

NetSpective IPv6 Guide



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NetSpective IPv6 Passive Deployment

NetSpective Passive can be deployed in two ways:

We can deploy in an environment where the IPv4 stack is turned on.

We can deploy in an environment where the IPv4 and IPv6 stacks are turned on. This is referred to as a **Dual Stack** environment. This enables IPv6 passive filtering.

When working in a dual stack environment, we are making the assumption that every workstation can receive IPv4 traffic. While NetSpective will monitor all IPv4 and IPv6 traffic on the network, we will only send block pages and portal pages across IPv4. Traffic can still be intercepted and logged regardless of which stack the traffic appears on. However if you wish to receive a block page, the IPv4 stack will still need to be enabled.

NetSpective IPv6 Global Proxy Deployment

NetSpective Global Proxy should also be deployed in a dual stack environment only. The difference is, the proxy appliance will be configured with both an IPv4 and an IPv6 address.

The screenshot shows the 'Device Settings' page for a NetSpective device. The page has a header with 'admin | help | logout' and a search bar. Below the header are tabs for 'Network (IPv4)', 'Network (IPv6)', 'Certificate', and 'Advanced'. The 'Network (IPv6)' tab is selected. The main content area contains a description of the device's network settings and a section for 'IPv6 Settings'. In the 'IPv6 Settings' section, the checkbox 'Enable IPv6 Network Interfaces and Static Routes' is checked. Below this is a table for 'Interfaces' with columns for Interface, IP, Prefix, Port, Status, and Mac Address. The 'Admin' interface has IP 2001:480:e340:28::2:100 and the 'External' interface has IP 2001:480:e340:a::ffff:10. Below the table is a 'Default Gateway' field with the value 2001:480:e340:28::1. At the bottom, there is an 'Additional Routes' table with columns for Destination, Prefix, Gateway, and Interface. A single route is listed with Destination '::', Prefix '0', Gateway '2001:480:e340:a::1', and Interface 'External'. There are 'Delete' and 'Add' buttons below the table.

Interface	IP	Prefix	Port	Status	Mac Address
Admin	2001:480:e340:28::2:100	64	Lan A	1000 Full	00:0c:29:c3:f9:9e
External	2001:480:e340:a::ffff:10	64	Lan B	1000 Full	00:0c:29:c3:f9:a8

Destination	Prefix	Gateway	Interface
::	0	2001:480:e340:a::1	External

As the picture above shows, there are now two Network tabs. One for IPv4 and one for IPv6. The appliance can still be configured as a single port proxy, or a dual port proxy. Each interface will require an IPv4 and IPv6 IP address. The appliance still relies on the environment being dual stack for receiving block pages across IPv4. The minimum requirement for enabling proxy is to have an Admin IP address and an associated Default Gateway. If you are using a dual port proxy, then you will want to specify an additional route for the External interface.

Proxy Auto Configuration

It should be noted that there is limited IPv6 support for Proxy Auto Configuration. You will find settings for this under Filter Settings > Proxy. When adding rules the WPAD file, it will not accept IPv6 special rules.

Filter Settings admin | [help](#) | [logout](#)

Search: Group: System

Proxy

NetSpectve can use traffic shaping to give higher or lower priority to certain traffic and to limit traffic. NetSpectve may also operate in a load balanced or fail over cluster. Certain destination sites or IP addresses, such as your local intranet, can be configured to bypass NetSpectve or use an alternate proxy.

Proxy Settings

Cluster Mode: None/Standalone

Max Mbps: 100

Enable X-Forwarded-For Header

Enable Google NoSSLSearch Option

Priority Settings

	Low	Medium	High
Target (%)	<input type="text" value="1"/>	<input type="text" value="9"/>	<input type="text" value="90"/>
Limit (%)	no limit	no limit	no limit

Proxy Automatic Configuration

Last Updated On: 2014-07-16 09:06 AM - [Download](#)

NetSpectve Proxies: 10.2.40.117 - [Edit List](#)

Rules

Exclude Simple Hostnames

<input type="checkbox"/> Destination IP/Netmask	Rule		
<input type="checkbox"/> 192.168.0.0/16	Bypass Proxy	<input type="button" value="↑"/>	<input type="button" value="↓"/>
<input type="checkbox"/> Destination Host Name	Rule		
<input type="checkbox"/> *.telemate.net	Bypass Proxy	<input type="button" value="↑"/>	<input type="button" value="↓"/>

The Rules section will give an error message when attempting to add an IPv6 rule.

Proxy Automatic Configuration

IP/Netmask

Host

Rule: Bypass Proxy

Proxy Address:

The page at 10.2.40.117 says:

IPv6 Addresses are not supported in PAC file generation.

Dual Stack Users

The Users section has been redesigned with dual stack in mind. Users now have all of their IP addresses grouped together, both IPv4 and IPv6. Each user with multiple addresses has a drop down toggle, so you can view each address.

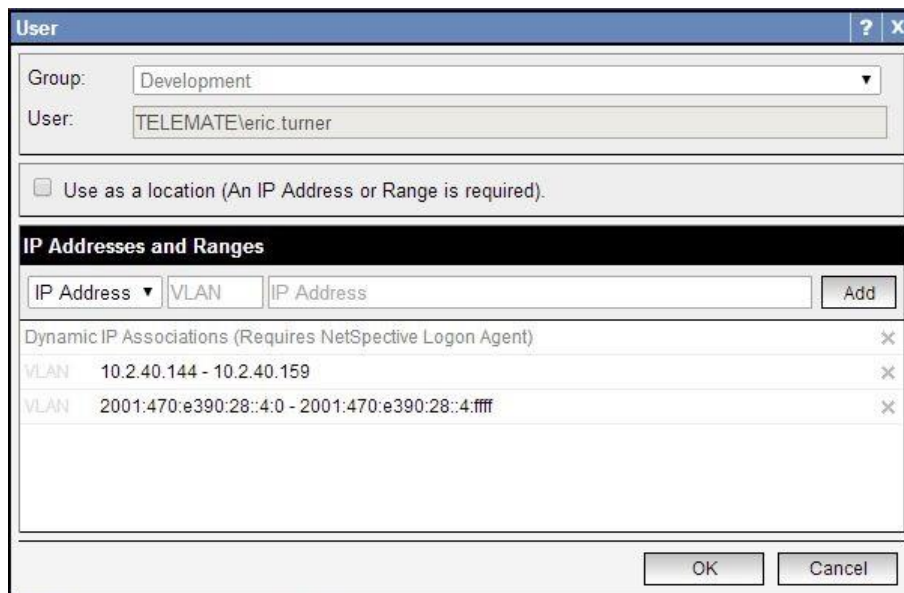


The screenshot shows the 'Users' management interface. At the top, there is a search bar and a group selector set to '[All Assigned Users]'. Below this is a table with columns for 'User', 'Addresses', and 'Group'. Two users are listed: 'TELEMATE\domain.backup' (LDAP) in the 'Domain Admins' group, and 'TELEMATE\eric.turner' (LDAP) in the 'Development' group. The 'Addresses' column for 'TELEMATE\eric.turner' is expanded to show a list of IP addresses and ranges, including '10.2.40.144 - 10.2.40.159' and '2001:470:e390:28::4:0 - 2001:470:e390:28::4:ffff'.

User	Addresses	Group
TELEMATE\domain.backup	LDAP	Domain Admins
TELEMATE\eric.turner	LDAP	Development

VLAN	IP Address or Range
	10.2.40.144-10.2.40.159
	2001:470:e390:28::4:0-2001:470:e390:28::4:ffff

When creating a static IP user or an IP range user, the IP address field will accept either an IPv4 or an IPv6 address. Addresses associated with the user you are creating are now listed in the pane below.



The 'User' dialog box is shown with the 'Group' set to 'Development' and the 'User' set to 'TELEMATE\eric.turner'. The 'Use as a location' checkbox is unchecked. The 'IP Addresses and Ranges' section contains a table with columns for 'IP Address', 'VLAN', and 'IP Address', and an 'Add' button. Below this table, there is a section for 'Dynamic IP Associations (Requires NetSpective Logon Agent)' with a list of IP addresses and ranges, including '10.2.40.144 - 10.2.40.159' and '2001:470:e390:28::4:0 - 2001:470:e390:28::4:ffff'. The dialog box has 'OK' and 'Cancel' buttons at the bottom.

The Users section is the only area of NetSpective that requires ranges of IP addresses to be typed out with the starting IP and the ending IP.

Other areas to find IPv6

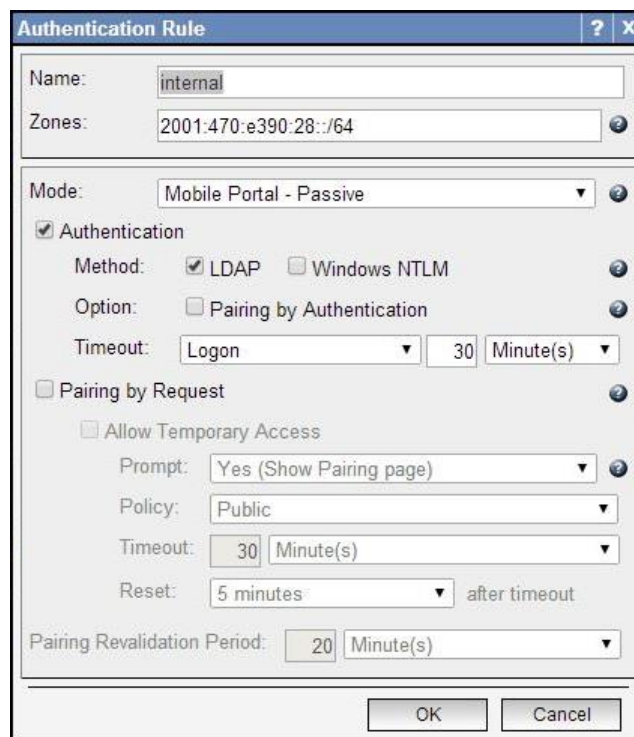
The Overrides section now supports overriding both IPv4 and IPv6 addresses. This section will accept slash notation for designating IP ranges.



The screenshot shows the 'Overrides' management page. At the top, there is a user profile for 'TELEMATE\william.babij' with links for 'register', 'help', and 'logout'. Below this is a search bar with 'All' selected and a 'Group' dropdown set to 'Sales Engineering'. A navigation bar contains tabs for 'Domains', 'IP Addresses', 'URLs', 'Search Terms', 'File Extensions', 'News Groups', and 'Requests'. The main content is a table with columns: 'IP Address', 'Start Date', 'End Date', 'Category', and 'Override'. Two entries are visible: '10.0.0.0/8' with 'Admin Block' and '2001:470:e398:28::/64' with 'Admin Allow'. At the bottom are 'Delete' and 'Clean Up' buttons.

IP Address	Start Date	End Date	Category	Override
10.0.0.0/8	2014-07-10	Never	Internal	Admin Block
2001:470:e398:28::/64	2014-07-10	Never		Admin Allow

The Authentication section allows you to enable the Mobile Portal for a range of IPv6 addresses on your Wi-Fi Network. This area will also accept slash notation to designate a range of IP addresses.



The screenshot shows the 'Authentication Rule' configuration dialog. The 'Name' field is 'internal' and the 'Zones' field is '2001:470:e390:28::/64'. The 'Mode' is set to 'Mobile Portal - Passive'. Under 'Authentication', 'LDAP' is selected. The 'Option' is 'Pairing by Authentication' and the 'Timeout' is '30 Minute(s)'. Under 'Pairing by Request', 'Allow Temporary Access' is checked, with 'Prompt' set to 'Yes (Show Pairing page)', 'Policy' set to 'Public', 'Timeout' set to '30 Minute(s)', and 'Reset' set to '5 minutes after timeout'. The 'Pairing Revalidation Period' is '20 Minute(s)'. 'OK' and 'Cancel' buttons are at the bottom.

The statistics page will also report on IPv6 traffic. Websites typically default to IPv4 if it is enabled, but you will find some that prefer IPv6. In the example below, Google is a good testing ground for IPv6 traffic. The IP address shown is that of the user workstation requesting the webpage from Google.

Statistics					
Search: eric.turner				Report: Recent Activity	
Recent Activity					
Jul 08 11:21:13	TELEMATE eric.turner	Development	[2001:470:e390:28::4:0]	Admin Allow	
HTTPS://atl01exs10.telemate.net:443					
Jul 08 11:20:28	TELEMATE eric.turner	Development	[2001:470:e390:28::4:0]	Internet Tools	🔊
HTTPS://www.google-analytics.com:443					
Jul 08 11:20:28	TELEMATE eric.turner	Development	[2001:470:e390:28::4:0]	Internet Tools	🔊
HTTPS://www.google-analytics.com:443					
Jul 08 11:20:27	TELEMATE eric.turner	Development	[2001:470:e390:28::4:0]	Internet Tools	🔊
HTTPS://www.google-analytics.com:443					
Jul 08 11:20:27	TELEMATE eric.turner	Development	[2001:470:e390:28::4:0]	Internet Tools	🔊
HTTPS://www.google-analytics.com:443					
Jul 08 11:20:10	TELEMATE eric.turner	Development	[2001:470:e390:28::4:0]	Internet Tools	🔊
HTTPS://clients6.google.com:443					
Jul 08 11:19:30	TELEMATE eric.turner	Development	[2001:470:e390:28::4:0]	Web E-Mail	🔊
HTTPS://mail.google.com:443					

Filters in NetAuditor also support IPv6. You can specify IPv6 addresses to search for and each report will reflect this data.

Filters ▼

Add filters to limit the amount of data that will be displayed in the report.

Filter	Values
Device	✕
User Group	✕
User Name	✕
User Host	✕
User IP	✕

Criteria: Is IPv4 Single Add

Values:

- IPv4 Single
- IPv4 Range
- IPv4 Mask
- IPv6 Single
- IPv6 Range
- IPv6 Mask

Requirements

As a final note, in order to properly authenticate Dual Stack users, new agents have been created. These can be found in the Utilities section. The version numbers you see below are that of the initial IPv6 build's release. Always make sure to update Logon Agents and Remote Agents to their newest version.

Name	Version	File
Windows / Citrix Terminal Server Agent	3.0.4	TerminalServerAgent.exe
Logon Agent for Windows Domain Controllers	3.0.8	LogonAgent.zip
Logon Agent (Mac OS 10.5 - 10.6)	2.1-11	LogonAgent-2.1-11.dmg
Logon Agent (Mac OS 10.7 - 10.9)	2.3-9	LogonAgent-2.3-9.dmg
Remote Agent Client (Windows)	1.4.4	RemoteAgent.msi
Remote Agent Client (Mac OS 10.5 - 10.6)	1.1-91	RemoteAgent-1.1-91.dmg
Remote Agent Client (Mac OS 10.7 - 10.9)	2.1-5	RemoteAgent-2.1-5.dmg
Remote Agent Configuration File	N/A	Configuration

A new version of NetAuditor 3 has also been created to support IPv6. This new version is required for IPv6 archival reporting. If you are unsure of what version you should be running, install the latest version downloaded from the NetSpective appliance or contact our support department.