Mesh Topology

Supported by AVM

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Date: 2024-01-30

History

Date	Version	Changes
2023-02-08	1	Initial version
2023-02-13	2	Revised third question and corresponding answer in FAQs chapter
2024-01-30	3	Updated Table 1 JSON schema URLs for mesh topology by FRITZ!OS version

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1 Mesh Topology

A mesh topology in terms of FRITZ!OS is a mapping of a network topology. It consists of nodes (e.g. FRITZ!Boxes, Wi-Fi stations or desktop PCs), node interfaces of different technologies (e.g. LAN, WLAN and PLC) and node links between node interfaces which connect two nodes.

For details on how to interpret a mesh topology, please refer to the JSON schema matching the corresponding FRITZ!OS version as well as chapter 2.

FRITZ!OS version	JSON schema URL
07.80	https://avm.de/fileadmin/user_upload/Global/Service/Schnittstellen/mesh_topology/mesh_topology_schema_v5.0.json
07.58, 07.57, 07.56, 07.55, 07.52, 07.51, 07.50	https://avm.de/fileadmin/user_upload/Global/Service/Schnittstellen/mesh_topology/mesh_topology_schema_v4.11.json
07.30, 07.29, 07.20	https://avm.de/fileadmin/user_upload/Global/Service/Schnittstellen/mesh_topology/mesh_topology_schema_v1.9.json
07.15, 07.14, 07.13, 07.12, 07.11	https://avm.de/fileadmin/user_upload/Global/Service/Schnittstellen/mesh_topology/mesh_topology_schema_v1.6.json
07.10, 07.08	https://avm.de/fileadmin/user_upload/Global/Service/Schnittstellen/mesh_topology/mesh_topology_schema_v1.5.json

Table 1 JSON schema URLs for mesh topology by FRITZ!OS version

2 FAQs

This chapter provides answers to the most frequently asked questions regarding mesh topologies and the corresponding JSON schemata.

2.1 Are UIDs of nodes, node interfaces and node links stored in the property “uid” unique within a mesh topology?

Yes, within a mesh topology UIDs are always unique. However, retrieving the mesh topology twice in a row from the same FRITZ!OS device does not guarantee that a UID refers to the same topology element it referred to before. Hence, UIDs may not be used to find a topology element.

2.2 Why do some nodes have no node links to any other nodes?

A mesh topology also contains nodes which were not actively seen for a while and thus have no active node links anymore.

2.3 Why does a mesh topology with two or more PLC adapters contain node links from each PLC adapter to any other adapter within the same PLC network?

A PLC network is inherently composed of a bus (a power line), i.e. any PLC adapter is connected to any other adapter in the same PLC network. Since there is no topology element which maps to a bus, a node link from each PLC adapter to any other adapter is used.

2.4 Is a mesh topology always free from loops?

No, loops may exist due to PLC networks, Wi-Fi DBDC connections or switching loops.