Scalable Distributed Network Management

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The Problem:
Networks today are managed from the middle via proprietary, usually unreplicated, hardware deployed at choke-points and managed by experienced IT staff.

This results in high cost while providing policy which is not pervasive in a way which does not easily scale out and is prone to faults.

Enabling Technologies
- Trusted Computing:
  End-hosts can be trusted to manage the network
- Consensus
  Consistent, fault-tolerant state
- Virtualization
  Easy interposition on traffic

Our Solution:
Push management and enforcement tasks to the edge where resources can automatically scale with the number hosts and policy can be enforced pervasively with existing hardware.

Tasks are executed inside attested execution environments (AEEs) which are verified using TPMs.

Sample Apps

Network Address Translation

Bandwidth Allocation