Development and Performance Analysis of UDT-based Application Suite for High Performance Data Transfer

***Abstract*—As the datasets used by the scientific community grow, transferring data efficiently and reliably between collaborators becomes more challenging. TCP is reliable but slow, and UDP is fast but unreliable. UDT (UDP-based Data Transfer Protocol) takes the best features of TCP and UDP and provides reliable and high speed data transfers over high performance wide area networks (WAN).**

We have developed an application suite built around UDT comprised of UDR, udpipe, and ucp. UDR is a wrapper around rsync that enables rsync to use UDT. The bidirectional network piping application, udpipe, allows for versatile and secure data flows. An alternative to scp over high performance networks, ucp, can be used for secure and recursive directory transfers.

This paper details the development of this application suite and experimental studies over a high performance WAN. These applications demonstrate substantial performance increases compared to their TCP counterparts.

I. Introduction

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II. Conclusion

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The authors would like to thank...

References

[1] H. Kopka and P. W. Daly, *A Guide to LaTeX*, 3rd ed. Harlow, England: Addison-Wesley, 1999.