

# **AUTH\_DIAMETER Module**

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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>](mailto:serusers@iptel.org) and e-mail regarding development versions or CVS snapshots should be send to [<serdev@iptel.org>](mailto:serdev@iptel.org).

If you want to keep the mail private, send it to [<serhelp@iptel.org>](mailto:serhelp@iptel.org).

## 3. How can I report a bug?

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