requirements Terminology

Keywords "MUST", "MUST NOT", "REQUIRED", "SHOULD", "SHOULD NOT" and "MAY" that appear in this document are to be interpreted as described in RFC 2119 [RFC2119].
1.2. Overview

This document extends the description of Notifier processing of SUBSCRIBE requests in [RFC3265]. A notifier which receives a SUBSCRIBE request with Event header parameters having invalid or unsupported values that cause a processing failure of the SUBSCRIBE MAY indicate this error by responding the SIP response code of 439. The notifier responding with a 439 error response code MUST include a Invalid-Parameters-Values header containing the Event header parameter(s) and its invalid value(s).

Example SUBSCRIBE request Event header:

Event: my-event;param1=value1;param2=invalid;param3=invalidAsWell

Example SUBSCRIBE 439 response Invalid-Parameters-Values header:

Invalid-Parameters-Values: param2=invalid;param3=invalidAsWell

The Invalid-Parameters-Values header is valid in a 439 response to a SUBSCRIBE request. The Invalid-Parameters-Values header is ignored as having no meaning in any other SIP message. [Should it be possible to use this header in other error responses such as 420 Bad Extension?] The ABNF for the Invalid-Parameters-Values header is derived from the ABNF defined for the Event header in [RFC3265] as follows:

Invalid-Parameters-Values =
   ( "Invalid-Parameters-Values" ) HCOLON
   *( SEMI event-param )

2. IANA Considerations


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<td>[RFCXXXX]</td>
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3. Security Considerations

None.

4. References

4.1. Informational References


4.2. Normative References


Appendix A. Acknowledgments

Thank you to Robert Sparks of Estacado for input on the requirements.
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