

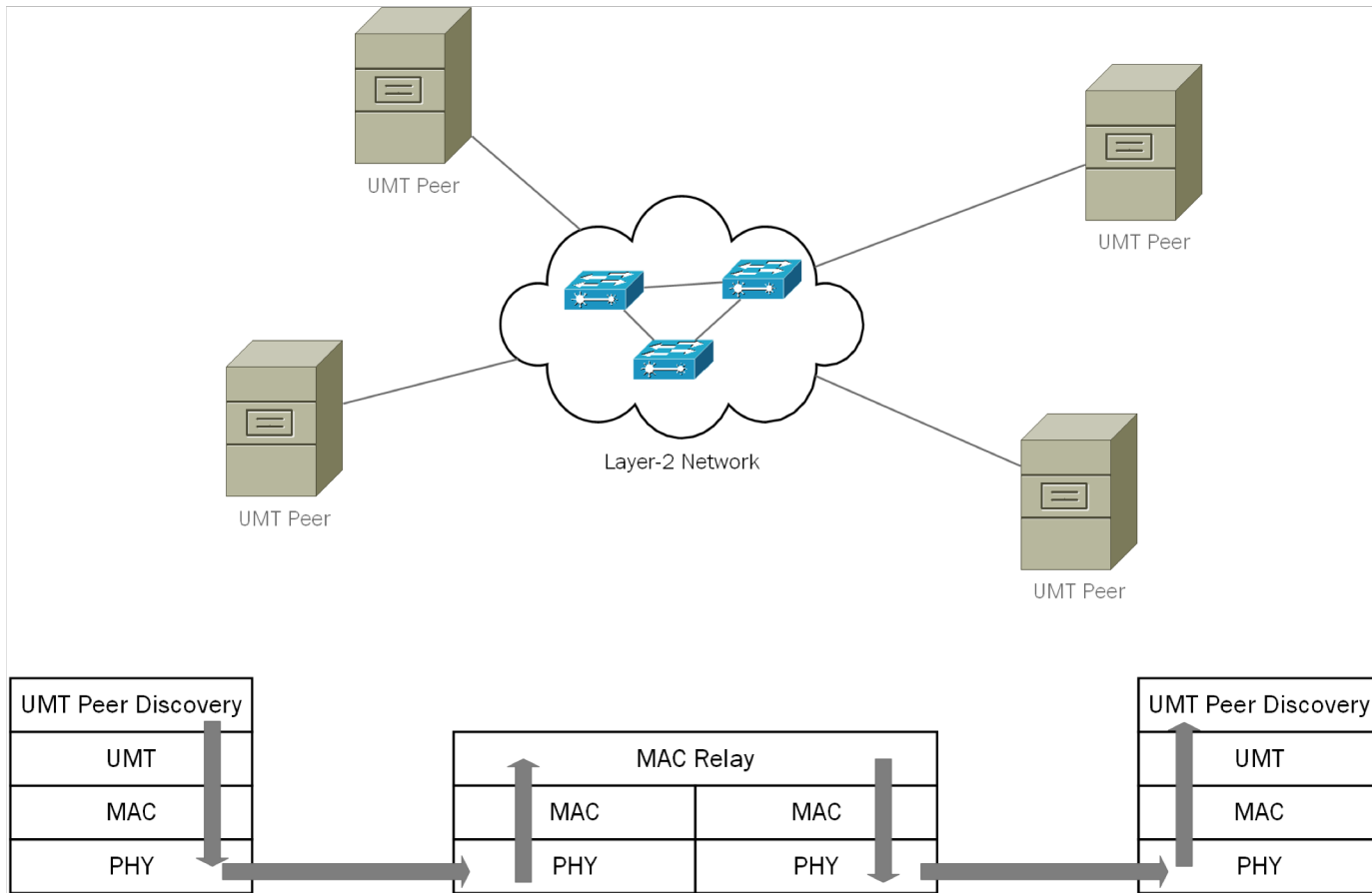
UMT Peer Discovery and Automatic Tunnel Configuration

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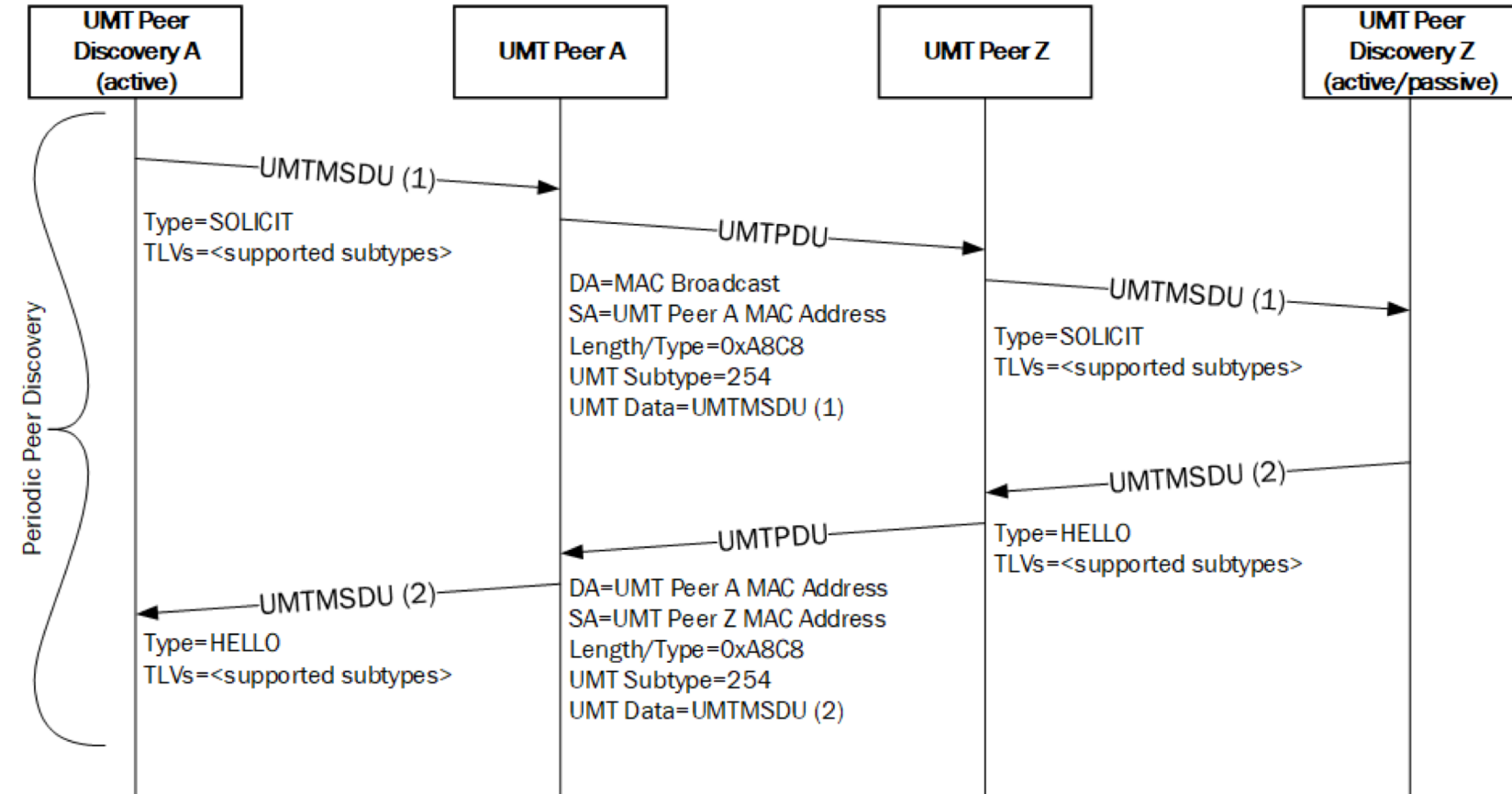
Principles

- UMT Peer discovery
 - Define Active and Passive Peers
 - Only Active Peers may send unsolicited messages
 - Passive Peers must remain silent unless solicited by an active peer
 - Peer discovery is only responsible for building a database of neighboring UMT peers
- UMT Tunnel Auto-Configuration
 - UMT Tunnel Auto-Configuration is not dependent upon automatic UMT Peer Discovery
 - Any peer in the UMT network can initiate a tunnel configuration
 - UMT tunnels are stateless, therefore UMT auto-config is not for tunnel maintenance, but is a method to request creation of a tunnel adapter on the remote peer
- Define a UMT Peer Maintenance Subtype
 - This subtype could be used for other UMT-specific uses
 - Periodic Peer heartbeat could be added, but eOAM over UMT has that capability already

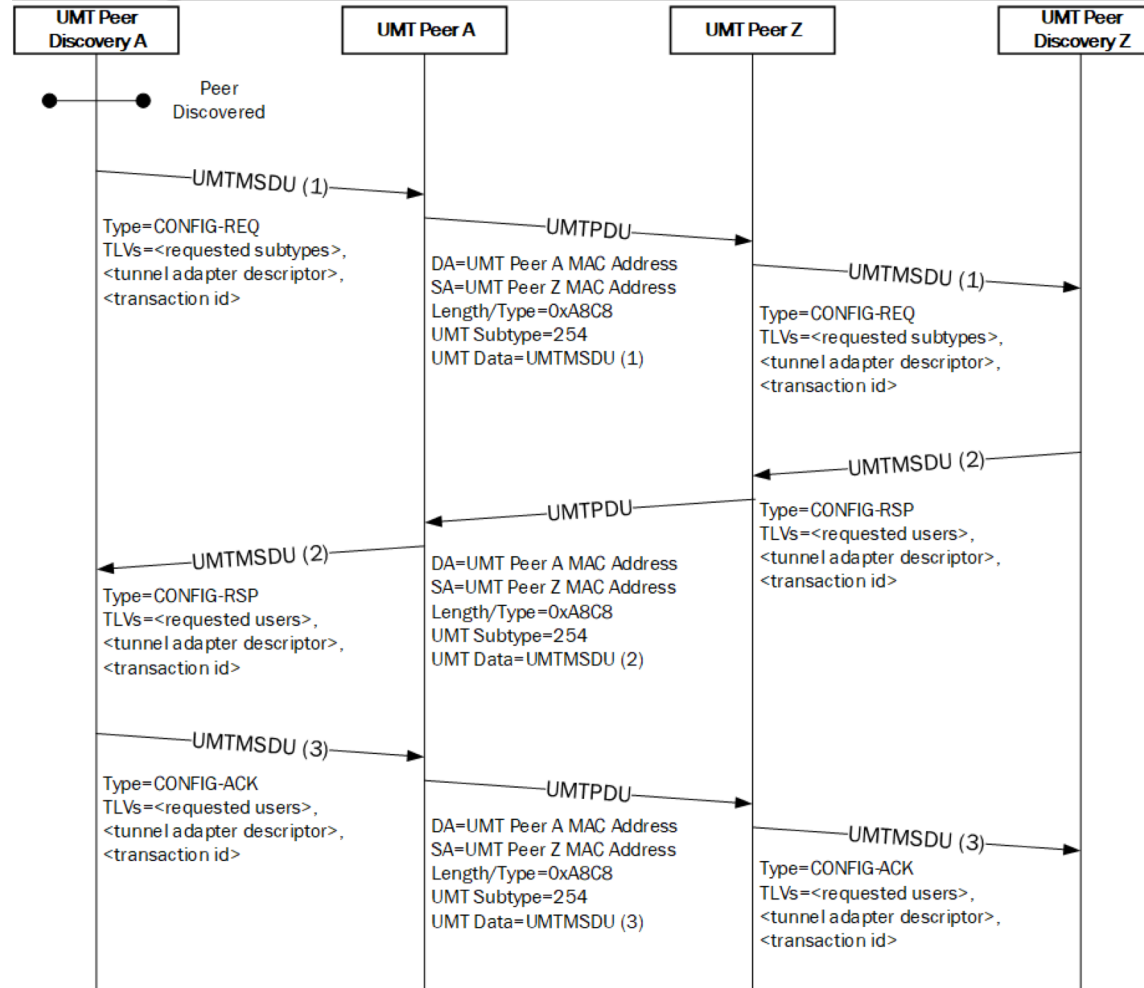
Reference Topology



Discovery Packet Flow

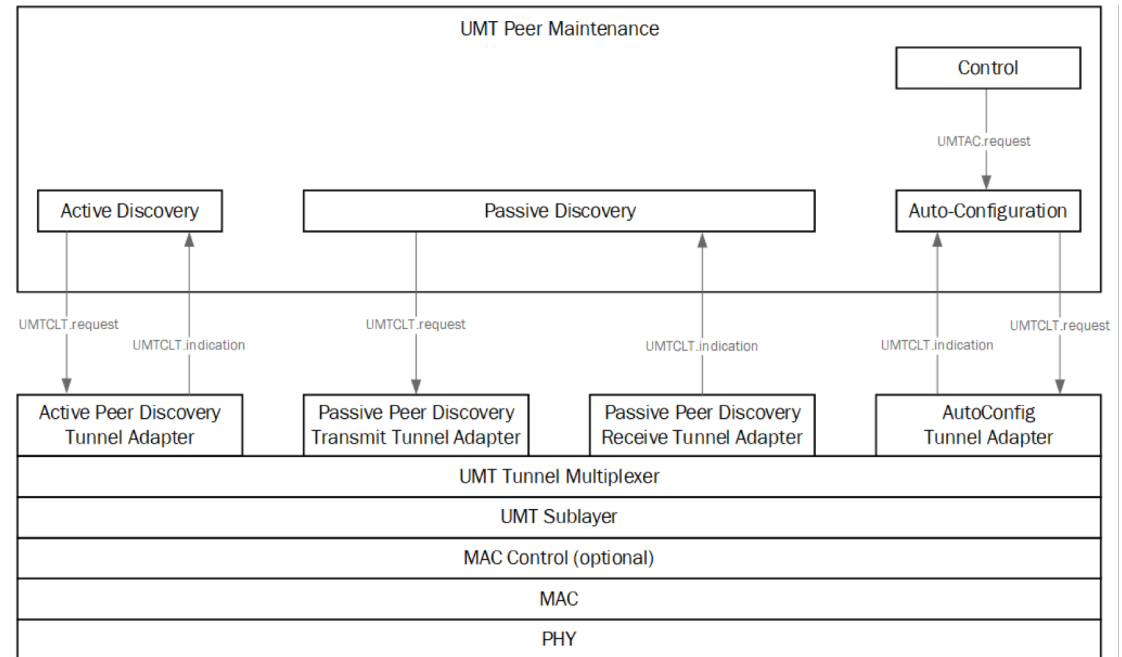


Tunnel Auto-Config Packet Flow



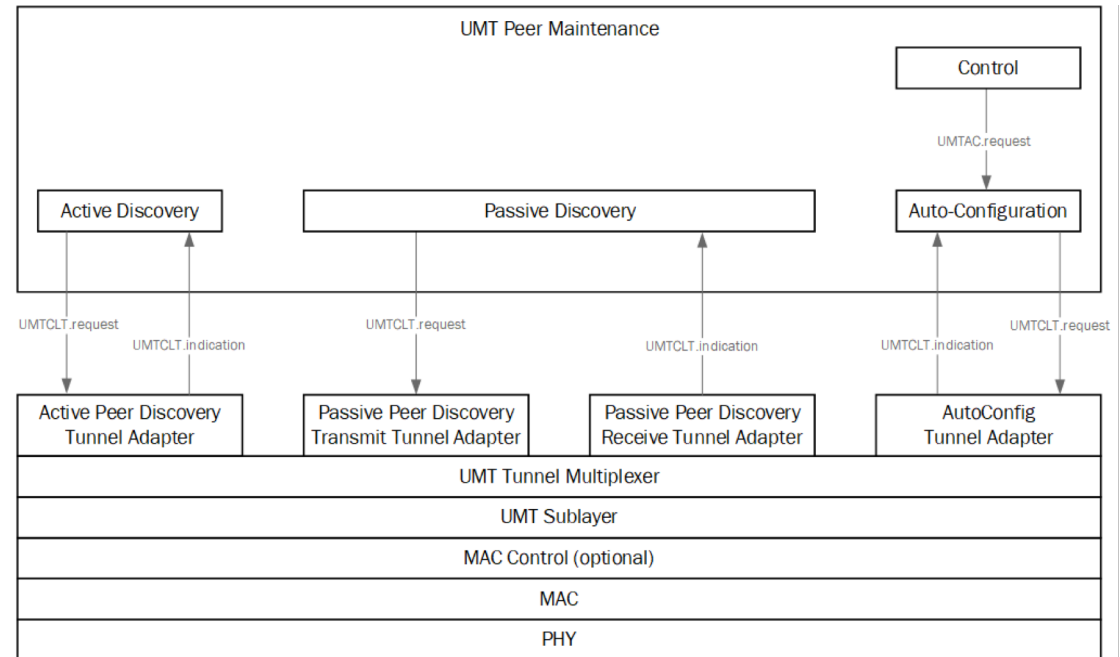
Stack – Peer Discovery

- Active PD Tunnel
 - Active component only needs to send broadcast
 - Active component needs to receive unicast from any source
 - Achieved with tunnel defined by
 - Ind DA = Local MAC
 - Ind SA = <any>
 - Req DA = broadcast
 - Req SA = Local MAC



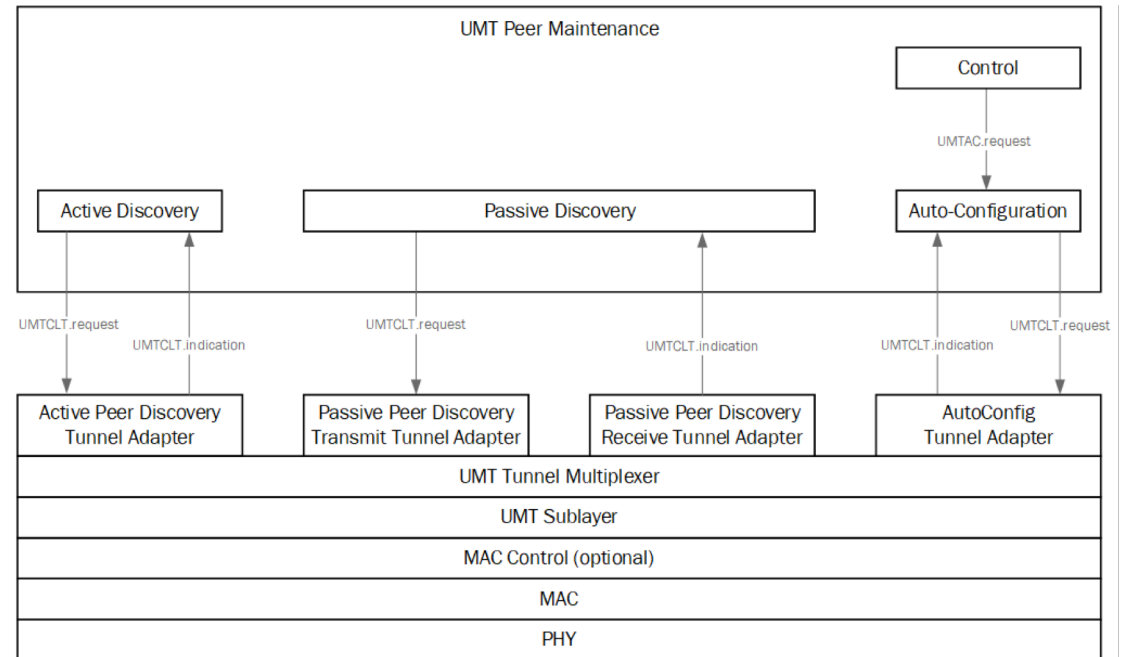
Stack – Peer Discovery

- Passive Rx Tunnel
 - Passive component only needs to receive broadcast
 - Receive tunnel is needed for the life of the PD entity
 - Achieved with tunnel defined by
 - Ind DA = broadcast
 - Ind SA = any
 - Req DA = N/A
 - Req SA = N/A



Stack – Peer Discovery

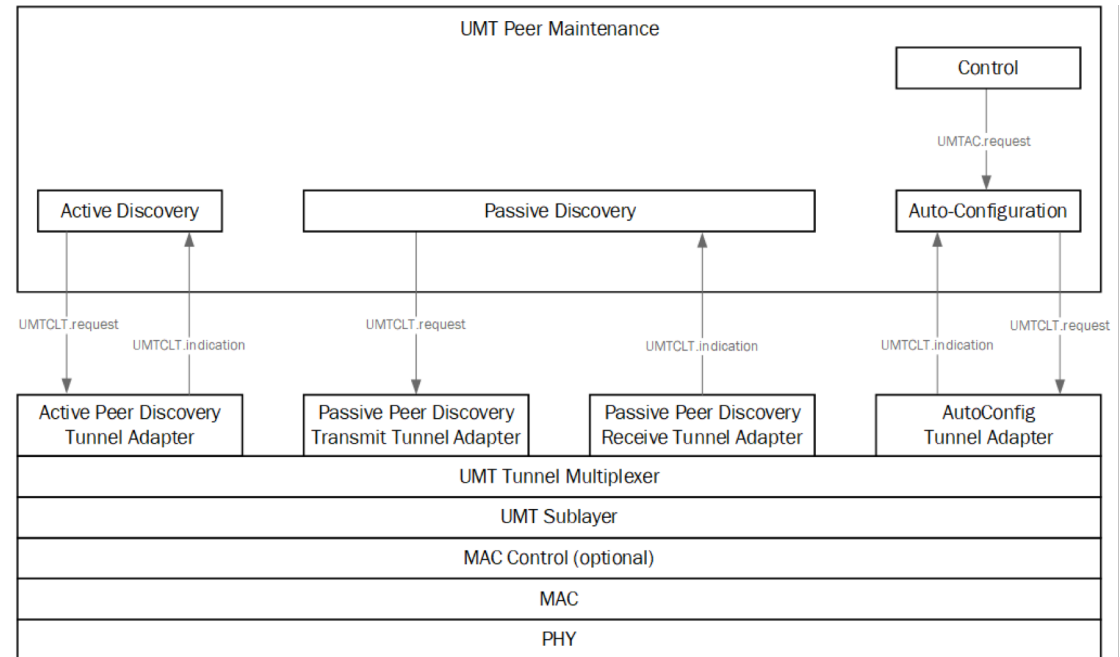
- Passive Tx Tunnel
 - Passive component only needs to transmit unicast
 - Transmit tunnel is needed only temporarily
 - Achieved with tunnel defined by
 - Ind DA = N/A
 - Ind SA = N/A
 - Req DA = Active Peer’s MAC
 - Req SA = Local MAC



Stack – Auto Config

- AutoConfig Tunnel

- AutoConfig needs a “typical” UMT tunnel
- AutoConfig tunnel is a unicast tunnel
- AutoConfig tunnel exists for the life of the peer relationship
- Achieved with tunnel defined by
 - Ind DA = Local MAC
 - Ind SA = Peer’s MAC
 - Req DA = Peer’s MAC
 - Req SA = Local MAC



Thank You.