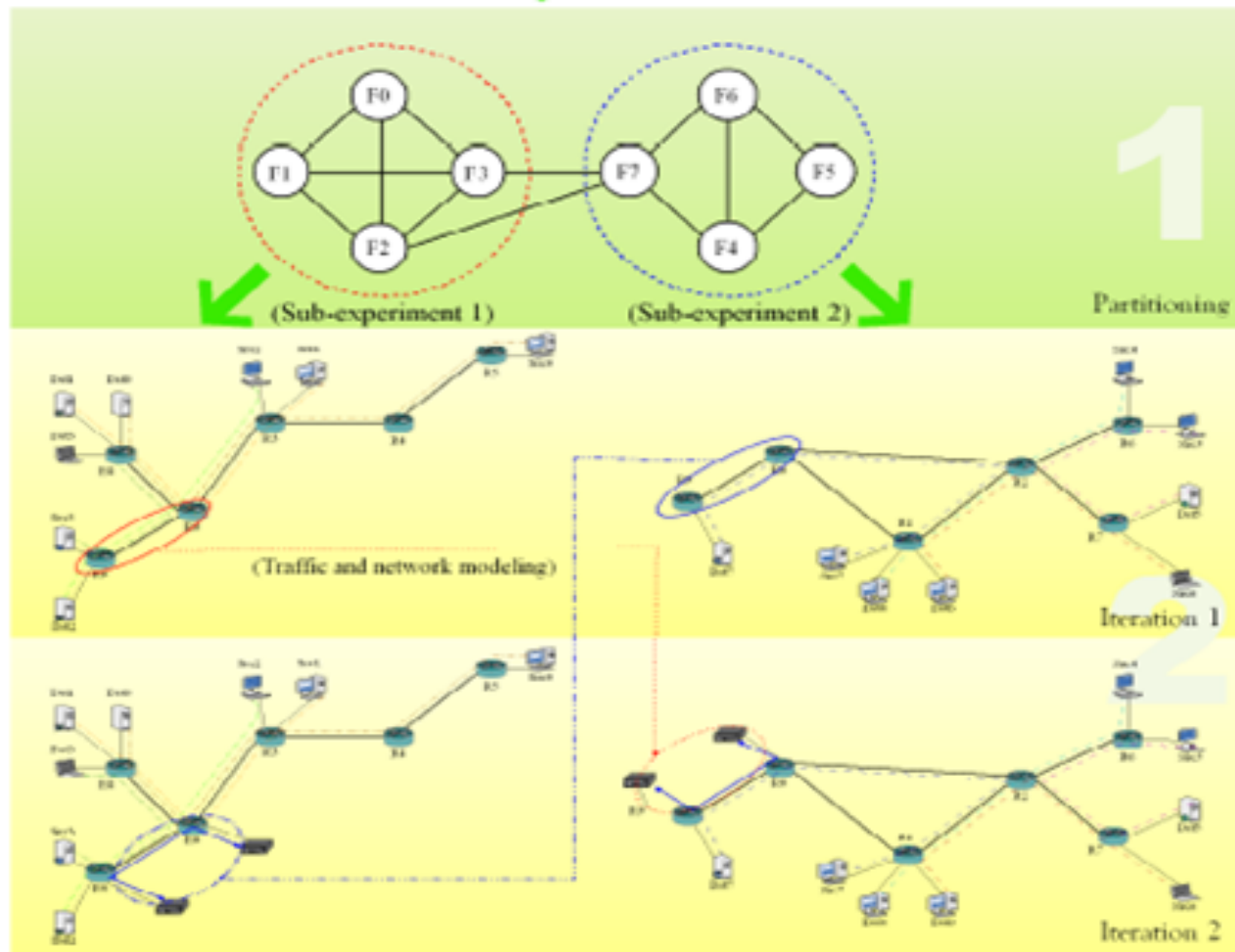


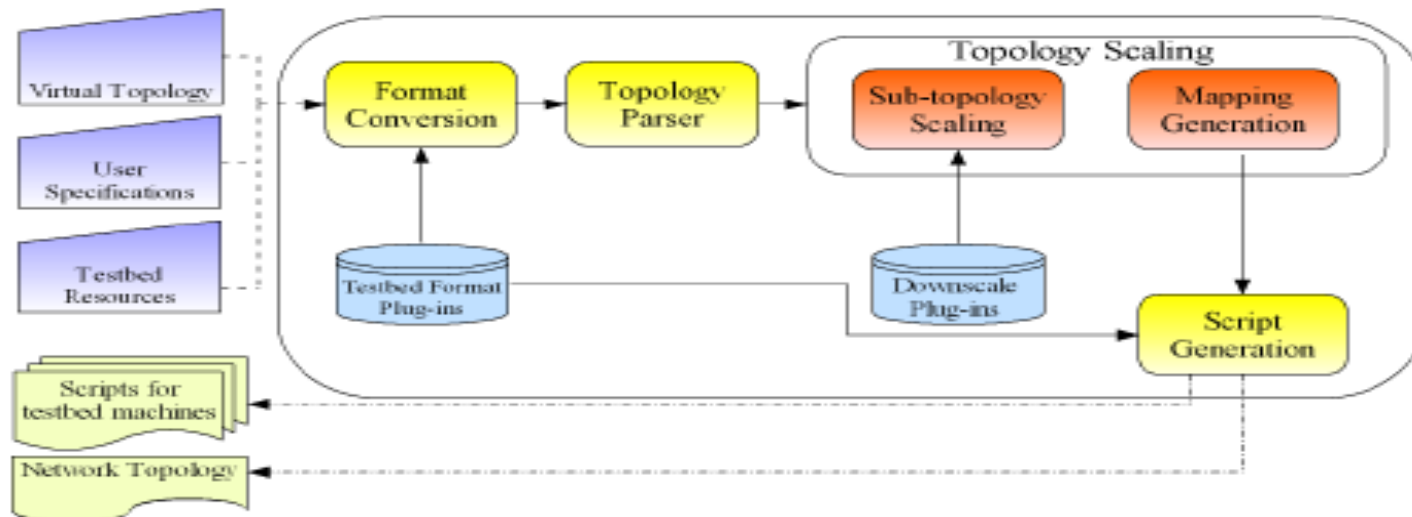
# Analysis, Partitioning, and Mapping Tools for Large Experiments

**SONIA FAHMY, PURDUE UNIVERSITY**

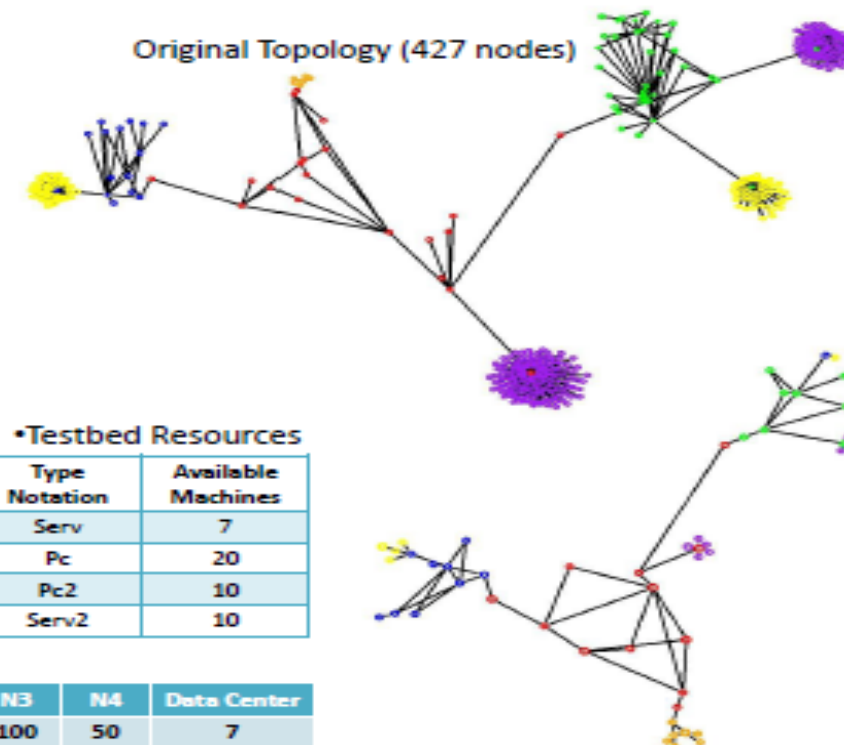
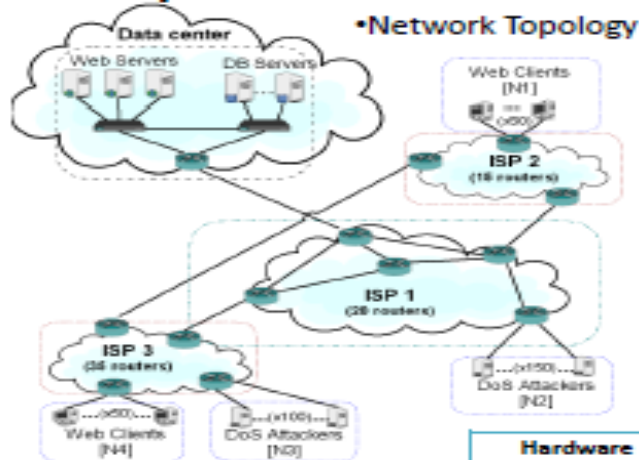




Wei-Min Yao, Sonia Fahmy, "Flow-based Partitioning of Network Testbed Experiments," Computer Networks, Volume 58, 15 January 2014, pp. 141-157 (earlier version appeared in Proc of ICDCS)



## Example:



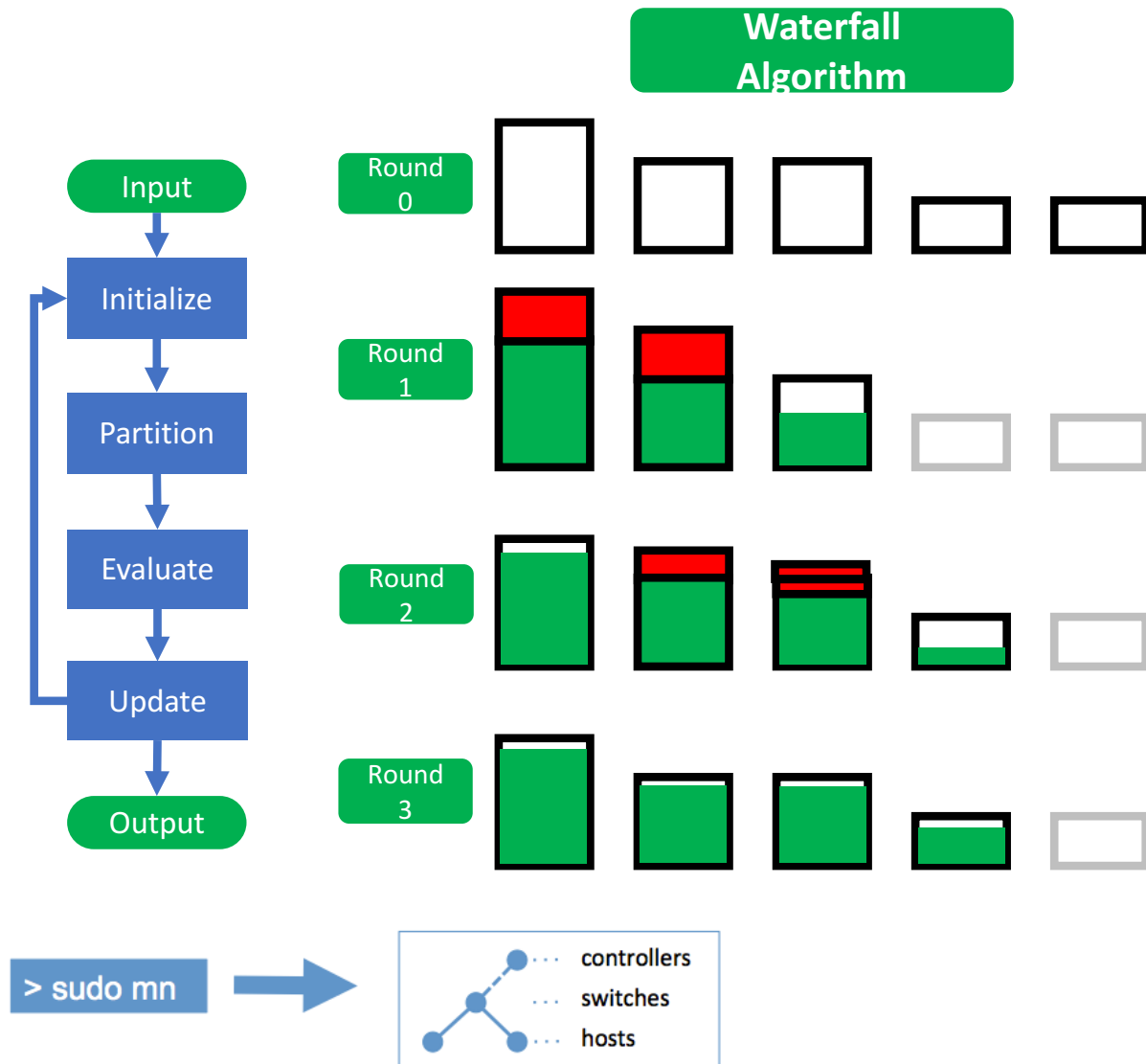
### •Testbed Resources

Hardware Description	Type Notation	Available Machines
High-end Server	Serv	7
Low-end PC	Pc	20
General PC	Pc2	10
General Server	Serv2	10

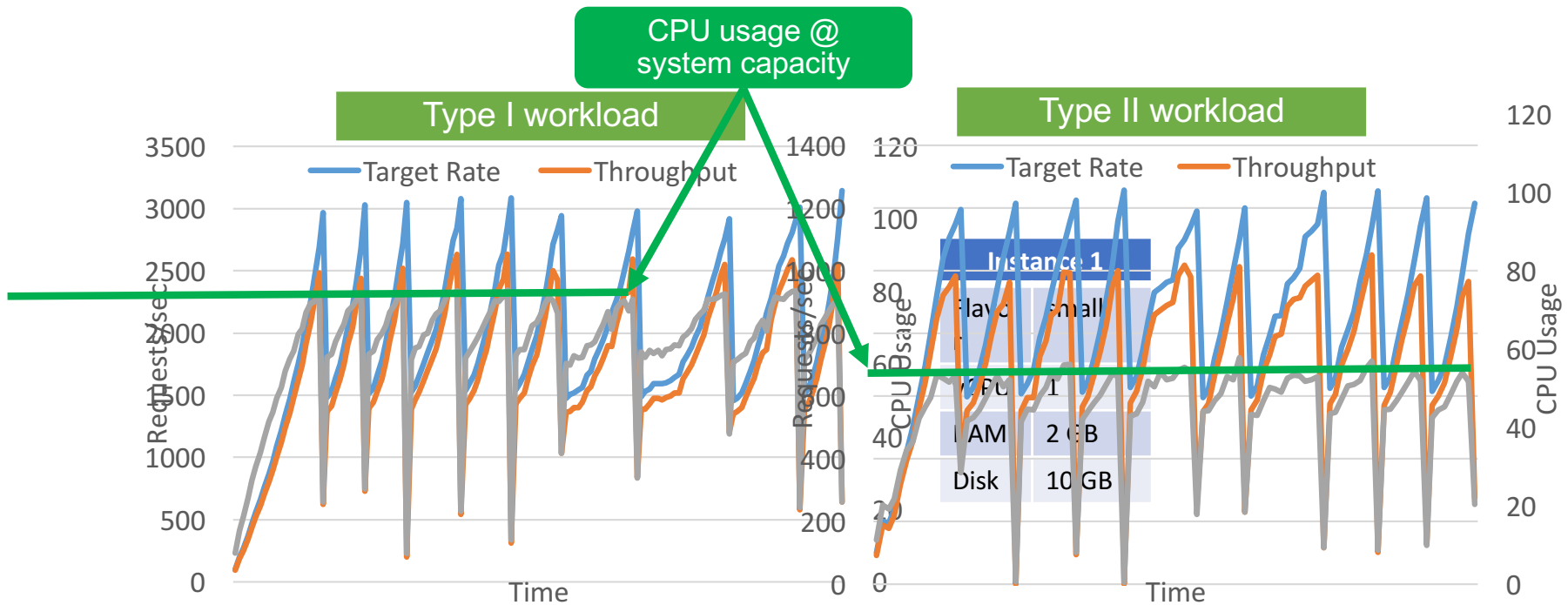
### •User-specified Requirements

SubNetwork	ISP 1	ISP 2	ISP 3	N1	N2	N3	N4	Data Center
Nodes	20	15	35	50	150	100	50	7
Fidelity Index	8	5	5	4	3	2	2	Max

Wei-Min Yao, Sonia Fahmy, Jiahong Zhu, "EasyScale: Easy Mapping for Large-Scale Network Security Experiments," In Proceedings of the first IEEE Conference on Communications and Network Security (CNS), 9 pp., October 2013



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Lianjie Cao, Puneet Sharma, Sonia Fahmy, Vinay Saxena, "ENVI: Elastic resource flexing for Network function Virtualization," In Proceedings of the 9th USENIX Workshop on Hot Topics in Cloud Computing (HotCloud '17), 8 pp., July 10, 2017