

draft-ietf-behave-nat-behavior-discovery-00

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Overview

Was draft-macdonald-behave-nat-behavior-
discovery-00

Updates the behavior discovery operations from
3489 to 3489bis.

Caveat Emptor

This STUN usage provides information about observable transient behavior; it only truly determines a NAT's behavior with regard to the STUN server used at the instant the test is run. Applications requiring reliable reach must establish a communication channel through a NAT using another technique such as ICE or OUTBOUND.

Changes from previous

Added SRV discovery and more info on backward compatibility with 3489

Clarify that supporting OTHER-ADDRESS, CHANGE-ADDRESS, RESPONSE-ADDRESS, and XOR-RESPONSE-ADDRESS not appropriate for a server with a single IP address

Added CACHE-TIMEOUT

Usage Discovery Issue

SRV Target

- Yes
- BUT target should usually point to same port as binding usage
- Don't want to deliver behavior-discovery attributes to regular binding request

Requires new optional attribute to request behavior-discovery attributes be returned

- OTHER-ADDRESS
- SOURCE-ADDRESS

OTHER-ADDRESS-REQUEST

Client includes this attribute in request to indicate desire to receive behavior-discovery attributes in response

Server **MUST NOT** include OTHER-ADDRESS or SOURCE-ADDRESS in response unless present

Note that a non-behavior-discovery server will still reject requests containing behavior-discovery mandatory attributes.

Compatibility

client	server	behavior
b-d	b-d	works fine, responds to O-A-R
b-d	3489bis	can use as STUN, but receives 420 on using mandatory b-d attribute
b-d	3489	works, except for PADDING (more later)
3489	b-d	works if the server has backwards-compatibility support on cookie
3489bis	b-d	same responses as any other 3489bis server

PADDING

Used to test for UDP fragment handling

New attribute in behavior-discovery

Mandatory or optional attribute?

- Believe it should be mandatory in behavior-discovery implementations
- Making it a mandatory attribute makes queries fail to 3489 servers

Proposed solution:

- Leave as mandatory, preventing client from believing it has tested fragment handling, but not checking return code. Requires resend for rest of query to 3489 server.

XOR Addresses

Same rationale for XOR-MAPPED-ADDRESS applies to XOR-REFLECTED-FROM and XOR-RESPONSE-ADDRESS (already included)

But

If a server is also behind a NAT, SOURCE-ADDRESS and OTHER-ADDRESS could also be affected.

Proposal, add XOR-SOURCE-ADDRESS and XOR-OTHER-ADDRESS, use when magic cookie indicates 3489bis compatibility