

On Design of Resilient Communication Networks

Dorina Luminita COPACI, Angelica BACIVAROV

EUROQUALROM, ETTI, University «Politehnica» of Bucharest, Romania
lcopaci@yahoo.com, angelica@euroqual.pub.ro

Abstract

This work develops approaches on providing resilience of a network, using the CAN algorithm and it will show the manner in which it can be applied to an internet communications protocol, such as the SIP (Session Initiation Protocol).

Keywords: peer-to-peer networks, SIP protocol, resilience, security.

References:

- [1] <http://en.wikipedia.org/wiki/Resilience>.
- [2] I.C. Bacivarov, V. Cătuneanu, Fiabilitatea sistemelor de telecomunicații, Ed. Militară, 1995.
- [3] xxx Proceedings of IEEE Symposium on Fault Tolerant Computers, 1990-2010.
- [4] R. Albert, H. Jeong, and A.-L. Barabasi, Error and attack tolerance of complex networks, Nature, 406(6794):378-382, July 2000.
- [5] VOIP <http://en.wikipedia.org/wiki/Voip>.
- [6] D. Loguinov, Evolution of Massive P2P Graphs: Zone Distribution Perspective, Work in Progress, July 2003.
- [7] D. Loguinov, A. Kumar, V. Rai, and S. Ganesh, Graph-Theoretic Analysis of Structured Peer-to-Peer Systems: Routing Distances and Fault Resilience, ACM SIGCOMM, August 2003.
- [8] D. Bryan, P. Matthews, E. Shim, and D. Willis, Concepts and Terminology for Peer to Peer SIP draft-ietf-p2psip-concepts-00 (June 2007).
- [9] C. Jennings and R. Mahy, Managing Client Initiated Connections in the Session Initiation Protocol (SIP), draft-ietf-sip-outbound-07 (work in progress), January 2007.
- [10] A. Fiat and J. Saia, Censorship Resistant Peer-to-Peer Content Addressable Networks, Symposium on Discrete Algorithms, 2002.
- [11] S. Ratnasamy, P. Francis, M. Handley, R. Karp and S. Shenker, A Scalable Content Addressable Network (Jan 2001).
- [12] Distributed Hash Table – http://en.wikipedia.org/wiki/Distributed_hash_table.
- [13] www.sipdht.sourceforge.net/sipdht2.