

Towards Programmable Networks

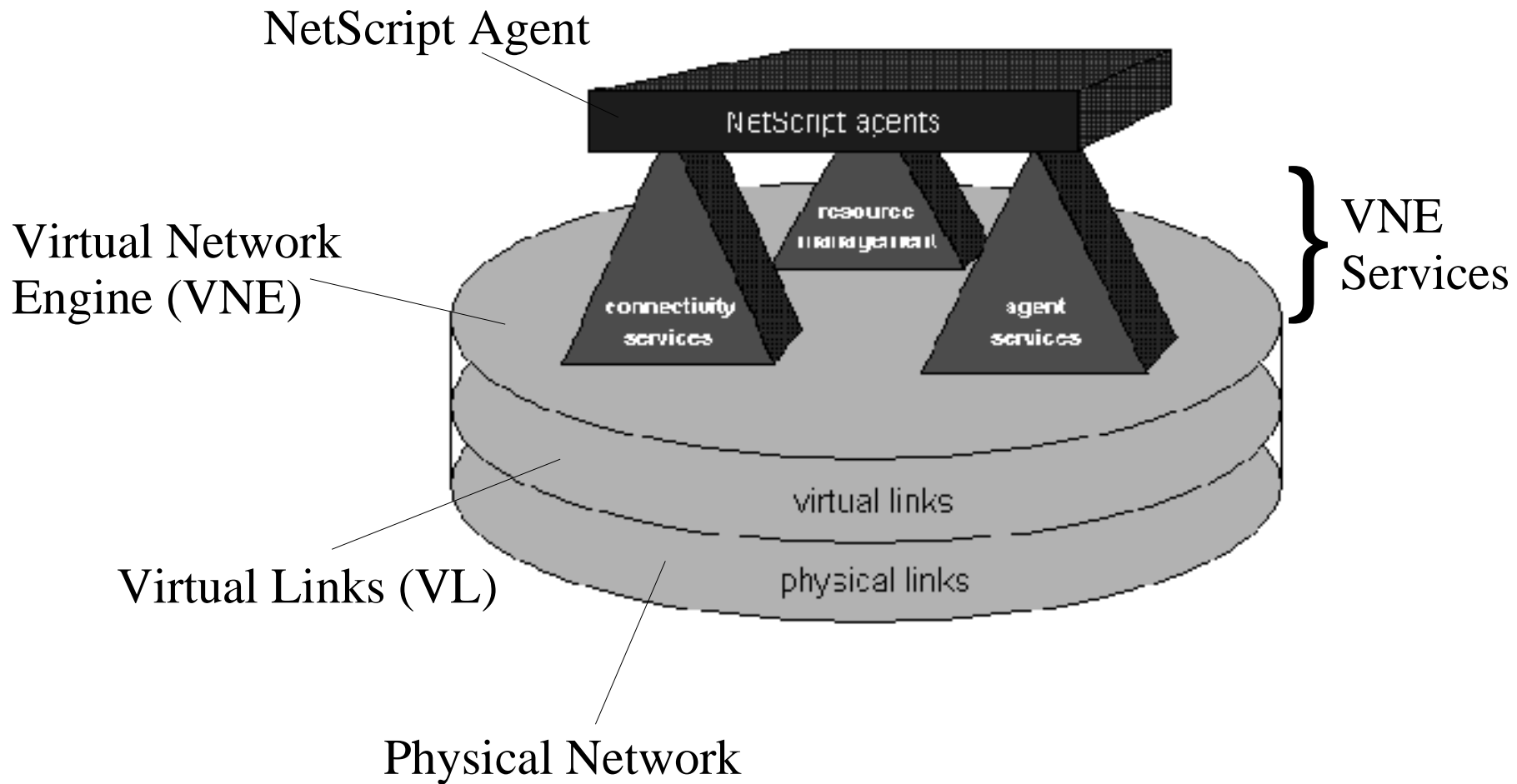
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Active Networks

- Networks where each node can be dynamically programmed
- Why do we need this?
 - Intractable standardization
 - Replace committees with market forces
 - Allow greater extensibility of intermediate nodes
 - Intermediate nodes not keeping up with technology

Active Node Architecture



NetScript

- Agents deployed from any VNE to any other VNE(s)
- Think --> a pool of communicating threads
- Three distinguishing features:
 - Universal abstraction
 - Dynamic language
 - Dataflow language

Applications

- Remote Network Monitor
- SNMP Agents
- Normal Network Stuff (router, switch, etc)
- Firewalls
- Internet Telephony
- Multimedia (jitter control)

Conclusions

- Active Networks have been an idea for a long time
- Still many problems that need solving
 - Security
 - Stability
 - Mobile agents
 - Network management
- NetScript is an interesting idea, but needs more motivation