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Simulation of handoff algorithm for NDN producer's mobility (Article)

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Abstract

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Named Data networking is a novel communication scheme designed for efficient data dissemination. NDN is cantered on content management to improve on IP challenges such mobility , scalability, security and better quality of service. In this paper, producer 's mobility between two points is set-up for simulation using hard handoff technique. In this form of handoff , the carrier frequency of a connecting access gateway remains the same with the newly visited gateway of the producer (i.e intra-frequency). The mobile producer in node 3 is requesting a video content to another producer in node 4 while in a state of mobility . We considered anchorless technique of managing mobility of the nodes and simulation ensures that contents still receive routing update as they achieve handoff . These set-ups of simulation were conducted using NetSim version 12.10 software. In the results, we present video application throughput and the link throughput of link 1, link 2 and link 7and comprehend that, efficiency and seamless mobility is realized using video application as compared to link throughout. Network and queued metrics also present more results being generated after the simulation processes. The algorithm of our inputs is tested in MATLAB and part of the coding system is build using visual studio 2015 which by default, is compatible with NetSim "binary" and "dll" folders.

SciVal Topic Prominence

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Data Handoff Producer Throughput

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References (22)

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1 Shang, W., Gawande, A., Zhang, M., Afanasyev, A., Burke, J., Wang, L., Zhang, L.

Publish-Subscribe communication in building management systems over named data networking

(2019) *Proceedings - International Conference on Computer Communications and Networks, ICCCN*, 2019-July, art. no. 8846951. Cited 2 times.
ISBN: 978-172811856-7
doi: 10.1109/ICCCN.2019.8846951

View at Publisher

2 Hussaini, M., Naeem, M.A., Kim, B.-S., Maijama'a, I.S.

Efficient Producer Mobility Management Model in Information-Centric Networking (Open Access)

(2019) *IEEE Access*, 7, art. no. 8674752, pp. 42032-42051. Cited 8 times.
http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=6287639
doi: 10.1109/ACCESS.2019.2907653

View at Publisher

3 Meddeb, M., Dhraief, A., Belghith, A., Monteil, T., Drira, K., Gannouni, S.

AFIRM: Adaptive forwarding based link recovery for mobility support in NDN/IoT networks

(2018) *Future Generation Computer Systems*, 87, pp. 351-363. Cited 18 times.
doi: 10.1016/j.future.2018.04.087

View at Publisher

4 Zhang, L., Afanasyev, A., Burke, J., Jacobson, V., Claffy, K.C., Crowley, P., Papadopoulos, C., (...), Zhang, B.

Named data networking

(2014) *Computer Communication Review*, 44 (3), pp. 66-73. Cited 957 times.
http://www.acm.org/sigs/sigcomm/
doi: 10.1145/2656877.2656887

View at Publisher

5 Vijay, G.
(2010) *Wireless Communications & Networking*. Cited 86 times.
Elsevier

6 Ahmed, M.Z., Hashim, A.H.A., Khalifa, O.O., Alkali, A.H., Bt Midi, N.S., Rahman, F.B.A.

Evaluating mobility management models for content forwarding in named data networking environments (Open Access)

(2019) *International Journal of Interactive Mobile Technologies*, 13 (4), pp. 47-60. Cited 4 times.
https://online-journals.org/index.php/i-jim/article/download/10519/5589
doi: 10.3991/IJIM.V13I04.10519

View at Publisher

☐ 7 Ahmed, M.Z., Hassan, A.M., Alkali, A.H., Hashim, A.H.A., Khalifa, O.O., Ramli, H.A.B.M.
Performance Evaluation of Scenerio-aware Protocol for Producer Mobility Support in NDN

(2019) *2019 7th International Conference on Mechatronics Engineering, ICOM 2019*, art. no. 8952040. Cited 2 times.
http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=8947451
ISBN: 978-172812971-6
doi: 10.1109/ICOM47790.2019.8952040

View at Publisher

☐ 8 Salami, and MuhanadBabikier
(2017) *Queuing Theory Approach for Evaluating Rate of Transmission in Wireless Network Using Network Coding*

☐ 9 Elagib, S.B., Najeeb, A.R., Hashim, A.H., Olanrewaju, R.F.
Big data analysis solutions using MapReduce framework

(2014) *Proceedings - 5th International Conference on Computer and Communication Engineering: Emerging Technologies via Comp-Unication Convergence, ICCCE 2014*, art. no. 7031617, pp. 127-130. Cited 14 times.
ISBN: 978-147997635-5
doi: 10.1109/ICCCE.2014.46

View at Publisher

☐ 10 Khalifa, O.O., Assidiq, A.A.M., Hashim, A.-H.A.
Vision-based lane detection for autonomous artificial intelligent vehicles

(2009) *ICSC 2009 - 2009 IEEE International Conference on Semantic Computing*, art. no. 5298698, pp. 636-641. Cited 16 times.
ISBN: 978-076953800-6
doi: 10.1109/ICSC.2009.113

View at Publisher

☐ 11 Ahmed, M.Z., Abdallahhashim, A.H., Khalifa, O.O., Salami, M.J.E.
Border Gateway Protocol to provide failover in multihoming environment
(2017) *International Journal of Information Technology*, 9 (1), pp. 33-39. Cited 3 times.

☐ 12 Babiker, M., Othmankhalifa, O., Aishahashim, H.A., Momoh-Jimohsalami, E., Muhammedahmed, Z.
(2017) *Performance of Turbo Code in CDMA under AWGN Channel*. Cited 2 times.

☐ 13 Babiker, M., Khalifa, O.O., Htike, K.K., Hassan, A., Zaharadeen, M.
Automated daily human activity recognition for video surveillance using neural network

(2018) *2017 IEEE International Conference on Smart Instrumentation, Measurement and Applications, ICSIMA 2017*, 2017-November, pp. 1-5. Cited 15 times.
ISBN: 978-153863960-3
doi: 10.1109/ICSIMA.2017.8312024

View at Publisher

☐ 14 Babiker, M., Khalifa, O.O., Htike, K.K., Hassan, A., Zaharadeen, M.
Harris corner detector and blob analysis featuers in human activty recognetion

(2018) *2017 IEEE International Conference on Smart Instrumentation, Measurement and Applications, ICSIMA 2017*, 2017-November, pp. 1-5. Cited 3 times.
ISBN: 978-153863960-3
doi: 10.1109/ICSIMA.2017.8312025

View at Publisher

15 Ahmed, M.Z., Hashim, A.H.A., Hassan, A.M., Khalifa, O.O., Alkali, A.H., Ahmed, A.M.
Performance evaluation of best route and broadcast strategy for NDN producer's mobility (Open Access)

(2019) *International Journal of Engineering and Advanced Technology*, 9 (1), pp. 3671-3677. Cited 3 times.
https://www.ijeat.org/wp-content/uploads/papers/v9i1/A2712109119.pdf
doi: 10.35940/ijeat.A2712.109119

View at Publisher

16 Hasan, M.K., Saeed, R.A., Hashim, A.A., Islam, S., Alsaqour, R.A., Alahdal, T.A.
Femtocell network time synchronization protocols and schemes

(2012) *Research Journal of Applied Sciences, Engineering and Technology*, 4 (23), pp. 5136-5143. Cited 14 times.
http://maxwellsci.com/print/rjaset/v4-5136-5143.pdf

17 Rahman, M.A., Azad, M.S., Anwar, F., Abdalla, A.H.
A simulation based performance analysis of reactive routing protocols in wireless mesh networks

(2009) *Proceedings - 2009 International Conference on Future Networks, ICFN 2009*, art. no. 5189941, pp. 268-272. Cited 13 times.
ISBN: 978-076953567-8
doi: 10.1109/ICFN.2009.64

View at Publisher

18 Musa, A., Bashir, S.O., Abdalla, A.H.
Review and assessment of electromagnetic wave propagation in sand and dust storms at microwave and millimeter wave bands — Part I (Open Access)

(2014) *Progress In Electromagnetics Research M*, 40, pp. 91-100. Cited 22 times.
http://www.jpier.org/PIERM/pierm40/10.14102904.pdf
doi: 10.2528/PIERM14102904

View at Publisher

19 Khalifa, O.O., Binti Yusof, Y., Abdalla, A.-H., Olanrewaju, R.F.
State-of-the-art digital watermarking attacks

(2012) *2012 International Conference on Computer and Communication Engineering, ICCCE 2012*, art. no. 6271316, pp. 744-750. Cited 13 times.
ISBN: 978-146730478-8
doi: 10.1109/ICCCE.2012.6271316

View at Publisher

20 Alawi, M.A., Saeed, R.A., Hassan, A.A.
Cluster-based multi-hop vehicular communication with multi-metric optimization

(2012) *2012 International Conference on Computer and Communication Engineering, ICCCE 2012*, art. no. 6271145, pp. 22-27. Cited 15 times.
ISBN: 978-146730478-8
doi: 10.1109/ICCCE.2012.6271145

View at Publisher

21 Musa, A., Bashir, S.O., Abdalla, A.H.
Review and assessment of electromagnetic wave propagation in sand and dust storms at microwave and millimeter wave bands - part ii (Open Access)

(2014) *Progress In Electromagnetics Research M*, 40, pp. 101-110. Cited 13 times.
http://www.jpier.org/PIERM/pierm40/11.14102903.pdf
doi: 10.2528/PIERM14102903

View at Publisher

22 Ahmed, M.Z., Hassan, A.M., Alkali, A.H., Hashim, A.H.A., Khalifa, O.O., Ramli, H.A.B.M.

Performance Evaluation of Scenerio-aware Protocol for Producer Mobility Support in NDN

(2019) *2019 7th International Conference on Mechatronics Engineering, ICOM 2019*, art. no. 8952040. Cited 2 times.
http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=8947451
ISBN: 978-172812971-6
doi: 10.1109/ICOM47790.2019.8952040

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