

Open Active Measurement Protocols

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IETF 48, 1 Aug 2000

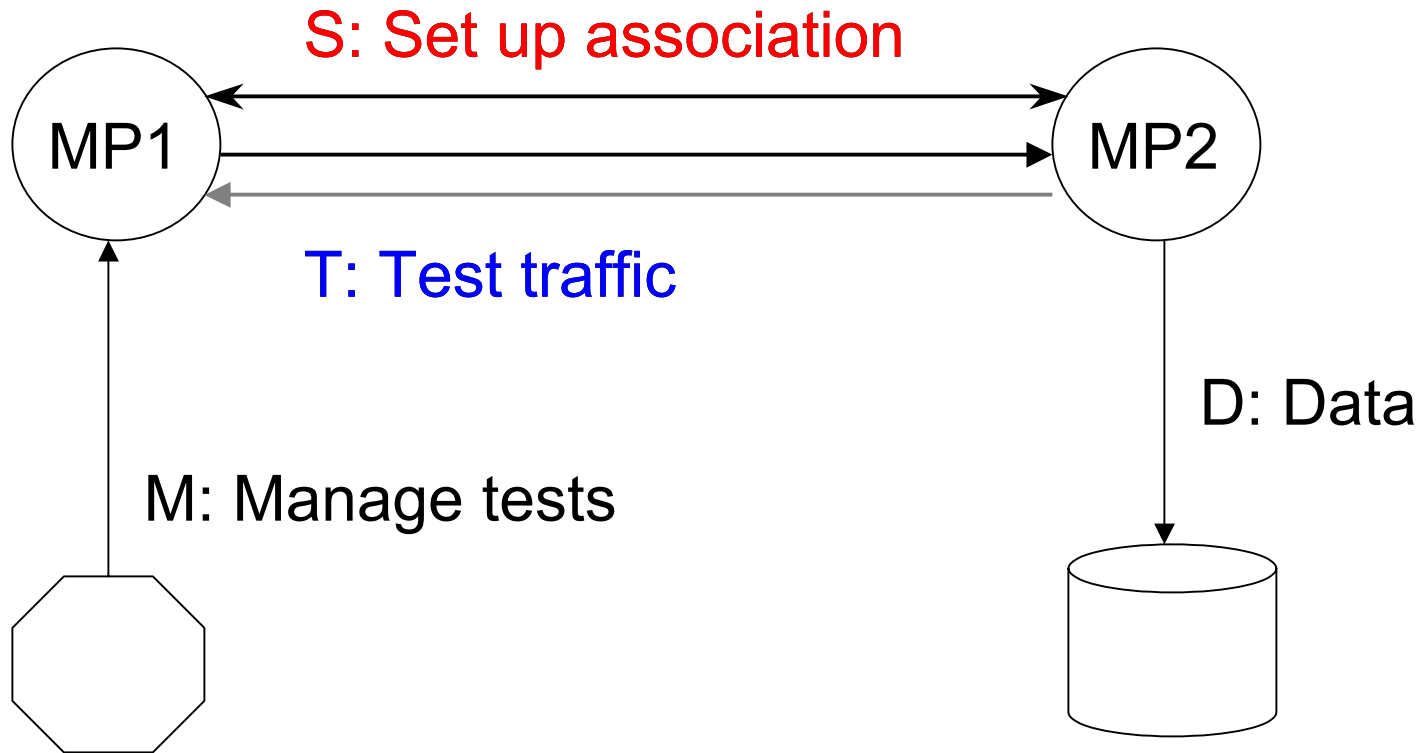
Motivation

- IPPM one-way delay and loss metrics have at least two independently-developed implementations
 - Measure the same thing, but can't exchange packets
- Should we standardize protocol(s), so implementations can interoperate?

This Talk

- Briefly describe initial thinking on requirements
- See if there is initial consensus to move forward; if so
 - Get input from mailing list
 - Consult with AD's about amending charter
 - Produce a draft document

General Model



Basic Protocol Requirements

- **T: Test traffic**
 - Timestamp
 - Sending MP accuracy (if known)
 - Sequence number
 - Variable padding
- **S: Setup association**
 - Test stream description (Start, Stop, Packet Size, packet send schedule, accuracy)
 - Could include session data retrieval (D)

Security Considerations

- Avoiding detection
 - Test streams should look like user traffic
 - Stream ports should be negotiated, not fixed
- Authentication and encryption
 - Unauthenticated (open)
 - Visualize ow-ping to open servers
 - Encrypted
 - Client authenticates to server (simple shared secret)
 - Integrity of all communication protected
 - Authenticated
 - Similar to encrypted, but timestamps sent in clear

Some Specifics

- At end of session, receiver should know full results
- Measurement error computed by combining singleton accuracies
- Security measures must not effect accuracy
- Should be able to negotiate a Poisson stream (other distributions too?)

Next steps

- We are writing an ID
- Is there initial consensus to move forward?