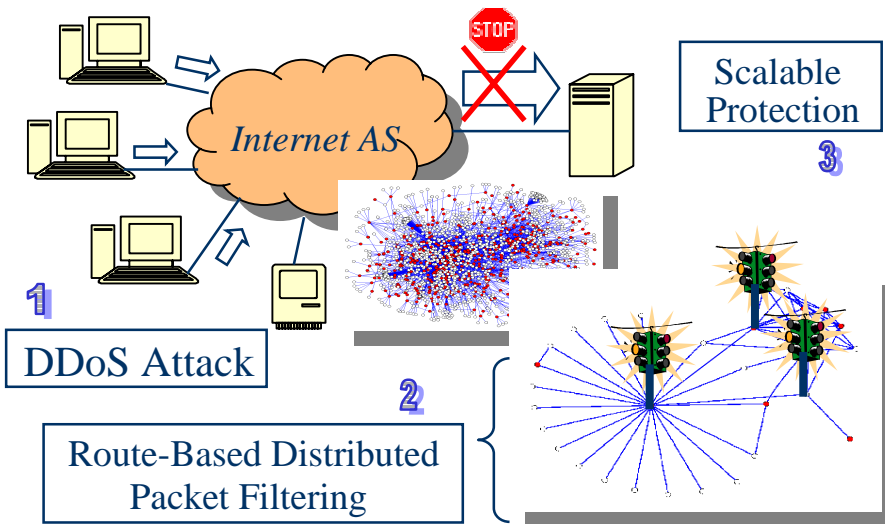


Toward Scalable Solutions for Distributed DoS Attack Prevention

DARPA ATO FTN

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New Ideas

Route-based distributed packet filtering for scalable DDoS defense:

- ◆ Proactive discarding of spoofed DDoS packets
- ◆ Reactive traceback of DDoS attack sites

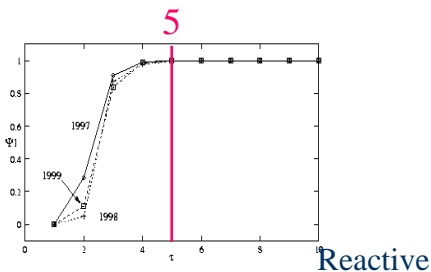
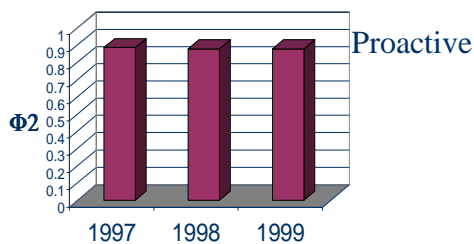
Power-law Internet AS topology affects efficiency:

- ◆ Scalable DDoS protection via small partial deployment
- ◆ BGP based inter-domain routing implementation

Impact

Provides practical incentive for group of ISPs to perform route-based filtering:

- ◆ Global benefit through synergistic filtering effect
- ◆ Applicable to intra-domain routing within a single AS



Schedule

Year 1:

- ◆ Optimal filter placement
- ◆ BGP-based protocol specification and implementation
- ◆ Static performance evaluation using *dpf*

Year 2:

- ◆ Control plane vulnerability
- ◆ *ns*-based dynamic performance evaluation environment
- ◆ Purdue Infobahn benchmarking