Paper Review: TELNET Network Protocol Explained

Paper Title: TELNET: Network Protocol Explained
Date Published: Not specified (accessed November 2025)
Authors: WireX Systems Research Team
Journal/Website: WireX Systems Resource Center
Link: https://wirexsystems.com/resource/protocols/telnet/

Preliminary Review

- Later Revisions / Retraction:
  No record of later revisions or retraction found. The page appears current and regularly maintained by WireX Systems.
- Age of Citations:
  The article does not include formal citations; it reads as an informational overview rather than a peer-reviewed research paper. However, the discussion references historical context (1970s origins) and modern incidents (Mirai 2016, Persirai 2017), showing an awareness of both old and new data.

Summary

This article provides an accessible overview of the TELNET network protocol, one of the earliest methods for enabling remote computer access. It explains the fundamentals of how TELNET operates within the client-server model and its role in remote system administration, file transfer, and network management. The article also outlines TELNET's benefits; such as simplicity, reliability, and cost-effectiveness; while contrasting them with its major security vulnerabilities, especially its default lack of encryption. The piece further explores how TELNET has been exploited in high-profile cyberattacks and concludes with how modern tools like WireX Systems' Ne2ition NDR can analyze TELNET traffic for malicious behavior.

Weaknesses (at least 2 sentences)

1. The article lacks peer-reviewed references or technical depth, relying mostly on descriptive explanations rather than verifiable data or citations.
2. It overstates TELNET's "security" by claiming it supports encryption and authentication, which is misleading since TELNET does not provide encryption by default.

Strengths (at least 2 sentences)

1. The article clearly explains TELNET's purpose and operation in a way that is approachable for beginners and non-specialists.

2. It effectively connects TELNET's historical background to modern cybersecurity incidents, such as the Mirai and Persirai botnets, helping readers understand its relevance today.

Points of Improvement (at least 4 sentences each)

1. Provide Technical Depth and Source Validation:
   The article should include formal references, protocol specifications (RFC 854, RFC 855), or IEEE papers to validate its claims. Presenting packet-level examples or command interactions (e.g., showing how TELNET negotiates sessions) would make the technical content more credible. It should also clarify misconceptions around TELNET's lack of inherent encryption by distinguishing between TELNET and SSH. Including verified data on port numbers, command options, and real-world performance metrics would improve technical rigor.

2. Separate Marketing from Research Content:
   The article's latter sections shift focus toward promoting WireX Systems' product capabilities, which reduces its neutrality. To improve scholarly value, the promotional tone could be replaced with a balanced discussion of multiple network monitoring tools, including open-source alternatives. This would make the paper more objective, educational, and reliable for academic reference. Furthermore, discussing future research directions or mitigation frameworks for legacy protocols like TELNET would strengthen its contribution to cybersecurity education.

Post-Analysis Reflection

- Would you feel confident using this paper as a reference for lab work?
  Yes, for background explanation of TELNET's operation and history. It provides a good conceptual understanding for beginners or when summarizing TELNET's role in legacy systems.

- Would you feel confident using this paper as a reference for publication?
  No, because it lacks scholarly references, peer review, and sufficient technical depth. It reads more like a professional blog post than a research study.

- Why might these answers differ?
  In lab contexts, foundational summaries and simplified explanations are useful to demonstrate understanding. However, for formal publication, accuracy, technical specificity, and verified references are required; criteria that this article does not fully meet.

IEEE Citation Example

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