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ACAP Profile for Sieve Script Access

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A version of this draft document is intended for submission to the RFC editor as a Proposed Standard for the Internet Community. Discussion and suggestions for improvement are requested.

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1. Abstract

The Sieve [SIEVE] language provides a very useful interoperable syntax for mail filtering. The Email Account Dataset Class [ACAP-EMAIL] provides an extensible and interoperable means of accessing and controlling Sieve scripts, but requires an ACAP [ACAP] server.

This memo proposes a profile of ACAP which is suitable for accessing Sieve scripts, very easy to implement in clients and servers, and upwardly compatible with ACAP.

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 [KEYWORDS].

3. Comments

Public comments can be sent to the Sieve mailing list, <ietf-mta-filters@imc.org>. To subscribe, send a message to <ietf-mta-filters-request@imc.org> with the word SUBSCRIBE as the body. Private comments should be sent to the author.

4. Sieve ACAP Profile Overview

The Sieve ACAP Profile uses ACAP commands and syntax but provides access only to Sieve-related [SIEVE] attributes in an actual or virtual Email Account Dataset [ACAP-EMAIL]. Clients can store and retrieve Sieve scripts. If supported by the server, syntax errors

and warnings for just-stored scripts, and/or run-time errors and warnings, are also available.

By using a profile of ACAP, we get a ready-made protocol designed for just this type of activity which is very easy to implement, and most importantly, an easy upgrade path. A client which uses this profile can also talk to a full ACAP server. Full ACAP provides many features not available in the profile, such as Access Control Lists (ACLs), sophisticated searching (including change notification), and of course unlimited attributes and datasets.

The goal of this profile is to provide the minimum functionality required to access and store Sieve scripts, in a way that is as easy as possible to implement in clients and servers, with a sensible upgrade mechanism (in this case, to full ACAP).

This profile of ACAP uses port xxx. The normal ACAP sequence is followed (client opens connection, server responds with an initial greeting, etc.)

5. Commands

The supported ACAP commands (with the RFC 2244 section numbers) are:

- AUTHENTICATE (6.3.1)
- SEARCH (6.4.1)
- STORE (6.6.1)
- NOOP (6.2.1)
- LOGOUT (6.2.4)

Note that the SEARCH and STORE commands are severely limited as to the datasets and attributes which may be accessed, and the command elements which may be used.

Servers MAY choose to support only those command elements specifically mentioned here.

The SEARCH command MUST NOT use a dataset name not permitted by section 7, Datasets and Attributes.

The RETURN modifier MAY be used. Other modifiers SHOULD NOT be

used. The RETURN modifier MUST only specify attributes permitted by section 7, Datasets and Attributes.

The EQUAL criteria SHOULD be used. Other criteria SHOULD NOT be used. The EQUAL criteria SHOULD specify an attribute of "ENTRY", a comparator of "i;octet", and a value permitted by section 7.

A typical SEARCH command is:


```
t1 SEARCH "/email/~/" RETURN ("email.sieve.script") EQUAL "entry"
"i;octet" "sieve"
```

The SEARCH command results in typically one ENTRY intermediate response and one MODTIME intermediate response, followed by an OK response.

The STORE command MUST be passed one entry store list. The entry path normally refers to the "sieve" (or another) entry in the "email" dataset (for example, "/email/~/sieve"). See section 7.

Attribute store items MUST use attribute names which begin with "email.sieve." The NOCREATE modifier MUST NOT be used. The UNCHANGEDSINCE modifier MAY be used.

A typical STORE command is:

```
t2 STORE ("/email/~/sieve" "email.sieve.script" <script>)
```

6. Responses

The following ACAP responses are supported (with the section number in RFC 2244):

- ACAP Untagged Response (6.1.1)
- OK Response (6.2.5)
- NO Response (6.2.6)
- BAD Response (6.2.7)
- ENTRY Intermediate Response (6.4.2)
- MODTIME Intermediate Response (6.4.3)
- BYE Untagged Response (6.2.8)

Note that the definition of initial-greeting (the ACAP untagged response) is changed to:

```
initial-greeting = "*" SP "SIEVE" *(SP "(" init-capability ")") CRLF
```

This is to avoid confusion with a full ACAP server, in addition to operating on a different port.

7. Datasets and Attributes

Only attributes which start with "email.sieve", in the Email dataset, are generally accessible using this profile.

The server MAY also permit access to attributes which start with "capability.email.sieve." in the "email" entry of the "capability" dataset. These attributes indicate (by a value of "1") the availability of the corresponding attributes in the Email dataset, for example, for Sieve run-time and syntax error and warning information. To simplify implementation, this dataset is accessed

only as "/capability/~/", that is, under the user hierarchy.

Only one entry in the Email dataset is available. In implementations which use this protocol solely to allow access to existent or new Sieve scripts (such as a mail server), it is likely that there are no actual entries or datasets, simply one or more Sieve scripts per user. In such cases, the "sieve" entry is used as a place holder for the only entry. In other situations, there may be a full ACAP server offering access to general datasets and entries. In this case, the client needs to know the actual entry name. Thus, it is reasonable for clients to allow users to specify an entry name in addition to a server name, user name, etc. It is also reasonable to default the entry name to "sieve".

Attributes are specified in the Email Account Dataset Class [ACAP-EMAIL]. Note that the active Sieve script is contained in the "email.sieve.script" attribute. Supported Sieve extension capability strings are in the multivalued "email.sieve.capability" attribute.

8. Multiple Sieve Scripts

It is possible to access multiple Sieve scripts. The active Sieve script is always in the "email.sieve.script" attribute. Additional Sieve scripts may be placed in attributes of the form "email.sieve.script.foo", where "foo" is the name of another script.

A client can access all Sieve scripts by asking the server to return "email.sieve.script*".

9. Example Session

```
   S:  * SIEVE (IMPLEMENTATION "sievead v1.0.0.7") (SASL "PLAIN"
         "CRAM-MD5")
   C:  0001 authenticate ....
   S:  0001 OK "Logged in"
   C:  0002 search "/email/~/" return ("email.sieve.capability"
            "email.sieve.script") equal "entry" "+i;octet" "sieve"
   S:  0002 ENTRY "sieve" ("fileinto" "vacation" "envelope") {25+}
            if size over 1
               keep;
   S:  0002 MODTIME "20000224232637550"
   S:  0002 OK "SEARCH Completed"
   C:  0003 store ("/email/~/sieve" "email.sieve.script" {112+}

            #rule\09<<0>>
            #size
            #verb \09 Over
            #value \09 2ááááááááá
            #Keep \09
```



```
            if size :over 2ááááááááá
            {
                Keep;
            }
            )
   S:  003 OK "STORE Completed"
```

10. References

[ACAP] Newman, Myers, "ACAP -- Application Configuration Access Protocol", RFC 2244, Innosoft, Netscape, November 1997. <ftp://ftp.isi.edu/in-notes/rfc2244.txt>

[ACAP-EMAIL] Gellens, "ACAP Email Account Dataset Class", work in Progress. <ftp://ftp.ietf.org/internet-drafts/draft-gellens-acap-acnt-xx.txt>

[KEYWORDS] Bradner, "Key words for use in RFCs to Indicate Requirement Levels", RFC 2119, Harvard University, March 1997. <ftp://ftp.isi.edu/in-notes/rfc2119.txt>

[SIEVE] Showalter, "Sieve -- a Mail Filtering Language", Carnegie Mellon, Work in Progress. <ftp://ftp.ietf.org/internet-drafts/draft-showalter-sieve-xx.txt>\

11. Security Considerations

Since this protocol does not include Access Control Lists (ACLs) or other means for setting or changing permissions, by default servers MUST ensure that only a script owner has access to a script. Servers MAY provide and/or honor out-of-band mechanisms for setting access controls on scripts (for example, native OS file permissions).

12. Acknowledgments

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