

NFD - Feature #4924

Expose RetxSuppressionExponential settings in strategy parameters

04/25/2019 06:57 AM - Junxiao Shi

Status:	Code review	Start date:	
Priority:	Normal	Due date:	
Assignee:	Ashlesh Gawande	% Done:	0%
Category:	Forwarding	Estimated time:	3.00 hours
Target version:	v0.8		
Description			
AsfStrategy, BestRouteStrategy, and MulticastStrategy use RetxSuppressionExponential to decide whether to forward or aggregate a retransmitted Interest, but the suppression settings are hard-coded. It's desirable to allow configuration of these settings via strategy parameters.			

History

#1 - 04/25/2019 07:02 AM - Junxiao Shi

<https://www.lists.cs.ucla.edu/pipermail/ndn-interest/2019-April/002418.html> has some background on how I got this idea.

#2 - 08/10/2020 09:38 PM - Ashlesh Gawande

Can typed components be used for these strategy parameter? So that we can have something like `<...>/retx-initial-suppression=20ms`

Do we reserve it in <https://redmine.named-data.net/projects/ndn-tlv/wiki/NameComponentType>? Or these typed components are for something more widely used such as version, segment, timestamp?

[In Asf we are using parameters like: `<...>/n-silent-timeouts~5`.

I think we are supposed to use typed components in the long run: <https://redmine.named-data.net/issues/4193#note-5>

#3 - 08/11/2020 01:18 AM - Junxiao Shi

This is not an appropriate use of typed component because it is specific to one application and not at all universal.

In the wire format (the name), you can continue using the URI query string format (use = instead of ~, and use & separator) or switch to JSON. It does not need to be human readable.

Then, engineer the nfdc tool to allow operator entering each parameter as a separate key-value pair:

```
nfdc strategy set /localhost/nfd/strategy/best-route strategy-version 7 strategy-flag retx-initial-suppression=20 strategy-flag retx-max-suppression=500
```

Initially, nfdc does not need to validate the key-value pairs, but merely encodes them into either URI query string or JSON format. Available flags and validation rules can be exposed via [#3887](#).

#4 - 08/12/2020 09:16 PM - Ashlesh Gawande

Why bother with this and not simply go with same scheme as current ASF?

#5 - 08/13/2020 07:13 PM - Junxiao Shi

Ashlesh Gawande wrote in [#note-4](#):

Why bother with this and not simply go with same scheme as current ASF?

If we are to add suppression config to ASF, how to pack multiple parameters in the same name component?

#6 - 08/13/2020 07:49 PM - Ashlesh Gawande

The same way it does now:

<https://named-data.net/doc/NFD/current/manpages/nfd-asf-strategy.html>

```
nfdc strategy set prefix /ndn strategy /localhost/nfd/strategy/asf/%FD%03/probing-interval~30000/n-silent-timeouts~5
```

Could provide shortened args optionally.

Can have something like:

```
nfdc strategy set prefix /ndn strategy /localhost/nfd/strategy/asf/%FD%03/pi~30000/nst~5/ris=20ms
```

#7 - 08/15/2020 08:21 PM - Junxiao Shi

I didn't realize that strategy parameters can have multiple components.

Remember to increment strategy version number every time you change the syntax or semantics of a parameter.

Don't introduce shortened aliases. Every strategy should have only one name.

#8 - 09/12/2020 09:52 PM - Ashlesh Gawande

- Status changed from New to Code review

- Assignee set to Ashlesh Gawande

#9 - 09/13/2020 08:07 AM - Ashlesh Gawande

- Subject changed from *best-route: expose RetxSuppression settings in strategy parameters* to *asf/best-route/multicast: expose RetxSuppression settings in strategy parameters*

- Description updated

#10 - 03/26/2021 12:20 PM - Davide Pesavento

- Subject changed from *asf/best-route/multicast: expose RetxSuppression settings in strategy parameters* to *Expose RetxSuppressionExponential settings in strategy parameters*

- Description updated

- Target version set to v0.8