



MANET: Enhancements to PPPoE for Router-to-Radio Links

The MANET: Enhancements to PPPoE for Router-to-Radio Links feature extends Point-to-Point Protocol over Ethernet (PPPoE) to enable a router or radio to query or report link-quality metric information. Credit-based flow control provides in-band and out-of-band credit grants in each direction. Link quality metrics are used to report link performance statistics that are then used to influence routing.

Mobile Ad Hoc Networks (MANET) for router-to-radio communications address the challenges faced when merging IP routing and mobile radio communications in ad hoc networking applications. the Cisco solution for MANETs provides capabilities that enable

- Optimal route selection based on Layer 2 feedback from the radio network
- Faster convergence when nodes join and leave the network
- Efficient integration of point-to-point, directional radio topologies with multi hop routing
- Flow-controlled communications between each radio and its partner router

Through the router-to-radio link, the radio can inform the router immediately when a node joins or leaves, and this enables the router to recognize topology changes more quickly than if it had to rely on timers. Without this link-status notification from the radio, the router would likely time out while waiting for traffic. The link-status notification from the radio enables the router to respond faster to network topology changes. Metric information regarding the quality of a link is passed between the router and radio, enabling the router to more intelligently decide on which link to use.

Configuration Information

Configuration information is included in the “Mobile Ad Hoc Networks for Router-to-Radio Communications” module of the *Mobile Ad Hoc Networks for Router-to-Radio Communications* module of the [Cisco IOS IP Mobility Configuration Guide](#)

The following sections provide information about this feature:

- PPPoE Interfaces for Mobile Radio Communications
- PPPoE Credit-based Flow Control
- Configuration Examples for VMI PPPoE



For a complete list of features included in the “Mobile Ad Hoc Networks for Router-to-Radio Communications” module, see the Feature Information table located toward the end of the module.

Command Reference Information

Release 12.4(15)T

The following command is new or modified for this feature:

- **show pppoe session**

Detailed information about this command is included in the [Cisco IOS IP Mobility Command Reference](#),

Master Commands Lists

Cisco IOS master commands lists provide an alphabetical list of all Cisco IOS commands in a Cisco IOS release.

Cisco IOS new, modified, removed, and replaced commands lists provide an alphabetized list of all new, modified, removed, and replaced commands in a Cisco IOS release.

Release 12.4T

[Cisco IOS Master Commands List, Release 12.4T.](#)

[Cisco IOS New, Modified, Removed, and Replaced Commands List, Release 12.4T.](#)

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