

# **mangler Module**

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Revision History

Revision \$Revision: 1.1 \$ \$Date: 2003/07/24 16:35:42 \$

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# 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>](mailto:serusers@iptel.org) and e-mail regarding development versions or CVS snapshots should be sent 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>