



Hamilton Institute

Unwanted traffic: Attacks, detection, and potential solutions

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Monday, May 22nd, 2006

Abstract

Unwanted packets have been at the heart of many of the problems on the Internet in the last few years. Small scale attacks on individual network nodes have since spread to every layer of the protocol stack. Large numbers of compromised machines are used to launch a wide range of distributed attacks. Spam has clogged networks and phishing is a growing component of the attacks.

The first part of the talk presents a taxonomy of the attacks as well as the variety of existing and proposed mechanisms to deter them. A range of proposed solutions ranging from prevention, establishing identity, intrusion and anomaly detection, deflection, filtering, and traceback are examined. The second part will cover an economic disincentives based anti-spam scheme called SHRED (Spam Harassment Reduction via Economic Disincentives) that aims to add monetary cost to senders of such unwanted mail while allowing legitimate mail to be exchanged at no cost to users and in the same manner as today. I will speculate on why the scheme has gone nowhere.

Biography

Balachander Krishnamurthy has been with AT&T Labs--Research since his PhD. His main focus of research of late is in the areas of unwanted traffic, Internet measurements, and Internet protocols. He has authored and edited a dozen books, published more than 70 technical papers, holds seventeen patents, and has given invited talks in over thirty countries.

He co-founded the successful Internet Measurement Conference in 2001 and created the new workshop SRUTI (Steps to Reducing Unwanted Traffic on the Internet). He has been on the thesis committee of several PhD students, on the board of several journals, collaborated with over sixty researchers worldwide, and given tutorials at several industrial sites and conferences. His last book 'Web Protocols and Practice' (Addison-Wesley) is the first in-depth book on the technology underlying the World Wide Web, and has been translated into Portuguese, Japanese, Russian, and Chinese. His next book "Internet Measurements: Infrastructure, Traffic and Applications" (John Wiley) will be published in April 2006. Bala is homepageless but many of his papers can be found at <http://www.research.att.com/~bala/papers/>

Venue: Seminar Room, Hamilton Institute, Rye Hall,
NUI Maynooth

Time: 1.00 - 2.00pm (followed by tea/coffee)

Travel directions are available at www.hamilton.ie



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