

SAM Testbed Proposal

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Goal

- Create a 5 to 10 node testbed
 - Shared by researchers working on SAM protocols
 - Sites distributed globally
 - Use low-cost hosts with freely available virtualization software to provide isolated experimentation
- Why not use PlanetLab?
 - Could use PL for overlay nodes (see Phase 2 slide later)
 - But PL nodes don't seem to support native multicast

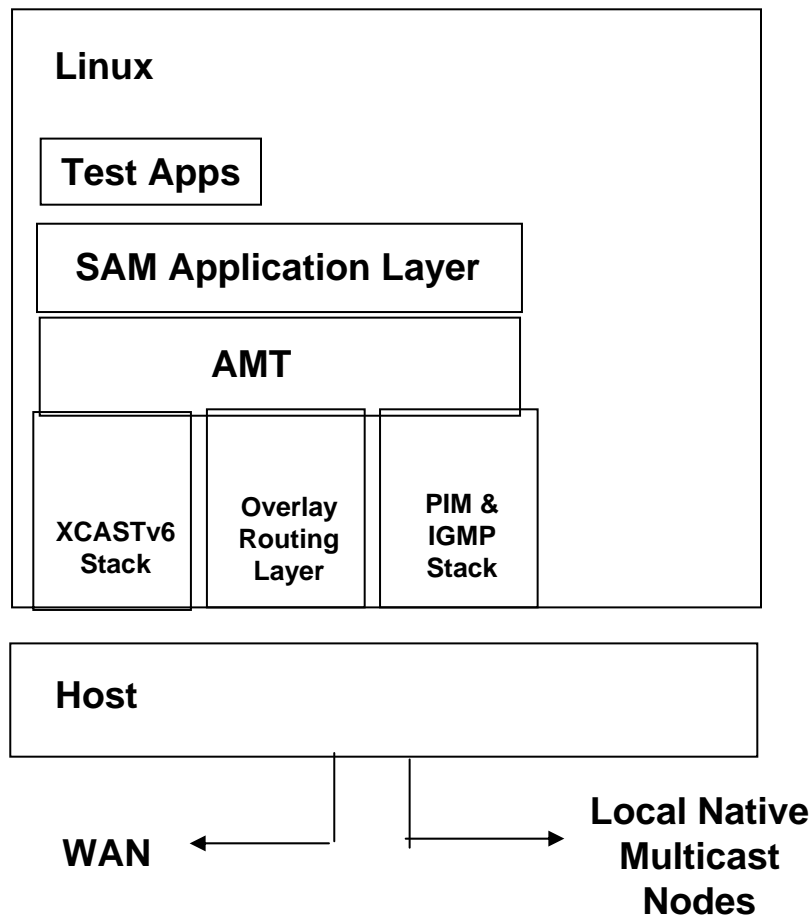
Initial Locations



- Princeton, NJ, USA
- Hamburg, Germany
- Stirling, UK
- Swansea, UK
- Tokyo, Japan (WIDE?)
- Washington, DC, USA

- Once initial set is working, we can incrementally add other sites

Site Configuration

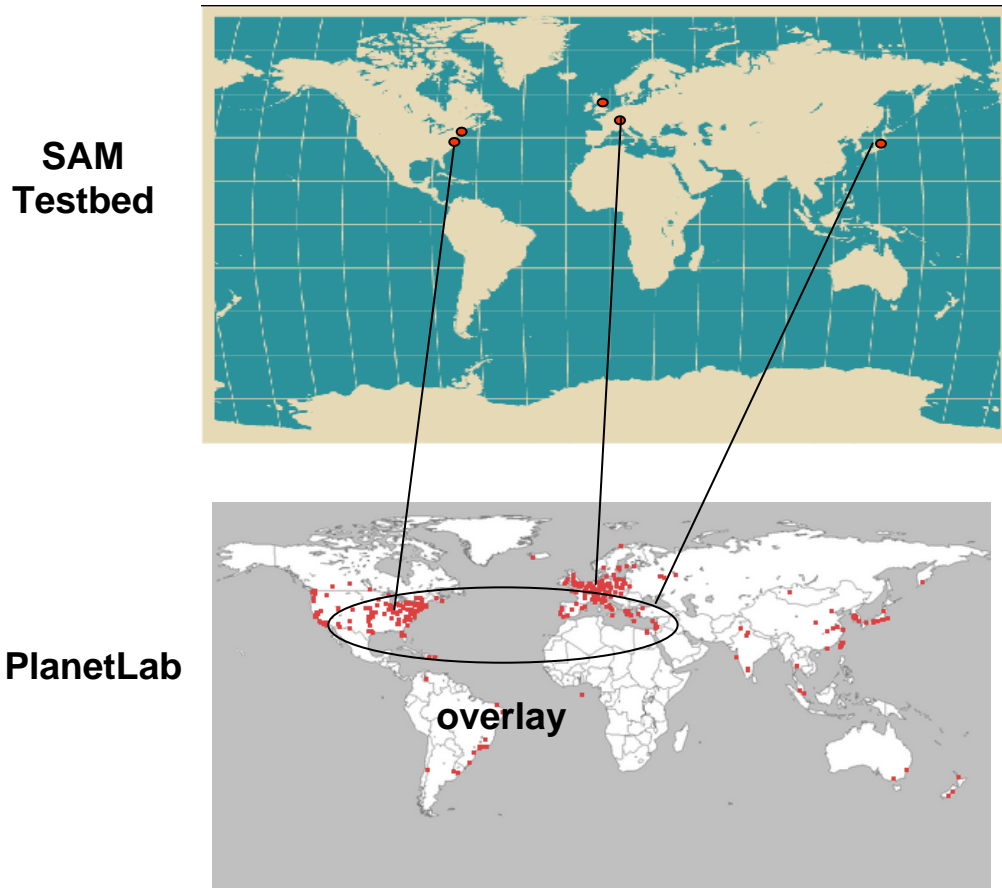


- Could run “private PlanetLab” node software
- AMT software
 - <http://cs.utdallas.edu/amt/>
- An XCASTv6 stack is available for Ubuntu
- Overlay (determined by researcher)
 - OverlayWeaver
 - P2P-SIP
- Multiple Guest User Accounts

Integration Scenario for G-Lab

- Hamburg is collaborating in Germany-funded national multicast-capable testbed
- Could provide large scale “multicast island” (e.g., 170 nodes)
- Approach
 - Hamburg provides GW from SAM Testbed to G-Lab network for sourcing and receiving multicast streams

Phase 2: Hybrid ALM trees with 100s of nodes



- Once experimental configuration is operating, we can scale up by deploying an overlay on PlanetLab
- Hybrid SAM experiments using SAM testbed and PL

Next Steps

- Agree on approach
- Identify core group of participating researchers
 - Participating researchers need to be affiliated with a node in the testbed
- Need a volunteer to coordinate

Q&A

- More details about experiments would be good for community to see where this can be used
 - A good demo application
- GENI tie in
 - GENI is a federated testbed, e.g., including EMuLab, Tokyo CoreLab as leaf testbeds
 - How to include a new SAM Testbed into GENI
 - Contact Aaron @ GENI