Candidacy Exam Reading List

On the "Availability of Network Application Systems"

Jong Yul Kim

Background Reading

1. Avizienis, A., Laprie, J.-C. , and Randell, B. 2004. *Dependability and its Threats: A Taxonomy*. In Building the Information Society: Proc. IFIP 18th World Computer Congress, 22-27 August 2004, Toulouse, France, pp.91-120.

Service availability and failures

2. Jiang, W., and Schulzrinne, H. 2003. *Assessment of VoIP Service Availability in the Current Internet.* In PAM, 2003.

3. Kushman, N., Kandula, S., and Katabi, D. 2007. *Can you hear me now?!: it must be BGP.* SIGCOMM Comput. Commun. Rev. 37, 2 (Mar. 2007), 75-84.

4. Dahlin, M., Chandra, B. B., Gao, L., and Nayate, A. 2003. *End-to-end WAN service availability.* IEEE/ACM Trans. Netw. 11, 2 (Apr. 2003), 300-313.

5. Oppenheimer, D., Ganapathi, A., and Patterson, D. A. 2003. *Why do internet services fail, and what can be done about it?.* In Proceedings of the 4th Conference on USENIX Symposium on internet Technologies and Systems - Volume 4 (Seattle, WA, March 26 - 28, 2003). USENIX Association, Berkeley, CA, 1-1.

Recovery from network failures using path redundancy

6. Andersen, D., Balakrishnan, H., Kaashoek, F., and Morris, R. 2001. *Resilient overlay networks.* In Proceedings of the Eighteenth ACM Symposium on Operating Systems Principles (Banff, Alberta, Canada, October 21 - 24, 2001). SOSP '01. ACM, New York, NY, 131-145.

7. Gummadi, K. P., Madhyastha, H. V., Gribble, S. D., Levy, H. M., and Wetherall, D. 2004. *Improving the reliability of internet paths with one-hop source routing.* In Proceedings of the 6th Conference on Symposium on Opearting Systems Design & Implementation - Volume 6 (San Francisco, CA, December 06 - 08, 2004). Operating Systems Design and Implementation. USENIX Association, Berkeley, CA, 13-13.

8. Akella, A., Pang, J., Maggs, B., Seshan, S., and Shaikh, A. 2004. *A comparison of overlay routing and multihoming route control.* In Proceedings of the 2004 Conference on Applications, Technologies, Architectures, and Protocols For Computer Communications (Portland, Oregon, USA, August 30 - September 03, 2004). SIGCOMM '04. ACM, New York, NY, 93-106.

9. Akella, A., Maggs, B., Seshan, S., Shaikh, A., and Sitaraman, R. 2003. *A measurement-based analysis of multihoming.* In Proceedings of the 2003 Conference on Applications, Technologies,

Architectures, and Protocols For Computer Communications (Karlsruhe, Germany, August 25 - 29, 2003). SIGCOMM '03. ACM, New York, NY, 353-364.

Server clustering

10. Cardellini, V., Casalicchio, E., Colajanni, M., and Yu, P. S. 2002. *The state of the art in locally distributed Web-server systems.* ACM Comput. Surv. 34, 2 (Jun. 2002), 263-311.

11. Nagaraja, K., Krishnan, N., Bianchini, R., Martin, R. P., and Nguyen, T. D. 2003. *Quantifying and Improving the Availability of High-Performance Cluster-Based Internet Services*. In Proceedings of the 2003 ACM/IEEE Conference on Supercomputing (November 15 - 21, 2003). Conference on High Performance Networking and Computing. IEEE Computer Society, Washington, DC, 27.

12. Lei, P., Ong, L., Tuexen, M., Dreibholz, T. *An Overview of Reliable Server Pooling Protocols.* RFC 5351. IETF 2008.

13. Dreibholz, T. *Reliable Server Pooling – Evaluation, Optimization, and Extension of a Novel IETF Architecture.* Chapter 3 Reliable Server Pooling. Ph.D. Thesis 2007.

Content Distribution Networks

14. Huang, C., Wang, A., Li, J., and Ross, K. W. 2008. *Measuring and evaluating large-scale CDNs.* In Proceedings of the 8th ACM SIGCOMM Conference on internet Measurement (Vouliagmeni, Greece, October 20 - 22, 2008). IMC '08. ACM, New York, NY, 15-29.

15. Afergan, M., Wein, J., and LaMeyer, A. 2005. *Experience with some principles for building an internet-scale reliable system.* In Proceedings of the 2nd Conference on Real, Large Distributed Systems - Volume 2 (San Francisco, CA). USENIX Association, Berkeley, CA, 1-6.

16. Amir, Y., Shaw, D. 1999. *Walrus-a low latency, high throughput Web service using Internet-wide replication.* In Proceedings of 19th IEEE International Conference on Distributed Computing Systems Workshops on Electronic Commerce and Web-based Applications/Middleware. pp.31-40, 1999.

Domain Name Systems

17. Bush, R., Karrenberg, D., Kosters, M., Plzak, R. 2000. *Root Name Server Operational Requirements.* RFC 2870. IETF 2000.

18. Elz, R., Bush, R., Bradner, S., Patton, M. 1997. *Selection and Operation of Secondary DNS Servers.* RFC 2182. IETF 1997.

19. Abley, J. 2003. *Hierarchical Anycast for Global Service Distribution.* ISC Technical Note 2003-1. 2003.

20. Abley, J., Lindqvist, K. 2006. *Operation of Anycast Services.* RFC 4786. IETF 2006.