nathelper Module

Maxim Sobolev
PortaOne

Edited by
Maxim Sobolev

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Edited by and Maxim Sobolevand Maxim Sobolev

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Revision History

Revision $Revision: 1.1 $ $Date: 2003/07/16 15:59:44 $

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Chapter 1. User's Guide

1.1. Overview

This is a module to help with NAT traversal. In particular, it helps symmetric UAs that don't advertise they are symmetric and are not able to determine their public address. fix_nated_contact rewrites Contact header field with request's source address:port pair. fix_nated_sdp adds the active direction indication to SDP (flag 0x01) and updates source IP address too (flag 0x02).

Known devices that get along over NATs with nathelper are ATAs (as clients) and Cisco Gateways (since 12.2(T)) as servers. See
http://www.cisco.com/en/US/products/sw/iosswrel/ps1839/products_feature_guide09186a0080110bf9.html">
(http://www.cisco.com/en/US/products/sw/iosswrel/ps1839/products_feature_guide09186a0080110bf9.html)

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. `natping_interval` (integer)

Period of time in seconds between sending short UDP packets to all currently registered UAs to keep their NAT bindings alive. Value of 0 disables this functionality.

Default value is 0.

Example 1-1. Set `natping_interval` parameter

```
...
modparam("nathelper", "natping_interval", 10)
...
```

1.3.2. `ping_nated_only` (integer)

If this variable is set then only contacts that have "behind_NAT" flag in user location database set set will get ping.

Default value is 0.

Example 1-2. Set `ping_nated_only` parameter

```
...
modparam("nathelper", "ping_nated_only", 1)
...
```

1.4. Exported Functions

1.4.1. `fix_nated_contact()`

Rewrites Contact HF to contain request's source address:port.

Example 1-3. `fix_nated_contact` usage

```
...
if (search("User-Agent: Cisco ATA.*") {fix_nated_contact();};
...
```

1.5. Exported Functions

1.5.1. `fix_nated_sdp(mode)`

Rewrites Contact HF to contain request's source address:port.

Meaning of the parameters is as follows:

- *mode* - 0x01 (add direction=active), 0x02 (rewrite media IP address with source address of the message).

Example 1-4. `fix_nated_sdp` usage

```
...
if (search("User-Agent: Cisco ATA.*") {fix_nated_sdp("3");};
...
```

1.5.2. `force_rtp_proxy()`

Rewrites SDP body to ensure that media is passed through an RTP proxy.

Example 1-5. `force_rtp_proxy` usage

```
...
if (search("User-Agent: Cisco ATA.*") {force_rtp_proxy();};
...
```

1.5.3. `force_rtp_proxy(ip_address)`

Rewrites SDP body with given IP address to ensure that media is passed through an RTP proxy.

Meaning of the parameters is as follows:

- *ip_address* - new SDP IP address.

Example 1-6. `force_rtp_proxy` usage

```
...
if (search("User-Agent: Cisco ATA.*") {force_rtp_proxy("1.2.3.4");};
...
```

1.5.4. `nat_uac_test(mode)`

Tries to guess if client's request originated behind a nat. The parameter determines what heuristics is used. If flag 1 is set, the "received" test is used -- address in Via is compared against source IP address of signaling. If flag 2 is set, Contact header field is searched for occurence of RFC1918 addresses. Both flags can be bitwise combined, the test returns true if any of the tests identified a NAT.

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