

IPv6 Availability

All Mediatrix Units

DGW 49.2.2941

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IPv6

IPv6 (Internet Protocol version 6) is the successor to the most common Internet Protocol today (IPv4).

This is largely driven by the fact that IPv4 32-bit addresses are quickly being consumed by the ever-expanding sites and products on the Internet. IPv6 128-bit address space should not have this problem for the foreseeable future.

IPv6 addresses, in addition to being longer, are distinguished from IPv4 addresses by the use of colons ":", e.g. 2001:470:8929:4000:201:80ff:fe3c:642f. An IPv4 address is noted by 4 sets of decimal numbers separated by periods ".", e.g. 192.168.10.1.

Please note that IPv6 addresses should be written between [] to allow port numbers to be set. For instance, [fd0f:8b72:5::1]:5060.

IPv6 Availability

DGW supports IPv6 except for:

- CPE WAN Management Protocol (CWMP)/TR-069
- DHCP embedded sever
- IP Routing
- Local Firewall (LFW)
- Network Firewall (NFW)
- Network Address Translation (NAT)
- Online Certificate Status Protocol (OSCP)
- Remote Authentication Dial In User Services (RADIUS)
- Session Border Controller (SBC)
- Simple Network Management Protocol (SNMP)
- PPPoE

IPv6 link-local Addresses

IPv6 link-local addresses start with fe80 and must include the scope identifier

Therefore, the format of a link-local address is: [IPv6 link-local%ScopeIdentifier].

The scope identifier corresponds to:

- On Windows: the network link used to contact the IPv6 link-local address.
- On Linux: the link name or the interface number.

For example, if the unit must contact a server at the IPv6 link-local fe80::201:80ff:fe3c:642f address, you must check on which network link the server is available. Some units have WAN or LAN. If it is on the WAN link, the IP address would then be "[fe80::201:80ff:fe3c:642f%wan]".

Locating the Scope Identifier of fe80 IPv6 Addresses on Windows

Information

IMPORTANT: If the Mediatrix unit is configured to use IPv6 addresses and the firmware is downgraded to a version that does not support IPv6, then all IPv6 networks are deleted.

Steps

- 1) Open the Windows Command Line interface.
- 2) Type **ipconfig**.
- 3) Locate the IPv6 address.

Note: The IPv6 address starts with fe80.

- 4) Locate the interface number in the IPv6 address.

Note: the interface number is at the end of the address, after the %.

Result

In the following example, the interface number of the [fe80::201:80ff:fe3c:642f%4] IPv6 address is 4.

```

C:\WINNT\system32\cmd.exe
C:\>ipconfig

Windows IP Configuration

Ethernet adapter Wan:

    Connection-specific DNS Suffix . : mediatrix.com
    IP Address. . . . . : 10.4.126.223
    Subnet Mask . . . . . : 255.255.0.0
    IP Address. . . . . : 2001:470:8929:4000:7806:1b61:5ef4:bb14
    IP Address. . . . . : 2001:470:8929:4000:219:b9ff:fe65:f59c
    IP Address. . . . . : fe80::219:b9ff:fe65:f59c%4
    Default Gateway . . . . . : 10.4.0.1
                                fe80::211:43ff:fe58:18ff%4

```

Locating the Scope Identifier of fe80 IPv6 Addresses on Linux

Information

IMPORTANT: If the Mediatrix unit is configured to use IPv6 addresses and the firmware is downgraded to a version that does not support IPv6, then all IPv6 networks are deleted.

Steps

- 1) Open the Linux Command Line interface.
- 2) Type **ipconfig**.
- 3) Locate the IPv6 address.

Note: The IPv6 address starts with fe80.

- 4) Locate the interface number in the IPv6 address.

Result

In the following example, to contact the IPv6 link-local IPv6 address "fe80::201:80ff:fe3c:642f", you would use: [fe80::201:80ff:fe3c:642f%2] or [fe80::201:80ff:fe3c:642f%eth0].

```

[root@PAFillion-Linux paf]# ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 16436 qdisc noqueue state UNKNOWN
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UNKNOWN qlen 1000
    link/ether 00:01:80:3c:64:2f brd ff:ff:ff:ff:ff:ff
    inet 10.4.200.22/16 brd 10.4.255.255 scope global eth0
    inet6 2001:470:8929:4000:201:80ff:fe3c:642f/64 scope global dynamic
        valid_lft 2066644sec preferred_lft 79444sec
    inet6 fe80::201:80ff:fe3c:642f/64 scope link
        valid_lft forever preferred_lft forever

```

DGW Documentation

Mediatrix devices are supplied with an exhaustive set of documentation.

Mediatrix user documentation is available on the [Media5 Documentation Portal](#).

Several types of documents were created to clearly present the information you are looking for. Our documentation includes:

- **Release notes:** Generated at each GA release, this document includes the known and solved issues of the software. It also outlines the changes and the new features the release includes.
- **Configuration notes:** These documents are created to facilitate the configuration of a specific use case. They address a configuration aspect we consider that most users will need to perform. However, in some cases, a configuration note is created after receiving a question from a customer. They provide standard step-by-step procedures detailing the values of the parameters to use. They provide a means of validation and present some conceptual information. The configuration notes are specifically created to guide the user through an aspect of the configuration.
- **Technical bulletins:** These documents are created to facilitate the configuration of a specific technical action, such as performing a firmware upgrade.
- **Hardware installation guide:** They provide the detailed procedure on how to safely and adequately install the unit. It provides information on card installation, cable connections, and how to access for the first time the Management interface.
- **User guide:** The user guide explains how to customise to your needs the configuration of the unit. Although this document is task oriented, it provides conceptual information to help the user understand the purpose and impact of each task. The User Guide will provide information such as where and how TR-069 can be configured in the Management Interface, how to set firewalls, or how to use the CLI to configure parameters that are not available in the Management Interface.
- **Reference guide:** This exhaustive document has been created for advanced users. It includes a description of all the parameters used by all the services of the Mediatrix units. You will find, for example, scripts to configure a specific parameter, notification messages sent by a service, or an action description used to create Rulesets. This document includes reference information such as a dictionary, and it does not include any step-by-step procedures.

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