

NLSR - Feature #3948

Multiple network support

02/06/2017 09:36 AM - Ashlesh Gawande

Status:	New	Start date:	05/30/2017
Priority:	Normal	Due date:	
Assignee:	Laqin Fan	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:	Minor Release v0.6.1		
Description			
Do not forward LSA interests to routers not in the same network. Multiple networks should not interfere with each other.			
Currently, if two routers are working on different network prefixes, e.g. /ndn/ and /ccn, LSAs distributed will leak into the other network, and cause interruptions.			
<ul style="list-style-type: none">• (1) On a single computer, multiple NLSR processes could run simultaneously without interfering with each other.• (2) LSAs distributed for one network would not clutter other networks.			
This is a CI-NEW grant (NDN-CRI) goal for year two.			
Subtasks:			
Bug # 4101: Use network name in sync prefix			Closed
Related issues:			
Related to NLSR - Feature #3277: NLSR messages should include process ID		New	10/20/2015

History

#1 - 05/22/2017 12:17 PM - Nicholas Gordon

- Priority changed from Normal to Low

#2 - 05/23/2017 01:46 PM - Nicholas Gordon

- Priority changed from Low to Normal

#3 - 05/25/2017 07:50 AM - Nicholas Gordon

- Related to Feature #3277: NLSR messages should include process ID added

#4 - 05/25/2017 02:51 PM - Nicholas Gordon

- Tracker changed from Task to Feature

- Subject changed from Support multiple NLSR domains in a large network and multiple NLSR processes on a border router to Multiple network support

- Description updated

- Target version set to v0.5.0

#5 - 05/30/2017 08:12 AM - Nicholas Gordon

- Description updated

To further specify this issue, the goal is: given two NLSR processes on one computer, condition (1) means that the two processes will not forward **anything** to each other.

Some of the problems can be addressed by namespacing (e.g. sync and LSAs, which can be given with a multi-component prefix to avoid collisions, in theory).

Other problems are not clear. It seems that NLSR should already be able to support multiple processes per node, considering the case where neighbors are specified with full URIs, disambiguating two processes should be possible, say with a port number specification.

For example, consider the case where we are running three NLSR processes on each node. In a conventional UDP-tunneled overlay, we could specify the URIs like this:

- udp4://10.0.0.1:8000 (in the first nlsr.conf)
- udp4://10.0.0.1:8001 (in the second)

- `udp4://10.0.0.1:8002` (in the third)

Then, this should be enough to differentiate the processes. If we then differentiate the broadcast-type connections (Hello protocol, LSA, and sync) by setting good network names, a cursory evaluation suggests that NLSR *should* already do this.

Unless someone else knows of a situation in which this fails, we may need to construct an experiment to determine whether this happens in practice.

#6 - 06/12/2017 10:34 AM - Nicholas Gordon

- Description updated

#7 - 01/02/2018 02:05 PM - Nicholas Gordon

- Assignee set to *Laqin Fan*

#8 - 12/21/2018 12:16 PM - Ashlesh Gawande

- Target version changed from *v0.5.0* to *v0.6.0*

#9 - 12/29/2020 07:03 PM - Saurab Dulal

- Target version changed from *v0.6.0* to *Minor Release v0.6.1*