

Protocol Review: Protocols for NAT Control

(draft-brockners-diameter-nat-control-protocols-review-00.txt)

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Motivation & Approach

- Motivation
 - Analyze existing protocols that offer capabilities for controlling a device performing Network Address Translation
 - Evaluate applicability of these protocols for per-endpoint control of a Large Scale NAT
- Approach
 - Compile Generic List of NAT Control Capabilities
 - Analyze existing protocols using this list of capabilities
 - Supply perspective which NAT Control Capabilities an LSN would require and how they are fulfilled by the protocols evaluated.

Generic Capabilities for NAT Control

	NAT Control Protocol Capability	Applicability to LSN
1	Endpoint awareness	√
2	Configure NAT-Binding Limits	√
3	Configure full NAT-Binding	√
4	Configure half NAT-Binding	√
5	Configure Address pools	√
6	Accounting – per NAT-binding	√
7	Accounting – per range	√
8	NAT-Binding Information Query	√
9	Support Address Latching	
10	Support AFT	(√)
11	Support Twice-NAT	
12	Support Soft-State Configs	√
13	Transport specific bindings	√
	Control Connection Initiation (push, pull)	
	Base protocol	

Protocols Evaluated: Results Summary

Protocol/Protocol Framework	Capabilities Supported												
	1	2	3	4	5	6	7	8	9	10	11	12	13
MIDCOM	√		√	√	√				√	√	√	Ps	√
SIMCO			√	√	√				√	√	√	Ps	√
ETSI Ia			√	√				√	√	√			
ETSI Gq'	√		√	√				√	√		√	Ps	
ITU Rs	√		√	√				√	√		√	Ps	
ITU Rw	√		√	√				√	√		√	B	
UPnP IGD				√							√	Ps	√
Bonjour NAT-PMP				√							√	Ps	√
NAT-PMP relay				√							√	Ps	√
NSLP	√			√							√	Ps	√
NAT with explicit control (NAT-XC)			√			√	√		√	√	√	Ps	√

C12 - Connection Initiation Legend

Ps- Push

PI - Pull

B - Both

Next Steps

- Authors appreciate feedback from the WG
- Add this draft to BEHAVE WG charter?