

# **mangler Module**

**Gabriel Vasile**  
FhG FOKUS

Edited by  
**Gabriel Vasile**

## **mangler Module**

Edited by and Gabriel Vasileand Gabriel Vasile

Copyright © 2003 Fill in here

### Revision History

Revision \$Revision: 1.1.2.1 \$ \$Date: 2003/08/05 21:48:07 \$

# Table of Contents

|                                                |          |
|------------------------------------------------|----------|
| <b>1. User's Guide .....</b>                   | <b>1</b> |
| 1.1. Overview .....                            | 1        |
| 1.2. Dependencies .....                        | 1        |
| 1.2.1. SER Modules .....                       | 1        |
| 1.2.2. External Libraries or Applications..... | 1        |
| 1.3. Exported Parameters.....                  | 1        |
| 1.3.1. contact_flds_separator (string).....    | 1        |
| 1.4. Exported Functions .....                  | 2        |
| 1.4.1. sdp_mangle_ip(pattern, newip).....      | 2        |
| 1.4.2. sdp_mangle_port(offset).....            | 2        |
| 1.4.3. encode_contact(encoding_prefix) .....   | 3        |
| 1.4.4. decode_contact().....                   | 3        |
| 1.4.5. decode_contact_header().....            | 3        |
| <b>2. Developer's Guide .....</b>              | <b>5</b> |
| <b>3. Frequently Asked Questions .....</b>     | <b>6</b> |

# List of Examples

|                                        |   |
|----------------------------------------|---|
| 1-1. Set db_url parameter .....        | 1 |
| 1-2. sdp_mangle_ip usage .....         | 2 |
| 1-3. sdp_mangle_port usage .....       | 2 |
| 1-4. encode_contact usage .....        | 3 |
| 1-5. decode_contact usage .....        | 3 |
| 1-6. decode_contact_header usage ..... | 4 |

# Chapter 1. User's Guide

## 1.1. Overview

This is a module to help with SDP mangling. Still in testing.

## 1.2. Dependencies

### 1.2.1. SER Modules

The following modules must be loaded before this module:

- *No dependencies on other SER modules.*

### 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. `contact_flds_separator` (string)

First char of this parameter is used as separator for encoding/decoding Contact header.

#### Warning

First char of this field must be set to a value which is not used inside username,password or other fields of contact. Otherwise it is possible for the decoding step to fail/produce wrong results.

*Default value is “\*”.*

**Example 1-1. Set db\_url parameter**

```
...
modparam("module", "contact_flds_separator", "-")
...
```

then an encoded uri might look sip:user-password-ip-port-protocol@PublicIP

## 1.4. Exported Functions

### 1.4.1. sdp\_mangle\_ip(pattern, newip)

Changes IP addresses inside SDP package in lines describing connections like c=IN IP4 Currently in only changes IP4 addresses since IP6 probably will not need to traverse NAT :)

The function returns negative on error, or number of replacements + 1.

Meaning of the parameters is as follows:

- *pattern* - A pair ip/mask used to match IP's located inside SDP package in lines c=IN IP4 ip. This lines will only be mangled if located IP is in the network described by this pattern. Examples of valid patterns are "10.0.0.0/255.0.0.0" or "10.0.0.0/8" etc.
- *newip* - A string representing the new IP to be put inside SDP package if old IP address matches pattern.

**Example 1-2. sdp\_mangle\_ip usage**

```
...
sdp_mangle_ip("10.0.0.0/8", "193.175.135.38");
...
```

### 1.4.2. sdp\_mangle\_port(offset)

Changes ports inside SDP package in lines describing media like m=audio 13451.

The function returns negative on error, or number of replacements + 1.

Meaning of the parameters is as follows:

- *offset* - A string representing an integer which will be added/subtracted from the located port.

**Example 1-3. sdp\_mangle\_port usage**

```
...
sdp_mangle_port("-12000");
```

...

### 1.4.3. encode\_contact(encoding\_prefix)

This function will encode uri-s inside Contact header in the following manner

sip:username:password@ip:port;transport=protocol goes sip:enc\_pref\*username\*ip\*port\*protocol@public\_ip\* is the default separator.

The function returns negative on error, 1 on succes.

Meaning of the parameters is as follows:

- *encoding\_prefix* - Something to allow us to determine that a contact is encoded publicip--a routable IP,most probably you should put your external IP of your NAT box.

#### Example 1-4. encode\_contact usage

```
...
if (src_ip == 10.0.0.0/8) encode_contact("enc_prefix","193.175.135.38");
...
```

### 1.4.4. decode\_contact()

This function will decode the URI in first line in packets wich come with encoded URI in the following manner

sip:enc\_pref\*username\*ip\*port\*protocol@public\_ip goes to

sip:username:password@ip:port;transport=protocol It uses the default set parameter for contact encoding separator.

The function returns negative on error, 1 on succes.

Meaning of the parameters is as follows:

#### Example 1-5. decode\_contact usage

```
...
if (uri =~ "^enc*") { decode_contact(); }
...
```

### 1.4.5. decode\_contact\_header()

This function will decode URIs inside Contact header in the following manner

sip:enc\_pref\*username\*ip\*port\*protocol@public\_ip goes to

sip:username:password@ip:port;transport=protocol. It uses the default set parameter for contact encoding separator.

The function returns negative on error, 1 on succes.

Meaning of the parameters is as follows:

**Example 1-6. decode\_contact\_header usage**

```
...  
if (uri =~ "^enc*") { decode_contact_header(); }  
...
```

## 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>