Captive Portal API State Structure Enhancement

Abstract

This document specifies a new key in Captive Portal API State data structure. The purpose of the new key is to allow clients to perform the client authentication without user interaction.

Status of This Memo

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1. Introduction

As described in [RFC8908], the Captive Portal API data structure is specified in JavaScript Object Notation (JSON) [RFC8259]. Requests and responses for the Captive Portal API use the "application/captive+json" media type. The original specification specifies key "user-portal-url" to convey the web portal URL to the client. Although in most cases client devices are capable of presenting the web portal to the user, there are types of devices that are not built to support the user interaction with the web portal. This document specifies a new key that allows client to perform the authentication without user interaction.

2. Conventions and Definitions

The key words "**MUST**", "**MUST NOT**", "**REQUIRED**", "**SHALL**", "**SHALL NOT**", "**SHOULD**", "**SHOULD NOT**", "**RECOMMENDED**", "**NOT RECOMMENDED**", "**MAY**", and "**OPTIONAL**" in this document are to be interpreted as described in BCP 14 [RFC2119] [RFC8174] when, and only when, they appear in all capitals, as shown here.

3. API State Structure Enhancement

Table 1 shows the new key that can be optionally included in the top-level of the JSON structure returned by the API server.

Key	Type	Description
authentication-server-url	string	It provides the URL of the Authentication Server that **MUST** be accessed over TLS. Authentication Server authenticates clients using the HTTP authentication framework specified in [RFC9110]. The server **MUST NOT** require user interaction on the client device. The client **MUST** have a credential to perform the authentication without user nteraction.

Table 1: Table 1

4. Security Considerations

This document recommends security considerations specified in Section 7 of [RFC8908].

5. Privacy Considerations

This document recommends privacy consideration specified in Section 7.1 of [RFC8908].

6. IANA Considerations

IANA is requested to add the new key specified in Table 1.

7. Normative References

[RFC2119]   Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <https://www.rfc-editor.org/info/rfc2119>.

[RFC8174]   Leiba, B., "Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words", BCP 14, RFC 8174, DOI 10.17487/RFC8174, May 2017, <https://www.rfc-editor.org/info/rfc8174>.

[RFC8259]   Bray, T., Ed., "The JavaScript Object Notation (JSON) Data Interchange Format", STD 90, RFC 8259, DOI 10.17487/RFC8259, December 2017, <https://www.rfc-editor.org/info/rfc8259>.

[RFC8908]   Pauly, T., Ed. and D. Thakore, Ed., "Captive Portal API", RFC 8908, DOI 10.17487/RFC8908, September 2020, <https://www.rfc-editor.org/info/rfc8908>.

[RFC9110]   Fielding, R., Ed., Nottingham, M., Ed., and J. Reschke, Ed., "HTTP Semantics", STD 97, RFC 9110, DOI 10.17487/RFC9110, June 2022, <https://www.rfc-editor.org/info/rfc9110>.

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