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Addendum to User's Guide for the Dell PowerVault™ 124T Autoloader

Purpose of This Document

This PowerVault 124T Autoloader release (V53) includes support for Internet Protocol Version 6 (IPv6 Phase 1). The *Dell PowerVault 124T User's Guides* have not been updated for this release.

IPv6 Phase 1 Support

The PowerVault 124T autoloader now supports Internet Protocol Version 6 (IPv6 Phase 1).

Using IPv6 Phase 1 instead of or in addition to IPv4 does not affect autoloader functionality. However, setting up network configuration is different for IPv6 Phase 1.

With both IPv4 and IPv6 Phase 1 enabled, the autoloader responds to remote access using the IP protocol received. A Link local address is configured by the autoloader at boot time.

Internet Explorer does not recognize the IPv6 Phase 1 syntax. To access the Remote Management Unit (RMU) of the autoloader using an IPv6 Phase 1 address from Internet Explorer, you must do one of the following:

- **Option 1** - Use IPv6 address FE80::2E0:9EFF:FE0D:D7CE as an example of an RMU address. Enter the address into the address bar but replace all occurrences of "**:**" with "**-**" and add "**s6.ipv6-literal.net**", where the number **6** after the letter **s** indicates your local system's IPv6 Zone ID. You can determine your Zone ID number by opening a command prompt window and entering the command **ipconfig**. This command returns information specific to your local system's addresses.
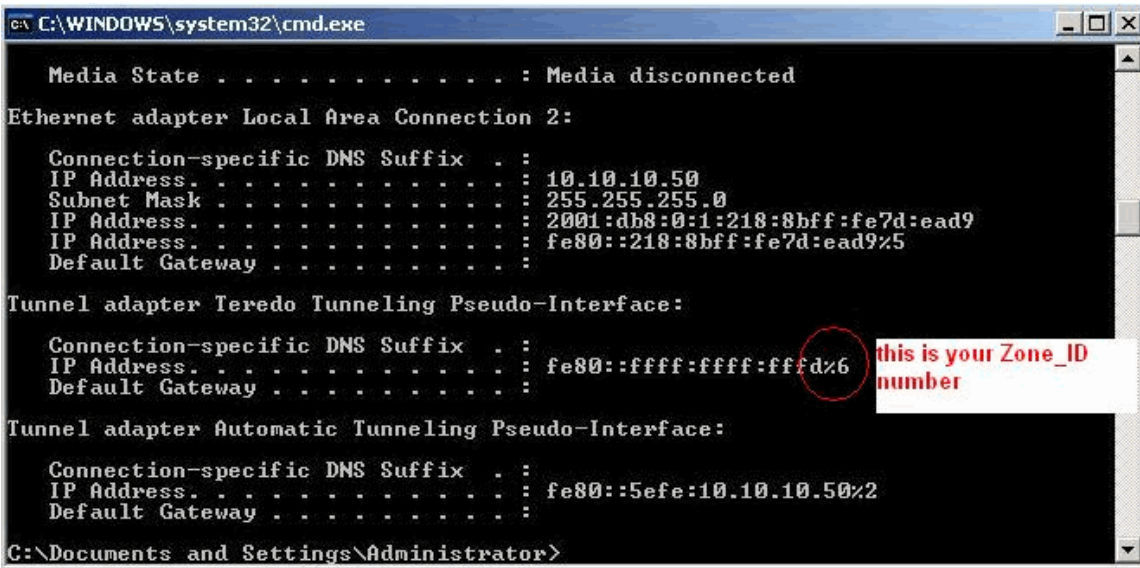
- **Option 2** - Modify the system's hostname file to translate the IPv6 address.
- **Option 3** - Use an IPv6-enabled server.

Enabling IPv6 Phase 1

The PowerVault 124T autoloader is IPv6 Phase 1 enabled by default.

Configuring IPv6 Phase 1

From the Operator Panel:

- Select **Configuration > Ethernet > Set IPv6 Addr**.

From any On Board Remote Management screen:

- Select **Configuration > Networking**. At **Set IPV6**, enter a static **Global IPv6 Address** and/or **IPv6 Gateway** address.

The **SNMP Server** and **Time Server** can be configured with either IPv4 or IPv6 addresses at **Set Network Configuration.**

IP Address Requirements and Conventions

The following requirements and conventions apply to IPv6 addresses:

- IPv6 addresses must be entered in the proper notation. IPv6 addresses can be entered in the most common notation, as eight groups of four hexadecimal digits.

- Only Global Unicast addresses can be entered from the Operator Panel and On Board Remote Management screen. This means that the first three bits of the leading hexadecimal digit must be 001, allowing only a value of 2 or 3 for the leading digit. An example of a valid IPv6 Global Unicast address is 2001:0ff8:55cc:033b:1319:8a2e:01de:1374.

- When one or more of the four-digit groups contains 0000, you can substitute two colons for the four zeros. Using this notation, 2001:0ff8:0000:0000:0000:0000:01de:1374 is the same as 2001:0ff8::01de:1374.

Viewing IPv6 Addresses

To view your autoloader's IPv6 address, do any of the following:

- From the operator panel, select **Status > Ethernet > Enter to View IPV6 Address**.

- From any On Board Remote Management screen, select **Configuration > Networking** to view **Current Network Parameters** (you can also configure the settings here).

References

PV124T RMU Access Methods Matrix

	Windows XP SP1		Windows XP SP 2		Windows 2003 Server R2 SP2		Windows Server 2008 Longhorn, IE7	Windows Vista, IE7	Fedora Linux FireFox 2.0	RedHat Linux 5, FireFox 1.5
	IE6	IE7 (not supported)	IE6	IE7	IE6	IE7				
IPv4	Pass	N/A	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Link Local	0	N/A	1	1	1, 3	1, 3	1, 2, 3, 5	1, 2, 3, 5	N/A	N/A
Global	4, 5	N/A	4, 5	4, 5	4, 5	2, 4, 5	2, 4, 5	2, 4, 5	2, 4, 5	2, 4, 5
Multicast	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Key	Syntax	Example
0	No access	
1	http://<IPv6 address, with dashes>s<zoneID>.ipv6-literal.net/	http://fe80--216-cfff-fe98-d3b3%6.ipv6-literal.net
2	http://[<IPv6 address>]/	http://[fe80::216:cfff:fe98:d3b3]
3	http://<host file lookup, with Zone ID>	http://124T
4	http://<host file lookup, without Zone ID>	http://124T
5	http://<dns name for device>	http://124T

NOTE: Hostfile access and/or Knowledge of your DNS settings are needed for keys 3 to 5. Please consult your network administrator for necessary information.

Useful IPv6 web sites

- IPv6 for Microsoft Windows: Frequently Asked Question
  http://www.microsoft.com/technet/network/ipv6/ipv6faq.mspx
- MS Introduction to IPv6
  http://www.microsoft.com/technet/network/ipv6/introipv6.mspx
- IPv6 Enabled Applications
  http://www.ipv6.org/v6-apps.html
- IPv6 Information Page
  http://www.ipv6.org/
- Wikipedia Internet Protocol version 6 (IPv6)
  http://en.wikipedia.org/wiki/IPV6

Trouble connecting to services using link local addresses

If you have successfully tested ping6 using scoped link-local addresses, it is possible that you want to use this addresses also for connections to TCP services. Unfortunately, this generally won't work because you cannot set the scope for this address using client programs.

Solution: add site-local addresses to your interfaces and use them instead of link-local ones.

Reference: http://www.bieringer.de/linux/IPv6/IPv6-HOWTO/IPv6-HOWTO-6.html

For a list of known issues and limitations, see the release notes attached to the firmware download on the Dell website: www.dell.com/support.dell.com