

Benchmarking the Flagship Alabama HPC System

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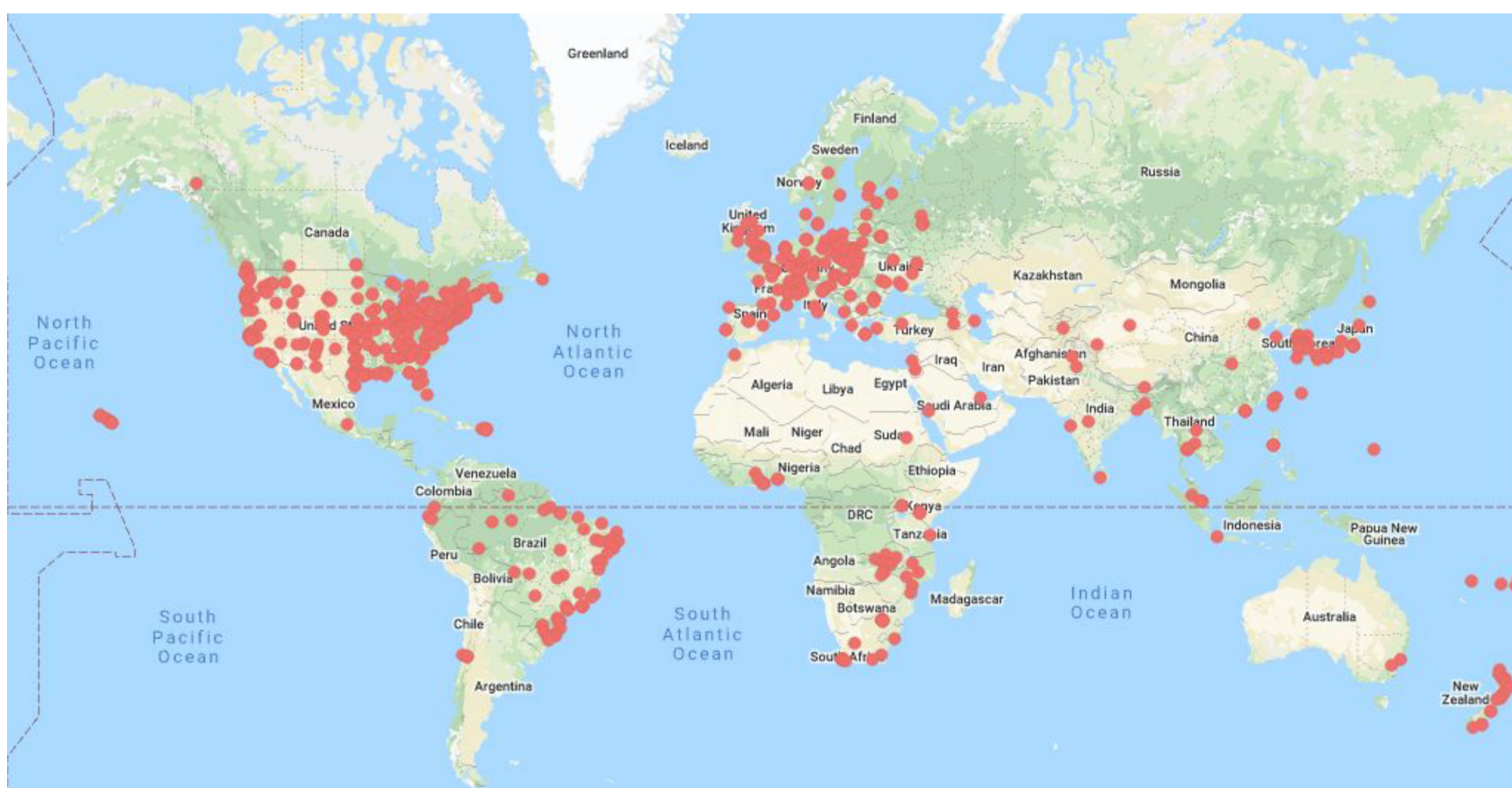
Introduction

perfSONAR is the performance Service-Oriented Network monitoring ARchitecture, a network measurement toolkit designed to provide federated coverage of paths and help to establish end-to-end usage expectations. There are thousands of perfSONAR instances deployed worldwide, many of which are available for open testing of key measures of network performance. This global infrastructure helps to identify and isolate problems as they happen, making the role of supporting network users easier for engineering teams and increasing productivity when utilizing network resources. perfSONAR is developed by a partnership of these institutions:



Impact

Locations of the approximately 2,000 perfSONAR hosts:



References

<https://www.perfsonar.net/>
<http://perf-test-node.nsstc.uah.edu/>
<http://ps-sd.rc.uab.edu/>
<http://stats.es.net/ServicesDirectory/>

Acknowledgements

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perf5.0NAR

Explanation

perfSONAR provides a uniform interface that allows for the scheduling of measurements, storage of data in uniform formats, and scalable methods to retrieve data and generate visualizations. This extensible system can be modified to support new metrics, and there are endless possibilities for data presentation.

Key Findings

perfSONAR data, gathered from numerous locations around the world, can provide untapped knowledge related to the performance of networks. Using a set of APIs, it is possible to retrieve and study this data, further advancing the understanding of computer and information sciences.

perfSONAR is middle-ware between network monitoring tools and higher level services such as visualizations and workflow managers. Using perfSONAR APIs, it is possible to unlock data gathered from 1000s of networks, and design more intelligent “above the network” services. Developers of lower level measurement and monitoring tools can use similar APIs to facilitate the deployment, sharing, and location of new products.