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# Chapter 1. User's Guide

## 1.1. Overview

The module contains record routing logic

## 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. `enable_full_lr` (integer)

If set to 1 then `;lr=on` instead of just `;lr` will be used. This is to overcome problems with broken UAs which strip `;lr` parameter when generating Route header fields from Record-Route (`;lr=on` seems to help).

*Default value is 0 (no).*

#### Example 1-1. Set `enable_full_lr` parameter

```
...  
modparam("rr", "enable_full_lr", 1)  
...
```

### 1.3.2. `append_fromtag` (integer)

if turned on, request's from-tag is appended to record-route; that's useful for understanding whether subsequent requests (such as BYE) come from caller (route's from-tag==BYE's from-tag) or callee (route's from-tag==BYE's to-tag)

*Default value is 1 (yes).*

#### Example 1-2. Set `append_fromtag` parameter

```
...
modparam("rr", "append_fromtag", 0)
...
```

### 1.3.3. `enable_double_rr` (integer)

There are some situations when the server needs to insert two Record-Route header fields instead of one. For example when using two disconnected networks or doing cross-protocol forwarding from UDP->TCP. This parameter enables inserting of 2 Record-Routes. The server will later remove both of them.

*Default value is 1 (yes).*

#### Example 1-3. Set `enable_double_rr` parameter

```
...
modparam("rr", "enable_double_rr", 0)
...
```

## 1.4. Exported Functions

### 1.4.1. `loose_route()`

The function performs loose routing as defined in RFC3261 (<http://www.ietf.org/rfc/rfc3261.txt>). See the RFC3261 (<http://www.ietf.org/rfc/rfc3261.txt>) for more details.

#### Example 1-4. `loose_route` usage

```
...
loose_route();
...
```

## 1.4.2. `strict_route()` -- deprecated

If there are any Route HFs in the message, the function takes the first one, rewrites Request-URI with it's value and removes the first URI from Route HFs.

### Example 1-5. `strict_route` usage

```
...
strict_route();
...
```

## 1.4.3. `record_route()`

The function adds a new Record-Route header field. The header field will be inserted in the message before any other Record-Route header fields.

### Example 1-6. `record_route` usage

```
...
record_route();
...
```

## 1.4.4. `record_route_preset(string)`

This function will put the string into Record-Route, don't use unless you know what you are doing.

Meaning of the parameters is as follows:

- *string* - String to be inserted into the header field.

### Example 1-7. `record_route_preset` usage

```
...
record_route_preset("1.2.3.4:5090");
...
```

## 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>