A novel approach to protect Grids with Firewalls

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Problem

- In Grid environment implementations: network-level protection has totally shifted to application-level protection
- Firewalls?

Previous Work

- ## Should still use Firewalls in conjunction with AAI, alternatives:
  - ### Wide open (disabled Firewall)
  - ### Application-aware (complex rules)
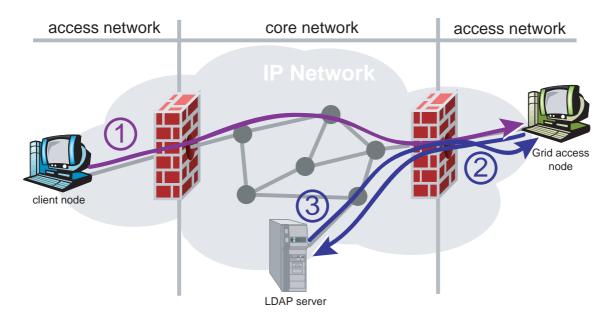 - ### Signaling (work in progress)

Novel approach

- ## Use IPSec tunnels with certificates from LDAP directory, restricted to a few ports
- ## Authenticated Headers for good ratio between security and performance (not full protection)

Specification of dynamics

access network   core network   access network

IP Network

① ② ③

client node

Grid access node

LDAP server

Discussion and conclusion

- Feasible approach, combines good approaches
- Only Grid-node-specific, not fine-grained access (users)
- LDAP directory single point of failure
- Implementation, evaluation in due course