AUTH_DIAMETER Module

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Revision History

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Chapter 1. User's Guide

1.1. Overview

This module implements SIP authentication and authorization with DIAMETER server, namely DIameter Server Client (DISC).

The digest authentication mechanism is presented in next figure.

Example 1-1. Digest Authentication

```
...
a) First phase of Digest Authentication for SIP:


     +----+ SIP INVITE   +=====+  DIAMETER      +-------+       +-------+
     |    | no Auth hdr  #/////#  AA-Request    |       |       |       |
     |    |---------1--->#/////#-------2------->|       |---2-->|       |
     |UAC |              #UAS//#                |DClnt  |       |DSrv   |
     |    |<-----4-------#(SER)#<------3--------|(DISC) |<--3---|(DISC) |
     |    |     401      #/////#  DIAMETER      |       |       |       |
     +----+ Unauthorized +=====+  AA-Answer     +-------+       +-------+
                                  Result-Code=4001


b) Second phase of Digest Authentication for SIP:


     +----+ SIP INVITE   +=====+  DIAMETER     +-------+       +----+
     |    | Auth hdr     #/////#  AA-Request   |       |       |    |
     |    |--------1---->#/////#-------2------>|       |---2-->|    |
     |UAC |              #UAS//#               |DClnt  |       |DSrv|
     |    |<-------4-----#(SER)#<------3-------|       |<--3---|    |
     |    |      200 OK  #/////#  DIAMETER     |       |       |    |
     +----+              +=====+  AA-Answer    +-------+       +----+
                                  Result-Code=2001

...
```

1.2. Dependencies

1.2.1. SER Modules

The following modules must be loaded before this module:

- *sl* - used to send stateless replies.

1.2.2. External Libraries or Applications

The following libraries or applications must be installed before running SER with this module loaded:

- *None*.

1.3. Exported Parameters

1.3.1. `diameter_client_host` (string)

Hostname of the machine where the DIAMETER Client is running.

Default value is "localhost".

Example 1-2. Set `diameter_client_host` parameter

```
...
modparam("auth_diameter", "diameter_client_host", "10.10.10.10")
...
```

1.3.2. `diameter_client_port` (string)

Port number where the DIAMETER Client is listening.

Default value is "3000".

Example 1-3. Set `diameter_client_port` parameter

```
...
modparam("auth_diameter", "diameter_client_port", "3000")
...
```

1.3.3. `use_domain` (int)

Specifies whether the domain name part of URI is used when checking the user's privileges.

Default value is "0 (0==false and 1==true)".

Example 1-4. Set `use_domain` parameter

```
...
modparam("auth_diameter", "use_domain", 1)
...
```

1.4. Exported Functions

1.4.1. `diameter_www_authorize(realm)`

SIP Server checks for authorization having a DIAMETER server in backend. If no credentials are provided inside the SIP request then a challenge is sent back to UAC. If the credentials don't match the ones computed by DISC then "403 Forbidden" is sent back.

Meaning of the parameters is as follows:

- *realm* - the realm to be use for authentication and authorization.

Example 1-5. `diameter_www_authorize` usage

```
...
if(!diameter_www_authorize("iptel.org"))
{ /* user is not authorized */
break;
};
...
```

1.4.2. `diameter_proxy_authorize(realm)`

SIP Proxy checks for authorization having a DIAMETER server in backend. If no credentials are provided inside the SIP request then a challenge is sent back to UAC. If the credentials don't match the ones computed by DISC then "403 Forbidden" is sent back.

Meaning of the parameters is as follows:

- *realm* - the realm to be use for authentication and authorization.

Example 1-6. `diameter_proxy_authorize` usage

```
...
if(!diameter_proxy_authorize("iptel.org"))
{ /* user is not authorized */
break;
};
...
```

1.4.3. `diameter_is_user_in(who, group)`

The method performs group membership checking with DISC.

Meaning of the parameters is as follows:

- *who* - what header to be used to get the SIP URI that is wanted to be checked being member in a certain group. It can be: "Request-URI", "From", "To" or "Credentials".
- *group* - the group name where to check if the user is part of.

Example 1-7. `diameter_is_user_in` usage

```
...
if(!diameter_is_user_in("From", "voicemail"))
{ /* user is not authorized */
break;
};
...
```

1.5. Installation & Running

Notes about installation and running.

Chapter 2. Developer's Guide

The module does not provide any sort of API to use in other SER modules.

Chapter 3. Frequently Asked Questions

1. Where can I find more about SER?

Take a look at http://iptel.org/ser.

2. Where can I post a question about this module?

First at all check if your question was already answered on one of our mailing lists:

- http://mail.iptel.org/mailman/listinfo/serusers
- http://mail.iptel.org/mailman/listinfo/serdev

E-mails regarding any stable version should be sent to `<serusers@iptel.org>` and e-mail regarding development versions or CVS snapshots should be send to `<serdev@iptel.org>`.

If you want to keep the mail private, send it to `<serhelp@iptel.org>`.

3. How can I report a bug?

Please follow the guidelines provided at: http://iptel.org/ser/bugs